Punjab Factories Rules 1952

CHAPTER-1
Preliminary

Rule 1: Short title, extent and commencement-

(1) These rules may be cited as the Punjab Factory Rules, 1952.

(2) They shall extend to the territories which immediately before the IST November, 1956, were comprised in the State of Punjab and Patiala and East Punjab States Union.

(3) Except as hereunder provided with respect to certain rues these rules shall come into force at once: -

Rules 31 to 35 (Artificial lighting) Rule 55 (Safety precautions)
Rule 68 (Washing facilities)
Rule 70 (Ambulance room)
Rule 71 to 77 (Canteens)
Six months after the enforcement of these Rules.
Six months after the enforcement of these Rules. Three months after the enforcement of these Rules. Three months after the enforcement of these Rules.
Nine months after the enforcement of these Rules.

Rule 78 (Shelters, etc.) Six months after the enforcement of these Rules. Rule 79-82 (Crèches) Nine months after the enforcement of these Rules. Rule 102 Six months after the enforcement of these Rules.
(Special provision for dangerous operations)

Rule 2: Definitions

In these Rules unless there is anything repugnant in the subject or context :-

(a) "Act" means the Factories Act, 1948.

(b) "Appendix" means an appendix appended to these Rules.

(c) "Artificial humidification" means the introduction of moisture into the air of a room by any artificial means whatsoever, except the unavoidable escape of steam of water vapour into the atmosphere directly due to a manufacturing process:
Provided that the introduction of air directly from outside through moistened mats or screens placed in openings at times when the temperature of the room is 80 degrees or more, shall not be deemed to be artificial humidification.

(d) "Belt" includes any driving strap or rope.

(e) "Degrees of temperature" means degrees on the Fahrenheit scale.

(ee) "first employment" means first employment in any manufacturing process to which the

relevant Schedule applies and shall also include re-employment in the manufacturing process following and cessation of employment for a continuous period exceeding three calendar months.

(f) "Fume" includes gas or vapour.

(g) "Form" means form appended to these rules.

(h) "Health Officer" means the Municipal Health Officer or District Health Officer or such other official as may be ap ernment in that behalf.

(i) "Hygrometer" means an accurate wet and dry bulb hygrometer conforming to the prescribed conditions as regards construction and maintenance.

(j) (Omitted for Punjab - Vide Notification dt. 31-10-1984.)

(j) "Inspector" means an officer appointed under section 8 of the Act and includes "Chief Inspector", Additional Inspector and the District Magistrate.

(k) "Maintained" means maintained in an efficient state, in efficient working order and in good repair.

(l) "Manager" means the person responsible to the occupier for the working of the factory for the purposes of the Act.

(m) "Family" means the wife, son, daughter, father, mother, brother and sister of the owner of any place wherein a manufacturing process is carried on who lives with or is dependent on such owner.

(n) recognized university or institution means, -

(i) any university incorporated by law in any of the states of India; or

(ii) in the case of a degree or diploma obtained as a result of examination held before the 15th August, 1947, the Punjab, Sind or Dacca University; or

(iii) any other university or institution which is declared by the Government to be a recognized university or institution for the purposes of these rules.

Rule 2A: [Framed U/S 2(ca) and 112 of the Act] Competent person

(1) The Chief Inspector sections may recognize any person as `competent person' within such area and for such period as may be specified for the purposes of carrying out tests, examination, inspection and certification for such buildings, dangerous machinery, hoists and lifts, lifting machines and lifting tackles, pressure plant, confined space, ventilation system and such other process of plant and equipment located in a factory as stipulated in the Act and the rules made

there under, if such person possesses the qualifications, experience and other requirements specified in the Schedule appended to this rule. Provided that the Chief Inspector may relax the requirements of qualifications in respect of competent person if such a person is exceptionally experience and knowledgeable;

Provided further that where it is proposed to recognise a person employed under the Chief Inspector as a competent person, concurrence of the State Government shall be obtained and such a person after being so recognised, shall not have the powers of an Inspector;

Provided further that the competent person recognise under this rule shall not be above the age of sixty-two years and shall be physically fit for the purpose of carrying out the requisite tests, examination and inspection.

(2) The Chief Inspector may recognise an institution of repute, having persons possessing qualification and experience as specified in the Schedule appended to this rule, and issue a certificate of competency in

Form I-B for the purposes of carrying out tests, examinations, inspections and certification buildings, dangerous machinery, hoists and lifts, lifting machines and lifting tackles, pressure plant confined space, ventilation system and such other processes of plant and equipment, as are stipulated in the Act and the rules made thereunder, a competent person within such area and for such period as may be specified.

Form 1-A from a person or an institution as the case may be, intending to be recognised as a competent person for the purposes of the Act and the rules made thereunder, shall register such application and after satisfying himself as regards competence and facilities available at the disposal of the applicant may recognise the applicant as a competent person. Such application shall be disposed of either by issuing a certificate of competency in Form I-B or by rejecting the same specifying reasons thereof, within a period of sixty days.

(4) The Chief Inspector of Factories, if he has reason to believe that a competent person -

(a) has violated any condition stipulated in the certificate of competency; or (b) has carried out a test, examination and inspection or has acted in a manner inconsistent with the intent or the purpose of the Act or the rules made thereunder, or has omitted to act as required under the Act or the rules made thereunder; or

(c) for any other reason to be recorded in writing; may revoke the certificate or competency after giving an opportunity to the competent person for being heard.

Explanation - For the purpose of this rule, an institution includes an organisation.

(5) The Chief Inspector of Factories may, for reasons to be recorded in writing, require recertification of lifting machines, lifting tackles, pressure plant or ventilation system, as the case may be, which has been certified by a competent person outside the State:

"(6) Following leading technical Institutions in the State of Punjab and Chandigarh having Civil or Structural Engineering courses shall be the competent person for the purpose of clause (a) of sub-section (1) of section 6 of the Act, namely:-

(1) Punjab Engineering College (deemed to be University), Sector-12, Chandigarh;

(2) Chandigarh College of Engineering and Technology, Sector-26, Chandigarh;

(3) Thapar Institute of Engineering and Technology, Patiala;

(4) Guru Nanak Dev Engineering College, Ludhiana;

(5) Dr. B.R. Ambedkar National Institute of Technology, Jalandhar;

(6) Giani Zail Singh Campus College of Engineering and Technology, Maharaja Ranjit Singh Punjab Technical University, Bathinda;

(7) Indian Institute of Technology, Ropar;

(8) Punjabi University, Patiala;

(9) Shaheed Bhagat Singh State Technical Campus, Ferozepur; and

(10) any other institute, as may be notified by the State Government.

(7) The certification done by the institutions referred in sub-rule (6) shall be accepted only when such certification is signed by the Head of the Civil or Structural Engineering Department and Head of the Institution.".

SCHEDULE

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[Rule 2A (1) and (2)]

Sr. No.	Sections or Rules under the purpose	Qualifications	Experience for Facilities at his Disposal
1	2 3	4	5
1. Rules made under Bachelors Degree in Section 6 and section 112 Engineering or certificate of stability for buildings	Civil or structural Engineering or its equivalent from recognized university	(i) A Member or Associate Member , of an – (a) Institute of civil engineering ;or (b) Institute of structural engineering ; or (c) Institute of engineering (India) in civil engineering or structural engineering branch, shall have an experience of working as such in design or construction or repair of structure, for a minimum period of five years;". (ii) Knowledge of non-destructive testing various codes of practices that are current and the effect of the vibrations and natural forces on the stability of the building; and (iii) an ability to arrive at a reliable conclusion with regard to the safety of the structure or the building.	
. 2. Rules made under Bachelor's degree Section 21(2) in Electrical or measurement Dangerous machines other equipment	Mechanical or Textile Engineering Or its equivalent From a recognized University.	(i) an experience of working for a minimum period of of seven years in (a) design, operation or maintenance or (b) testing, examination & inspection of dangerous machines. of relevant machinery, their guards, Safety devices and appliances (ii) Should (a) Be conversant with safety devices And their proper functioning; (b) Be able to identify defects and any Other cause leading to the failure; and (c) An ability to arrive at a reliable conclusion with regard to the proper functioning of Safety devices and appliances and machine guards.	Gauges for measurement, instruments for of speed and any or device to determine the safety in the use of
3 Section 28- A Bachelor's degree for load Hoists and lifts tensile testing	in Electrical/ Mechanical Engineering or Its equipment or	(i) an experience of working for a minimum period of seven years in;	Facilities testing, gauges,

		equivalent from a measurement recognized university	(a) design or erection or maintenance; or	gadgets for and any other
			(b) Inspection and test procedure of hoists & lifts.	required for determining the safe working conditions of hoists & lifts
			ii) Should be- conversant with the current and relevant codes of practices and test procedures; conversant with other statutory requirements covering the safety of hoists and lifts; and (c) able to identify defects and arrive at a reliable conclusion and with regard to safety of hoist & lifts	
4	section 29- Lifting machines And lifting tackles	A Bachelor's degree in Electrical or Mechanical or Metallurgical Engineering or its equivalent from a recognized university	(i) an experience of working for a minimum period of seven years in; (a) design or erection or maintenance; or testing, examination and inspection of lifting machines chains, ropes and lifting tackles (ii) Should be- (A) conversant with the current and relevant codes of practice and test procedures; (**B)** conversant with structure machines & metallurgy of the material of construction; and (C) Heat-treatment or stress relieving techniques as applicable to stress bearing components and parts of lifting machinery and lifting tackles (D) capable to identifying defects arriving at a reliable conclusion	Facilities for load testing, tensile testing heat-treatment equipment or gadgets for gauges and any such other equipment required for determining the safe working condition s of the lifting machines and tackles.

			sand with regard to safety of lifting machinery, chains, ropes and lifting tackles	
5. Section 31- Pressure plants	A Bachelor's degree in Electrical or Mechanical or Metallurgical Engineering or its equivalent from a recognized university	(i) an experience of working hydraulic tests, gauges for a minimum period of ten years in; equipments or gadget (a) design or erection or maintenance; or testing, examination and inspection of plants	Facilities for carrying for measurement or any other equipment gauges to determine the safety in the use of pressure vessel. (ii) Should be- (A) conversant with the current and relevant codes of practice and test procedures; (B) conversant with other Statutory requirements concerning the safety of unfired pressure vessels And equipments operating under pressure (C) conversant with non-destructive testing techniques as applicable to pressure vessels; and (D) capable to identifying defects and arriving at a reliable conclusion and with regard to safety of pressure vessels.	
6 (i) section 36 Precautions against fumes, gases (ii) rules made Section 41 & 112 certification of safety	Master degree in chemistry Or Bachelor's degree in Chemical Engineering or its equivalent from a recognized university	(i) an experience of working meters, for a minimum period of & devices duly 7 years in; calibrated and certified collection and analysis of for carrying out the tests environmental samples and and calibration of monitoring in working in confined equipments, spaces	He shall- (a) Be conversant with the hazardous preparation of chemicals and their permissible limit values; (b) Be conversant with current techniques sampling and analysis of environmental contaminants; and (c) able to arrive at a reliable conclusion as	

		regards the safety in respect of entering and carrying out hot work
7 ventilation system as facilities for testing required under various ventilating system	degree in mechanical or electrical engineering	(i) a minimum of seven years experience in design,fabrication,testing of ventilating the

schedules framed under section 87 such as schedule

or equivalent

system used for extraction and collection of dust, fumes and vapours and other instruments and gauges for testing

Effectiveness of

(i) grinding or glazing metals and processes dusts,vapours & incidental thereto in respect of ventilation and extraction system

(ii) cleaning or smoothing, roughing etc. of articles by jet of sand, metal shot or grit or other abrasive propelled by a blast of compressed air or steam.

(iii) handling and processing of Asbestos

(iv) manufacturing of Rayon by Viscose Process

(v) Foundry operations

ancillary equipment.

(ii) he shall be conversant with relevant codes of practice and test procedures that are current for fumes and any other equipment needed for determining the efficiency and adequacy of these systems. He shall have the assistance of a suitable qualified technical person who can come to a reasonable conclusion as to the adequacy of system.

Rule 3: [Framed U/S 6 of the Act] Submission of plans

(1) The State Government or the Chief Inspector may require for the purposes of the Act, submission of plans of any factory which was either in existence on the date of the commencement of the Act or which had been constructed or extended since then. Such plans shall be drawn to scale showing: --

(a) the site of the factory and immediate surrounding including adjacent buildings and other structures, Roads, drains, etc.

(b) the plan, elevation and necessary cross-sections of the factory buildings indicating all relevant details relating to natural lighting, ventilation and means of escape in case of fire, and the position of the plant and machinery, aisles and passage-ways; and

(c) such other particulars as the State Government or the Chief Inspector, as the case may be,

may require.

Rule 3A: [Framed U/S 6 of the Act] Approval of Plans

(1) No building shall be constructed or used as a factory unless its building plan is

certified by the competent person and is submitted to the Chief Inspector.

(2) No additions, alterations or extensions in the existing factory shall be made, except those specified in the Schedule given below, unless such additions, alterations or extensions are accepted by the

Chief Inspector.

SCHEDULE

Serial No. Type of additions, alterations or extensions

1. Boundary Wall upto height of 6 Feet.
2. Rooms or cabins be used for clerical or managerial or pantry purposes.
3. Security pickets or guard rooms
4. Electricity meter rooms
5. Sheds for vehicle parking
6. Canopies for generator sheds
7. Store where non-combustible or non-inflammable or non-toxic material to be stored.
8. Balcony or chajjas.
9. Toilets or urinals.
10. Demolition of any part of factory building.
11. Addition of machinery which does not result in any change in process or end product or by product.
12. Changes in outer gates.
13. Additional stair cases or ramps.
14. Rooms to be used for residential purpos

(3) Application for submission of the plans shall be uploaded by the Occupier or Manager along with the

following plans and documents on the portal (pblabour.gov.in) of the Chief Inspector:-

"(a) a certificate of approval in respect of a site or a factory from the local authority, if

such site is located in an area where notified or draft master plan does not exist and

a certificate from an officer, who is not below the rank of District Town Planner,

Department of Town Country Planning, concerning the classification of land use to

the effect that such site falls in an industrial area or zone; "

(b) Form No. 1-E and replies to questionnaire annexed thereto;

(c) Flow chart of the manufacturing process giving a brief description of the process in

its various stages;

(d) Site plan drawn to a minimum scale of 1 cm. = 12 m. showing the exact location of

the factory with respect to surrounding buildings, roads, drains, etc:

(e) Plans, elevations, cross-sections drawn to a minimum scale of 1 cm. = 1.2 m.

showing means of lighting, ventilation, fire escapes, position of plant and machinery, direction of opening of doors, drinking water points, roof materials,

details of urinals, latrines, washing places, facilities for storing and drying of workers

clothing, rest-room and lunch-room, canteen and ambulance room; and

(f) (i) the occupier or manager of the factory shall appoint a competent person for

certification of Building Plans and Stability Certificate; and

(ii) “the competent person shall make an application of self certification to the effect that

the building plans and stability certificate being certified are as per the Act and rules

made thereunder. The occupier or manager of the factory shall submit such certified

application through his user name on the portal "pblabour.gov.in" of the Chief

Inspector for acceptance;".

(g) Such other particulars as the Chief Inspector may require in relation to the

submission .

The Chief Inspector, if satisfied with the plan and documents attached alongwith the application given under sub-rule(3), shall retain one copy thereof in his office and send another copy to the inspector for necessary action .

Rule 4: [Framed U/S 6(c) of the Act] Certificate of stability

(1) No manufacturing process shall be carried on in any building or part thereof (whether newly constructed or re-constructed or extended) as a factory or increase the machinery in any existing factory until a certificate of stability in

Form 1-F in respect thereof, duly signed by a competent, person, has been sent to the Chief Inspector.

(2) No manufacturing process shall be carried out in any factory, unless a fresh certificate of stability (in Form 1-F) , is obtained from a Competent Person after completion of a five years period, and sent to the Chief Inspector.

Rule 5: [Framed U/S 6(c) of the Act]

No person except in the case of building owned by any Government shall be authorised to sign a certificate of stability or to certify plans and specifications who is in the employment of the owner or builder of the building in respect of which the certificate is given.

Rule 6: [Framed U/S 6(c) of the Act]

(i) The internal height of a workroom shall be not less than 4.25 m. measured from the floor level to the lowest part of the roof and if the roof is of corrugated iron which is neither covered with tiles nor has an inner ceiling of lining of heat-resisting material with an air space of at least 10 cm. Between it and the corrugated iron, the internal height shall be not less than 5 m:

Provided that in the case of building having a brick or concrete roof, or a combination of the two, the minimum height may be 3.75 m. if approved by the Chief Inspector of Factories:

Provided further that in case of factories employing less than 50 workers, the Chief Inspector may, where he is satisfied that the conditions of work are reasonably good., exempt such factories from the provisions of this sub-rule.

(ii) There shall be provided at all times for each person employed in any room of a factory where

mechanical or electrical power is used, at least 36 square feet (3.35 square meter) of floor space exclusive of that occupied by machinery and a breathings space of at least 500 cubic feet (14 cubic meter).

(iii) Particulars of each workroom of the factory (except the factories declared and defined as such under Section 85 of the Act] in which persons are) regularly employed shall be entered in

Form 1-D which shall be shown to the Inspector when required.

The provisions of sub-rule (i) of rule 6 shall not apply to rooms intended for storage, go downs and like purposes and also rooms intended solely for office purposes where only clerical work is done,

Rule 7: [Framed U/S 6(c) of the Act] Application for registration and grant of licenses (1) The occupier of every factory shall submit to the Chief Inspector an application in

Form No. 2 in triplicate for the registration of the factory and for the grant of license.

(2) The responsibility under this rule shall entirely lie with the occupier himself of the factory.

Rule 8: [Framed U/S 6(c) of the Act] Grant of licence

(1) A licence for a factory shall be granted by the Chief Inspector or any other officer appointed under sub section (2-A) of Section 8 of the Act and specially empowered in this behalf by the State Government in

Form No. 4 prescribed for the purpose for a period of one year or any further period upto ten years as may be requested in the application for registration and grant of licence and on payment of the fees specified in sub-rule (2).

(2) The fees for grant of licence for one year shall be as specified in the Schedule given below. In case an application for licence has been made for a period of more than one year, the licence fees shall be multiplied by the number of years the fees payable for grant of licence for more than one year, as specified in the said Schedule.

SCHEDULE

Fees for the grant of licence for a factory for one year

Quantity Kilo Watt installed (Max Kilo Watt)	Maximum number of workers to be employed on any day during the year						
	Upto 20	From 21 to 50	From 51 to 100	From 101 to 250	From 251 to 500	From 501 to 1000	Above 1000
Upto 20	450	750	1500	3000	4500	7500	10,500
21 upto 50	675	1500	2250	4500	7500	10,500	15,000
51 upto 100	1500	2250	3000	7500	10,500	15,000	18,000
101 upto 250	2250	3000	6000	10,500	15,000	18,000	22,500
251 upto 500	3000	4500	7500	12,000	18,000	22,500	30,000
501 upto 1000	4500	6000	10,500	15,000	22,500	30,000	37,500
Above 1000	6000	10,500	15,000	22,500	30,000	37,500	45,000.”

(3) A licence granted under this rule may be at the request of licensee, be renewed for one year, or any number of years upto ten years, as the case may be, in accordance with the provisions of rule 10.

(4) Every licence granted or renewed shall remain in force upto the 31st December of the year for which the licence is granted or upto the period for which it is renewed.

Rule 9: [Framed U/S 6(d) of the Act] Amendment of Licence

(1) A licence granted under rule 8 may be amended by the Chief Inspector or any other officer appointed under sub section (2-A) of Section 8 of the Act and specially empowered in this behalf by the State Government,

(2) No licensee shall, -

(i) change the name of his factory ; or

(ii) employ persons in excess of the number as specified in the licence ; or

(iii) use motive power in excess of the limits of horse power specified in the licence ; without getting his licence amended.

(3) A licensee who desires to have his licence amended, shall submit it to the Chief Inspector or any other officer appointed under sub section (2-A) of Section 8 of the Act and specially empowered in this behalf by the State Government, an application stating the nature of the amendment and reasons therefore.

(4) The fee for the amendment of a licence shall be twenty five rupees plus the amount, if any, by which the fee which would have been payable for issuing the licence in amended form originally.

Rule 10: [Framed U/S 6(d) of the Act] Renewal of licence

(1) A licence shall be renewed by the Chief Inspector or any other officer appointed under sub section (2-A) of Section 8 of the Act and specially empowered in this behalf by the State Government,

Form No. 2 together with the receipt of the payment of fees for a period of one year or any further period upto ten years as the case may be, and shall be submitted not less than thirty days before the date on which the licence expires. If the application, complete in all respects, is so made, the premises shall be held to be duly licensed until such date as the Chief Inspector or as the case may be the officer appointed under sub section (2-A) of Section 8 of the Act and specially empowered in this behalf by the State Government, renews the licence.

(3) The fees for renewal of licence for one year shall be the same as for the grant thereof. In case an application for renewal has been made for a period of one year or any further period upto ten years, the renewal fees shall be multiplied by the number of years the fees payable for renewal of licence for one year, as specified in the Schedule given below sub-rule (2) of rule 8:

Provided that if the application for renewal, compete in all respects, is not received with in the time specified in sub-rule (2), the licence shall be renewed only on payment of a fee twenty five percent in excess of the fees ordinarily payable for the renewal of a licence for one year or five year, for which the application has been received late.

Rule 10–A: Automatic Renewal of License.- (1) A license shall be renewed for one year digitally through automatic mode if there is no change in particulars of license from the previous

granted or renewed license and other conditions required by Government.

Form 2-

B together with the fees for a period of one year, and shall be submitted on departmental portal "pblabour.gov.in" not less than thirty days before the date on which the license is to expire.

(3) The fees for renewal of license for one year shall be as specified in the Schedule given under sub-rule

(2) of rule 8:

Provided that if the application for renewal, complete in all respects, is not submitted on the

portal within the time specified in sub-rule (2), a late fee of twenty-five percent of the fees payable for the renewal of a license for one year shall be chargeable.

(4) The license generated under this rule shall have the same sanctity as renewed under rule 10".

Rule 11: [Framed U/S 6(d) of the Act] Transfer of licence

(1) the holder of a licence may, at any time before the expiry of the licence, apply for permission

to transfer his licence to another person.

(2) Such application shall be made to the Chief Inspector or any other officer appointed under sub section (2-A) of Section 8 of the Act and specially empowered in this behalf by the State Government, who shall, if he approves of the transfer, enter upon the licence under his signature, and endorsement to the effect that the licence has been transferred to the person named in the application.

(3) A fee of one hundred rupees shall be charged on each such application.

Rule 12: [Framed U/S 6(d) of the Act] Procedure on death or disability of licensee

If a licensee dies or becomes insolvent, the person carrying on the business of such licensee shall not be liable to any penalty under these rules for exercising the powers granted to the licensee by the licence during such time as may reasonably be required to allow him to make an application for the amendment of the licence under Rule 9 in his own name for the unexpired portion of the original licence.

Rule 13: [Framed U/S 6(d) of the Act] Loss of Licence

Where a licence granted under these Rules is lost or accidentally destroyed, a duplicate may be granted on payment of a fee of twenty five rupees.

Rule 14: [Framed U/S 6(d) of the Act] Payment of Fees

(1) Every application under these rules shall be accompanied by a treasury receipt showing that the appropriate fee has been deposited in the authoriezed branch of any bank under the head of account "0230 Lab our and Employment (Provincial) -104 fees realized under Factories Act 1948".

(2) If an application for the grant, renewal or amendment of licence is rejected, the fee paid shall be refunded to the applicant.

Rule 14-A: [Framed U/S 6 of the Act] Prohibition running of a factory without a valid licence An occupier shall not use any premises as a factory or carry on any manufacturing process in a factory, unless a licence has been issued in respect of such premises and is force for the time being:

Provided that if a valid application for grant of a licence or renewal of a licence has been submitted and the required fee has been paid, the premises shall be deemed to be fully licensed until such date as the Chief Inspector or as the case may be, any other officer

appointed under sub section (2-A) of Section 8 of the Act and specially empowered in this behalf by the State

Government grants or renews the licence or refuses in writing, with reasons, to grant of renew licence.

Provided further that if the Chief Inspector or as the case may be, any other officer appointed under sub section (2-A) of Section 8 of the Act and specially empowered in this behalf by the State Government fails to grant or renew the licence or fails to refuse to do so, for reasons to be

communicated in writing, to the applicant, within sixty days from the date of the application, the licence shall be deemed to have been granted or renewed.

Rule 15: [Framed U/S 7(1) of the Act] Notice of occupation

The notice of occupation required to be given to the Chief Inspector under sub-section (1) of Section 7, shall be in

Rule 15-A: [Framed U/S 7(4) of the Act] Notice of change of Manager

The notice of charge of Manager referred to be given under sub-section (4) of Section 7 of the Act shall be in

Form No. 2-A.

Rule 15-B: [Framed U/S 7(4) of the Act] Guidelines, instructions and records

(1) Without prejudice to the general responsibility of the occupier to comply with the provisions of section 7-A, the Chief Inspector of Factories may, from time to time, issue guidelines and instructions regarding the general duties of the occupier relating to health, safety and welfare of all workers while they are at work in the factory.

(2) The occupier shall maintain such records, as may be specified by the Chief Inspector of Factories in respect of monitoring of working environment in the factory.

CHAPTER II
THE INSPECTING STAFF

Rule 16: [Framed U/S 9 of the Act] Qualifications of Inspector of Factories

No person shall be appointed as an Inspector of Factories for the purpose of the Act, unless he possesses the qualifications specified for an Inspector of Factories in the Punjab Labour (Class II) Service Rules, 1982 as amended from time to time.

Rule 16-A: [Framed U/S 9 of the Act] Powers of Inspectors

An Inspector shall, for the purpose of the execution of the powers assigned to him under the Act within the local limits of his jurisdiction have power to do all or any of the following things, that is to say-

(a) to photograph any worker, to inspect, examine, measure, copy, photograph, sketch or test, as the case may be, any building or room, any plant, machinery, appliance or apparatus any register or document or anything provided for the purpose of securing the health, safety or welfare of the worker employed in a factory;

(b) in the case of an Inspector who is a duly qualified medical practitioner, to carry out such medical examinations as may be necessary for the purposes of his duties under the Act

(c) to prosecute, conduct or defend before a Court any complaint or other proceeding arising under the Act or in discharge of his duties as an Inspector :
Provided that the powers of the district magistrates and such other public officers as are appointed to be Additional Inspectors shall be limited to the inspection of factories for the purposes notified under sub-section (5) of Section 8.

Rule 17: [Framed U/S 10 of the Act] Duties of Certifying Surgeon

(1) For purposes of the examination and certification of young persons who wish to obtain certificate of fitness, the Certifying Surgeon shall arrange a suitable time and place for the attendance of such persons, and shall give previous notice in writing of such arrangements to the managers of factories situated within the local limits assigned to him. He may also arrange where possible to get the women workers examined by a Lady Doctor.

Form No. 5. The foil and counterfoil shall be filled in and the left thumb mark of the person in whose name the certificate is granted shall be taken on them. On being satisfied as to the correctness of the entries made therein and of the fitness of the person examined, he shall sign the foil and initial the counter-foil and shall deliver the foil to the person in whose name the certificate of fitness granted under section 69 of the Act. All counterfoils shall be kept by the Certificate Surgeon for a period of at least 2 years after the issue of the certificate.

(b) On the request of an Inspector, Certifying Surgeon or medical practitioner authorised under Section 10(2) of the Act shall examine any person produced before him and issue certificate regarding his age and fitness.

No fee shall be charged for such examination or for the grant of certificate in pursuance thereof.

(c) A Certifying Surgeon revoking a certificate under sub-section (4) of Section 69 of the Act, shall stamp the work "Revoked" in red ink on the foil and counterfoil.

(d) If a Certifying Surgeon refuses to grant to any person a certificate under the rule, no fresh application for certificate shall be made on behalf of that person until a period of three months has elapsed, unless the Certifying Surgeon when he refuses to grant the certificate, gives permission in writing, for an application to be made at an earlier date.

(e) Every practitioner authorised under sub-section (2) of Section 10 of the Act to exercise provisionally the powers of a Certifying Surgeon shall grant certificates in the manner provided under this rule, Certificates issued by him shall be valid for a period of 6 months unless countersigned by the Certifying Surgeon. The word "Provisional" shall be printed or stamped in red ink at the top of each foil and counterfoil.

(f) When a person to whom a certificate under Section 62(2) has been granted loses such certificate, he may apply to the Certifying Surgeon for a copy of the certificate, and the Certifying Surgeon, after making such enquiry from his employer or if he is unemployed from his last employer and from such other sources as he deems fit, may grant a duplicate thereof. The word "Duplicate" shall be clearly written in red ink across such certificate and initialed by the Certifying Surgeon. The counterfoil in the bound book of forms shall be similarly marked "Duplicate" and initialed.

(g) For every copy of a certificate granted under clause (f) of this rule a fee of annas four which shall be credited to Government, shall be charged. The Certifying Surgeon shall maintain a register of all fees paid for this issue of copies of certificate and shall initial each entry made therein.

(h) No duplicate of a certificate granted under Section 69 of the Act shall be granted to any person otherwise than in accordance with the provisions of this rule.

(i) No child, adolescent or a young person shall be certified as fit to work in a factory unless he or she-

(i) is free from organic disease:

(ii) has a good physique;

(iii) is capable of enduring of the kind of work that has to be performed in the factory;

(iv) is mentally sound ; and

(v) is protected against small-pox by vaccination.

(j) The examination of children and adolescents under the Act shall be carried out by the Certifying Surgeon free of charge in cases where such examination is required either by the Factory Inspector or by the manager or occupier of the factory where the candidate concerned is either already employed or accepted for employment.

Provided that usual fees shall be charged from candidates brought for examination for purposes of the Act by the candidate's guardians or from candidates appearing on their own.

(3) The Certifying Surgeon shall, upon request by the Chief Inspector, carry out such examination and furnish him with such report as he may indicate, for any factory or class or description of factories where-

(a) cases of illness have occurred which is reasonable to believe are due to the nature of the manufacturing process carried on or other conditions of work prevailing therein, or

(b) by reason of any change in the manufacturing process carried on, or in the substances used therein, or by reason of the adoption of any new manufacturing process or of any new substance for use in a manufacturing process, there is likelihood of injury to the health of workers employed in that manufacturing process, or

(c) young person who are, or are about to be, employed in any work which is likely to cause injury to their health.

(4) For the purpose of the examination of persons employed in processes covered by the rules relating to dangerous operations, the Certifying Surgeon shall visit the factories within the local limits assigned to him at such intervals as are prescribed by the rules relating to such dangerous operations.

(5) At such visits, the Certifying Surgeon after examining a worker, shall issue a Certificate of Fitness in

Form No. 32 and the record of examination and re-examinations carried out shall be kept in custody of the Manager of the factory and the record of each examination carried out under sub-rules (1), including the nature and the results of the tests, shall also be entered by the Certifying Surgeon in a health register in Form No. 17.

(6) If the Certifying Surgeon finds as a result of his examination that any person employed in such process is no longer fit for medical reasons to work in that process, he shall suspend such person from working in that process, for such time as he may think fit and no person after suspension shall be employed in that process without the written sanction of the Certifying Surgeon in the Health Register.

(7) The manger of a factory shall afford to the Certifying Surgeon facilities to inspect any process
in which any person is employed or is likely to be employed.

(8) The manager of a factory shall provide for the purpose of any medical examination which the
Certifying Surgeon wishes to conduct at the factory (for his exclusive use on the occasion of an
examination) a room which shall be properly cleaned and adequately ventilated and lighted and
furnished with a screen, a table (with writing materials) and chairs.

CHAPTER III

HEALTH

Rule 18: [Framed U/S 11(1) of the Act] Record of white-washing, etc.

The record of dates on which whitewashing, colour-washing, varnishing, etc., are carried out
shall be entered in a register maintained in Form No. 7.

Rule 19: [Framed U/S 12(2) of the Act] Disposal of trade wastes and effluents

The arrangements made in every factory for the disposal of wastes and effluents due to the
manufacturing processes carried on therein shall be in accordance with those approved by the
Punjab State Board for the Prevention and Control of Water and Air Pollution constituted under
the Water (Prevention and Control of Pollution) Act, 1974 and the Air (Prevention and control of
Pollution) Act, 1981 and other appropriate authorities.

Rule 19-A: [Framed U/S 13(2) of the Act] Limits of temperature and air movements

In any factory the maximum wet-bulb temperature of air in a workroom at a height of 1.5 meter
(5 feet) above the floor level shall not exceed 30 degrees C (86 degrees F) and adequate air
movement of at least 30 meters per minute (100 feet per minute) shall be provided; and in
relation to dry bulb temperature the wet bulb temperature in the work-room at the said height

shall not exceed that shown in intermediate between the two dry bulb readings (that) specified in
relation to the higher of these two dry-bulb readings

SCHEDULE

Dry-bulb Temperature °C (°F)	Wet-bulb Temperature °C	(°F)
30	(86) 29.0	(84.2)
31 (87.8)	28.9	(84.0)
32 (89.6)	28,8	(83.8)
33 (91.4)	28.7	(83.6)
34 (93.2)	28.6	(83.5)
35	(95) 28.5	(83.4)
36 (96.8)	28.4	(83.2)
37 (98.6)	28.3	(83.0)
38	(100.4)	28.2 (82.7)
39	(102.2) 28.1	(82.6)
40	(104) 28.0	(82.5)
41	(105.8)	27.9 (82.3)
42	(107.6)	27.8 (82.1)
43	(109.4)	27.7 (81.9)
44	(111.2)	27.6 (81.7)
45	(113) 27.5 (81.5)	
46	(114.8)	27.4 (81,3)
47	(116.6) 27.3	*(81.1)*

Provided that if the temperature measured with a thermometer inserted in a hollow globe of 15 cm (6 in.) dia-coated mat block outside and kept in the environment for not less than 20 minutes exceeds the dry bulb temperature of air, the temperature so recorded by the globe thermometer shall be taken in place of the dry bulb temperature:

Provided further that when the reading of the wet-bulb temperature out-side in the shade exceeds 27 degree C (80.6 degree F) the value of the wet-bulb temperature allowed in

the schedule for a given dry-bulb temperature may be correspondingly exceeded to the same extent :

Provided further that this requirement shall not apply to the factories covered by section 15 and to factories where the nature of work carried on involves production of excessively high temperature referred to in clause (ii) of sub-section (1) of section 13 to which workers are exposed for short periods of time not exceeding one hour followed by an interval of sufficient duration in thermal environments not exceeding those otherwise laid down in this rule;

Provided further that the Chief Inspector, having due regard to the health of the workers, may in special and exceptional circumstances by an order in writing exempt any factory from the foregoing requirement, in so far as restricting the thermal conditions within the limits laid down in the Schedule are concerned, to the extent that he may consider necessary, subject to such conditions as he may specify.

Rule 19-A(2) Provision of Thermometers

(a) If it appears to the Inspector that in any factory, the temperature of air in a workroom is sufficiently high and is likely to exceed the limits prescribed in rule 19 A, he may serve on the manager of the factory an order requiring him to provide sufficient number of whirling hygrometers or any other type of hygrometers and direct that the dry-bulb and wet-bulb readings in each such a work-room shall be recorded at such positions as approved by the Inspector twice during each working shift by a person especially nominated for the purpose by the manager and approved by the Inspector.

(b) If the Inspector has reason to believe that a substantial amount of heat is added inside the environment of a work-room by radiation from walls, roof or other solid surroundings, he may serve on the manager of the factory an order requiring him to provide one or more globe thermometers referred to in the first proviso in rule 19-A and further requiring him to place the globe thermometers at places specified by him and keep a record of the temperatures in a suitable register.

Rule 19-A(3) Ventilation

(a) In every factory the amount a workroom below the eyes

shall, except where mechanical means of ventilation as required by sub-rule (2) are provided, be of an aggregate area of not less than 15 per cent of the floor area and so located as to afford a continued supply of fresh air:

Provided that the Chief Inspector may relax the requirements regarding the amount of ventilating openings if he is satisfied that having regard to the location of the factory, orientation of the workroom, prevailing winds, roofs height and the nature of manufacturing process carried on, sufficient supply of fresh air into the workroom is afforded during most part of the working time:

Provided further that these requirements shall not apply in respect of workrooms of factories:

(i) covered by section 15; or

(ii) in which temperature and humidity are controlled by refrigeration.

(b) Where in any factory, owing to special circumstances such a situation with respect to adjacent buildings and the height of the building with respect to floor space, the requirements of ventilation openings under sub-rule (1) cannot be complied with or in the opinion of the Inspector the temperature of air in a workroom is sufficient high and is likely to exceed the limits prescribed in rule 1 he may serve on the manager of the factory an order requiring him to provide additional ventilation either by means of roof ventilators or by mechanical means.

(c) The amount of fresh air supplied by mechanical means of ventilation in an hour shall be equivalent to at least six times the cubic capacity of the workroom and shall be distributed evenly throughout the work-room without air-pockets or undue draughts caused by high inlet velocities.

(d) In regions where in summer (15th March---15th July) dry-bulb temperatures of outside air in the shade during most part of the day exceed 35 degrees (95 degrees) and simultaneous wet bulb temperatures are 25 degrees (67 degrees) are below and in the opinion of the Inspector the manufacturing process carried on in the workroom of a factory permits thermal environments with relative humidity of 50 per cent or more the Inspector may serve on the manager of the factory an order to have sufficient supply of outside air for ventilation cooled by passing it through water sprays either by means of unit type of evaporative air coolers (desert coolers) or, where supply of outside air is provided by mechanical means through ducts in a plenum system by means of central air washing plants)

Rule 20: [Framed U/S 15 of the Act] When artificial humidification not allowed

There shall be no artificial humidification in any room of a cotton spinning or weaving factory -

(a) by the use of steam during any period when the dry bulb temperature of that room exceeds 85 degrees.

(b) at any time when the wet bulb reading of the hygrometer is higher than that specified in the

following Schedule annexed hereto in relation to the dry bulb reading of the hygrometer at the

time; or as regards a dry bulb reading intermediate between any two dry bulb readings indicated

consecutively in the Schedule when the dry bulb reading does not exceed the wet bulb reading

SCHEDULE

Dry bulb	Wet bulb	Dry bulb	Wet bulb	Dry bulb	Wet bulb
60.0	58.0	77.0	75.0	94.0	86.0
61.0	59.0	78.0	76.0	95.0	87.0
62.0	60.0	79.0	77.0	96.0	87 5
63.0	61.0	80.0	78.0	97.0	88.0
64.0	62.0	81.0	79.0	98.0	88.5
65.0	63.0	82.0	80.0	99.0	89.0
66.0	64.0	83.0	80.5	100.0	89.5
67.0	65.0	84.0	81.0	101.0	90.0
68.0	66.0	85.0	82.0	102.0	90.0
69.0	67.0	86.0	82.5	103.0	90.5
70.0	68.0	87.0	83.0	104.0	90.5
71.0	69.0	88.0	83.5	105.0	91.0
72.0	70.0	89.0	84.0	106.0	91.0
73.0	71.0	90.0	84.5	107.0	91.5
74.0	72.0	91.0	85.0	108.0	91.5
75.0	73.0	92.0	85.5	109.0	92.0
76.0	74.0	93.0	86.0	110.0	92.0

Provided, however, that clause (b) shall not apply when the difference between the wet bulb

temperature as indicated by the hygrometer in the department concerned and the wet bulb

temperature taken with a hygrometer outside in the shade is less than 3.5 degrees.

Rule 21: [Framed U/S 15 of the Act] Provision of Hygrometer

In all departments of cotton spinning and weaving mills wherein artificial humidification is

adopted, hygrometers shall be provided and maintained in such positions as are approved by

the Inspector. The number of hygrometer shall be regulated according to the following scale: ---

(a) Weaving Department - One hygrometer for departments with less than 500 looms, and one

additional hygrometer for every 500 or part of 500 looms in excess of 500.

(b) Other Departments - One hygrometer for departments with less than 8400 cubic meter

capacity and one extra hygrometer for each 5600 cubic meter or part thereof, in excess of this.

(c) One additional hygrometer shall be provided and maintained outside each cotton spinning

and weaving factory wherein artificial humidification is adopted and in a position approved by the

Inspector for taking hygrometer for each 5600 cubic meter or part thereof hygrometer shade readings.

Rule 22: [Framed U/S 15 of the Act] Exemption from maintenance of hygrometers When the Inspector is satisfied that the limits of humidity allowed by the Schedule to rule 21 are never exceeded, he may, for any department other than the weaving department, grant exemption from the maintenance of the hygrometer. The Inspector shall record such exemption in writing.

Rule 23: [Framed U/S 15 of the Act] Copy of Schedule to rule 18 to be affixed near every hygrometer

A legible copy of the schedule to Rule 18 shall be affixed near each hygrometer.

Rule 24: [Framed U/S 15 of the Act] Temperature to be recorded at each hygrometer at each hygrometer maintained in accordance with rule 22 correct wet and dry bulb

temperatures shall be recorded thrice daily during each working day by competent persons nominated by the manager and approved by the Inspector. The temperature shall be taken between 7a.m. and 9 a.m., between 11 a.m. and 2 p.m. (but not in the rest interval) and between 4 p.m. and 5.30 p.m. in exceptional circumstances, such additional readings and between such hours, as the Inspector may specify, shall be taken. The temperatures shall be entered in a Humidity Register in the prescribed

Form No. 6, maintained in the factory. At the end of each month, the persons who have taken the readings shall sign the register and certify the correctness of the entries. The register shall always be available for inspection by the Inspector.

Rule 25: [Framed U/S 15 of the Act] Specifications of hygrometer

(1) Each hygrometer shall comprise two mercurial thermometers of wet bulb and dry bulb of similar construction, and equal in dimensions, scale and divisions of scale. They shall be mounted on a frame with a suitable reservoir containing water.

(2) Two wet bulbs shall be closely covered with a single layer of muslin, kept by means of a wick attached to it and dropping into the water in the reservoir. The muslin covering and the wick shall be suitable for the purpose, clean and free from size of grease.

(3) No part of the wet bulb shall be within 7.62 cm. from the dry bulb or less than 2.54 cm. from the surface of the water in the reservoir and the water reservoir shall be below it, of the side of it away from the dry bulb.

(4) The bulb shall be spherical and of suitable dimensions and shall be freely exposed on all sides to the air of the room.

(5) The bores of the stems shall be such that the position of the top of the mercury column shall be readily distinguishable at a distance of 0.6 m.

(6) each thermometer shall be graduated so that accurate readings may be taken between 50 and 120 degrees.

(7) Every degree from 50 degrees up to 120 degrees shall be clearly marked by horizontal lines on the stem, each fifth and tenth degree shall be marked by longer marks than the intermediate degrees and the temperature marked opposite each tenth degree, i.e. 50, 60, 70, 80, 90, 100, 110 and 120.

(8) The markings as above shall be accurate, that is to say, at no temperature between 50 and 120 degrees shall be indicated readings be in error by more than two-tenths of a degree.

(9) A distinctive number shall be indelibly marked upon the thermometer.

(10) The accuracy of each thermometer shall be certified by the National Physical Laboratory, London, or some competent authority appointed by the Chief Inspector and such certificate shall be attached to the Humidity Register.

Rule 26: [Framed U/S 15 of the Act] Thermometers to be maintained in efficient order Each thermometer shall be maintained at all times during the period of employment in efficient working order so as to give accurate indications and in particular: -

(a) the wick and the muslin covering of the wet bulb shall be renewed once a week;

(b) the reservoir shall be filled with water which shall be completely renewed once a day. The Chief Inspector may direct the use of distilled water or pure rain water in any particular mill or mills in certain localities;

(c) no water shall be applied directly to the wick or covering during the period of employment.

Rule 27: [Framed U/S 15 of the Act] inaccurate thermometer not to be used without fresh certificate

If an Inspector gives notice in writing that a thermometer is not accurate it shall not,

after one month from the date of such notice, be deemed to be accurate unless and until it has been re- examined as prescribed and a fresh certificate obtained which certificate shall be kept attached to the Humidity Register.

Rule 28: [Framed U/S 15 of the Act] Hygrometer not to be affixed to wall, etc. unless protected by wood

(1) No hygrometer shall be affixed to a wall pillar, or other surface unless protected there from by wood or other non-conducting material at least half an inch in thickness and distant at least 2.5 cm from the bulb of each thermometer.

(2) No hygrometer shall be fixed at a height of more than 1.65 m from the floor to the top of thermometer stem or in the direct draughts from a fan, window, or ventilating opening.

Rule 29: [Framed U/S 15 of the Act] No reading to be taken within 15 minutes of renewal of water

No reading shall be taken for record on any hygrometer within 15 minutes of the renewal of water in the reservoir.

Rule 30: [Framed U/S 15 of the Act] How to introduce steam for humidification In any room in which stem pipes are used for the introduction of steam for the purpose of artificial humidification of the air, the following provisions shall apply

(a) The diameter of such pipe shall not exceed two inches and in the case of pipes are installed after 1st day of January, 1949, the diameter shall not exceed 2.5 centimeter.

(b) Such pipes shall be as short as is reasonably practicable.

(c) All hangers supporting such pipes shall be separated from the bare pipes by an efficient insulator not less than (12 mm) in thickness.

(d) No uncovered jet from such pipe shall project more than (11.25 cm) beyond the outer surface of any cover.

(e) The steam pressure shall be as low as practicable and shall not exceed 4.9 kg. per square centimeter.

(f) The pipe employed for the introduction of steam into the air in a department shall be effectively covered with such non-conducting material, as may be approved by the Inspector in order to minimise, the amount of heat radiated by them into the department.

Rule 31: [Framed U/S 17(4) of the Act] Lighting-Application and commencement (omitted)

Rule 32: [Framed U/S 17(4) of the Act] Lighting of interior parts

(1) The general illumination over these interior parts of a factory where persons are regularly employed shall be not less than (150 lux) measured in the horizontal plane at a level of 90 cm.

above the floor:

Provided that in any such parts in which the mounting height of the light source for general illumination necessarily exceeds 7.5 m. measured from the floor or where the structure of the room or the position or construction of the fixed machinery or plant prevents the uniform attainment of this standard, the general illumination at the said level shall be not less than 50 lux and where work is actually being done the illumination shall be not less than 150 lux.

(2) The illumination over all other interior parts of the factory over which persons employed pass shall when and where a person is passing, be not less than 25 lux at floor level.

(3) The standard specified in this rule shall be without prejudice to the provision of any additional illumination required to render the lighting sufficient and suitable for the nature of the work.

Rule 33: [Framed U/S 17(4) of the Act] Prevention of glare

(1) Where any source of artificial light in the factory is less than 480 cm above floor level, no part of the light source or of the lighting fitting having a brightness greater than 10 candles per square centimeter shall be visible to persons whilst normally employed within 33 meter of the source or

part of the fitting as the case may be exceeds 20 degrees.

(2) Any local light, that is to say, an artificial light designed to illuminate particularly the area or part of the area of work of a single operative or small group of operatives working near each other, shall be provided with a suitable shade of opaque material to prevent glare or with other effective means by which the light source is completely screened from the eyes of every person employed at a normal working place, or shall be so placed that no such person is exposed to glare there from.

Rule 34: [Framed U/S 17(4) of the Act] Power of Chief Inspector to exempt

Where the Chief Inspector is satisfied in respect of any particular factory or part thereof or in respect of any description of workroom or process that any requirement of the foregoing rules for suitable lighting is inappropriate or is not reasonably practicable, he may be order in writing, exempt the factory or part thereof, or description or workroom or process from such requirement to such extent and subject to such conditions as he may specify.

Rule 35: [Framed U/S 17(4) of the Act] Exemption from rule 33 (Omitted)

Rule 36: [Framed U/S 18(4) of the Act] Quantity of drinking water

The quantity of drinking water to be provided for the workers in every factory shall be a minimum of 5 litres per worker per day and shall be readily available at all times during working hours. The Chief Inspector may, however, allow variation in the quantity of drinking water if local conditions so warrant.

Rule 37: [Framed U/S 18(4) of the Act] Source of supply

The water provided for drinking shall be supplied ---
(a) from the taps connected with a public water supply system; or (b) from any other source approved in writing by the Health Officer.

Rule 38: [Framed U/S 18(4) of the Act] Means of supply

If drinking water is not supplied directly from public water supply system or water supply system of the factory approved by the Health Officer, it shall be kept in suitable vessels, receptacles or tanks fitted with taps and having dust proof covers placed on raised stands or platforms in shade and having suitable arrangement of drainage to carry away the spilt water. Such vessels or receptacles and tanks shall be kept clean and the water shall be replaced at least once every day. All practicable measures shall be taken to ensure that the water is not contaminated.

Rule 39: [Framed U/S 18(4) of the Act] Cleanliness of well or reservoir

(1) Drinking water shall not be supplied from any open well or reservoir unless it is so constructed, situated, protected and maintained as to be free from the possibility of pollution by chemical or bacterial and extraneous impurities.

(2) Where drinking water is supplied from such well or reservoir the water in it shall be sterilized once a week or more frequently if the Inspector, by written order, so requires, and the date of

which sterilizing is carried out shall be recorded:

Provided that this requirement shall not apply to any such well or reservoir if the water therein is filtered and treated to the satisfaction of the Health Officer before it is supplied for consumption.

Rule 40: [Framed U/S 18(4) of the Act] Report from Health Officer

The Inspector may be order in writing, direct the Manager to obtain, at such time or at such intervals as he may direct, a report from the Health Officer as to the fitness for human

consumption of the water supplied to the workers, and in every case to submit to the Inspector a copy of such report as soon as it is received from the Health Officer.

Rule 41: [Framed U/S 18(4) of the Act] Cooling of water

In every factory wherein more than two hundred and fifty workers are ordinarily employed: ---

(a) the drinking water supplied to the workers shall from the 1st May to the 30th September in every year be cooled, so that the temperature of drinking water is below 80 degrees F:

Provided that, if ice is placed in the drinking water, the ice shall be clean and wholesome and shall be obtained only from a source approved in writing by the Health Officer;

(b) the cooled drinking water shall be supplied in every canteen, lunch-room and rest-room and also at conveniently accessible points throughout the factory which for the purpose of these rules shall be called "Water Centres";

(c) the water centres shall be sheltered from the weather and adequately drained;

(d) the number of water centres to be provided shall be one "centre" for every 150 persons employed at any one time in the factory:

Provided that in the case of a factory where the number of persons employed exceeds 500, it shall be sufficient if there is one such "centre" as aforesaid for every 150 persons upto the first 500 and one for every 500 persons thereafter;

Provided further that the distance between the place of work and the water centre shall not be more than fifty metres or the distance as may be specified by the Inspector; and

(e) every "water centre" shall be maintained in a clean and orderly condition.

(f) the means of supply of cold drinking water shall be either directly through taps connected to water coolers or any other system for cooling the water, or by means of vessels, receptacles or tanks fitted with taps and having dust proof covers and placed on raised stand or platform in shade, and having suitable arrangement of drainage to carry away the spilt water and the vessels, receptacles or tanks shall be kept clean and water shall be replaced at least once everyday.

Clause (f) shall not apply to any factory in which suitable mechanically-operated drinking water refrigerating units are installed to the satisfaction of the Chief Inspector.

Rule 42: [Framed U/S 19(3) of the Act] Latrine Accommodation
Latrine accommodation shall be provided in every factory on the following scale:--

(a) Where females are employed, there shall be at least one latrine seat for every 25 females.

(b) Where males are employed, there shall be at least one latrine seat for every 25 males; provided that, where the number of males employed exceeds 100, it shall be sufficient if there is one latrine for every 25 males up to the first 100 and one for every 50 thereafter.

In calculating the number of latrines required under this rule, any odd number of workers less than 25 or 50, as the case may be, shall be reckoned as 25 or 50 and the number of workers to be considered shall be maximum number employed at any time during the day.

Rule 43: [Framed U/S 19(3) of the Act] Latrines to conform to public health requirements Latrines other than those connected with an efficient water-borne sewerage system shall comply with the standard laid down by the Public Health Authorities with respect of the designs, air- space and fixations, and use of disinfectants.

Rule 44: [Framed U/S 19(3) of the Act] Privacy of latrines
Every latrine shall be under cover and to partitioned off as to secure privacy, and shall have a proper door and of the design approved by the Chief Inspector.

Rule 45: [Framed U/S 19(3) of the Act] Signboards to be displayed
Where workers of both sexes are employed there shall be displayed outside each latrine-block a notice in the language understood by the majority of the workers 'For Men only" or "For Women only", as the case may be. The notice shall also bear the figure of a man or of a woman, as the case may be.

Rule 46: [Framed U/S 19(3) of the Act] Urinal accommodation
(1) Urinal accommodation shall be provided for the use of workers and shall not be less than 0.6 metre in length for every 50 males; provided that, where the number of males employed exceeds 500, it shall be sufficient if there is one urinal for every 50 males upto the first 500 employed and one for every 100 thereafter.

Where women are employed, separate urinal accommodation shall be provided for them on the same scale as mentioned above.

In calculating the urinal accommodation required under this rule any odd number of workers less than 50 or 100, as the case may be, shall be reckoned as 50 or 100 and the number of workers to be considered shall be the maximum number employed at any time during the day.

Rule 47: [Framed U/S 19(3) of the Act] Urinals to conform to public health requirements Urinals, other than those connected with an efficient water-borne sewerage system, and urinals in a factory wherein more than two hundred and fifty workers are ordinarily employed, shall

comply with the standard laid down by the Public Health Authorities with respect to designs, and use of water and disinfectants for flushings.

Rule 48: [Framed U/S 19(3) of the Act] Certain latrines and urinals to be connected to sewage system

(a) When any general system of underground sewerage with an assured water-supply for any particular locality is provided in a municipality all latrines and urinals of factory situated in such locality shall, if the factory is situated within 33 metres of an existing sewer, be connected with that Sewerage system.

(b) When no underground sewerage system exists, the design of latrines and urinals will take into account the problem of disposal either by way of sewerage pits or by sanitary receptacles contents of which can be disposed of without causing any insanitary of unhygienic condition in the locality.

Rule 49: [Framed U/S 19(3) of the Act] White-washing and colour washing of latrines and urinals

The walls, ceilings and partitions of every latrine and urinal shall be white-washed and the whitewashing shall be repeated at least once in every period of four months. The dates on which the white-washing is carried out shall be entered in the prescribed register

Form No. 7.

Provided that this rule shall not apply to latrines and urinals, the walls, ceiling, or partitions of which are laid in glazed tiles or otherwise finished to provide a smooth polished impervious surface and that they are washed with suitable detergents and disinfectants at least once in every period of four months.

Rule 50: [Framed U/S 19(3) of the Act] Construction and maintenance of drains

All drains carrying waste or sullage water shall be constructed with impermeable materials suitably surfaced to ensure smoothness and resistance to wearing away and shall be regularly flushed and the effluent disposed of by connecting such draining with a suitable drainage line without causing in sanitary or unhygienic condition in the locality.

Provided that where there is no such drainage line the effluent shall be deodorized and rendered innocuous and then disposed of in suitable manner to the satisfaction of the Health Officer.

Rule 51: [Framed U/S 19(3) of the Act] Water taps in latrines

where piped water-supply is available a sufficient number of water taps conveniently accessible shall be provided in or near such latrine accommodation.

(2) If piped water supply is not available, sufficient quantity of water shall be kept stored in suitable receptacles near the latrines.

Rule 52: [Framed U/S 20(3) of the Act] Number and location of spittoons

The spittoons in each factory shall be located in a manner that would not violate with sanitary requirements and their number will be according to such standard laid down for the locality and nature of industry as the Health Officer may determine for each factory.

Rule 53: [Framed U/S 20(2) of the Act] Type of spittoons

The spittoons shall be of the approved designs and either of the following types-:

(a) a galvanized iron container with a conical funnel-shaped cover, A layer of suitable disinfectant liquid shall always be maintained in the container;

(b) a container filled with dry, clean sand and covered with a layer of suitable thickness of lime or bleaching powder;

(c) any other type approved by Health Officer.

Rule 54: [Framed U/S 20(2) of the Act] Cleaning of spittoons

The spittoons mentioned in clause (a) of rule 53 shall be emptied, cleaned and disinfected at least once every day, and the spittoon mentioned in clause (b) of rule 53 shall be cleaned by scrapping out the top layer of sand as often as necessary or at least once every day.

CHAPTER-IV

SAFETY

Rule 55: [Framed U/S 21(2) of the Act] Further safety precautions

(1) Without prejudice to the provisions of sub-section (1) of section 21 in regard to the fencing of machines, the further precautions specified in Schedules I to VIII annexed thereto shall apply to the machines noted in each Schedule.

SCHEDULE I

(Textile machinery except machinery use in Jute Mills)

1. Application: - This Schedule shall apply to the machinery in factories engaged in manufacturing or processing of textiles other than jute textiles excluding the machinery in factories engaged exclusively in the manufacture of synthetic fibres.

2. Definitions;-For the purposes of this Schedule.

(a) "Calender" means a set of heavy roller mounted on vertical side frames and arranged to pass cloth between them which may have two to ten rollers or bowls some of which may be heated:

(b) "Card" means a machine consisting of cylinders various sizes and includes flats. covered with card clothing and set in relation to each so that fibres in ; staple form may be Separated into individual relationship

(c) "Card clothing" means the material with which the surfaces of the cylinder, Doffer flats, etc. of a card are covered and consists of a thick foundation material made of either textile fabrics, through which many fine closely spaced specially bent wires or mounted saw toothed wires are passed;

(d) "Comber" means a machine for combing fibres of cotton. wool etc. the essential parts whereof are device for feeding forward a fringe of fibres at regular intervals and an arrangement of combs or pins, which at the right time, pass through the fringe and by which tangled fibres. Short fibres, and nips are removed and the long fibres are laid parallel;

(e) "Combing machinery" means a general classification of machinery, including combers, silver lap machines. Ribbon lap machines and gill boxes,but excluding cards;

(f) "Continuous bleaching range" means a machine used for bleaching of cloth in rope or open-width form;

Explanation: (1) The cloth after wetting out, passes through a squeeze roll into a saturator, containing a solution of caustic soda and then to an enclosed J. Box. A V-shaped arrangement is attached to the front part of J. Box uniform and rapid saturation of the cloth, with steam before it is packed down in the J. Box; the cloth, in a single strand rope form passes over a guide roll down the first arm of the "V" at the upper end of the second arm so that the cloth is rapidly saturated with steam at this point; the J. Box capacity is such that cloth wiII remain hot for a sufficient time to complete the scouring action; it then passes through a series of washers with a squeeze roll in between; the cloth then passes through a second set of saturator, J-Box and washer, where it is treated with the peroxide solution;

Explanation :-(2) by slight modification of the form of the unit, the same process as is explained in Explanation (1), can be applied to open-width cloth;

(g) "embossing calender" means a calender with two or more rolls, one of which is engaged for producing figure effects of various kinds on a fabric;

(h) "granett machine" means any number of types of machines for opening hard twisted waste of wool, cotton, silk, etc., essentially consisting of a locker- in-one or more cylinders each having a complement worker and stringer rolls, and a fency roll and doffer.

Explanation: - The action of such machines is some what like that of a wool card, but it is much more severe in that the various rolls are covered with granett wire instead of card clothing;

(i) "gill box" means a machine used in the worsted system of manufacturing yarns which functions to arrange it in a parallel order and essentially, it consists of a pair of feed rolls and a series of follow ove at a faster surface speed and

perform as combine action;

0) "in-running rolls" means any pair of rolls or drums between which there is a 'nip';

(k) "Inter-locking arrangement" means a device that prevents the setting in motion of a dangerous part of a machine or the machine itself while the guard, cover or door provided to safe- guard against danger is open or un-locked, and which will also hold the guard, cover or door closed and locked- while the machine or the dangerous part thereof is in motion;

(I) "Kier" means large metal vat, usually .a pressure type in which fabrics may be boiled out, bleached etc.

(m) "loom" means a machine for effecting the interlocking of two series of yarns crossing one another at right angles by which the warp yarns are wound on a warp beam and pass through headless and reads and the filling is shot across in a shuttle and settled in place by read and slay, and the fabric is wound on a cloth beam;

(n) "mule" means a type of spinning frame having a head stock and a carriage as its two main sections, the head stock is stationery and the carriage is movable and its carries the spindles which draft and spin the roving into yarn and extends over the whole of the machine, moves slowly toward and away from the head stock during the spinning operation;

(0) "mercerizing range" means a 3-bowl mangle, a tenter frame, and a number of boxes for washing and scouring, the whole set up where of is in a straight line and all parts operate continuously;

Note :-The combination is used to saturate the cloth with sodium hydroxide, stretch it while saturated and washing out most of the caustic before releasing tension;

(p) 'Nip" means the danger zone between two rolls or drums, which by virtue of their positioning and movement create a nipping hazard;

(q) "Openers and pickers" means a general classification of machinery, which includes breaker pickers, intermediate pickers, finisher pickers, single process pickers, willow machines, card and picker waste cleaners, thread extractors shredding machines, roving waste openers, shoddy pickers, bale breakers, feeders, vertical openers, lattice cleaners horizontal cleaners and any similar machinery equipped with either cylinders, screen section calender section, rollers or beaters used for the preparation of stock for further processing;

(r) "paddler" means a trough for a solution and two or more squeeze rolls between which cloth passes after being passed through a mordent or dye bath;

(s) "Plating machine" means a machine used to lay cloth into folds of regular length for convenience of subsequent process or use;

(t) "ribbon lapper" means a machine or a part of a machine used to prepare laps for feeding a cotton comb the purpose of which is to provide a uniform lap in which the fibers have been straightened as much as possible;

(u) "rotary staple cutter" means a machine consisting of one or more rotary blades used for the purpose of cutting textile fibres into staple lengths;

(v) "roller printing machine" means a machine used for printing fabrics and consisting of a large central cylinder, or pressure bowl around the lower part of the perimeter of which is placed a series of engraved color rollers (each having a color trough), a furnisher roller, doctor blades, etc.;

(w) "silver lapper" means a machine or a part of a machine in which a number of parallel card silvers side bye side in a compact sheet

and wound into a cylindrical package;

(x) "starch mangle" means a mangle which is use specifically for starching cotton goods, and generally consists of two large rolls and a shallow open vat with several immersion rolls;

(y) "sanforizing machine" means a machine consisting of a large steam-heated cylinder and endless, thick woollen felt blanket which is in close contact with the cylinder for most of its perimeter and an electrically heated shoe which presses the cloth against the blanket while the later is in a stretched condition as it curves around feed-in roll;

(z) "shearing machine" means a machine used for shearing cloth in which cutting action is provided by a number of steel blades spirally mounted on a roller which rotates in close contact with a fixed edge blade.

(aa) "singeing machine" means a machine which comprises of a heated roller a plate, or an open gas flame by which the cloth or yarn is rapidly passed over the roller or the plate or through the open gas flame to remove fuzz of hairiness by burning;

(ab) "slasher" means a machine used for applying a size mixture to warp yarns which essentially consists of a stand for holding section beams a size box, one or more cylindrical dryers or an enclosed hot air dryer, and a beaming end for winding the yarn on the loom beams;

(ac) "tenter frame" means a machine for drying cloth under tension which essentially consists of a pair of endless traveling chains fitted with clips of fine pins and carried on tracks and the cloth is firmly held at the selvages by the two chains which diverge as they move forward so that the cloth is brought to the desired width;

(ad) "warper" means a machine for preparing and arranging the yarn intended for the warp of fabric, specifically a beam warper; and

(ae) "Water mangle" means a calender having two or more rolls used for squeezing water form fabrics before drying or for the finishing of various fabrics.

3. General safety requirements;-

(1) Every textile machine shall be provided with individual mechanical or electrical means for starting and stopping such machines and the belt shifter on machines driven by belts and shafting should be provided with a belt shifter lock or an equivalent positive locking device.

(2) Stopping and starting handles or other controls shall be of such design and so positioned as to prevent the operator's hand or fingers from striking against any moving part or any other part of the machine.

(3) All belts, pulleys, gears, chains, sprockets wheel and other dangerous moving parts of machinery which either form part of the machinery or are used in association with it, shall be securely guarded.

4. Openers and pickers ;-(1) In all operating or picker machinery;-

(i) Beaters and other dangerous parts shall be securely fenced by guards so as to prevent contact with them; and

(ii) Guards and doors or covers of openings giving access to any dangerous part of the machinery shall be provided with inter-locking arrangement:

Provided that in the case of doors or covers of openings giving access to any dangerous part, other than beater covers, instead of the inter, locking arrangement. such openings may be so fenced by guards which prevent access to any such dangerous part and which is either kept positively locked in position or fixed in such a manner that it cannot t the use of hand tools.

(2) The feed rolls on all opening and picking machinery shall be covered with a guard designed to prevent the Operator from reaching the nip while the machinery is in operation.

forming rollers shall be fitted with a guard or cover which shall prevent access to the nip at the intake of the lap roller and fluted roller as long as the weighted rack is down and the guard or cover shall be so locked that it cannot be raised until the machine is stopped, and machine cannot be started until the Cover of guard is closed:

Provided that the foregoing provision shall not apply to the machines equipped with automatic lap forming devices:

Provided further that any such machine equipped with automatic lap forming device shall not be used unless the automatic lap forming device is in efficient working order.

5. Cotton Cards.-(1) all cylinder doors shall be secured by an interlocking arrangement which shall prevent the door being opened until the cylinder has ceased to revolve and shall render it impossible to restart the machine until the door has been closed:

Provided that the latter requirement in respect of the automatic locking device shall not apply while stripping or grinding operations are carried out:

Provided further that stripping or grinding operation shall be carried out only by specially trained adult workers wearing tight "fitting clothing, whose names have been recorded in the register specified in sub-section (1) of section 22 of the Act.

(2) The licker-in shall be guarded so as to prevent access to the dangerous parts.

(3) Every card shall be equipped with an arrangement that would enable the card cylinder to be driven by power during stripping or grinding operations without having to either shift the main belt to the fast pulley of the machine or dismantle the interlocking mechanism and such an arrangement shall be used only for strip or grinding operations.

6. Garnett Machines. (1) Garnett licker-ins shall be enclosed and the garnett fancy rolls shall be enclosed by guards and shall be installed in a way that keeps work rolls reasonably accessible for removal or adjustment.

(2) The underside of the garnett shall be guarded by a screen mess or other form of enclosures to prevent access.

7. Gill boxes.-(1) The feed and shall be guarded so as to prevent fingers being caught in the pins of the intersecting fillers.

(2) All nips of in-running rolls shall be guarded by Suitable nip guards conforming to the following specifications.

Any opening which the guard may permit when fitted in position shall be so restricted with respect to the distance of the opening from any nip point through that opening from any nip point through that the maximum width of the opening shall not exceed the following :-

Distance of opening from nip point	Maximum width of opening
0 to 38 mm	6 mm
39 to 63 mm	10 mm
64 to 88 mm	13 mm
89 to 140 mm	15 mm
141 to 165 mm	19 mm
166 to 190 mm	22 mm
191 to 215 mrn	32 mm

8. Silver aid ribbon lappers (cotton). - The cylinder drums and the laps pool

shall be provided with a guard to prevent access to the nip between the in-running rolls.

9. Speed frame Jack Box wheels at the head stock shall band guard shall have interlocking arrangement.

10. Spinning Mules.-Wheels on spinning mule carriages shall be provided with substantial wheel guards, extending to within 6 mm of the rails.

11. Warpers.-Swiveled double-bar gates shall be installed on all warpers operating in excess of 410 meters minimum and shall have interlocking arrangements, except for the purpose of inching or jogging.

Provided that top and bottom bars of gates shall be at least 1.05 and 0.53 meters high from the floor or working plate form, and gate shall be locked 38 mm from vertical tangement to the bean head.

12 Slashers: - (1) Cylinder dryers :-(a) All open nips of in running rolls shall be guarded by nip guards conforming to the requirements in clause 7.

(b) When slashers are operated by control levers, these levers shall be connected to a horizontal bar or treadle located not more than 170mm above the floor to control the operation from any point.

(c) Slashers operated by such button control shall have stop and start buttons located at each end of the machine, and additional buttons located on both sides of the machine at the size box and the delivery end and if calender rolls are used, additional buttons shall be provided at both sides of machines at points near the nips, except when slashers are equipped with an enclosed dryer as in such clause (b).

2 Enclosed hot air dryer –

(a) All open nips of the top squeezing rollers shall be guarded by nip guards conforming to the requirement specified in sub-clause (2) of clause 7.

(b) When slashers are operated by control layers, these levers shall be connected to a horizontal bar or treadle located not more than 170 cm. above the floor to control the operation from any point.

(c) Slashers operated by push-button control shall have stop and start buttons located at each end of the machine and additional stop and start buttons located on both sides of the machine at intervals spaced not more than 1.83 meters on centers.

13 Looms –

(a) Each loom shall be equipped with suitable guards designed to minimize the danger from flying shuttles.

(b) Beam weights for tension in beam shall be of such construction so as prevent it from falling during its adjustment.

14 Valves of Kiers, tanks, and other containers. –

(a) Each valve controlling the flow of steam injurious gases or liquids into a kier or any other tank or container into which a person is likely to enter in connection with a process, operation, maintenance or for any other purpose, shall be provided with a suitable lock the valve securely in

the tank closed position and retain the key with him before entering the kier or container.

(b) Wherever boiling tanks, caustic tanks and any other containers from which liquids, which are hot, corrosive or toxic, may overflow or splash, are so located that the operator cannot see the contents from the floor or working areas, emergency shut off valves which can be controlled from a point not subject to danger of splash shall be provided to prevent danger.

15. **Shearing machines: -** All revolving blades on shearing machines shall be guarded so that the opening between the cloth surface and the bottom of the guard will not exceed 10 mm.

16. **Continuous bleaching range (cotton and rayon):-** The nip of all in running rolls on open-width bleaching machine rolls shall be protected with a guard to prevent the worker from being caught at the nip and the guard shall extend across the entire length of the nip.

17 Mercerizing range (piece goods) :-

(1) A stopping device shall be provided at each end of the machine.

(2) A guard shall be provided at each end of the frame between the in-running chain and the clip opener.

(3) A nip guard shall be provided for the in-running rolls of the mangle and

washers and the guard shall conform to the requirements specified in sub-clause (2) of clause 7.

18 Tenter frames:-

(1) A stopping device shall be provided at each end of the machine.

(2) A guard shall be provided at each end of the machine frame at the in-running chain and clip opener.

19 Paddlers. –

(1) Suitable nip guards conforming to the requirements specified in sub clause (2) of clause 7 shall be provided to all dangerous in-running rolls.

20 Centrifugal extractors. –

(1) Each extractor shall be provided with a guard for the basket, and the guard shall have interlocking arrangement.

(2) Each extractor shall be equipped with a mechanically or electrically operated brake to quickly stop the basket when the power driving the

basket is shut off.

21. **Squeezer of wringer extractor, water mangle, starch mangle, back washer (worsted yarn) crabbing machines and decanting machine: -** All in-running rolls shall be guarded with nip guards conforming to the requirements specified in sub-clause (2) of clause 7.

22 Sanforizing and palmer machine: - (i) Nip guards shall be provided on all accessible in-running rolls and these shall conform to the requirements specified in sub-clause (2) of clause 7.

(ii) Access from the sides to the nips of running rolls should be fenced by suitable side guards.

(iii) A safety trip rod, cable or wire center cord shall be provided across the front and back of all palmer cylinders extending the length of the face of the cylinder, which operate readily whether pushed or pulled and the safety trip shall not be more than 170 cm. above the level at which the operation stands and shall be readily accessible.

23 Rope washers:- (1) Splash guards shall be installed in all rope washers unless the machine is so designed as to prevent the water or liquid from splashing the operator, the floor or working surface.

(2) A safety trip rod, cable or wire centre cord shall be provided across the front and back of all rope was hers extending the length of the face of the washer which shall operate readily whether pushed or pulled and the safety trip shall be not more than 170 cm. above the level on which the operator stands and shall be readily accessible.

24 Laundry washer tumbler or shaker:

(1) Each drying tumbler, each double cylinder shaker or clothes tumbler, and each washing machine shall be equipped with an interlocking arrangement which will prevent the power operation of the inside cylinder when the outer door on the case or shall is open, and which will also prevent the outer door in the case or shall from being opened without shutting off the power and the cylinder coming to a stop but which should not prevent the movement of the inner-cylinder by means of a hand operated mechanism or an inching device.

(2) Each closed barrel shall also be equipped with adequate means for holding open the doors or covers of the inner and outer cylinders, of shells while it is being loaded or unloaded.

25. **Printing machine (roller type) -**

(1) All in-running rolls shall be guarded by nip guards conforming to the requirements specified in sub-clause(2) of clause 7

(2) The engraved roller gears and the large crown wheel shall be guarded.

26. **Calendars –**The Nip at the in-running side of the rolls shall be provided with a guard extending across the entire length of the nip and arranged to prevent the fingers of the workers from being pulled in between the rolls or between the guard and the rolls, and so contracted that the cloth can be fed into the rolls safely.

27. **Rotary staple cutters: -** The cutter shall be protected by a guard to prevent hands reaching the cutting zone.

28. **Plating machines.** Access to the trap between the knife and card bar shall be prevented by a guard.

29. **Hand baling machine. -**An angle iron handle-stop guard shall be installed at right angle to the frame of the machine, the stop guard of which shall be so designed and so located that it will prevent the handle from traveling beyond the vertical position should be handle slips from the operator's hand when the pawl has been released from the teeth of the take-up gear.

30 **Flat-Work ironer.-** Each flat-work or coller ironer shall be equipped with a safety bar or other guard across the entire from of the feed or first pressure rolls, so arranged that the striking of the bar or guard by the hand of the operator or other person will stop the machine. The guard shall be such that the operator or other person cannot reach into the rolls without removing the guard. This may be either a vertical guard on all sides or a complete cover. If a vertical guard is used, the distance from the floor or working platform to the top of guard shall not be less than 1.83 meters."

SCHEDUL E II (Cotton Ginning)

Line shaft: - The line shaft or second motion in cotton ginning factories, when below floor level shall be completely enclosed by a continuous wall or unclimbale fencing with only so many openings as are necessary for access to the shaft for removing cotton seed, cleaning and oiling and such openings shall be provided with gates or doors which, shall be kept closed and locked.

SCHEDULE III
(Woodworking Machinery)

1. ***Definitions: -***For the purposes of this Schedule:-

a) Woodworking machine means a circular saw, band saw, planning machine, chain mortising machine or vertical spindle moulding machine, operating on wood or cork.

b) Circular saw means a circular saw working in a bench (including rack bench) but does not include a pendulum or similar saw which is moved towards the wood for the purpose of cutting operation.

c) Band saw means a band saw, the cutting portion of which runs in vertical direction but does not include a log saw or band resaving machine.

d) Planning machine means a machine for overhand planning or thicknessing or for both operations.

2 **Stopping and starting device**: - An efficient stopping and starting device shall be provided on every woodworking machine. The control of this device shall be in such a position as to be readily and conveniently operated by the person in charge of the machine.

3 **Space around machine**: - The space surrounding every woodworking machine in motion shall be kept free from obstruction.

4 Floors:- the floor surrounding every woodworking machine shall be maintained

in good and level condition, and shall not be allowed to become slippery, and as far as practicable shall be kept free from chips or other loose material,

5 Training and Supervision:-

(1) No person shall be employed at a woodworking machine unless he has been sufficiently trained to under the adequate supervision of a person who has a thorough knowledge of the working of the machine.

(2) A person who is being, trained to work woodworking machine shall be fully and carefully and the precautions to be observed to secure safe working of the machine.

6. ***Circular Saws: -*** Every circular saw shall be fenced as follows:-

(A) Behind and in direct line with the saw there shall be a riving knife, which shall have a smooth

Surface, shall be strong, rigid and easily adjustable and shall also conform to the following conditions:-

(i) The edge of the knife nearer the saw shall form as are of a circle having a radius of not exceeding the radius of largest saw used on bench.

(ii) The Knife shall be maintained as close as practicable to the saw, having regard to the nature of t e time and at the level of

the bench table the distance between the front edge of the knife and the teeth of the saw shall not exceed 12 mm.

(iii) For a saw of a diameter of less than 0.6 meter, the knife extend upwards from the bench t able to within 25 mm3 of the top of the saw, and for a saw of a diameter of 0.6 meter or over shall extend upwards from the bench teeth of the saw shall not exceed 12 mm.

(B) The top of the saw shall be covered by a strong and easily adjustable guard with a flange at the side of the saw farthest from the fence. The guard shall be kept so adjusted that the said flange shall extend below the roots of the teeth of the saw. The guard shall extend from the top of the riving knife to a point as low as practicable at the cutting edge of the saw.

(C) The part of the saw below the bench table shall be protected by two plates of metal or other Suitable material one on each side of the saw; such plates shall not be more than 15 cm apart, and shall

extend from the axis of the outwards to a distance of not less then.5cm. Beyond the teeth of the saw- Metal plates, if not headed, shall be of a thickness of at least .25 cm. or if headed be of a thickness of at least.125 centimeters'i.

7. Push Sticks: - A push stick or other suitable appliance shall be provided for use at every circular saw and at every vertical spindle molding machine to enable the work to be done without unnecessary risk.

8. Band Saws: - Every band saw shall be guarded as follows:-

- Both sides of the bottom pulley shall be completely encased by sheet or expanded metal or other suitable material.
- The front of the top pulley shall be covered with sheet or expanded metal or other suitable material.
- All portions of the blade shall be enclosed or otherwise securey guarded except the portion of the blade between the bench table and the top- guide.

9. Planning Machines-

(I) a planning machine (other than a planning machine which is mechanically fed) shall not be used for overhand planning unless it is fitted with a cylindrical cutter block.

(II) Every planning machine used for over hand planning shall be provided with a "bride" guard capable of covering the full length and breadth of the cutting slot in the bench, and so constructed as to be easily adjusted both in a vertical and horizontal director.

(III) The feed roller of every planting machine used for thiknessing except the combined machine for overhand planning and thiknessing, shall be provided with an

efficient guard.

10. Vertical spindle moulding machines:-

 The cutter of every vertical spindle moulding machine shall be guarded by the most efficient guard having regard to the nature of the work being performed.

 The wood being moulded at vertical spindle moulding shall. If practicable be held in a jig or holder of such construction as to reduce as for as possible the risk of accident to the worker.

11. Chain mortising machines: -The chain of every chain mortising machine shall be provided with a guard which shall enclose the cutters as far as practicable.

12. Adjustment and maintenance of guards. The guards and other appliances required under this Schedule shall be:-
maintained in an efficient state.

Constantly kept in position while the machinery in motion, and
So adjusted as to enable the work to be done without unnecessary risk.

13. Exemption:- Paragraphs 6,8,9, and 10 shall not apply to an woodworking machine in respect of which it can be proved that other safeguards are provided, maintained and used which render the machine as safe as it would be if guarded in the manner prescribed in this Schedule.

SCHEDULE IV (Rubber Mills)

1. **Installation of machines: -** Mills for breaking down, cracking, grating, mixing, refining and warming rubber or rubber compounds shall be so installed that the top of the front roll is not less than 85cm. above the floor or working level. Provided that in existing installations where the top of the front roll is below this height a strong rigid distance bar shall be fitted across the front of the machine in such position that the operator cannot reach the nip of the rolls.

2. **Safety devices: -** (1) Rubber Mills shall be equipped with-

- Hoppers so constructed or guarded that it is impossible for the operator to come into contact in any manner with the nip of the rolls.
- Horizonatal-satety trop rods or tight wire cables across both front and rear which will when pushed or pulled, operate instantly to disconnect the power and apply the brakes or to reverse the rolls.

(2) Safety trip rods or tight wire cables on rubber mills shall extend across the entire length of the face of the rolls and shall be located not more than 1.75 meter above the floor or working level.

(3) Safety-trip rods and tight wire cables on all rubber mills shall be examined and tested daily in the presence of the Manager or other responsible person and if any defect is disclosed by such examination and test the mill shall not be used until such defect has been remedied.

SCHEDULE V

(Centrifugal machines)

1. ***Definition***: -"Centrifugal Machines" include centrifugal extractors, separators and driers.

2 Every part of a centrifugal machine shall be

(a) Of good design and construction and of adequate strength;

(b) Properly maintained; and

(c) examined thoroughly by a competent person at regular intervals.

3. Interlocking guard for drum or basket-

- The cage housing, the rotating drum or basket of every centrifugal machine shall be provided with a strong lid. The design, construction of the cage as well as the lid should be such that no access is possible to the drum or basket when the lid is closed.
- Every centrifugal machine shall be provided with an efficient interlocking device that will effectively prevent the lid referred to in sub-paragraph (1) from being opened while the drum or basket is in motion and prevent the drum or basket being set in motion while the lid is in the open position.

4. Braking arrangement: -Every centrifugal machine shall be provided with an effective arrangement capable of bringing the drum or basket to rest within as short a period of time as reasonably practicable after the power is cut off.

5. Operating speed:- No centrifugal machine shall be operated at a speed in excess of the manufacturers rating which shall be legibly stamped at easily visible places both on the inside of the basket and on the outside of the machine casing.

6. Exceptions—Sub-paragraph (2) of paragraph 3, paragraphs 4 and 5 shall not apply in case of top lung machines or similar machines used in the sugar manufacturing industry.

SCHEDUL E VI (Powers Presses)

1. ***Application: -*** This Schedule shall apply to all types of power presses including press brakes, except when used for working hot metal.

2. ***Definition: -***For the purpose of this Schedule,-

 “ approved” means approved by the Chief inspector;

 “fixed fencing” means fencing provided for the tools of a power press being fenced which has no moving part associated with or dependent upon the mechanism of a power and includes that part of a closed tool which acts as a guard;

 “power press” means a machine used in metal or other industries for moulding ,pressing, blanking, raising, [drawing and similar other purposes;

 “safety device” means the fencing and any other safeguard provided for the tools of a power press.

3. ***Starting and stopping mechanism: -*** The starting and stopping mechanism shall be provided with a safety stop so as to prevent over running

of the press or descent of the ram during tool shutting. etc.

4. ***Protection of tool and die:-***

 Each press shall be provided with a fixed guard with slip plate on the underside enclosing the front and all sides of the tool.

 Each die shall be provided with a fixed guard surrounding its front and sides, and extending to the back in the form of a tunnel through which the pressed article falls to the rear of the press.

 The design, construction and mutual position of the guards referred to in sub-Para-graphs (1) and (2) shall be such as to preclude the possibility of the worker’s hand or fingers reaching the danger zone.

 The machine shall be fed through a small aperture at the bottom of the dye guard, but a wider aperture may be permitted for second or subsequent operations if feeding is done through a chute.

 Notwithstanding anything contained in sub-paragraphs (1) and (2) an automatic or an interlocked guard may be used in place of a fixed guard, but where such guards are used they shall be maintained in an efficient working condition and if any guard develops a defect, the power shall not be

operated unless the defect guard is removed.

5. ***Appointment of perso resses for use:-***

(I) Except as provided in sub-paragraph (4) of paragraph 4, no person shall set, re-set, adjust or try out the tools on a power press or install or adjust any safety device thereon, being installation or adjustment preparatory to production of die proving, or carry out an inspection and test of any safety device thereon required by paragraph 8 unless he:-

- has attained the age of eighteen years;
- has been trained in accordance with the sub-paragraph (2); and

 has been appointed by the occupier of the factory to carry out those duties in respect of the class or description of power press or the class or description of safety device, as the case may be belongs; and the name of every such person shall be entered in a register in

Form 7A.

(II) The training shall include suitable and sufficient practical instructions in the matter in relation to each type of power press and safety device in respect of which it is proposed to appoint the person being trained.

6. Examination and testing of power presses and safety devices:

(1) No power press or safety device shall be taken into use in any factory for the first time in that factory or in case of a safety device for the first time on any power press, unless it has been thoroughly examined and tested, in the case of a power press, after installation in the factory or in the power press in connection with which it is to be used.

(2) No power press shall be used unless it has been thoroughly examined and tested by a competent person within the immediately preceding period of twelve months.

(3) No power press shall be used unless every safety device (other than fixed fencing) thereon has within the immediately preceding period of six months when in position on that power press, been thoroughly examined and tested by a competent person.

(4) The competent person carrying out an examination and test under the foregoing provision shall make a report of examination and test containing the following particulars and every such report shall be kept readily available for inspection;

(a) Name of the occupier of the factory;

(b) Address of the factory;

(c) Identification number or mark sufficient to identify the power press or the safety device, as the case may be;

(d) Date on which the power press or the safety device was first taken

into use in the factory;

(e) The date of each periodical thorough examination carried out as

per requirements of sub-paragraph (2) above;

(f) Particulars of any defects affecting the safe working of the power

press or the safety device found during such thorough

examinations and steps taken to remedy such defects.

7 Defect disclosed through examination and tests:-

1. Where any defect is disclosed in any power press or in any safety device by any examination and test under paragraph 6 and in the opinion of the competent person carrying out the examination and test, either:-

- the said defect is a cause of danger to workers and in consequence the power press or safety device, as the case may be ought not to be used until the said defect has been remedied; or
- the said defect may become a cause of danger to workers and in consequence the power press or safety device as the case may be, ought not to be used after the expiration of a specified period unless the said defect has been remedied, such defect shall, as soon as possible after the completion of the examination and test, be notified in writing by the competent person to the occupier of the factory and in the case of a defect falling within clause (b) of this sub-paragraph, such notification shall include the period within which, in the opinion of the competent person, the defect ought to be remedied.

2. In every case where notification has been notified under this paragraph, a copy of the report made under sub-paragraph, a copy of the report made under sub-paragraph (4) of paragraph 6 shall be sent by the competent person to the inspector of the concerned area within fourteen days of the completion of the examination and test.

3. Where any such defect is notified to the occupier in accordance with the foregoing provisions of this paragraph, the power press or safety device as the case may be, having the said defect, shall not be used;

- in the case of a defect falling within clause (a) of sub-paragraph (1) until the said defect has been remedied; and
- in the case of defect falling within clause (b) of sub-paragraph (1) until the said defect has been remedied after the expiration of the specified period.

4. As soon as is practicable, after any defect of which notification has been notified under sub-paragraph (1), has been remedied, a record shall be made by or on behalf of the occupier stating the measures by which and the date on which the defect was remedied.

8. Inspection and test of safety devices:

(1) No power press shall be used after the setting, resetting or adjustment of the tools thereon unless a person appointed or authorized for the purpose under paragraph 5 has inspected and tested every safety device thereon while it is in position on the said power press and has certified it to in order:

Provided that no inspection, test and certificate shall be required where

any adjustment of the tools has not caused or resulted in any alteration

to or disturbance of any safety device on the power press, and, if after

the adjustment of the tools, the safety device remain, in the opinion of the said person in efficient working order.

(2) Every power press and every safety devices thereon while it is in position on the said power press shall be inspected and tested by a trained person every day.

9. Defects disclosed during an inspection and test:-

(1) Where it appears to any person as a result of any inspection and test carried out by him under paragraph 8 that any necessary safety device is not in proper position on a power press or that any safety device which is in position on a power press, is not in his opinion suitable he shall notify the same to the manager forthwith.

(2) Except as provided in sub-paragraph (3) where any defect is disclosed in a safety device any inspection and test under paragraph 8, the person carrying out the inspection and test shall notify the same to the manager forthwith.

(3) Where any defect in a safety device is the subject of a notification in writing under paragraph 7 by virtue of which the use of the safety device may be continued during the specified period without the said defect having been

remedied, the requirement in sub-paragraph (2) of this paragraph shall not apply to the said defect until the said period has expired.

10. Identification of power presses and safety devices: -For the purpose of identification every power press and every safety device provided for the same, shall be distinctively and plainly marked.

11. Training the instructions to operators: -The operators shall be trained and instructed in the safe method of work before starting work on any power press.

12 Exemptions:-

(1) If in respect of any factory, the Chief Inspector of Factories is satisfied that owing to the circumstances or infrequency of the processes or for any other reason, all or any of the provisions of this schedule are not necessary for the protection of the workers employed on any power press or in the factory, the Chief Inspector of Factories may by a certificate in writing (which he may in his discretion revoke at any time), exempt such factory from all or ay of such provisions subject to such conditions, if any, as he may specify therein.

(2) Where such exemption is granted, a legible copy of the certificate, showing the conditions if any, subject to which it has been granted, shall be kept posted in the factory on a place where it may be conveniently read by the persons employed.

SCHEDULE VII

(Shears Slitters and Guillotine Machines)

1. Definitions-For the purpose of this schedule:-

(a) "guillotine" means a machine ordinarily equipped with straight, bevel edged blade operating Vertically against a stationery resisting edge and used for cutting metallic or non-metallic or non-metallic substances;

(b) "Shears" or "shearing machine" means a machine ordinarily equipped with straight, bevel edged blades operating vertically against resisting edged, or with rotary, overlapping cutting wheels and used for shearing metals or non- metallic substances; and

(c) "Slitter" or slitting machine" means a machine ordinarily equipped with circular disc-type knives, and used for trimming or cutting into metal or non-

metallic substances or for slitting them into narrow strips; for the purpose of this schedule, this term includes bread or other food slices equipped with rotary knives or cutting discs.

2 Guillotine and Shears:-

(I) Where practicable, a barrier metal guard of adequate strength shall be provided at the front of the knife, fastened to the machine frame and shall be so fixed as would prevent any part of the operator's body to reach the descending blade from above, below or through the barrier guard or from the sides:

Provided that in case of machines used in the paper printing and allied industries, where a fixed barrier metal guard is not suitable on account of the height and volume of the material being bed, there shall be provided suitable staring devices which require simultaneous action of both the hands of the operator or an automatic device when will remove both the hands of the operator from the danger zone at every descent of the blade.

(II) At the back of such machines, an inclined guard shall be provided over which the slit pieces would slide and be collected at a safe distance in a manner as would prevent a person at the back from reaching the descending bladed

(III) Power-driven guillotine cutters, except continuous feed trimmers, shall be equipped with:-

(a) starting devices which require the simultaneous action of both hands to start the cutting motion and of at least one hand control during the complete stroke of the knife: or

(b) an automatic guard will remove the hands of the operator from the danger zone at every decent of the blade, used in conjunction with one hand starting devices which require two distinct movements of the device to start the cutting motion, and so designed as to return positively to the non-starting position after each com .

(IV) Where two or more workers are employed at the same time on the same power driven guillotine cutter equipped with two-hand control, the device shall be so arranged that each worker shall be required to use both hands simultaneously on the safety trip to start the cutting motion, and at least one hand on a control to complete the cut.

(V) Power-driven guillotine cutters, other than continuous trimmer, shall be provided, in addition to the brake or other stopping mechanism, with an emergency device which will prevent the machine from operating in the event of failure of the brake when the starting mechanism is in the non-starting position.

3. Slitting Machine:-

(I) Circular disc type knives on machines for cutting metal and leather, paper, rubber, textile or other non metallic substances shall, if within reach of operators standing on the floor of working level, be provided with guards enclosing the knife edges at all times as near as practicable to the surface of the material, and which may either:-

(a) automatically adjust themselves to the thickness of the material; or

(b) be fixed or manually adjusted so that the space between the bottom of the guard and the material will not exceed 6 mm (1/4inch) at any time.

(II) Portions of blades underneath the tables or benches of slitting machines shall be covered by guards.

4. Index cutters and Vertical Paper Slotters: - Index cutter, and other machines for cutting strips from the ends of books, and for similar operations,

shall be provided with fixed guards, so arranged the fingers of the operators cannot come between the blades and the tables.

5. Corner Cutters:-Corner cutters used in the manufacture of paper boxes, shall

be equipped with:-

(a) suitable guard, fastened to the machines in front of the knives and provided with slots or perforations to afford visibility of the operations ;or
(b) other guards equally efficient for the protection of the fingers of the workers.

6. Band Knives: - Band Wheels on band knives, and all portions of the blades except the working side between the sliding guide and the table on vertical machines, or between the wheel guards on horizontal machines, shall be completely enclosed with hinged guards of sheet metal not less than 1 mm (0.04 inch) in think-ness or of other material of equal strength.

SCHEDULE VIII

Thermic fluid Heaters

1 All heaters shall be of such construction that coils are removal for periodic cleaning, visual inspection and hydraulic test.

2 Suitable arrangements shall be made for cooling the furnace effectively in case of power failure.

3 Before restarting the furnace, it shall be effect purged.

4 Velocity or flow of the thermic fluid shall not be allowed to fall below the minimum recommended by the manufactures while the heater is in operation.

5 The thermic fluid shall be circulated in a closed circuit formation with an expansion–cum-deaerator tank. This tank shall be located outside the shed where the heater is installed

6 Every heater shall be provided with a photo-resistor actuated auto-visual alarm to indicate flame failure and automatic burner cut

7 The stack temperature monitor-cum-controller with audiovisual alarm shall be provided so as to warn operator in case the outlet temperature exceeds the specific minimum.

8 Where inspection doors are provided on the furnace they shall be interlocked with the burner itself so that they cannot be opened until burner is shut of and furnace is cooled sufficiently.

9 All heaters shall also be provided with the following safety devices:- (i) Level control in the expansion tank

(ii) temperature control of thermic fluid;

(iii) differential pressure switch on the outlet line of the heater tubes; and

(iv) temperature control device for the fuel oil supply to the burner.

10 All devices specified in paragraph (9) shall have interlocking arrangement with burner so that in case of any predetermined limits being crossed, the supply of fuel and air shall automatically be cut-off.

11 All safety interlock when operated shall be indicated on the control panel of the heater by a suitable audio visual alarm

12 Every heater unit shall be provided as a standard accessory an arrangement for shifting with low pressure steam or nitrogen for putting out the fire.

13 Electoral panel for the heater shall be located near the heater but not so close as to be exposed to spilling or leaking oil.

14 The heater shall be located in a place partitioned off with fire proof material from other manufacturing activities.

15 Explosion vent shall be installed that release thanks place at safe location.

16 The heater coil shall be subjected to pressure test by competent person once at least in every twelve months. The test pressure shall not be less than twice the operating pressure.

17 If repairs are carried out to the coil, it shall be tested before taking it into use.

18 The thermic fluid shall conform to the specifications specified by the manufacturers and shall be tested by competent person for suitability at least once in every three months period. Such test shall include test for acidity, suspended matter, ash contents, viscosity and flash point.

19 Cleaning of internal surface of the heater so at check up of refractory surface on the inside shall be carried out every month or as often as required depending upon working conditions. The coils shall be removed and surface of the coils cleaned thoroughly once at least in a period of six months. The burner, nozzles, oil filters and pumps shall be cleaned once a week during the period of use.

20 A separate register containing the following information shall be maintained:-

(a) weekly checks carried out confirming the effectiveness of the interlock;

(b) weekly checks confirming that all accessories are in good state of repairs; and

(c) information regarding fuel , oil temperature, pressure, thermic fluid inlet/outlet pressure and temperature, fuel gas temperature, recorded at four hourly intervals.

(21) The heater when in operation shall always be kept in charges of a trained operator."

Rule 56: [Framed U/S 23(2) of the Act] Employment of Young Persons on dangerous machines

The machines specified in Sections 28, 29 and 30 and the machines mentioned below shall be deemed to be of such dangerous character that young persons shall not work at them unless the provisions of sub-section (1) of Section 23 are complied with: ---

1. Power presses other than hydraulic presses.
2. Milling machines used in the metal trades.
3. Circular saws.
4. Platen printing machines.
5. Guillotine machines.
6. Decorticater and oil expeller

7. Rubber mills.

8. Calendering machines.

Rule 56A: [Framed U/S 23(2) of the Act] Water-sealed Gasholder

(1) the expression "Gasholder" means a water-sealed gasholder which has a strange capacity of not less than 141.5 cubic meters (5,000 cft.)

(2) Every gasholder shall be of adequate material and strength, sound construction and properly maintained.

(3) Where there is more than one gasholder in the factory every gasholder shall be marked in a conspicuous position with a distinguishing number of better.

(4) Every gasholder shall be thoroughly examined externally by a competent person at least once in a period of 12 months.

(5) In the case of gasholder of which any lift has been in use for more than 10 years, the internal state of the sheeting shall, within one year of the coming into operation of these rules and thereafter at least every period of four years, be examined by a competent person by means of electronic or other accurate devices:
Provided that if the Chief Inspector is satisfied that such electronic or other accurate devices are not available, he may permit the cutting of samples from the crown and the sides of the holder: Provided further, that if the above inspection raises a doubt, an internal visual examination shall be made.

(6) All possible steps shall be repaired or demolished except under the direct supervision of a person who by his training and experience and his knowledge of the necessary precautions against risks of explosion and of persons being overcome by gas is competent to supervise such work.

(7) No gasholder shall be repaired or demolished except under the direct supervision of a person who by his training and experience and his knowledge of the necessary precautions against risks of explosion and of persons being overcome by gas is competent to supervise such work.

(8) (i) All samples discs cut under sub-rule (5) shall be kept readily available for inspection. (ii) A permanent register duly signed by the occupier and manager shall be maintained in

(iii) The result of examination by a competent person carried out under sub-rules (4) and (5) shall be in

Form No. 33-A shall be kept in the register in Form No. 33 and both the register and the report shall be readily available for inspection.

(9) Omitted

Rule 57: [Framed U/S 26(3) of the Act] Machinery Parts to be guarded by the makers The following parts of machines will be deemed to be machinery guarded by the markers for the purpose of section 26(1) of the Act:---

(1) Back gears, change wheels and cog driver of lathes.

(2) Back gear and level gearing of drilling machines.

(3) Gear wheels and level drives of planning, shaping, slotting and milling machines.

(4) All cog and level drives of oil expellers.

(5) Beater and spikers of the as hers.

(6) Blades and gear and chaff cutters.

(7) Nips of rollers of rubber mixing machines.

Rule 58: [Framed U/S 22(1) of the Act] Register of specially trained adult workers

Registers of workers attending to machinery as provided in sub-section (1) of Section 22 of the Act shall be in

Form 7-A.

Rule 59: [Framed U/S 28(1) of the Act] Belts, etc., to be regularly examined

All belts shall be regularly examined to ensure that the joints are safe and the belts at proper tension.

Rule 60: [Framed U/S 28(1) of the Act] Examination of Hoists and Lifts

(1) Examination of hoists and lifts - A register shall be maintained to record particulars of examinations of hoists and lifts in

Form 23.

(2) Exemption of certain hoists and lifts - In pursuance of the provisions of sub-section (4) of Section 28 of the Act in respect of any class or description of hoists or lift specified in the first column of the Schedule annexed hereto, the requirements of this section as specified in the second column of the said Schedule and set opposite to that class or description of hoists or lift shall not apply:-

SCHEDULE

I	II
Class or description Hoists or lift	requirements which shall not apply
Hoist or lifts mainly Used for raising material For charging blast furnaces so far as it requires a gate at the bottom landing	sub-section 1(b) in
Or lime-kilns Hoist not connected With mechanical power And which are not Used for carrying persons	sub-section (d), sub-section 1(e)
Sub-section 1 (b) in so far as it requires the hoist way or lift- way enclosure to be so const- -ructed as to prevent any person or thing from being trapped between any part of the hoist or lift and any fixed structure or moving part, subsection 1(e)	

Rule 60A: [Framed U/S 29(2) of the Act] Lifting machine, chains, ropes, and lifting tackles

(1) No lifting machine and no chain, rope or lifting tackle, except fibre 'rope or a fibre rope sling, shall be taken into use in any factory unless it has been tested and all parts have been thoroughly examined by a competent person and certificate to that effect, specifying the safe working load or loads, has been obtained from that person and is kept available for inspection.

(2) (a) Every jib-crane, which is so constructed that the safe working load varies with raising or lowering of the jib, shall have attached thereto either an automatic indicator of safe working loads or an automatic jib angle indicator and a table indicating the safe working loads at the corresponding inclinations of the jib, or corresponding radii of the load.

(b) A table showing the safe working loads of every kind and size of chain, rope or lifting tackle in use, and, in the case of a multiple sling, the safe working loads at different angles of the legs, shall be posted in the store-room of place where, or in which, the chains, ropes or lifting tackles are kept, and in prominent positions, on the premises, and no rope, chain or lifting tackle, not shown in the table, shall be used.
Provided that the foregoing provisions of this paragraph shall not apply in respect of such lifting tackle in the safe working load thereof, or in the case of a multiple sling, the safe working load at different angles of the legs, is plainly marked upon it.

(3) (a) the register to be maintained under sub-clause (iii) of the clause (a) of sub-section (1) of Section 29 of the Act shall contain the following particulars:
(i) Name of occupier of the factory.

(ii) Address of the factory.
(iii) Distinguishing number of mark, if any, and description sufficient to identify the lifting machine, chain, rope, or the lifting tackle.
(iv) Date when the lifting machine, chain, rope, or lifting tackle was first taken into use in the factory.

(v) Date and number of the certificate relating to any test and examination made under sub-rules (1) and (7) together with the name and address of the person who issued the certificate.
(vi) Date of each periodical thorough examination made under-clause (iii) of clause (a) of sub- section (1) of Section 29 of the Act and sub-rule (6) any by whim it was carried out.
(vii) Date of annealing or other heat treatment of the chain and other lifting tackle made under sub-rule (5) and by whom it was carried out.
(viii) Particulars of any defects affecting the safe working load found at any such thorough examination or after annealing and at the step taken to remedy such defects.
(b) The register shall be kept readily available for inspection.

(4) All rails on which a travelling crane moves and every track on which the carriage of a transporter or runway moves shall be of proper size and adequate strength and have an even running surface and every such rail or track shall be properly laid, adequately supported and properly maintained.

(5) All chains and lifting tackle except a rope sling shall, unless they have been subjected to such other heat treatment as may be approved by Chief Inspector of Factories, be effectively annealed under the supervision of a competent person at the following intervals:
(i) All chains, slings, rings, hooks, shackles and swivels used in connection with molten metal or molten slag or when they are made of half inch bar or smaller once at least in every six months.
(ii) All other chains, rings, hooks, shackles and swivels in general use once at least in every twelve months:
Provided that chains and lifting tackle not in frequent use shall, subject to the Chief Inspector's approval be annealed only when necessary. Particulars of such annealing shall be entered in a register prescribed under sub-rule (3).

(6) Nothing in the foregoing sub-rule (5) shall apply to the following classes of chains and lifting tackles:
(i) Chains made of malleable cast iron.

(ii) Plate link chains.
(iii) Chains, rings, hooks, shackles and swivels made of steel or of any non-ferrous metal. (iv) Pitched chains, working on sprocket or pocketed wheels.
(v) Rings, hooks, shackles and swivels permanently attached to pitched chains, pulley blocks or weighing machines.
(vi) Hooks and swivels having screw threaded parts or ball bearing or other case hardened parts.
(vii) Socket shackles secured to wire ropes by white metal capping.
(viii) Bordeaux connections.
Such chains and lifting tackle shall be thoroughly examined by a competent person once at lest in every twelve months, and particulars entered in the register kept in accordance with sub-rule (3).

(7) Every lifting machine, chain, rope and lifting tackle, except a fibre rope, or fibre rope sling, which has been lengthened, altered or repaired by welding or otherwise shall before being again taken into use, be adequately re-tested and re-examined by a

competent person and a certificate of such test and examination be obtained and particulars entered in the register kept in accordance with sub-rule (3).

(8) No person under eighteen years of age and no person who is not sufficiently competent and reliable shall be employed as driver of a lifting machine, whether driven by mechanical power or otherwise, or to give signals to a driver.

Rule 60B: [Framed U/S 72(3) of the Act] Passageways for cranes

(1) To provide access to rail track of overhead travelling cranes suitable passageways of at least fifty centimetre (twenty inches) width with the board and double hand rails ninety centimetre (three feet) high shall be provided alongside, and clear of, the rail track of over-head travelling cranes, such that no moving part of the crane can strike persons on the ways, and the
passageway shall be at a lower lever than the crane track itself. Safe access ladders shall be provided at suitable intervals to afford access to these passageways, and form passageways to the rail tracks

(2) The Government may in writing exempt any existing factory form the provisions of sub-rule (1) if by virtue of the construction of the factory it is impossible to provide such a passageway.

(3) The State Government may for reasons to be specified in writing, exempt any factory in respect of any overhead travelling crane form the operation of any, provision of sub-rule(1) subject to such conditions as it may specify.

Rule 61: [Framed U/S 31(2) of the Act] Pressure plan.-Prescribed under sub-section(2) of section

Every plant or machinery other than the working cylinders of prime movers used in a factory and operated at a pressure greater than atmospheric pressure shall be ---

(a) of good construction, sound material, adequate strength and free from any patent defect ; (b) properly maintained in a safe condition;

(c) Fitted with-

(i) a suitable safety valve or other effective device to ensure the maximum permissible working pressure of the vessel shall not be exceeded;

(ii) a suitable pressure gauge easily visible and designed to show, at all time, the correct internal pressure in kilogram per square centimetre and marked with a prominent red mark at the safe working pressure of the vessel;

(iii) a suitable stop valve or valves by which the vessel may be isolated from other vessels or source of supply of pressure; and

(iv) a suitable drain cock or valve at the lowest part of the vessel for the discharge of connected liquid;

(d) thoroughly examined by a competent person --

(i) externally, once in every period of six months, to ensure general condition of the vessel and the working of its fitting;

(ii) internally, once in every period of twelve months, to ensure condition of the walls, seams and ties both inside and outside of the vessel, soundless of the part of the vessel and the effects of corrosion. If by reason of construction of the vessel thorough internal examination is not possible this examination may be replaced by a hydraulic test which shall be carried out once in every two years : provided that for the vessels in continuous processes which can not be frequently opened, the period of internal examination may be extended to four years; and

(iii) hydraulically tested at inte ur years; provided that in

respect of pressure vessels with thin walls such as sizing cylinders made of copper or any other non- ferrous metal periodic hydraulic test may be dispensed with in the condition that the
requirements laid down in clause (2) are fulfilled:
Provided further that it shall be sufficient for the purposes of clause (c) in the safety valve, pressure gauge and stop valve mounted on a pipeline immediately adjacent to the vessel and where there is a range of two or more similar vessels in a place served by the same pressure load only one set of such mountings need be fitted provided they cannot be isolated.

(2)(a) In respect of pressure vessels of thin walls such as sizing cylinders made of copper or any other non-ferrous metals, the safe working pressure shall be reduced at the rate of 5 per cent of the original working pressure for every year of its use after the first five years and no such cylinder shall be continued to be used for more than twenty years after it was first taken into use.

(b) If no information as to the date of construction thickness of walls and safe working pressure is available, the age of the sizing cylinder shall be determined by the competent person in consultation with the Chief Inspector form any other particulars available with the manager. (c) Every new and second-hand cylinder of thin walls to which repairs, which may affect its working its safety have been carried out shall be tested before use to at least one and a half times its working pressure.

(3) Every vessel other than a part of a prime mover operated at a pressure greater than atmospheric pressure, and not so constructed as to withstand with safety the maximum permissible working pressure at the source of supply or the maximum pressure which can be obtained in the pipe connecting the vessel with any other source of supply fitted with a suitable reducing valve or other suitable automatic device to prevent the safe working pressure of the vessel being exceeded.

(4) In the cases where owing to the nature of the process or the action of the contents of the vessels, a pressure gauge or safety valve or both cannot work reliably a tested and reliable working thermometer with a sufficiently large scale, on which shall be clearly marked the maximum permissible temperature in the vessels or hygrometers or rupture disc in addition to the pressure gauge and safety valve, may be fitted as, may be directed by the Chief Inspector.

(5) If during through examination a doubt arises as to ability of vessel to work safety until the next examination provided for these rules when the competent person shall enter in the register prescribed a reasoned statement, to authorise the vessel for further work subject to a lowering of pressure or to more frequent inspection or subject to both of these statement.

(6) No vessel which has undergone alteration or repairs shall be taken into use unless it is thoroughly examined by a competent person.

Form No. 8 and signed by the person making the examination, and shall be kept available for perusal by the Inspector at any time while the vessel is in service.

(8) No vessel which has previously been used shall be taken into use in any factory for the first time until it has been examined and reported in accordance with the foregoing sub-rules and no new vessel shall be taken into use unless there has been obtained from the maker of the vessel, or from a competent person, a certificate specifying the maximum permissible working pressure thereof, and stating the nature of the tests to which the vessel and its fitting (if any) has been subjected, and the certificate is kept available for perusal by an Inspector, and the vessel is so marked as to enable it to be identified as the vessel to which the certificate relates.

(9) Where the report of any examination under this rule specifies conditions for securing the safe working of a vessel, the vessel shall not be used except in accordance with these conditions.

(10) The competent person making the report of any examination under this rule shall within seven days of the completion of the examination, send to the Inspector a copy of the report in every case where the maximum permissible working pressure is reduced, or the report in every case where the maximum permissible working pressure is reduced, or the examination shows that the vessel cannot continue to be used with safety unless certain repairs are carried out immediately or within a specified time.

(11) The requirements of this rule shall be in addition to and not in derogation of the requirements of any other Act, rules or regulations.

(12) nothing in this rule shall apply to-
(a) any vessel which comes within the scope of the Indian Boilers Act.

(b) metal bottles of cylinder used for the storage or transport of compressed gases or liquefied or dissolved gases under pressure.

(13) If the Chief Inspector of factories has reason to believe that the construction or use of pressure vessels is such that inspection is not necessary or practicable he may, subject to such conditions, if nay, exempt such pressure vessels from any or all of the provisions of this rule.

Explanation. - Competent person for the purpose of Sections 28 and 29 of the Act and rules 60, 61 and 67-A shall mean a person who is a degree holder or a diploma-holder in Mechanical Engineering of recognised university or institution and has at least two years practical
experience in examining testing and safe working of hoists and lifts, lifting machines and pressure vessels, and belts.

Rule 62: [Framed U/S 34(2) of the Act] Excessive weights

(1) No person, unaided by another person, or mechanical aid, he required or allowed to lift,

put down, carry or move any load of material, article, tool or appliance exceeding the maximum limit in weight as set out in the following schedule:-

SCHEDULE

Person	Maximum weight or material article tool or appliance
(a) Adult Male	50 Kilograms
(b) Adult Female	30 Kilograms
(c) Young Person (Male 15-18 Years)	30 Kilograms
(d) Young Person (Female 15-18 Years)	20 Kilograms
(e) Young Person (Male 14-15 Years)	16 Kilograms
(f) Young Person (Female 15-18 Years)	14 Kilograms

(2) No woman or young person shall engage, in conjunction with others, in lifting carrying or moving any material, article tool for appliance, if the weight thereof exceeds the lowest weight fixed by the Schedule to sub-rule (1) for any of the persons engaged, multiplied by the number of the persons engaged.

(3) Taking into account the conditions in which the work is to be performed, no worker shall be required or permitted to engage in the manual transport of load which, by reason of its weight, is likely to jeopardize his health or safety.

(4) Wherever reasonably practicable, suitable technical devices shall be used for the manual transport of loads.

Explanation: For the purposes of sub-rule (3) and (4), "Manual Transport of loads" means any transport in which the weight of the load is wholly borne by one worker, it covers the lifting and putting down of loads.

(5) Notwithstanding the fact that workers are engaged in the regular "manual transport of loads" within the permissible limits as set out in sub-rule(1), they should be subjected to medical examination prior to regular assignment and periodical examination at an interval of every twelve months if the assignment of such jobs exceeds more than twelve months.

Explanation: For the purpose of sub-rule (5) "Regular Manual Transport of Loads" means any

activity which is continuously or principally devoted to the manually transport of Loads, or
which normally includes, even through intermittently, the manual transport of loads."

(Amended vide Notification No. G.S.R. 34/C.A. 63/1948/S.112/Amd. (29)/2009 dated 27th August, 2009).

Rule 63: [Framed U/S 35 of the Act] Protection of eyes

Effective screens or suitable goggles shall be provided for the protection of persons employed in or in the immediate vicinity of the following processes: -

(a) The processes specified in Schedule 1 annexed hereto, being processes which involve risk of injury to the eyes from particles of fragments thrown off in the course of the process.

(b) The processes specified in Schedule II annexed hereto, being processes which involve risk of injury to the eyes by reason of exposure to excessive light (or infra-red or ultra-violet radiations).

SCHEDULE 1

(1) The breaking cutting dressing or carving of bricks, stone, concrete, slag or similar material by means of a hammer, a chisel, pick or similar hand tool, or by means of a portable tool driven by mechanical power and the dry grinding of surface of any such materials by means of a wheel or disc driven by mechanical power, where in any of the foregoing cases particles or fragments are liable to be thrown off towards the face of the operator in the course of the process.

(2) The dry grinding of surface of metal by applying them by hand to a wheel, disc or hand driven by means of a portable tool driven by mechanical power.

(3) The dividing into separate parts of metal, bricks, stone concrete or similar material by means of a high speed saw driven by mechanical power or by means of an abrasive cutting off wheel or disc driven by mechanical power.

(4) The turning of metal, or articles of metals where particles of fragments are liable to be thrown off towards the face of the operator in the course of the process.

(5) Drilling by means of portable tools, where particles or fragments are liable to be thrown off towards the face of the operator in the course of the process.

(6) The welding and cutting of metal by means of an electricity oxy-acetylene of similar process.

(7) The hot fettling of steel castings by means of a flux injected burner or air torch, and the deseaming of metal.

(8) The fettling of metal casting involving the removal of metal, including runners, gates and risers and the removal of any other material during the course of such fettling.

(9) The chipping of metal, and the chipping, knocking out, cutting our or cutting off of cold rivets bolts, nuts lugs, pins, collars or similar articles from any structure or plant or from part of any structure or plant by means of a hammer chisel, punch, or similar hand tools, or by means of a portable tool driver by mechanical power.

(10) The chipping, or scuffing of paint, scale, slag, rust or other corrosion from the surface of metal and other hand materials by means of a hand tools, or by means of a portable tool driver by mechanical power.

(11) The breaking of scrap metal by means of a hammer or by means of a tool driven by mechanical power.

(12) The routing of metal, where particles of fragments are liable to be thrown off towards the face of the operator in the course of the process.

(13) Work with drop hammers and power hammers used in either case for the manufacture of forgings, and work by any person not working with such hammers whose work is carried on in such circumstances and in such a position

that particles or fragments are liable to be thrown off towards his face during work by drop hammers or power hammers.

(14) Work at a furnace where there is a risk to the eyes from molten.

(15) Pouring or skimming of molten metal.

(16) Work involving risk to the eyes from hot sand being thrown off.

(17) Turning or dressing of an abrasive wheel.

(18) The handling in open vessel or manipulation of strong acids or dangerous corrosive liquids or materials and the operation, maintenance or dismantling of plant or any part of plant being plant or a part of plant which contains or has contained such acids, liquids or materials unless the plant or part of plant has been so prepared by isolation, reduction of pressure or otherwise, treated or designed or constructed so as to prevent risk or injury.

(19) Any other process wherein there is risk or injury to eyes from particles or fragments thrown off during the course of the process; and

SCHEDULE – II

(1) Welding or cutting of metals by means of an electrical oxyacetylene or similar process.

(2) All work on furnaces where there is risk of exposure to excessive light or infrared radiations.

(3) Process such as rolling casting or forging of metals where there is risk of exposure to excessive light or infra red radiations.

(4) Any other process wherein there is a risk of injury to eyes from exposure to excessive light or infrared ultraviolet radiations.

Rule 64: [Framed U/S 36(6) of the Act] Minimum dimensions of manholes

Every chamber, tank, vat, pipe, flue or other confined space which persons may have to enter and which may contain dangerous fumes to such an extent as to involve risk of the persons being overcome thereby shall unless there is other effective means of egress, be provided with a manhole which may be rectangular, oval or circular in shape, and which shall -

(a) in the case of rectangular or oval shape, be not less than 40 centimeter long and 30 centimeter wide:

(b) in the case of a circular shape, be not less than 40 centimeter in diameter.

Rule 65: [Framed U/S 37(5) of the Act] Exemption

The requirements of sub-section (4) of section 37 of the Act shall not apply to the following processes carried on in any factory:

(a) The operation of repairing a water-sealed gas-holder by the electric welding process, subject to the following conditions:-

(i) The gas-holder shall contain only the following gases, separately or mixed at a pressure greater than atmospheric pressure, namely, town gas, coke-oven gas, producer gas, blast furnace gas, or gases other than air used in their manufacture:

Provided that this exemption shall not apply to any gas-holder containing acetylene or mixture of gases to which acetylene has been added intentionally;

(ii) Welding shall only be done by the electric welding processes and shall be carried out by experienced operatives under the constant supervision of a competent person.

(b) The operations of cutting or welding steel or wrought iron gas mains and services by the application of heat subject to the following conditions-

(i) the main or service shall be situated in the open air, and it shall contain only the following gases, separately or mixed at a pressure greater than atmospheric pressure, namely gas, coke oven gas, producer gas, blast furnace gas, or gases other than air used in their manufacture.

(ii) the main or service shall not contain acetylene or any gas or mixture of gases to which acetylene has been added intentionally;

(iii) the operation shall be carried out by an experienced person or persons and at least 2 persons (including those carrying out the operations) experienced in work on gas mains and over 18 years of age shall be present during the operations;

(iv) the site of the operation shall be free from any inflammable or explosive gas or vapour;

(v) where acetylene gas is used as source of heat in connection with an operation, it shall be compressed and contained in a porous substance in a cylinder; and

(vi) prior to the application of any flame to the gas main or service this shall be pierced or drilled and the escaping gas ignited.

(c) The operation of repairing on oil tank on any ship by the electric welding process shall be subject to the following conditions-

(i) the only oil contained in the tank shall have a flash point of not less than 150 degrees F (close test) and a certificate to this effect shall be obtained from a competent analyst;

(ii) the analyst's certificate shall be kept available for inspection by Inspector or by any person employed or working on the ship;

(iii) the welding operation shall be carried out only on the exterior surface of the tank at a place (a) which is free of oil leakage in inflammable quantities and (b) which is not less than one foot below the nearest part of the surface of the oil within the tank; and

(iv) welding shall be done only by the electric welding and shall be carried out by experienced operatives under the constant supervision of a competent person.

Rule 66: [Framed U/S 38(7) of the Act] Fire protection

(1) Processes, equipment, plants, etc., involving serious explosion and serious fire hazards - (a) All processes, storages, equipment, plants etc. involving serious explosion and flash fire hazards shall be located in segregated buildings where the equipment shall be so arranged that only a minimum number of employees are exposed to such hazards at any one time.

(b) All industrial processes involving serious fire hazards shall be located in buildings or work places separated from one another by walls of fire resistant construction.

(c) Equipment and plant involving serious fire of flash fire hazards shall, wherever possible be so constructed and installed that in case of fire, they can be easily isolated.

(d) Ventilation ducts, pneumatic conveyers and similar equipment involving a serious fire risk shall be provided with flame-arresting or automatic fire extinguishing appliance or fire resisting damps, electrically interlocked with heat sensitive or smoke detectors and the air conditioning plant system.

(e) In all work places having serious fire or flash fire hazards, passages between machines, installations or piles of material should be at least ninety centimetres wide and for storage piles, the clearance between the ceiling and the top of the pile should not be less than two metres.

(2) Access for fire fighting - (a) Building and plants shall be so laid and roads, passage-ways etc. so maintained as to permit unobstructed access for fire fighting.

(b) Doors and windows opening shall be located in a suitable position on all external walls of the building to provide easy access to the entire area within the building for the fighting.

(3) Protection against lighting - Protection from lighting shall be provided for-

(a) buildings in which explosive or highly flammable substances are manufactured, used, handled or stored;

(b) storage tanks containing oils, paints or other flammable liquid;

(c) grain elevators;

(d) buildings, tall chimneys or stacks where flammable gases, fumes dust or lint are likely to be present; and

(e) sub-station buildings and outdoor transformers and switch-yards.

(4) Precautions against ignition - Whenever there is danger of fire of explosion from accumulation of flammable or explosive substances in air-

(a) all electrical apparatus shall either be excluded from the area of risk or they shall be of such construction and so installed and maintained as to prevent the danger of their being a source of ignition:

(b) effective measures shall be adopted for prevention of accumulation of static charges to a dangerous extent;

(c) workers shall wear shoes without iron or steel nails to cause sparks by friction;

(d) smoking lighting or carrying of matches, lighters, or smoking materials shall be prohibited.

(e) Transmission belts with iron fasteners shall not be used; and

(f) All other precautions as are reasonably practicable, shall be taken to prevent initiation of ignition from all other possible sources such as open flames, frictional sparks, overheated surfaces of machinery or plant, chemical or physico-chemical reaction and radiant heat.

(5) Spontaneous ignition - Where materials are likely to induce spontaneous ignition, care shall be taken to avoid formation of air pocket and to ensure adequate ventilation. The materials susceptible to spontaneous ignition shall be stored in dry condition and shall be in heaps of such capacity and separated by such passage which will prevent fire. The materials susceptible to ignition and store in the open shall be at a distance not less than ten metres away from process

of storage building.

(6) Cylinders containing compressed gas - Cylinders containing compressed gas may only be stored in open, if they are protected against excessive variation of temperature direct rays of sun or continuous dampness. Such cylinders shall never be stored near highly flammable substance furnaces, or hot processes. The room where such cylinders are stored shall have adequate ventilation.

(7) Storage of flammable liquids - (a) the quantity of flammable liquids in any work room shall be the minimum required for the process or processes carried on in such room. Flammable liquids shall be stored in suitable containers with close fitting cover:

Provided that not more than twenty litres of flammable liquids having a flash point of 2000 C or less shall be kept or stored in any work room.

(b) Flammable liquids shall be stored in closed containers and in limited quantities in well ventilated rooms of fire resisting construction which are isolated from the remainder of the building by fire walls and self closing fire doors.

(c) Large quantities of such liquids shall be stored in an isolated and adequately ventilated building of fire resisting construction or in storage tanks preferably underground and at distance from any building as required in Petroleum Rule, 1976.

(d) Effective steps shall be taken to prevent leakage of such liquids into basements, sumps or drains and to confine any escaping liquid within safe limits.

(8) Accumulation of flammable dust, gas, fume or vapour in air of flammable waste material on the floors -

(a) Effective steps shall be taken for removal or prevention of the accumulation in the air of flammable dust gas, fume or vapour to an extent which is likely to be dangerous.

(b) No waste material of a flammable nature shall be permitted to accumulate on the floors and shall be removed at least once in a day or shift and more often, when possible. Such materials shall be placed in suitable metal containers with covers wherever possible.

(9) Fire exits - (a) In this rule-

(i) "horizontal" means an arrangement which allows alternative egress from a floor area to another floor at or near the same level in an adjoining building or an adjoining part of the same building with adequate separation; and

(ii) "travel distance" means the distance an occupant has to travel to reach an exist.

(b) An exit may be a doorway, corridor, passageway to an external stairway or to a verandah or to an internal stairway segregated from the rest of building by fire resisting walls which shall provide continuous and protected means of egress to the exterior of a building or to an exterior open space. An exit may also include a horizontal exist leading to an adjoining building at the same level.

(c) Lifts, escalator and revolving doors shall not be considered as exits for the purpose of this sub-rule.

(d) In every room of a factory exist sufficient to permit safe escape of the occupants in case of fire or other emergency shall be provided which shall be free of any obstruction.

(e) The exits shall be clearly visible and suitable illuminate with suitable arrangements irrespective of the fact that whatever artificial lighting is to be adopted for this purpose, to maintain the required illumination in case of failure of the normal source of electric supply.

(f) The exist shall be marked in language understood by the majority of the workers.

(g) Iron rung ladders or spiral staircases shall not be used as exit staircases.

(i) Fire resisting doors or roller shutter shall be provided at appropriate places along the escape routes to prevent spread of fire and smoke, particularly at the entrance of lifts or stars where funnel or flue effect may be created inducing an upward spread of fire.

(j) All exists shall provide continuous means of agrees to the exterior of a building or to an exterior open space leading to a street.

(j) Exits shall be so located that the travel distance to reach at least one of them on the floor shall not exceed thirty metres.

(k) In of those factories where high hazard materials are stored or used, the travel distance to the exit shall not exceed twenty-two-and-half metres and there shall be at least two ways of escape from every room, however small except toilet rooms, so located that the points of access thereto, are out of, or suitably shielded from areas of high hazard.

(l) Wherever more than one exit is required for any room, space of floor exits shall be placed as remote from each other as possible and shall be arranged to provide direct access in separate direction from any point in the area served.

(m) The unit of exit width used to measure capacity of any exit shall be fifty centimetres. A clear width of twenty-five centimetres shall be counted as an additional half unit. Clear width of less than twenty-five centimetres shall not be counted for exit width.

(n) Occupants per unit width shall be fifty for stairs and seventy-five for doors.

(o) For determining the exits required, the occupant load shall be reckoned on the basis of actual number of occupants within any floor area of ten square metres per person, whichever is more.

(p) There shall not be less than two exits serving every floor area above and below the ground floor, and at least one of them shall be an internal enclosed stairway.

(q) For every building of structure used for storage only, and every section thereof considered separately, shall have access to at least one exit so arranged and located as to provide suitable means of escape for any person employed therein, and in any such room wherein ten persons may be normally present, at least two separate means of exit shall be available as remote from each other as practicable.

(r) Every storage area shall have access to at least one means of exit which can be readily opened.

(s) Every exit doorway shall open into an enclosed stairway, a horizontal exit on a corridor or passageway providing continuous and protected means of egress.

(t) No exit doorway shall be less than one hundred centimetres width. Doorways shall not be less than two hundred centimetres in height.

(u) Exit doorways shall open outwards, that is, away from the room but shall not obstruct the travel along any exit. No door when opened, shall reduce the required width of stairway of landing to less than ninety centimetres. Overhead or sliding doors shall not be installed for this purpose.

(v) An exit door shall not open immediately upon a flight of stair. A landing at least 1.5 metre x 1.5 metre in size shall be provided in the stairway at each doorway.

(w) The exit doorways shall be openable from the side which they serve without the use of a key.

(x) Exit corridors and passageways, shall be of a width not less than the aggregate required width of exit doorways leading from there in the direction of travel to the exterior.

(y) Where stairways discharge through corridors and passageways, the height of the corridors and passageways shall not be less than 2.4 metres.

(z) A staircase shall not be arranged round a lift shaft unless the latter is totally enclosed by a material having a fire-resistance rating not lower than that of the type of construction of the former.

(aa) Hollow combustible construction shall not be permitted.

(bb) The minimum width of an internal staircase shall be one hundred centimetres.

(cc) The minimum width of treads without nosing shall be twenty-five centimetres for an internal staircase. The treads shall be constructed and maintained in a manner to prevent slipping.

(dd) The maximum height of a riser shall be nineteen centimetres and the number of risers shall be limited to twelve per flight.

(ee) Hand rails shall be provided with a minimum height of one hundred centimetres and shall be firmly supported.

(ff) The use of spiral staircase shall be limited to low occupant load and to a building of height of nine metres, unless they are connected to platforms such as balconies and terraces to allow escapees to pause. A spiral staircase shall be not less three hundred centimetres in diameter and have adequate head room.

(gg) The width of a horizontal exit shall be the same for the exit doorways.

(hh) The floor area on the opposite of refuge side of a horizontal exit shall be sufficient to accommodate occupants of the floor areas served, allowing not less than 0.3 square metre per person. The refuge area shall be provided with exits adequate to meet the requirements of this sub-rule. At least one of the exits shall lead directly to the exterior or street.

(ii) Where there is different in level between connected areas for horizontal exit, ramps not more than one in eight slope shall be provided. For this purpose steps shall not be used.

(jj) Doors in horizontal exits shall be open able at all times.

(kk) Ramps with a slope of not more than one in ten may be substituted for the requirements of staircase. For all slopes exceeding in ten and wherever the use is such as to involve danger of slipping, the ramp shall be surfaced with non-slipping material.

(ll) In any building not provided with automatic fire alarm, a manual fire alarm system shall be provided if the total capacity of the building is over five hundred persons, or if more than twenty- five persons are employed above or below the ground floor, except that no manual fire alarm shall be required in one storey buildings where the entire area is undivided and all parts thereof are clearly visible to all occupants.

(10) First-aid fire fighting arrangements - (a) in every factory there shall be provided and maintained adequate and suitable fire fighting equipment for fighting fires in the early stages, those being referred to as first-aid fire fighting equipment in this rule.

(b) The types of first aid fire fighting equipment to be provided shall be determined by considering the different types of fire risks which are classified as follows.

(1) "Class A fire" - Fire due to combustible materials such as wood textiles, paper, rubbish and the like;

(i) "light hazard" - Occupancies like offices, assembly halls, canteens rest-rooms, ambulance room and the like;

(ii) "ordinary hazard"- Occupancies like saw mills, carpentry shop, small timber yards, book binding shops, engineering workshop and the like;

(iii) "extra hazard"- Occupancies like large timber yards, go downs, storing, fibrous materials, flour mills, cotton mills, jute mills, large wood working factories and the like;

(2) "class B fire"- Fire in flammable liquids like oil petroleum products, solvents, grease, paint etc.;

(3) "class C fire"- Fire arising o ;

(4) "class D fire"- Fire from reactive chemicals, active metals and the like;

(5) "class F fire"- Fire involving electrical equipment and delicate machinery and the like.

(c) The number and types of first-aid fire fighting equipment to be provided for `light hazard' occupancy shall be as given in Schedule 1 to this rule. For `ordinary hazard' or `extra hazard' occupancies, as the case may be, equipment as given in paragraph 12 shall be provided, in addition to that given in Schedule 1 to this rule.

(d) The first aid fire fighting equipment shall conform to the relevant Indian Standards.

(e) As far as possible the first-aid fire fighting equipment shall be similar in shape and appearance and shall have the same method of operation.

(f)) All first-aid fire fighting equipment shall be placed in a conspicuous position and shall be readily and easily accessible for immediate use. Generally, these equipments shall be placed as near as possible to the exits or stair landing or normal routes of escape.

(g) All water buckets and bucket pump type extinguisher shall be filled with clean water. All sand buckets shall be filled with clean, dry and fine sand.

(h) All other extinguishers shall be charged appropriately in accordance with the instructions of the manufacturer.

(i) Each first-aid fire fighting equipment shall be allotted a serial number by which it shall be referred to in the records. The following details shall be pointed with white paint on the body of each equipment,-

(1) Serial number;

(2) Date of last refilling; and

(3) Date of last inspection.

(j) First-aid fire fighting equipment shall be placed on platforms or in cabinets in such a way that their bottom is seven hundred and fifty milimetres above the floor level. Fire buckets shall be placed on hooks attached to a suitable sand or wall in such a way that their bottom is seven hundred and fifty metres above the floor level. Such equipment if placed outside the building, shall be under sheds or covers.

(k) All extinguishers shall be thoroughly cleaned and re-charged immediately after discharge. Sufficient refill material shall be kept readily available for this purpose at all times.

(l) All first-aid fire fighting equipment shall be subjected to routine maintenance inspection, and testing to be carried out by properly trained persons. Periodicity of the routine maintenance, inspection and test shall conform to the relevant Indian Standards.

(11) Other fire fighting arrangements - (a) In every factory, adequate provision of water supply for fire fighting shall be made and where the amount of water required in litres per minute, as calculated from the formula A+B+C+D divided by 20, is 550, or more power driven trailer pumps of adequate capacity to meet the requirements of water as calculated above shall be provided and maintained. In the above formula -

A- the total area in square metres of all floors including galleries in all building of the factory;

B- the total area in square metres of all floors and galleries including open spaces in which combustible materials

C- the total area in square metres of all floors over fifteen metres above ground level; and

D- the total area in square metres of all floors of all buildings other than those of fire resisting construction.

Provided that in areas where the fire risk involved does not required use of water, such areas under B, C or
D may, for the purpose of calculation be halved:
Provided further that where the areas under B, C or D are protected by permanent automatic fire fighting installation approved by any fire association or fire insurance company, such areas may, for the purpose of calculation by halved;

Provided further that where the factory is situated at not more than three kilometres from an established city or town fire services, the pumping capacity based on the amount of water arrived at by the formula above, may be reduced by twenty-five per cent but no account shall be taken of this reduction in calculating water supply required under this clause.

(b) Each trailer pump shall be provided with equipment as per schedule II appended to this rule. Such equipment shall conform to the relevant Indian Standards.

(c) Trailers pumps shall be housed in a separate shed or sheds which shall be sited close to a principal source of water supplies in the vicinity of the main risks of the factory.

(d) In factories where the area is such as cannot be reached by man hauling of trailer pumps within reasonable time, vehicles with towing, attachment shall be provided at the scale of one for every four trailer pumps with a minimum of one such vehicle kept available at all times.

(e) Water supply shall be provided to give flow of water as required under clause (a) for at least one hundred minutes. At least fifty per cent of this water supply or four lac and fifty thousand litres whichever is less, shall be in the form of static tanks of adequate capacities (not less than four lac and fifty thousand litres each) distributed round the factory with due regard to the potential fire risks in the factory. Where pipes supply is provided, the size of the main shall not be less than fifteen hundred litres per minutes at a pressure of not less than seven kilograms per square centimetre.

(12) Personnel in charge of equipment and for fire fighting, fire drills, etc - (a) The first-aid and other fire fighting equipment to be provided as required in sub-rules (10) and (11) shall be in the charge of a trained responsible person.

(b) Sufficient number of persons shall be trained in the proper handling of fire fighting equipment as referred to in clause (a) and their use against the types of fire for which they are intended to ensure that adequate number of persons are available for fire fighting both the means of first-aid fire fighting equipment and by other means. Such persons shall be provided with clothing and equipment including helmets, belts and boots, preferably gum-boots. Wherever vehicles with towing attachment are to be provided as required in clause (d) of sub-rule (11), sufficient number of persons shall be trained in driving these vehicles to ensure that trained persons are available for driving them whenever the need arises.

(c) Fire fighting drills shall be held as often as necessary and at least once in every period of two months.

(13) Automatic sprinkles and fire hydrants shall be in addition and not in substitution of the requirements of sub-rules (10) and (11).

(14) If the Chief Inspector is satisfied in respect of any factory or any part of the factory that owing to the exceptional circumstances such as inadequacy of water supply or infrequency of the manufacturing process or for any other reason, to be recorded in writing, all or any of the requirements of the rules are impracticable or not necessary for the protection of workers, he may be order in writing (which he may at his discretion revoke) exempt such factory or part of the factory from all or any of the provisions of the rules subject to the conditions as he may by such order impose.

FIRST-AID FIRE FIGHTING EQUIPMENTS

(1) The different types of fires and fire fighting equipments suitable for use on them as under:-

Class of fire		Suitable type of equipment
1		2
A	Fires in ordinary combustible (wood, vegetable fibres,paper & like)	Chemical extinguishers of soda-acid, gas expelled water and anti freeze types and water buckets
B	Fires in inflammable liquids,paints,grease,solvents and like	Chemical extinguishers of foam, carbon-dioxide and dry powder types sand buckets
C	C Fires in gaseous substances under pressure	Chemical extinguishers of carbon-dioxide and dry powder types
D	D Fires in reactive chemicals, active metals and like	Special type of dry powder extinguishers and sand buckets
E	Fires in electric equipments	Chemical extinguishers of carbon-dioxide and dry powder types sand buckets

(2) One nine litres water bucket shall be provided for every one hundred square metre of the floor area or part therefore and one nine litres water type extinguisher shall be provided to six buckets or part thereof with a minimum of one extinguisher and two buckets per compartment of the buildings. Buckets may be dispensed with provided supply of extinguishers is double than that of the indicated above.

(3) Acceptable replacements for water buckets and water type

extinguishers in occupancies where class B fires are anticipated, are an

under:-

Acceptable Replacements	Bucket of water		Water type extinguishers
	For one bucket	For three buckets	For each nine litres (or tow gallons)
Dry sand carbon dioxide extinguishers	One bucket Three kilogram (or seven pounds)	Three bucket Nine kilograms or twenty pounds (in not less than two	Nine kilogram (or twenty pounds)
Dry powder	Two kilogram (or five pounds)	Five kilogram (or eleven pounds) In one or more	Five kilogram (or eleven pounds)
Foam extinguishers	Nine litres (or two gallons)	Nine litres (or two gallons	Nine litres (or two gallons)

(4) The following provisions shall be complied with where class E fires are anticipated:

(a) For rooms containing electrical transformers: switch-gears, motors and/or other electrical apparatus only, not less than two kilograms try power or carbon dioxide type extinguishers shall be provided within fifteen metres of the apparatus.

(b) Where motors and/ or other electrical equipments are installed in rooms other than those containing such equipment only one five kilogram dry powder or carbon dioxide extinguisher shall be installed within fifteen metres of such equipment in addition to the requirements mentioned in paras (3) and (4) above. For this purpose the same extinguisher may be deemed to afford protection to all apparatus within fifteen metres thereof.

© Where electrical motors are installed one platforms, one, two kilogram dry powder or carbon dioxide type extinguisher shall be provided on or below each platform. In cash of a long platform with a number of motors, one extinguisher shall be acceptable as adequate for every three motors, on the common platform. The above requirements shall be in addition to the requirements mentioned in paras (3) and (4) above.

(5) The first-aid fire fighting equipment shall be so distributed over the entire floor area that a person has to travel not more than fifteen metres to reach the nearest equipment.

(6) Selection of sites for the installation of first aid fire fighting equipments:-

(a) While selecting sites for first aid fire fighting equipment due consideration to be covered. The equipments shall be placed in conspicuous positions and shall be readily accessible for immediate use in all parts of the occupancy, It should always be borne in mind while selecting sites that first aid fire fighting equipment are intended only for use on incipient fire and their values may be negligible if the fire is not extinguished or brought under control in the early stages.

(b) Buckets and extinguishers shall be placed at convenient and easily locations either on hangers or on stands in such a way that their bottom is seven hundred and fifty millimeters above ad floor level.

(7) The operating instructions of the extinguishers shall not be defaced of obliterated. In case the operation instructions are obliterated or have become illegible due to passage of time, fresh transfers of the same shall be obtained from the manufacturers of the equipment sand affixed to the extinguishers.

Schedule II

Equipment to be provided with trailer pump

(A) For light trailer pump of a capacity of six hundred and eighty litres per minute.

One Armored suction hose of nine metres length, with wrenches.

Two Metal suction strainers.

One Basket strainer.

One Two way suction collecting-head.
One suction adaptor
Ten Unlined or rubber lined seventy milimetres delivery house of twenty five metres length complete with quick-release couplings.
One Dividing breaching – piece
Two Branch-pieces with fifteen milimetres
nozzles One diffuser nozzle.

One standpipe with blank cap.
One Hydrant key
Four Collapsible canvas
buckets.

One fire hook (preventor) with cutting edge.
One Twenty five milimetre manila
rope of
Thirty metres length.
One Extension ladder of nine metres
length (Where necessary)
One Heavy axe.
One spade,
One Pick axe
One Crowbar
One Saw
One Hurricane
lamp
One Electric
torch.

One pair rubber gloves.

(B) For large trailer pump of a capacity of one thousand and eight hundred litres/minute.
One Armored suction hose of nine metres length, with wrenches. One metal strainer.

One basket strainer.

One three-way suction

One suction adapter.
Fourteen unlined or rubber lined seventy
Milimetres delivery hoses of twenty five
Metres length complete with quick-release couplings
One dividing breaching piece.
One collecting breaching piece
Four branch pipes with one twenty five
Milimetre, two twenty milimetre and one
Diffuser nozzle.

Two standpipes with blank caps.

Two hydrant keys.

Six collapsible canvas buckets.

One ceiling hook (preventor) with cutting edge.

One fifty milimtre manilla rope of thirty metres length.
One extension ladder of nine metres length
(Where necessary)
One heavy axe.
One spade,
One pick
axe.
One crowbar,
One saw
One hurricane lamp
One electric torch
One pair rubber
gives.

Note: If, it appears to the Chief Inspector of Factories that in any factory the provisions of breathing apparatus is necessary, he may, by order in writing require the occupier to provide suitable breathing apparatus in addition to the equipment for light trailer pump or large trailer pump s the case may be"

Rule 66A: Building and Structures

No building wall, chimney, bridge, tunnels, road, gallery, stairway, ramp, floor, platform, staging or other structure, whether of a permanent or temporary character, shall be constructed, situated or maintained in any factory, in such a manner as to cause risk of bodily injury.

Rule 66B: Machinery and plant

No machinery, plant or equipment shall be constructed, situated, operated or maintained in any factory in such a manner as to cause risk of bodily injury.

Rule 66C: Method of work

No process or work shall be carried on in any factory in such a manner as to cause risk of bodily injury.

Rule 66D: Stacking and storing of materials etc

No materials or equipment shall be stacked or stored in such a manner as to cause risk of bodily injury.

Rule 66E: [Framed U/S 40-B (2) of the Act] (1) Safety Officer

There shall be one Safety Officer for factories employing between one thousand and two thousand workers. There shall be an additional Safety Officer for every two thousand workers or a fraction thereof in excess of two thousand workers.

(2) Qualifications - (a) A person shall not be eligible for appointment as a Safety Officer, unless he-

(i) possesses a degree of a recognised university or institution in any branch of Engineering or Technology and has practical experience of working in a factory in a supervisory capacity for a period of not less than two years or possesses a degree in Physics or Chemistry from a recognised university or institution and has practical experience of working in a factory in a supervisory capacity for a period of not less than five years, or possesses a recognised diploma in any branch of engineering or technology and has practical experience of working in a factory in a supervisory capacity for a period of not less than five years;

(ii) possesses a degree or diploma in industrial safety recognised by the State Government in this behalf; and

(iii) has adequate knowledge of language spoken by majority of the workers in the region in which the factory where he is to be appointed, is situated;

(b) Notwithstanding anything contained in clause (a), any person who-

(i) possesses a degree or diploma in Engineering or Technology of a recognised university or institution and has experience of not less than five years in a department of the Central Government or State Government which deals with the administration of the Factory Act, 1948 or the Indian Dock Labourers Act, 1934, or

(ii) possesses a degree or diploma in Engineering or Technology of a recognised university or institution and has experience of not less than five years of full time of training, education, consultancy, or research in the field of accident prevention in an industry or in any institution, shall also be eligible for appointment as a Safety Officer.

Provided that the Chief Inspector may, subject to such conditions as he may specify, grant exemption from the requirements of this sub-rule, if in his opinion a suitable person possessing the necessary qualifications and experience is not available for appointment;

Provided further that in the case of a person who has been working as a Safety Officer in a factory for a period of not less than three years on the date of commencement of these rules, the Chief Inspector may, subject to conditions as he may specify, relax all or any of the above said qualifications.

(3) Conditions of service - (a) Where more than one Safety Officer are appointed in a factory, one of them shall be designated as the Chief Safety Officer and shall be the overall in charge of the Safety functions as envisaged in sub-rule (4).

(b) The Chief Safety Officer or the Safety Officer in the case of factories where only one Safety Officer is required to be appointed, shall be given the status of a senior executive and shall work directly under the control of the Chief Executive of the factory.

(c) The scales of pay and the allowances to be granted to the Safety Officers including the Chief Safety Officer, and the other conditions of their service shall be the same as those of the officers of corresponding status in the factory.

(d) Against the order of dismissal or discharge a Safety officer shall have a right of appeal to the Government.

(4) Duties of Safety Officer - (a) The duties of a Safety Officer shall be to advise and assist the factory management in the fulfillment of its obligations, statutory or otherwise, concerning prevention of personal injuries and maintenance of a safe working environment.

(b) Without prejudice to the generality of duties in clause (a) a Safety Officer shall have the following duties, namely:-

(i) to advise the concerned departments in planning and organising measures necessary for the effective control of person injuries;

(ii) to advise on safety aspects in all job studies, and to carry out detailed job safety studies of selected jobs;

(iii) to check and a valuate the effectiveness of the action taken or proposed to be taken to prevent personal injuries;

(iv) to advise the purchase and stores departments in ensuring high quality and availability of personal protective equipment;

(v) to advise on matters relating to plant safety inspections;

(vi) to carry out plant safety inspections in order to observe the physical conditions of work and the work and the work practices and procedures followed by workers and to render advice on measures to be adopted for removing the unsafe physical conditions and preventing unsafe actions by workers;

(vii) to tender advice on matter relating to reporting and investigation of industrial accidents and occupational diseases;

(viii) to investigate accidents;

(ix) to investigate the cases of occupational diseases contracted and dangerous occurrences reportable under rule 103;

(x) to advise on the maintenance of such records as are necessary relating to accidents, dangerous occurrences and occupational diseases;

(xi) to promote setting up of safety committees and act as advisor and convener to such committees;

(xii) to organise in association with the concerned departments of the factory campaigns, competitions, contests and other activities which will develop and maintain the interest of the workers in establishing and maintaining safe conditions of work and procedures; and

(xiii) to design and conduct either independently or in collaboration with the training department of the factory, suitable training and educational programmes for the prevention of personal injuries.

(5) Facilities to be provided to Safety Officers - An occupier of the factory shall provide each Safety Officer with such facilities, equipment and information as are necessary to enable him to discharge his duties effectively.

(6) Prohibition of performance of other duties - No Safety Officer shall be required or permitted to do any work which is inconsistent with or detrimental to the performance of the duties prescribed in sub-rule (4).

Rule 66F: [Framed U/S 41-G & 112 of the Act] Safety Committee

(1) In every factory,-
(a) wherein two hundred and fifty or more workers are ordinarily employed; or
(b) which carries on hazardous process as defined in section 2 (cb) of the Act; or
(c) which carries on any manufacturing process or operation declared to be dangerous under section 87 of the Act;
there shall be set up a safety committee, by the occupier.

(2) The representatives of the management on Safety Committee shall include,-
(a) a senior official, who by virtue of his position in the organisation can contribute effectively to the functioning of the Committee. Such a senior official shall be the Chairman of the safety Committee;
(b) a Safety Officer and Factory Medical Officer, wherever available and the Safety Officer in such a case shall be Secretary of the Committee;
(c) a representative each from the production, maintenance and purchase departments. (3) The workers' representatives on this Committee shall be elected by the workers.

(4) The tenure of the Committee shall be two years.

(5) Safety Committee shall meet as often as necessary but at least once in every quarter. The minutes of the meeting shall be recorded and produced to the Inspector on demand.

(6) Safety Committee shall have the right to, -
(a) ask for necessary information concerning health and safety of the workers; and (b) seek any relevant information concerning health and safety of the workers.

(7) Functions and duties of the Safety Committee shall include,-
(a) assisting and co-operating with the management in achieving the aims and objects outlined in the `Health and Safety Policy' of the occupier;
(b) dealing with all matters concerning health safety and environment and to arrive at practicable solutions to problems encountered;
(c) creating safety awareness amongst all workers;
(d) undertaking educational training and promotional activities;

(e) deliberating on reports of safety environmental and occupational health surveys, emergency plans, safety audits, risk assessment and implementation of the recommendations made in the reports;

(f) carrying out health and safety surveys and identify causes of accidents;

(g) looking into any complaint made on the likelihood of an imminent danger to the safety and health of the workers and suggest corrective measures; and

(h) reviewing the implementation of the recommendations made by it.

(8) Where owing to the size of the factory, or any other reason, the functions referred to in sub- rule (7) cannot be effectively carried out by the Safety Committee it may establish sub- committees as may be required to assist it."

Rule 67: [Framed U/S 41 of the Act] Ladders

All ladders used in replacing belts shall be specially made and reserved for that work and provided with hooks or an effective non-skid device. Ladders provided with hooks must have hooks fitted in such suitable position that they rest on the shaft when the bottom end of the ladder is resting on the floor.

Rule 67A: [Framed U/S 41 of the Act] Safety belts and other safety equipment

When any person is required or allowed to work at a place not affording adequate hold and foothold and from which he is liable to fall through a height of or more than 1.80 metre, he shall be provided with a safety belt fitted with leather shoulder straps of not less than 5 cm. In width with a `D Ring at the back and a rope fastened thereon. The other end of the rope shall be securely tied or hooked to same suitable rigid fixture to ensure the safety of the workers. In case it is not possible to tie or hook the other end of the rope of the safety belt to a suitable rigid fixture. The worker shall be provided with some other type of safety belt to ensure the safety of the worker. It shall be the responsibility of the occupier and manager of the Factory to ensure that every worker engaged on such operation shall use these belts and other safety equipment. These belts and other equipment shall be examined and declared fit for use every six months by a competent person. The record of examination of these belts and other equipment by the said competent person shall be maintained in a bound register which shall be produced on demand by an inspector.

Rule 67B: [Framed U/S 41 of the Act] Fragile roofs - Provisions of crawling boards, etc In any factory, no person shall be required to stand or pass over or work on or near any roof or ceiling covered with fragile material through which he is liable to fall, in case it breaks or gives way, a distance of more than three metres, unless-

(a) suitable and sufficient ladders, duck ladders or crawling boards, which shall be securely supported, are provided and used; and

(b) a permit to work on the fragile roof is issued to him each time he is required to work thereon by a responsible person of the factory concerned.

Rule 67C: [Framed U/S 41 of the Act] Electricity Rules -

(1) Definitions - (a) "authorised person" means a person over 21 years of age who may be-

(i) either a supplied or a consumer or
(ii) a contractor for the time being under contract with the supplier or the consumer to carry out duties incidental to the generation, transformation, transmission, conversion, distribution or use of energy or
(iii) any person authorised by the said supplier, consumer or contractor for the purposes specified by him, being the person who is competent to perform the duties specified in this rule and whose name has been entered in a list maintained at the office or premises of the person authorising him and giving the purposes for which such person is authorised, and the entry has been attested by the authorised person and the person authorising him;

(b) "Apparatus" means electrical apparatus, and includes all apparatus machines and fitting in which conductors are use or of which they form a part;

(c) "bare" means not covered with insulating material;

(d) "circuit" means an electrical circuit forming a system or branch of a system;

(e) "conductor" means an electrical conductor arranged to be electrically connected to a system;

(f) "covered with insulating material" means adequately covered with insulating material of such quality and thickness that there is no danger;

(g) "danger" means danger to health or danger to life or limb from stock, burn or other injury, to persons employed or from fire attendant upon the generation, transformation, distribution or use of electrical energy;

(h) "dead" means at, or about, zero potential, and disconnected from any live system;

(i) "earthed" means connected to the general mass of each in such manner as well ensure all times an immediate discharge of electrical energy without danger.

(j) "live" means electrically charged;

(k) "pressure" means the difference of electrical potential between any two conductors or between a conductor and each as ready by a hot wire and electrostatic voltmeter;

(l) "low pressure" means a pressure in a system normally not exceeding 250 volts (where the electrical energy is used);

(m) "medium pressure" means a pressure in a system normally above 250 volts but not exceeding 620 volts, where electrical energy is used;

(n) "switch board" means the collection or switches or fuses, conductors and other apparatus in connection therewith, used for the purpose of controlling the current or pressure in any system or part of a system;

(o) "system" means an electrical system in which all the conductors and apparatus are electrically connected to a common source of electromotive force.

(2) All apparatus and conductors shall be adequate in size and power for the work they are called upon to do and so constructed, installed, protected, worked and maintained as to prevent danger so far as is reasonably practicable.

(3) All accessible metallic portions of electrical plant or apparatus which though normally not (forming) of an electrical circuit, may become alive, accidentally, shall (be protected by an insulating covering or by other adequate) means or shall be connected to each by a conductor of adequate size.

(4) Adequate working space and means of access, free from danger shall be provided for all apparatus which have to be worked or attended to by any person.

(5) The general arrangement of switch boards shall, so far as reasonably practicable, be such that-

(a) all parts which may have to be adjusted or handled are readily accessible;

(b) the course of every conductor may, where necessary, be readily traced;

(c) conductors arranged for connection to the same system are kept well apart, and can, where necessary, be readily distinguished;

(d) all bare conductors are so placed or protected as to prevent danger from accidental short circuit.

(6) Every switch board having bare conductors normally so exposed that they may be touched, shall, if not located in an area or areas set apart for the purpose thereof, where necessary be suitably fenced or enclosed.

No person except an authorised person, or a person acting under his immediate supervision, shall for the purpose of carrying out his duties, have access to any part of an area so set apart.

(7) Every flexible wire for portable apparatus shall be connected to the system either by efficient permanent joints or connections or by a properly constructed connector.

In all cases where the person handling portable apparatus or pendent lamps with switches, is liable to get a shock through a conducting floor or conducting work or otherwise, if the metal work of the portable apparatus becomes charged, the metal work must be efficiently earthed and any flexible metallic covering of the conductor shall itself be efficiently earthed and shall not itself be the only earth connection for the metal of the apparatus.

A lamp holder shall not be in metallic connection with the guard or other metal work of a portable lamp.

In such places the portable apparatus and its flexible wire shall be controlled by efficient means suitably located and capable of cutting off the pressure, and the metal work shall be efficiently earthed independently of any flexible metallic cover of the conductors and any such flexible covering shall itself be independently earthed.

(8) In plug and socket connection for transportable apparatus the socket shall be connected to the conductor and the plug to the appliance side.

(9) Plug for connecting movable conductors shall be of such construction that they do not get in the socket connections meant for higher current. Plug and socket connection shall be of such construction that the plug cannot be inserted or withdrawn while the current is on.

(10) All conductors and apparatus exposed to the weather; wet-corrosion, inflammable surroundings or explosive atmosphere, or used in any process or for any special purpose other than for lighting or power shall be so constructed or protected, and such special precautions shall be taken as maybe necessary to prevent danger in view of such exposure or use.

(11) Adequate precautions shall be taken to prevent any conductor or apparatus from being accidentally or inadvertently electrically charged when persons are working thereon.

(12) Instructions, both in English and in the vernacular of the district, as to the treatment of persons from electric shock, shall be affixed in all premises where electrical energy is generated, transformed, converted, switched, controlled, regulated, distributed or used.

(13) Exemptions - (I) Nothing in this rule shall apply to any service lines or apparatus on the supply side of the consumer's terminal or to any chamber containing such service lines or apparatus where the supply is obtained from an outside authority;

provided always that no live metal is exposed so that it may be touched.

(ii) If the occupier can show, with regard to any requirements of this rule, that the special conditions in his premises are such as adequately prevent danger, that

requirement shall be deemed to be satisfied and the Chief Inspector may by order in writing direct that any class to special conditions defined in the requirements of this rule adequately to prevent danger are satisfied, and may revoke such order. In particular the following shall be deemed for all the purposes of this rule adequately to prevent danger.

Room in which, -
(a) the floor is of wood or otherwise
insulated;

(b) there is no machinery or other earthed metal with which a person handling any non-earthed lamp fittings or any portably lamp is liable to be in contact;

(c) no process rendering the floor wet is carried on; and

(d) no live conductor is normally exposed so that it may be touched.

(14) This rule shall apply to all factories. They are in addition, and not derogatory, to the Indian Electricity Act, 1910 and the Indian Electricity Rules, 1956.

Rule 67D: Supply of personal protective equipment

The Inspector may, having regard to the nature of the hazards involved in work and process being carried out, orders the occupier or the manager in writing to supply to the workers exposed to a particular hazard any personal protective equipment as he may deem necessary.

Rule 67E: Quality of personal protective equipment

all personal protective equipments provided to workers as required under any of the provisions of the Act or the rules shall have certification by Bureau of Indian Standards.

Rule 67F: Examination of eye-sight of certain workers

(1) No person shall be employed to operate a crane, locomotive of fork-lift truck, or to give signals to a crane or locomotive operator unless his eye-sight and colour vision has been examined and declared fit by a qualified ophthalmologist to work whether with or without the use of corrective glasses.

(2) The eye-sight and colour vision of the person employed as referred to in sub-rule (1) shall be examined at least once in every period of twelve months upto the age of forty-five years and once in every six months beyond that age.

(3) Any fee payable for an examination of a person under this sub-rule shall be paid by the occupier and shall be recoverable from that person.

(4) The record of examination carried out as required under sub-rules (1) and (2) shall be maintained in

Form 8-A.

Rule 67G: Railways in factories

(1) this rule shall apply to railways in the precincts of a factory which are not subject to Indian Railways Act, 1980.

(2) Gateways- A gateway through which a railway track passes shall not be used for the general passage of workers into or out of a factory.

(3) Barriers and Turn gates - (a) Where building or walls contain doors or gates, which open to a railway track a barrier about one metre high shall be fixed parallel to and about sixty
centimetres away from the building or walls outside the opening and extending several feet beyond it at either end, so that any person passing out may become aware of an approaching train when his pace is checked at the barrier.

If the traffic on the nearest track is all in one direction, the barrier shall be in the Form of "L" with the end of the short leg abutting on to the wall and the other opening towards the approaching train.

(b) If the distance between wall and track cannot be made to accommodate such a barrier the barrier, or a turn gate shall be placed at the inside of the opening.

(c) Where a footway passage close to a building or other obstruction as it approached a railway track a barrier or a turn gate shall be fixed in such a manner that a person approaching the track is compelled to move away from the building or obstruction and thus obtain timely sight of an approaching locomotive or wagon.

(4) Crowds - (a) Workers pay windows, first aid stations and other points where a crowd may collect, shall not be placed near a railway track.

(b) At any time of the day when workers are starting or ending work, all railway traffic shall cease for not less than five minutes.

(5) Locomotives - (a) No locomotive shall be used in shunting operations unless it is in good working order.

(b) Every locomotive and tender shall be provided with efficient brakes, all of which shall be maintained in good working order. Brake shoes shall be examined at suitably fixed intervals and those which are worn out shall be replaced at once.

(c) Water-gauge glasses of every locomotive, whatever its boiler pressure may be, shall be protected with substantial glass or metal screens.

(d) Suitable stops and hand-holds shall be provided at the corners of the locomotive for the use of shunters.

(e) Every locomotive crane shall be provided with lifting and jacking pads at the four corners of the locomotive for assisting in re-railing operations.

(f) It shall be clearly indicated on every locomotive crane in English and in the language understood by the majority of the workers in the factory, for what weight of load and at what radius the crane is safe.

(6) Wagons - (a) Every wagon (and passenger coach, if any) shall be provided either with self acting brakes, capable of being applied continuously or with efficient hand brakes which shall be maintained in good working order. The brakes shall be capable of being applied by a person on the ground and fitted with a device for retaining them in the applied position.

(b) No wagon shall be kept stan s of any pinch bars.

(7) Riding on locomotive, wagon or other rolling stock - No person shall be permitted to be upon (whether inside or outside) any locomotive wagon or after rolling stock except where secure foothold and hand are provided.

(8) Attention to brakes and doors - (a) No locomotive, wagon or other rolling stock shall be kept standing unless its brakes are firmly applied and, where it is on a gradient, without sufficient number of properly constructed scotches placed firmly in position.

(b) No train shall be set in motion until the shunting jamadar has satisfied himself that all wagon doors are securely fastened.

(9) Projecting loads and cranes - (a) If the load on wagon projects beyond its length, a guard of dummy truck shall be used beneath the projection.

(b) No loco-crane shall travel without load unless the jib is completely lowered and positioned in line with the track.

(c) When it is necessary for a loco-crane to travel with a load, the jib shall not be swung until the loco-crane has come to test.

(10) Loose shunting - Loose shunting shall be permitted only when it cannot be avoided. It shall never be performed on a wagon not accompanied by a man capable of applying and pinning down the brakes. A wagon not provided with brakes in good working order and capable of being easily pinned down shall not be loose shunted unless there is attached to it at least another wagon with such brakes. Loose shunting shall not be performed with, or against a wagon containing passengers, livestock or explosives.

(11) Fly-shunting - Fly-shunting shall not be permitted on any factory railway.

(12) The shunting jamadar - (a) every locomotive or wagon is motion in a factory shall be in charge of a properly trained jamadar.

(b) Before authorising a locomotive or wagon to be moved, the shunting jamadar shall satisfy himself that no person is under or in between or in front of the locomotive or wagon.

(13) Hand signals - The hand signals used by the shunting jamadar, by day and night shall be those prescribed by the shunting rules of railways, framed under the Indian Railways Act, 1890 (IX of 1890).

(14) Night work and fog - (a) In factories where persons work at night, no movement of locomotive, wagon or other rolling stock otherwise than by hand shall be permitted between sunset and sunrise unless the tracks and their vicinity are lighted on a scale of not less than ten lux as measured at the horizontal plane at the ground level.

(b) In no circumstances shall any locomotive or train be moved between sunset and sunrise or at any time when there is fog, unless it carried a white head light and a red rear light.

(15) Speed control - (a) A locomotive or train shall not be permitted to move at a speed greater than seven kilometres per hour.

(b) A train locomotive, wagon or other rolling stock shall not be moved by mechanical or electrical power unless it is preceded at a distance of not less than ten metres during the whole of its journey by a shunting jamadar. He shall be provided with signalling flags or lamp and whistle necessary for calling the attention of the driver.

(16) Tracks - (a) The distance (i) between tracks, and (ii) between tracks and buildings, blind walls or other structures and (iii) between tracks and materials deposited on the ground shall respectively be not less than :

(i) from centre to centre of parallel tracks, the over all width of the widest wagon of that gauge plus twice the width of the door of such a wagon when opened directly outward plus one metre.

(ii) from a building or structure other than a loading platform to the centre of the nearest track, half the overall width of the widest wagon of that gauge; plus the width of its door when opened outward, plus one and a half metres.

(iii) from material stacked or deposited alongside the track, on the ground or on a loading platform, to the centre of the nearest track, half the overall width of the widest wagon of that gauge ,plus half the width of its door when opened directly outward plus one metre.

(b) Sleepers of a track shall be in level with the ground and at all crossings of the track with a road or walkway, the surface of the road or walkway shall be in level with the top of the rails.

(c) All track ends shall be equipped with buffer stops of adequate strength.

(d) Barriers of substantial constructions shall be securely and permanently fixed across and doorway or gateway in a building or in a wall which conceals an appropriating train view, between the building and the track as prescribed in clause (a) of sub-rule (3).

(e) Where tracks are carried on gantry or other elevation, a footway or footways with hand rails and too-boards shall be provided at all positions where persons work or pass on foot; and where there is an opening in the stage of an elevated track for the dropping of materials to a lower level, the position shall be adequately fenced or the opening itself provided with a grill through which a person cannot fall.

(f) All point levers shall have their movement parallel to not across, the direction of the track.

(g) All loading platforms which are move than sixty centimetres above the level of the ground on which the track is laid and more than fifteen metres in length, shall be provided with stops at intervals not greater than fifteen metres apart to enable the platform to be easily mounted from the track.

(h) Turn tables on plan railways shall be provided with locking devices which will prevent the tables from turning while locomotive or wagons are being run on or off the tables.

(i) Workers shall be prohibited from passing under between or above railway wagons.

(17) Crossings - (a) at all crossings of a track with a road for walkway, danger or crossing signs and wherever reasonably practicable, blinking lights or alarm lights shall be provided. At all important crossings, gates, or barriers manned by watchman shall be provided. Swinging gates and barriers shall be secured against inadvertent opening or closing.

(b) All crossing, warning, signs, gates and barriers shall be illuminated during the hours of darkness.

(18) Duties of drivers and shunters - It shall be the duty of every driver of a locomotive, or a shunter including a shunting jamadar to report without delay to their superior any defect in permanent way, locomotive or rolling stock.

(19) Young persons not to be employed as drivers of locomotive or as shunters - No person who is below the age of eighteen years and no person who is not sufficiently competent and reliable shall be employed as a driver of a locomotive or as a shunter.

(20) The Chief Inspector may by an order in writing exempt a factory or part of it from all or any of the provisions of this rule to such extent and on such conditions as he deems necessary."

Rule 67H: [Framed U/S 41-A & 112 of the Act] Site Appraisal Committee

(1) The following provisions shall govern the functioning of the Site Appraisal Committee (hereinafter referred to be as the "Committee") in these rules namely :-

(a) The State Government may constitute or reconstitute a Site Appraisal Committee as and when necessary;

(b) The State Government may appoint a senior official of the Factories Inspectorate, preferably having qualification in Chemical Engineering to be the Secretary of the Committee;

(c) The State Government may appoint the following as members of the Committee, namely :-

(i) a representative of the Local Government wing of the Department of Local Government, Housing and Urban Development Department of the State Government;

(ii) a representative of the Department of Industries of the State Government; and

(iii) a representative of the Director General of Factory Advice Service and Labour Institute, Bombay.

(2) No member, unless required to do so by a court of law, shall disclose otherwise than in connection with the purposes of the Act, at any time any information relating to manufacturing or commercial business or any working process which may come to his knowledge during his tenure as a Member on this Committee.

(3) Application for Appraisal of Sites :--

(a) Applications for appraisal of sites in respect of the industries covered under clause (cb) of section 2 of the Act shall be submitted to the Chairman of the Site Appraisal Committee;

(b) The application for site appraisal along with fifteen copies thereof shall be submitted in

Form 8-B. The Committee may dispense with furnishing of information on any particular item in the application Form,. If it considers the same to be not relevant to the application under consideration.

(4) Functions of the Committee:--

(a) The Secretary shall arrange to register the applications received for appraisal of site in separate register and acknowledge the same within a period of seven days;

(b) The Secretary shall fix up the meetings in such manner that all the applications received and registered are referred to the Committee within a period of one month from the date of their receipt;

(c) The Committee shall adopt a procedure for its working keeping in view the need for expeditious disposal of applications;

(d) The Committee shall examine the applications for appraisal of a site with reference to the prohibitions and restriction on the location of an industry and the carrying on of processes and operations in different areas as per the provisions of rule 5 of the Environment (Protection) Rules, 1986 framed under the Environment (Protection) Act, 1986;

(e) The Committee may call for documents examine experts, inspect the site if necessary and take other steps for formulating its views in regard to the suitability of the site; and

(f) Wherever the proposed site required clearance by the Ministry of Industries or by the Ministry Environment and Forests of Government of India, the application for Site Appraisal will be considered by the Site Appraisal Committee only after such clearance had been received.

Rule 67-I: [Framed U/S 7-A,41-B & 112 of the Act] Health and Safety Policy

(1) The occupier of every factory except as provided for in sub-rule (2), shall prepare a written statement of his policy in respect of health and safety of workers at work.

(2) All factories :

(a) covered under sub-clause (i) of clause (m) of section 2 of the Act but employing less than fifty workers;

(b) covered under sub-clause (ii) of the said clause (m) but employing less than one hundred workers;

shall be exempted from the requirements of sub-rule (1):

Provided that the factories specified in clauses (a) and (b) above are not covered in First Schedule under clause (cb) of section 2 of the Act and are not carrying out processes or operations declared to be dangerous under section 87 of the Act.

(3) Notwithstanding anything contained in sub-rule (2) the Chief Inspector may require the occupier of any of the factories or class or description of factories to comply with the requirements of the sub-rule (1) if in his opinion, it is expedient to do so.

(4) The Health and Safety policy should contain or deal with:-

(a) the declared intention and commitment of the top management to health, safety and environment and compliance with the relevant statutory requirements;

(b) the organisational set up to carry out the declared policy clearly assigning the responsibility at different levels; and

(c) arrangements for making the policy effective.

(5) In particular, the policy should specify the following namely :-

(a) the intentions of taking into account the health and safety performance of

(b) the intentions of taking into account the health and safety performance of individuals at different levels while considering their career advancement;

(c) fixing the responsibility of the contractors, sub-contractors, transporters and other agencies entering the premises;

(d) providing a resume of health and safety performance of the factory in its annual report;

(e) relevant techniques and methods, such as safety audits and risk assessment for periodical assessment of the status on health, safety and environment and taking all remedial measures;

(f) stating its intentions to integrate health and safety in all decisions including those dealing with purchase of plant, equipment, machinery and materials as well as selection and placement of personnel; and

(g) arrangements for informing educating and training and retraining its own employees at different levels and the public, wherever required.

(6) A copy of the declared Health and Safety Policy duly signed by the occupier shall be made available to the Inspector having jurisdiction over the factory and to the Chief Inspector.

(7) The policy shall be made widely known by :-

(a) making copes available to all workers including contract workers, apprentices, transport workers and suppliers, etc.,

(b) displaying copies of the policy at conspicuous places, and

(c) any other means of communication.

(8) The occupier shall revise the Health and Safety Policy as often as may be appropriate, but it shall necessarily be revised under the following circumstances: -

(a) whenever any expansion or modification having implications on safety and health of persons at work is made; or

(b) whenever new substance(s) or articles are introduced in the manufacturing process having implications on health and safety of persons exposed to such substances.

Rule 67J: [Framed U/S 41-B & 112 of the Act] Collection, development and dissemination of information

(1) (a) The occupier or every factory carrying on a hazardous process shall arrange to obtain or develop detailed information in the form the Material Safety Data Sheet (MSDS) prescribed in

Form No. 8-C in respect of every hazardous substance or material handled in the manufacture, transportation and storage in the factory. It shall be accessible upon request to a worker for reference.

(b) The occupier while obtaining or developing a Material Safety Data Sheet in respect of a hazardous substance shall ensure that the information recorded accurately reflects the scientific evidence used in making that hazard determination. If he becomes newly aware of any significant information regarding the hazards, of a substance or ways to protect against the hazards, this new information shall be added to the Material Safety Data Sheet as soon as practicable.

(2) Labelling.

Every container of an hazardous substance shall be clearly labelled or marked to identity :- (a) the contents of the container;
(b) the name and address of the manufacturer or importer of the hazardous substance;
(c) the physical and health hazards; and
(d) the recommended personal protective equipment needed to work safely with the hazardous substance.

(3) In case a container is required to be transported by road outside the factory premises it should in addition be labelled or marked in accordance with the requirements laid down under sub-rule (2).

Rule 67-K[Framed U/S 41-B & 112 of the Act] Disclosure of information to workers (1) The occupier of a factory carrying on a hazardous process shall supply to all workers the following information in relation to handling of hazardous materials o substances in the manufacture, transportation, storage and other processes :-

(a) requirements of section 41-B, 41-C and 41-H of the Act;

(b) a list of hazardous processes carried on in the factory;

(c) location and availability of all Material Safety Data Sheets as provided in rule 67-J;

(d) physical and health hazards arising from the exposure to or handling of substances;

(e) measures taken by the occupier to ensure safety and control of physical and health hazards;

(f) measure to be taken by the workers to ensure safe holding, storage and transportation of hazardous substances;

(g) personal protective equipment required to be used by workers employed in hazardous process or dangerous operations;

(h) meaning of various labels and markings used in the containers of hazardous substances as provided under rule 67-J;

(i) signs and symptoms likely to be manifested on exposure to hazardous substances and to whom to report;

(j) measure to be taken by the workers in case of any spillage of leakage of an hazardous substance; and

(k) role of workers vis-à-vis the emergency plan of the factory in particular the evacuation procedures.

(l) Any other information considered necessary by the occupier to ensure safety and health of workers.

(2) The information required by sub-rule (1) shall be complied and made known to workers individually through supply of booklets of leaflets and display of cautionary notices at the work places.

(3) The booklets, leaflets and the cautionary notices displayed in the factory will be in the language understood by the majority of the workers and also explained to them.

(4) The Chief Inspector of factories may direct the occupier to supply further information to the workers may be deemed necessary.

Rule 67-L: [Framed U/S 41-B(2) & 112 of the Act] Disclosure of information to the Chief Inspector of Factories

(1) The occupier of every factory carrying on hazardous process shall furnish, in writing, to the Chief Inspector of Factories a copy of all the information furnished to the workers.

Form 8-C, in respect of the hazardous substances used, produced or stored in the factory shall be furnished to the Chief Inspector of Factories.

(3) The occupier shall also furnish any other information asked for by the Chief Inspector of Factories for the purpose of the Act and the rules.

Rule 67-M: [Framed U/S 41-B (2) & 112 of the Act] Information on industrial wastes (1) The information furnished under rule, 67-K, and 67-L shall include the quantity of the solid and liquid wastes generated per day, their characteristics and the method of treatment such as incineration of solid wastes, chemical and biological treatment or liquids wastes, and
arrangements for their final disposal.

(2) It shall also include information on the quality and quantity of gaseous waste discharged through the stacks or other openings, and arrangements such as provision of scrubbers, cyclone separators, and electrostatic precipitators or similar such arrangements made for controlling pollution of the environment.

(3) The occupier shall also furnish information specified in sub-rules (1) and (2) to the State Board for the prevention and Control of Water Pollution constituted under the Water (Prevention and Control of Pollution) Act, 1974 or the Air (Prevention and Control of Pollution) Act., 1891.

Rule 67-N: [Framed U/S 41-B(2) & 112 of the Act] Review of the information furnished to workers etc.

(1) The occupier shall review once in every calendar year and modify, if necessary, the information furnished under rules 67-K and 67-L to the workers and the Chief Inspector of Factories.

(2) In the event of any change in the process or operations or methods of work or when any new substance is introduced in the process or in the event of a serious accident taking place, the information so furnished shall be reviewed and modified to the extent necessary.

Rule 67-O: [Framed U/S 41-B(2) & 112 of the Act] Confidentiality of information

(1) The occupier of a factory carrying on `hazardous process' shall disclose all information needed for protecting safety and health of the workers to (a) his workers; and (b) the Chief Inspector of Factories as required under rules 67-K and 67-L. If the occupier is of the opinion that the disclosure of details regarding the process and formulations will adversely affect his business interests, he may make a representation to the Chief Inspector of Factories stating the reasons for withholding such information. The Chief Inspector of Factories shall give an opportunity to the occupier of being heard and pass an order on the representation.

(2) An occupier aggrieved by the order of the Chief Inspector of Factories may refer an appeal before the State Government with him a period of thirty days. The State Government shall give an opportunity to the occupier of being heard and pass an order. The order of the State Government shall be final.

Rule 67-P: [Framed U/S 41-C(b) &112 of the Act] Medical Examination

(1) Workers employed in an hazardous process shall be medically examined by a qualified medical practitioner (hereinafter referred to as the Factory Medical Officer), in the following manner, namely :-

(a) Once before employment, to ascertain physical fitness of the person to do the particular job;

(b) Once in a period of six months, to ascertain the health status of all the workers in respect of occupational health hazards to which they are exposed; and in cases where in the opinion of the Factory Medical Officer it is necessary to do so at a shorter interval in respect of any worker; and

(c) The details of pre-employment and periodical medical examination carried out as aforesaid shall be recorded in the health register in

Form 32 granted by the Factory Medical Officer. If the Factory Medical Officer declares a person unfit for being employed in any process covered under sub-rule (1), such a person shall have the right to appeal to the Inspector who shall refer the matter to the Certifying Surgeon whose opinion shall be final in this regard. If the Inspector of Factories himself is also a Certifying Surgeon, he may dispose of the application himself.

(3) Any finding of the Factory Medical Officer revealing any abnormality or unsuitability of any person employed in the process shall immediately be reported to the Certifying Surgeon who shall in turn, examine the concerned worker and communicate his findings to the occupier within thirty days. If the Certifying Surgeon is of the opinion that the worker so examined is required to be taken away from the process for health protection, he will direct the occupier accordingly, who shall not employ the said worker in the same process. However the worker so taken away be provided with alternate placement unless he is fully incapacitated in the opinion of the Certifying Surgeon in which case the worker affected shall be suitably rehabilitated :

Provided that the Certifying Surgeon on his own may examine any worker when he considers it necessary to do so for ascertaining the suitability of his employment in the 'hazardous process' or for ascertaining the health status of any workers.

(4) The workers taken away from employment in any process under sub-rule (2) may be employed again in the same process only after obtaining the Fitness Certificate from the Certifying Surgeon and after making entries to that effect in the health register.

(5) An Inspector may, if he deems it necessary to do so, refer a worker to the Certifying Surgeon for medical examination as required under sub-rule (1) or if he is Certifying Surgeon himself, conduct such medical examination. The opinion of the Certifying Surgeon in such a case shall be final. The fees required for this medical examination shall be paid by occupier.

(6) The worker required to undergo medical examination under these rules and for any medical survey conducted by or on behalf of the Central or the State Government shall not refuse to undergo such medical examination.

Rule 67-Q: [Framed U/S 41-C (b) of the Act] Occupational Health Centers

(1) In respect of any factory carrying on hazardous process there shall be provided and maintained in good order an occupational Health Centre with the services and facilities as per scale laid down hereunder: -

(a) For factories employing up to fifty workers -

(i) the services of a Factory Medical Officer on retainer ship basis in his clinic to be notified by the occupier. He will carry out the pre-employment and periodical medical examination as stipulated in rule 67-P and render medical assistance during any emergency;

(ii) at least five persons trained in first-aid procedures amongst whom at least one shall always be available during the working period; and

(iii) a fully equipped first-aid box.

(b) For factories employing fifty-one to two hundred workers-

(i) an occupational health Centre having a room with a minimum floor area of fifteen square metres with floors and walls made of smooth and impervious surface and with adequate illumination and ventilation as well as equipment and with adequate

illumination and ventilation as well as equipment as per the Schedule annexed to this rule;

(ii) a part-time Factory Medical officer shall be in over all charge of the centre who shall visit the factory at least twice in a week and whose services shall be readily available during medical emergencies;

(iii) one qualified and trained dresser-cum-compounder on duty throughout the working period; and

(iv) a fully equipped first-aid box in all the departments.

(c) For factories employing above two hundred workers---

(i) one full-time Factory Medical Officer for factories employing up to five hundred workers and one more medical officer for every additional one thousand workers or part thereof;

(ii) an Occupational Health Centre having at least two rooms each with a minimum floor area of fifteen square metres with floor and walls made of smooth and impervious surface and adequate illumination and ventilation as well as equipment as per the Schedule annexed to this rule.

(iii) There shall be one nurse, one dresser-cum compounder and one sweeper-cum-ward boy throughout the working period; and

(iv) the Occupational Health Centre shall be suitably equipped to manage medical emergencies.

(2) The Factory Medical Officer required to the appointed under sub-rule (1) shall have qualifications included in the Schedule to the Indian medical Degrees Act, 1916 or in the Schedules to the Indian Medical Council Act, 1956 and should possess a certificate of Training in industrial Health of minimum three months duration recognised by the State Government:

Provided that-

(i) a person possessing a Diploma in Industrial Health or equivalent shall not be required to possess the certificate of training as aforesaid;

(ii) the Chief Inspector of Factories may, subject to such conditions as he may specify, grant exemption from the requirement of this sub-rule, if in his opinion a suitable person possessing the necessary qualification is not available for appointment; and

(iii) in case of a person who has been working as Factory Medical officer for a period of not less than three years on the date of commencement of this rule, the Chief Inspector of Factories may, subject to the condition that the said person shall obtain the aforesaid certificate of training within a period of three years, relax the qualification.

(3) The syllabus of the course leading to the above certificate and the organisations conducting the Sate course shall be approved by the Director General, Factory Advice Service and Labour Institute of the Government in accordance with the guidelines issued by the Director General Factory Advice Service and Labour Institute.

(4) Within one month of the appointment of a Factory Medical Officer, the occupier of the factory shall furnish to the Chief Inspector the following particulars, namely:-

(a) Name and address of the Factory Medical Officer;

(b) Qualifications;

(c) Experience, if any; and

SCHEDULED
(See rule 67-
Q (b) (i)

Equipment for occupational Health Centre in Factories.

1. A glazed sink with hot and cold water always available 2. A table with a smooth top at least 180 cm.x105 cm.

3. Means for sterilizing instruments .

4. A couch.

5. Two buckets or containers with close fitting.

6. A kettle and spirits stove or other suitable means of boiling water.
7. One bottle of spirits ammoniac aromatics(120 ml) 8. Two medium size sponges.

9. Two Kidney trays.
10. Four cakes of toilet, preferably antiseptic 11 Two glass tumblers and two wine glasses 12. Two clinical thermometers.
13. Two tea spoons.

14. Two graduated (120ml) measuring glasses.

15. One wash bottle (1000 cc) for washing eyes.

16. One bottle (one litre) carbolic lotion 1 in 20.

17. Three chairs.

18. One screen.

19. One electric hand torch.

20. An adequate supply of tetanus toxied.

21. Coramine liquid (60ml.).
22. Talets-Antihistaminic, antispasmodic (25 each) 23. Syringes with needles -2 cc, and 10 cc.

24. Two needle holders big and small.
27. One dressing forceps
28. One scalpels.

29 One stethoscope.

30. Rubber bandage-pressur

31. Oxygen cylinder with necessary attachments.
32. One Blood Pressure
apparatus,
33. One patellar Hammer.

34. One Peak-flow meter for lung function measurement.

35. One stomach wash set.
36. Any other equipment recommended by the Factory Medical Officer according to specific need elating to manufacturing process.
37. in addition –

(1) For factories employing 51 to 200 workers-

1. Four plain wooden splints 900 mmx00 mmx6mm 2. Four plain wooden splints 50 mm x 75 mm x 6mm.

3. Twoplain wooden splints 250 mm x 50 mm x 12 mm.

4. One pair artery forceps.

5. Injections-morphia, pethidine, atropine, adrenaline, coramine, novacan (2

each).

6. One surgical scissors.

(2) For factories employing above 200 workers.

1. Eight plain wooden splints 900 mm x 100 mm x 6 mm.

2. Eight plain wooden splints 350 mm x 75 mm x 6 mm.

3. Four plain wooden splints 250 mm x 50 mm x 12 mm.

4. Two pairs artery forceps.

5. Injections –morphia, pethadine, atropine , adrenaline, coramine, novacan

(4each).

6. Two surgical scissors.

Rule 67-R: [Framed U/S 41-C & 112 of the Act] Ambulance Van

(1) In any factory carrying on hazardous process, there shall be provided and maintained I n good condition a suitably constructed ambulance van equipped with items as per sub-rule (2) and manned by a full-time Driver-cum-mechanic and helper trained in first-aid for the purposes of transportation of serious cases of accidents or sickness. The ambulance van shall not be used for any purpose other than the purpose stipulated herein and will normally be stationed at or near to the Occupational Health Centre :

Provided that a factory employing less than two hundred workers may make

arrangements for procuring such facility at short notice from nearby hospital or other places, to meet any emergency.

(2) The ambulance should have the following equipments :--

(a) General --

-- A wheeled stretcher with folding and adjusting devices; with the head of the stretcher capable of being tilled upward;
-- Fixed suction unit with equipment;
-- Fixed oxygen supply with equipment;
-- Pillow with case; -- Sheets; -- Blankets; -- Towels;
-- Emesis bag; -- Bed Pan ; -- Urinal; -- Glass

(b) Safety equipment --

-- Flares with life of thirty minutes;
-- Flood lights;
-- Flash lights; -- Fire extinguisher dry powder type; -- Insulated gauntlets.

(c) Emergency care equipments-

(i) Resuscitation --
-- Portable suction unit; Portable Oxygen units;
-- Bag-valve-mask, hand operated artificial ventilation unit; -- Airways; -- Mouth gases; -- Trachestomy adoptors; -- Short spine board; -- I. V. Fluids with administration unit; -- B.P. manometer; -- Gugg; -- Stethoscope

(ii) Immobilization -
-- Long and short padded boards; -- Wire ladder splints; -- Triangular bandage; -- Long and short spine boards.

(iii) Dressings -
-- Gauze pads - 4" x 4"; -- Universal dressing 10" x 36";
-- Roll of aluminium foils; -- Adhesive tape of 3"; -- Safety pins; -- Bandage sheets; -- Burn sheet.

(iv) Poisoning -
-- Syrup of lpecae; -- Activated Charcoal pre-packeted in doses; -- Snake bite kit; -- Drinking water.

(v) Emergency Medicines --
-- As per requirement (under the advice of Medical Officer only).

Rule 67-S: [Framed U/S 41-C & 112 of the Act] Decontamination facilities

In every factory carrying out `hazardous process' the following provisions shall be made to meet emergency:

(a) fully equipped first aid box;

(b) readily accessible means of water for washing, drenching clothing of workers as well as for those who have been contaminated with hazardous and corrosive substances and such means shall be as per scale shown in the table below:-

Table

-----No. of persons employed at any time	No. of drenching showers
i) Up to fifty workers	2
ii) Between fifty one to two hundred part Workers.	2+1 for every additional fifty or Thereafter.
iii) Between two hundred and one to five hundred or thereafter.	5+1 for every additional one Hundred workers. Part
iv) Five hundred and one workers and hundred or	8+1 for every additional two above. Part there-after.

(c) a sufficient number of eye wash bottles filled with distilled water or suitable liquid, kept in boxes or cupboards conveniently situated and clearly indicated by a distinctive sign which shall be visible at all times.

Rule 67-T: [Framed U/S 41-C & 112 of the Act] Making available Health Records to Workers

(1) The occupier of every factory carrying out hazardous process shall make accessible the health records including the records of workers exposure to hazardous process or, as the case may be, the medical records of any worker for his perusal under the following conditions :- (a) once in every six months or immediately after the medical examination whichever is earlier; (b) if the Factory Medical Officer of the Certifying Surgeon, as the case may be, is of the opinion that the worker has manifested signs and symptoms of any notifiable disease as specified in the Third Schedule to the Act;
(c) if the worker leaves the employment;
(d) if any one of the following authorities so direct :--
(i) the Chief Inspector of Factories;
(ii) the Health Authority of Central or State Government;
(iii) Commissioner of workmen's Compensation;
(iv) The Director General Employees' State Insurance Corporation;
(v) The Director, Employees State Insurance Corporation (Medical benefits; and
(vi) The Director General, Factory Advice Service and Labour Institutes.
(2) A copy of the upto date health records including the record of worker's exposure to hazardous process or, as the case may be, the medical records shall be supplied to the worker on receipt of an application from him X-ray plates and other medical diagnostic reports may also be made available for reference to his medical practitioner.

Rule 67-U: [Framed U/S 7-A, 41-B & 112 of the Act] Qualifications of Supervisors (1) All persons who are required to supervise the handling of hazardous substances shall process the following qualifications and experience: -

(a) (i) A Bachelor's degree in Chemistry or Diploma in Chemical Engineering or Technology with five years experience; or

(ii) A Master's Degree in Chemistry or a Degree in Chemical Engineering or Technology with two years experience.

The experience stipulated above shall be in process operation and maintenance in the Chemical Industry.

(2) The syllabus and duration of the above training and the organisations conducting the training shall be approved by t ory Advice Service and Labour

Institute or the State Government in accordance with the guidelines issued by the Director General, Factory Advice Service and Labour Institute.

Rule 67-V: [Framed U/S 41-B & 112 of the Act] Issue of guidelines

For the purpose of compliance with the requirements of sub-sections (1), (4) and (7) of section 41-B or section 41-C, the Chief Inspector of Factories may if deemed necessary, issue guidelines from time to time to the occupiers of factories carrying on `hazardous process'. Such guidelines shall be based on national Standards, Codes of Practice, or recommendations of International Bodies such as International lab our Organization and World Health Organization.

CHAPTER-V

WELFARE

Rule 68: [Framed U/S 42 of the Act] Washing facilities

(1) there shall be provided and maintained in every factory according to the nature of factory for the use of employed persons adequate and suitable facilities for washing, depending on the nature of the industry and its operations. It shall include suitable means of clearing and the facilities shall be conveniently accessible and shall be kept in orderly condition.

(2) Without prejudice to the generality of the foregoing provisions the washing facilities shall be of the design standard laid down by Chief Inspector in case of each industry.

(3) (a) Every container of water for washing facilities shall have a smooth, impervious surface.

(b) Suitable provisions will be made for sanitary disposal of the water from washings.

(4) For persons whose work involves contact with any injurious or noxious substance there shall be at least one tape of every fifteen persons.

(5) If female workers are employed, separate washing facilities shall be provided and so enclosed or screened that the interiors are not visible from any place where persons of the other sex work or pass. The entrance to such facilities shall bear conspicuous notice in the language understood by the majority of the workers "For Women only" and shall also be indicated pictorially.

(6) The water-supply to the washing facilities in case of industries involving contact with injurious or obnoxious substance shall be capable of yielding at least two gallons a day for each person employed in the factory and shall be from a source approved in writing by the Health Officer. Provided that where the Chief Inspector is satisfied that such a yield is not practicable he may be certificate in writing permit the supply of a smaller quantity not being less than one gallon per day for every person employed in the factory.

The quantity of water required for other industries will be as approved by Chief Inspector of Factories.

Rule 68A: [Framed U/S 43 of the Act] Facilities for storing and drying clothing:-

All classes of factories, mentioned in the schedule annexed hereto, shall provide facilities for keeping clothing not worn during the working hours and for the drying of wet clothing. Such facilities shall include the provisions of such arrangements as are ordered by the Chief Inspector of Factories, in writing.

Schedule

1. Glass Works.
2. Engineering workshops
3. Iron and Steel Works
4. Metal Foundries
5. Oil Mills
6. Chemical Works
7. Automobiles Workshops
8. Dyeing Works
9. Printing Press

Rule 69: [Framed U/S 45 of the Act] First-aid appliance -

The first-aid boxes or cupboards shall be distinctively marked with a red cross on white background and shall contain the following equipment :-

(a) for factories in which the number of persons employed does not exceed ten or in the case of factories in which mechanical power is not used such number does not exceed fifty person :- (i) six small size sterilised dressings;

(ii) three medium size sterilised dressings;

(iii) three large-size sterilised dressings;

(iv) three large-size sterilised burn dressings;

(v) one (60 ml) bottle of Certrimide solution (1 per cent) or a suitable anti-septic solution; (vi) one (60 ml) bottle containing sal-volatile having the dose and mode of administration indicated on the label;

(vii) one pair scissors;

(ix) one roll of adhesive plaster (2 cms x 1 metre);

(x) six pieces of sterilized eyepads in separate sealed packets;

(xi) one bottle containing 100 tablets (each of 5 grains) of aspirin or any other analgesic;

(xii) Polythene wash bottle (1/2 litre, i.e. 500 c.c,) for washing eyes;

(xiii) one Snake-bite lancet;

(xiv) one (30 ml.) bottle containing Potassium Permanganate crystals;

(xv) one copy of first-aid leaflet issued by the Director-General of Factory Advice Service and Labour Institutes, Government of India, Bombay.

(b) For factories in which mechanic power is used and in which the number of persons employed exceeds ten, but does not exceed fifty:

(i) twelve small size sterilized dressings;

(ii) six medium size sterilized dressings;

(iii) six large size sterilized dressings;

(iv) six large size sterilized burn dressings;

(v) six (15 gm.) packets of sterilized cotton wool;

(vi) one (120 ml.) bottle of certimide solution (1 per cent) or a suitable anti-septic solution; (vii) one (120 ml.) bottle of mercurochrome solution (2 per cent) in water;

(viii) one (60 ml.) bottle containing sal-volatile having the dose and mode of administration indicated on the label;

(ix) one pair scissors;

(x) two rolls of adhesive plaster (2 cms x 1 metre);
(xi) eight pieces of sterilized eye pads in separate sealed packets;
(xii) one tourniquet.
(xiii) one dozen safety pins;
(xiv) one bottle containing 100 tablets (each of 5 grains) of aspirin or any other analgesic; (xv) one polythene wash bottle (1/2 litre, i.e. 500 cc.) for washing eyes;
(xvi) one Snake-bite lancet;
(xvii) one (30 ml, bottle containing Potassium Permanganate crystals,)
(xviii) one copy of the First-aid leaflet issued by the Directorate General of Factory Advice Service and Labour Institutes, Government of India Bombay.

(c) For factories employing more than fifty persons;
(i) twenty-four small sterilized dressings;
(ii) twelve medium size sterilized dressings;
(iii) twelve large size sterilized dressings;
(iv) twelve large size sterilized burn dressings;
(v) twelve (15 gm.) packets of sterilized cotton wool;
(vi) one (200 ml.) bottle of certimide solution (1 per cent) or a suitable anti-septic solution; (vii) one (200 ml.) bottle of mercurochrome solution (2 per cent) in water;
(viii) one (120 ml.) bottle containing sal-volatile having the dose and mode of administration indicated on the label;
(ix) one pair scissors;
(x) one rolls of adhesive plaster (6 cms x 1 metre);
(xi) two rolls of adhesive plaster (2 cms. X 1 metre);
(xii) twelve pieces of sterilized eye pads in separate sealed packets;
(xiii) one bottle containing (100 tablets each of 5 grains) of aspiring or any other analgesic; (xiv) one polythene wash bottle (500 c.c.) for washing eyes;
(xv) twelve roller bandages 10 cms. Wide;
(xvi) twelve roller bandages 5 cms. Wide;
(xvii) six triangular bandages;
(xviii) one tourniquet;
(xix) suitable splints;

(xx) two packets of safety pins;

(xxi) kidney tray;

(xxii) one snake-bite lancet;

(xxiii) One (30 ml) bottle containing Potassium Permanganate crystals;

(xxiv) one copy of the First-aid leaflet issued by the Directorate General of Factory Advice Service and Labour Institute, Government of India, Bombay;
(xxv) One set of resuscitator (for artificial respiration.).

Provided that items (xiv) to (xxi) inclusive need not be included in the standard first-aid box or cupboard., (a) where there is a property equipped ambulance room, or (b) if at least one box containing such items placed and maintained in accordance with the requirements of Section 45 of the Act is separately provided.

(d) In lieu of the dressings required under items (i) and (ii) of clauses (a), (b) and (c there may be substituted adhesive wound dressings approved by the Chief Inspector and other equipment or medicines that may be considered essential and recommended by him from time to time.

Rule 69-A: [Framed U/S 45 of the Act] Notice regarding first-aid

A notice containing the names of the persons working within the precincts of the factory who are trained in first-aid treatment and who are in charge of the first-aid boxes or cupboards shall be pasted in every factory at a conspicuous place and near each such box or cupboard. The notice shall also indicate work room where the said person shall be available. The name of the nearest hospital and its telephone number shall also be mentioned prominently in the said notice.

Rule 70: [Framed U/S 45(4) of the Act] Ambulance Room

(1) Every ambulance room shall be in the charge of at least one whole-time qualified medical practitioner (hereinafter referred to as Medical Officer) assisted by at least one qualified nurse or dresser-cum-compounder and one nursing attendant, in each shift. No Medical Officer shall be required or permitted to do any work which is inconsistent with or detriment to his
responsibilities.

Provided that where a factory works in more than one shift, the Chief Inspector, if he is satisfied that on account of the size of factory, nature of hazardous or frequency of accidents, it is not necessary to employ a whole-time medical officer for each shift separately, he may, grant exemption from the provisions of this sub-rule and permit employment of only one whole-time Medical Officer for more than one or all shifts, subject to the conditions that-

(i) there shall be no relaxation in respect of nursing staff, and

(ii) the Medical Officer is readily available on call during the working hours of the factory;

(iii) in sub-rule (2) the words "or dispensary" shall be omitted; and
(iv) in sub-rule (3) -
(i) the words "or dispensary" shall be omitted; and
(ii) between the words "artificial means; and "An adequate" the words `There shall be attached to it at least one latrine and urinal of sanitary type", shall be inserted.

(2) There shall be displayed in the ambulance room or dispensary a notice giving the name, address and telephone number of the medical practitioner in charge. The name of the nearest hospital and its telephone number shall also be mentioned prominently in the said notice. (3) The ambulance room or dispensary shall be separate from the rest of the factory and shall be used only for the purpose of first-aid treatment and rest. It shall have a floor area of at least 24 square metres and smooth, hard and impervious walls and floors shall be adequately ventilated and lighted by both natural and artificial means. An adequate supply of wholesome drinking water shall be laid on the room shall contain at least --

(i) A glazed sink with hot and cold water always available.

(ii) A table with a smooth top at least 180 cms. X 1-5 cms.

(iii) Means for sterilizing instruments.

(iv) A torch.

(v) Two stretchers.

(vi) Two buckets or containers with close fitting lids.

(vii) Two rubber hot water bags.

(viii) A kettle and spirit stove or other suitable means of boiling water.

(ix) Twelve plain wooden splints 900 mm x 100 mm. x 6 m; (x) Twelve plain wooden splints 320 mm. x 75 mm. x 6 m; (xi) Six plain wooden splints 250 mm. x 50 mm. x 12 mm.

(xii) Six woolen blankets.

(xiii) Three pairs artery forceps.

(xiv) One bottle of Spiritus Ammoniac Aromaticus (120 ml.) (xv) Smelling salts (60 gms)

(xvi) Two medium size sponger.

(xvii) Six hand towels.

(xviii) Four "Kidney" traps.

(xix) Four cakes of toilet, preferably anti-septic soap.

(xx) Two glass tumblers and two wing glasses.

(xxi) Two clinical thermometers.

(xxii) Two Tea Spoons.

(xxiii) Two Graduated (120 ml.) measuring glasses, (xxiv) Two minimum measuring glasses.

(xxv) One wash bottle (100 cc.) for washing eyes.

(xxvi) One bottle (one litre) carbolic lotion 1 in 20.

(xxvii) Three chairs.

(xxviii) One screen.

(xxix) One electric hand torch.

(xxx) Four first-aid boxes or cupboard stocked according to the standard prescribed under clause (c) of rule 69.

(xxxi) An adequate supply of anti-tetanus toxiod.

(xxxii) Injection - Morphia, Pethidine, Atropine, Adrenaline, Coramine Novocam - 6 each.

(xxxiii) Coramine liquid (60 ml.)

(xxxiv) Tablets Antihis Taminic, Antispasmodic - 25 each (xxxv) Syringes with needles - 2 c.c, 5 c.c., 10 c.c., 50 c.c.

(xxxvi) Three Surgical Scissors.

(xxxvii) Needle holder.

(xxxviii) Suturing needles and materials.

(xxxix) Three Dissecting forceps.

(xl) Three Dressing forceps.

(xli) Three Scalpels.

(xlii) One Stethoscope.

(xliii) Rubber bandage-pressure bandage.

(xliv) Oxygen cylinder with necessary attachments.

(4) The occupier of every factory to which these rules apply shall for the purpose of removing serious cases of accident or sickness provide in the premises and maintain in good condition an suitable conveyance unless he has made arrangements for obtaining such a conveyance from a hospi

Explanation - For purposes of this rule, "qualified medical practitioner" means a person holding a qualification granted by an authority specified in the Schedule to the Indian Medical Degrees Act, 1916, or in the Schedules to the Indian Medical Council Act, 1956.

(5) The Chief Inspector, may, by an order in writing exempt any factory from the requirements of this rule, subject to such conditions as he may specify in that order, if there is an empanelment of a hospital or nursing home of minimum twenty beds at a travel distance of not more than two kilometers from the main gate of the factory and also there is a provision of ambulance van in the premises of the factory.

Rule 71: [Framed U/S 46(1) of the Act] Canteen

(1) (i) Canteen or canteens shall be provided and maintained in all types of factories wherein more than two hundred and fifty workers are ordinarily employed.

(2) The occupier of every factory wherein more than two hundred and fifty workers are ordinarily employed shall provide in or near the factory an adequate canteen according to the standards prescribed in these Rules.

(3) The Manager of a factory shall submit for the approval of the Chief Inspector plans and site plan, in duplicate (Triplicate for Punjab) of the building toe be constructed or adapted for use as a canteen.

(4) The canteen building shall be situated not less than 15 m. from any latrine, urinal, boiler house, coal stacks, ash dumps and any other source of dust, smoke or obnoxious fumes or anything which may be considered insanitary:

Provided that the Chief Inspector may in any particular factory relax the provisions of this sub- rule to such extent as may be reasonable in the circumstances and may require measures to be adopted to secure the essential purpose of this sub-rule.

(5) The canteen building shall be constructed in accordance with the plans approved by the Chief Inspector and shall accommodate at least a dining hall, kitchen, store-room, pantry with suitable fixtures and washing places separately for workers and for utensils.

(6) In a canteen the floor and inside walls up to a height of 125 cm. from the floor shall be made of smooth and impervious materials the remaining portion of the inside walls shall be made smooth by cement plaster or any other manner approved by the Chief Inspector.

(7) The doors and windows of canteen building shall be of fly-proof construction and shall allow adequate ventilation.

(8) The canteen shall be sufficiently lighted at all times when any person has access to it.

(9) (a) IN EVERY CANTEEN-

(i) all inside walls of rooms and all ceilings and passages and staircases shall be limewashed at least once in each year of painted once in three years dating from the period when last limewashed, or painted, as the case may be;

(ii) all woodwork shall be varnished o painted once in three years dating from the period when last varnished or painted;

(iii) all internal structural iron and steel work be painted once in three years dating from the period when last painted. Provided that inside walls of the kitchen shall be lime or colourwashed once every four months.

(b) Records of dates on which limewashing, colourwashing varnishing or painting is carried out shall be maintained in the register in

Form No. 7.

(10) The precinct's of canteen shall be maintain in a clean and sanitary condition. Waste water shall be carried away in covered drains of suitable design and slope so as not to allow waste water to accumulate and cause a nuisance. Suitable arrangements shall be made for the collection and disposal of garbage including provision of grease traps of adequate design.

Rule 72: [Framed U/S 46(1) of the Act] Dining hall

(1) The dining hall shall normally accommodate at a time 20 per cent of the workers working at the time:

Provided that, in any particular factory or in any particular class of factories, the Chief Inspector by an order in writing in this behalf, after the percentage of workers to be accommodated.

(2) The floor area of the dining hall, excluding the area occupied by the service counter and any furniture except tables and chairs, shall not be less than 75 square metre per diner to be accommodated as prescribed in sub-rule (1).

(3) A portion of the dining hall and service counter shall be partitioned off and reserved for women workers in proportion to their number. Washing places for women shall be separate and screened to secure privacy.

(4) Sufficient tables, chairs or benches shall be available for the number of diners to be accommodated as prescribed in sub-rule (1).

Rule 73: [Framed U/S 46(1) of the Act] Equipment

(1) There shall be provided sufficient utensils, cutlery furniture and other equipment necessary for the efficient running of the canteen. Suitable clean clothes for the employees serving in the canteen shall also be provided.

(2) The furniture, utensils and other equipment shall be maintained in a clean and hygienic condition. A service counter if provided, shall have a top of smooth and impervious material. Suitable facilities including an adequate supply of hot water shall be provided for the cleaning of utensils and equipment.

Rule 74: [Framed U/S 46(1) of the Act] Prices to be charged

(1) Food, drink and other items served in the canteen shall be sold on a no-profit basis and the prices charged shall be subject to the approval of the Canteen Managing Committee.

(1-A). In computing the prices referred to in sub-rule (1), the following items of expenditure shall not be taken into consideration, but will be borne by the occupier-

(a) the rest for the land and building;

(b) the depreciation and maintenance charges of the building and equipment provided for the canteen:

(c) the cost of purchase, repairs and replacement of equipments including furniture, crockery, cutlery and utensils;

(d) the water charges and expenses for providing lighting and ventilation:

(e) the interest on the amount spent on the provision and maintenance of the building, furniture and equipment provided for the canteen."

Rule 75: [Framed U/S 46(1) of the Act] Accounts

(1) All book, of accounts, registers and any other documents used in connection with the running of the canteen shall be produced on demand to an Inspector.

(2) The accounts pertaining to the canteen shall be audited once every twelve months by registered Accountants and Auditors and shall be submitted to the Canteen managing Committee not later than two months after the closing of the audited accounts. Provided that the accounts pertaining to the Canteen in a Government factory having its own accounts department may be audited in such department:

Provided further that where the canteen is managed by a Co-operative Society registered under the Punjab Co-operative Societies Act, 1954 (Punjab Act XIV of 1955), the accounts pertaining to such canteen may be audited in accordance with the provisions of that Act.

Rule 76: [Framed U/S 46(1) of the Act] Managing Committee

(1) The Manager shall appoint a Canteen Managing Committee which shall be consulted from time to time as to-

(a) the quality and quantity of foodstuffs to be served in the canteen;

(b) the arrangements of the menus;

(c) times of meals in the canteen; and

(d) any other matter as may be directed by the Committee;

Provided that where the Canteen is managed by a Co-operative Society registered under the Punjab Co-operative Societies Act, 1954 (Punjab Act XIV of 1955), it shall not be necessary to appoint a Canteen Managing Committee.

(2) The Canteen managing Committee shall consist of an equal number of elected worker shall be in the proportion of 1 for every 1,000 workers employed in the factory provided that is no case shall be more than 5 or less than 2 workers on the Committee.

(3) The Manager shall in consultation with the Works Committees, if any, determine and supervise the procedure for elections to the Canteen Managing Committee.

Rule 77: [Framed U/S 46(1) of the Act] Dissolution of the Committee

A canteen Managing Committee shall be dissolved by the Manager two years after the last election, no account being taken of a bye-election.

Rule 77A: [Framed U/S 46(1) of the Act] Medical Examination of Canteen Staff.

(1) Annual medical examination for fitness of each member of the canteen staff who handles food-stuffs shall be carried out by the Factory Medical Officer or the Certifying Surgeon which should include the following:

(i) Routine blood examination.

(ii) Routine and bacteriological testing of faeces and urine for germs of dysentery and typhoid fever.

(iii) Any other examination including chest X-ray that may be considered necessary by the factory medical officer or the Certifying Surgeon.

(2) Any person who in the opinion of the Factory Medical Officer the Certifying Surgeon is unsuitable for employment on account of possible risk to the health of others, shall not be employed as canteen staff).

Section 78: [Framed U/S 47(3) of the Act] Shelters, rest rooms and lunch rooms (1) this rule shall apply to all such factories wherein more than 150 workers are employed.

(2) The shelters or rest rooms and lunch rooms shall conform to the following standards and the manager of factory shal l of the Chief Inspector a site

plan in duplicate For Punjab Site plan and detailed plan in triplicate of the building to be constructed or adapted: -

(a) The building shall be soundly constructed and all the walls and roof shall be of suitable heat- resisting material and shall be waterproof. The floor and walls to the height of 0.9 metre shall be so laid or finished as to provide a smooth and impervious surface.

(b) The height of every room in the building shall be not less than 3.65 metre from floor level to the lowest part of the roof and there shall be at least 1.1 Sq.m. of floor area for every person employed. Provided that

(i) workers who habitually go home for their meals during the rest periods may be excluded in calculating number of workers to be accommodated (ii) in the case of factories in existence at the date of commencement of the Act., where it is impracticable owing to lack of space to provide 1.1 Sq.m. of floor area for each person, such reduced floor area per person shall be provided as may be approved in writing by the Chief Inspector.

(c) Effective and suitable provision shall be made in every room for securing and maintaining adequate ventilation by the circulation of fresh air and there shall also be provided and maintained sufficient and suitable natural or artificial lighting.

(d) Every room shall be adequately furnished with chairs or benches with backrests. (e) Sweepers shall be employed whose primary duty is to keep the rooms buildings, and precincts thereof in a clean and tidy condition.

(f) Suitable provisions shall be made in every room for supply of drinking water and facilities for washing.

(3) (a) The lunch rooms shall comply with the requirements laid down in clauses (a) to (f) of sub- rule (2).

(b) Every lunch room shall be provided with adequate number of tables with impervious tops and suitable benches or chairs for use of workers for taking food. Adequate means for warming food shall also be made.

Rule 79: [Framed U/S 48(3) of the Act] Creches

(1) In every factory wherein more than Thirty women workers are ordinarily employed the crèches shall be conveniently accessible to the mothers of the children accommodated therein and so far as reasonably practicable shall not be situated in close proximity to any part of the factory where obnoxious fumes, dust or odours are given off or in which excessively noisy processes are carried on.

(2) The building in which creche is situated shall be soundly constructed and all the walls and roof shall be of suitable heat-resisting materials and shall be waterproof. The floor and internal walls of the creche shall be so laid or furnished as to provide a smooth impervious surface.

(3) The height of the rooms in the building shall be not less than 65 cm from the floor to the lowest part of the roof and there shall be not less than 1.86 square metre of floor area for each child to be accommodated.

(4) Effective and suitable provision shall be made in every part of the creche for adequate ventilation by the circulation of fresh air.

(5) The creche shall be adequately furnished and equipped and in particular there shall be one suitable cot or cradle with the necessary bedding for each child (provided that

for children over two years of age it will be sufficient if suitable bedding is made available) at least on chair or equivalent seating accommodation for the use of each mother while she is feeding or attending to her child, and a sufficient supply of suitable toys for the older children.

(6) A suitable fenced and shady open air play-ground shall be provided for the older children: Provided that the Chief Inspector may by order in writing exempt any factory from compliance with this sub-rule if he is satisfied that there is no sufficient space available for the provision of such a play-ground.

(7) The occupier of every factory shall provide for facilities for the mothers of children to feed them at regular intervals.

Rule 80: [Framed U/S 48(3) of the Act] Wash-room

(1) There shall be in or adjoining the creche a suitable wash-room for the washing of the children and their clothing. The wash-room shall conform to the following standards: -

(a) The floor and internal walls of the room to the height of 0.9 metre shall be so laid or furnished as to provide a smooth impervious surface. The room shall be adequately lighted and ventilated and the floor shall be effectively drained and maintained in a clean and tidy condition.

(b) There shall be at least one basin or similar vessel for every four children accommodated in the creche at any one time together with a supply of water provided if practicable through taps from source approved by the health Officer. Such source shall be capable of yielding for each child a supply of at least five gallons of water a day.

(c) An adequate supply of clean clothes, soap and clean towels shall be made available for each child while it is in the creche.

(2) Adjoining the wash-room referred to above, latrine shall be provided for the sole use of the children in the creche. The design of the latrine and the scale of accommodation to be provided shall either be approved by the Public Health Authorities, or where there is no such authority, by the Chief Inspector of Factories.

Rule 81: [Framed U/S 48(3) of the Act] Supply of milk and refreshment

At least half of pint of pure milk shall be available for each child on every day it is accommodated in the creche and the mother of such a child shall be allowed in the course of her daily work, two intervals of at least 15 minutes to feed the child. For children above two years of age there shall be provided in addition an adequate supply of wholesome refreshment.

Rule 82: [Framed U/S 48(3) of the Act] Clothes for crèche staff

The creche staff shall be provided with suitable clean clothes for use while on duty in the creche.

Rule 82A: [Framed U/S 48(3) of the Act] Exemption from the provision of creche

(1) In factories where the number of married women or widows employed does not exceed fifteen or where the factory works for less than one hundred and eighty days in a calendar year, or where the number of children kept in the creche was less than five in the preceding year, the Chief Inspector of Factories may exempt such factories from the provisions of section 48 and the rules 79 to 82 of these rules, if he is satisfied that alternate arrangements as specified in sub- rule (2) are provided by the factory.

(2) (a) The alternate arrangements required in sub-rule (1) shall include a creche building which has a minimum ate of 1.85 square metres per

child and constructed in accordance with the plans approved by the Chief Inspector of Factories;

(b) The creche building shall have--

(i) a suitable washroom for washing of the children and their clothing;

(ii) adequate supply of soap and clean clothes and towels; and

(iii) adequate number of female attendants who are provided with suitable clean clothes for use while on duty to look after the children in the creche.

(3) The exemption granted under sub-rule (1) may at any time be withdrawn by the Chief Inspector of Factories if he finds after such enquiry as he may deem fit, that the factory has committed a breach of this rule."

CHAPTER-VI
WORKING HOURS OF ADULTS

Rule 83: [Framed U/S 53(1) of the Act] Compensatory holidays

(1) Except in the case of workers engaged in any work for which for technical reasons must be carried on continuously throughout the day, the compensatory holidays to be allowed under sub- section (1) of Section 52 of the Act shall be so spaced that not more than two holidays are given in one week.

(2) The Manager of the factory shall display, on or before the end of the month in which holidays are lost, a notice in respect of workers allowed compensatory holidays during the following month and of the dates thereof, at the place at which the notice of periods of work prescribed under Section 61 of the Act is displayed. Any subsequent change in the notice in respect of any compensatory holiday shall be made not less than three days in advance of the date of that holiday.

(3) Any compensatory holiday or holidays to which a worker is entitled shall be given to him before he is discharged or dismissed and shall not be reckoned as part of any period of notice required to be given before discharge or dismissal.

Form No 9.

Provided that if the Chief Inspector of Factories is of the opinion that any muster-roll or register maintained as part of routine of the factory or return made by the Manager, gives in respect of any or all of the workers in the factory the particulars required for the enforcement of Section 52, he may, by order in writing, direct that such muster-roll or register or return shall, to the corresponding extent, be maintained in place of and be treated as the register of return required under this rule, for that factory.

(b) The register maintained under clause (a) shall be preserved for a period of three years after the last entry in it and shall be produced before the Inspector on demand.

Rule 84: [Framed U/S 58(2) of the Act] Exemption for printing presses.

All Printing Presses attached to daily newspapers publishing more than one edition shall be exempted from the provisions of sub-section (1) of Section 58 of the Act subject to the condition that the system of overlapping shifts is duly approved by the Chief Inspector of Factories before hand and no worker is made to work more than nine hours a day subject to forty-eight hours a week as provided under Section 51 of the Act.

Rule 85: [Framed U/S 59(5) of the Act] Muster-roll for exempted factories

(1) The Manager of every factory in which workers are exempted under Section 64 or 65 from the provisions of Section 51 or 54 shall keep a muster-roll in

Form No. 10 showing the normal piece-work rate of pay, or the late or pay per hour, of all exempted employees. In this muster-roll shall be correctly entered the overtime hours of work and payments therefore of all exempted workers. The muster-roll in Form No. 10 shall always be available for inspection.

(2) Period of overtime work shall also be entered in overtime slips which shall be prepared in duplicate and an overtime slip duly signed by the Manager or by a person duly authorised by him shall be given to the worker immediately after completion of the overtime work.

"Provided that if the Chief Inspector is satisfied that it is not possible to issue daily slips to the workers due to the nature of work carried out by a worker in the factory, he may permit to issue weekly slips in duplicate duly signed by the Manager or by a person duly authorized by him after completion of the work specified therein."

Rule 85A: [Framed U/S 59(5) of the Act] Extra wages for overtime

For the purpose of computing cash equivalent of the advantage accruing through the concessional sale to a worker of foodgrains and other articles, the difference between the value of foodgrains and articles at the average rates in the nearest market prevailing during the wage food period in which overtime was worked and value of foodgrains and other articles supplied at concessional rates shall be calculated and allowed for the number of overtime hours worked:

Provided that this rule shall not apply to any Federal Railway Factory whose alternative method of compensation has been approved by the State Government.

Rule 86: [Framed U/S 61(8) of the Act] Register of Adult Workers the Register of periods of work for adult workers shall be in

Rule 87: [Framed U/S 62(2) of the Act] Register of adult workers The Register of adult workers shall be in

Form No. 12.

Rule 88: ----

Rule 89: ----

Rule 90: -----

Rule 91: -----

CHAPTER-VII

EMPLOYEMENT OF YOUNG PERSONS

Rule 92: [Framed U/S 72(3) of the Act] Notice of periods of work of children the notice of periods of work for child workers shall be in

Rule 93: [Framed U/S 73(2) of the Act] Register of child workers The Register of child workers shall be in

Form No. 14.

CHAPTER-VIII
LEAVE WITH WAGES

Rule 94: [Framed U/S 80(3) of the Act] Wages during leave period

The cash equivalent of the advantage accruing thorough the concessional sale of foodgrains and other articles payable to workers proceeding on leave shall be the difference between the value at the average rates in the nearest market prevailing during the month immediately preceding his leave and the value at the concessional rates allowed foodgrains and other articles he is entitled to.

For the purposes of the cash equivalent monthly average market rates of foodgrains and other articles shall be computed at the end of every month.

Rule 94A: [Framed U/S 83 of the Act] Leave with wages register

(1) The manager shall maintain a register in Form No., 15 (hereinafter called the leave with wages register) and the name of each worker shall be entered in this register before the close of the next calendar month following the month, in which the workers is taken in employment.

Provided that if Chief Inspector is of the opinion that any muster-roll or register or any other record maintained as part of the routine of the factory, or return made by the manager gives in respect of any or all the workers in the factory, the particulars required for the enforcement of Chapter VIII of the Act, he may, by order in writing, direct that such muster-roll or register or return shall, to the corresponding extent, the maintained in place of and be treated as the register or return required under this rule in respect of the factory.

(2) The leave with wages register shall be preserved for a period of three years after the last entry in it and shall be produced before the Inspector on demand.

Rule 95: [Framed U/S 83 of the Act] Leave Book

(1) The Manager shall provide each worker with a book in

Form No. 15 (hereinafter called the leave book) within one month following the month in which the worker is taken in employment.

The leave book shall be the property of the worker and the manager or his agent shall not demand it except to make relevant entries therein whenever necessary, and shall not keep it for more than a week at a time.

(2) If a worker loses his leave book, the manager shall provide him with another copy on payment of 15 Paise duly completed from his record within a week of the payment.

Rule 96: [Framed U/S 83 of the Act] Medical Certificate

If any worker is absent from work due to his illness and he wants to avail himself of the leave with wages due to him to cover the whole or part of the period of his illness under the provisions of clause (7) of Section 79 of Chapter VIII of the Act as revised by the Factories (Amendment) Act, 1954 he shall, if required by the manager, produce a medical certificate signed by a registered medical practitioner or by a registered or recognised Vaid or hakim stating the cause of the absence and the period for which the worker is, in the opinion of such medical practitioner, Vaid or hakim, unable to attend his work, or other reliable evidence to prove that he was actually ill during the period for which the leave is to be availed of.

Rule 97: [Framed U/S 83 of the Act] Notice to Inspector of involuntary unemployment The manager shall give as soon as possible a notice to the Inspector of every case of involuntary unemployment of workers, giving numbers of unemployed and the reason for their unemployment. Entries to this effect shall be made in the Leave with Wages Register and the Leave Book in respect of each worker concerned.

Rule 98: [Framed U/S 83 of the Act] Notice by worker

Before or at the end of every calendar year, a worker, who may be required to avail to leave in accordance with sub-section (8) of Section 79 of the Act may give notice to the Manager of his intention not to avail himself of the leave with wages falling due during the following calendar year. The Manager shall make an entry to that effect in the Leave the Wages Register and in the Leave Book of the Worker concerned.

Rule 99: [Framed U/S 83 of the Act] Notice of leave with wages

(1) As far as circumstances permit, members of the same family, comprising husband, wife and children shall be allowed leave on the same date.

(2) A worker may exchange the period of his leave with another worker, subject to the approval of the Manager.

Rule 100: [Framed U/S 83 of the Act] Payment of wages if the worker dies

If a worker dies before he resumes work, the balance of his pay due for the period of leave with wages not availed of shall be paid to his nominee within one week of the intimation of the death of the worker. For this purpose each worker shall submit a nomination in

Form No. D annexed hereto duly signed by himself and attested by two witnesses. The nomination shall remain in force until it is cancelled or revised by another nomination.

FORM No-D

I hereby require that in the event of my death before resuming work the balance of my pay due for the period of the leave with wages not availed of shall be paid to ----------

Who is my ----------and resides at ----------

Rule 101: [Framed U/S 83 of the Act]

Register to be maintained in case of exemption under Section 84

(1) Where an exemption is granted under Section 84, the Manager shall maintain a register showing the position of each worker as regards leave taken and wages granted.

(2) He shall display at the main entrance of the factory, notice giving full details of the system established in the factory for leave with wages and shall send a copy of it to the Inspector. (3) No alternation shall be made in the Scheme approved by the State Government at the time of granting exemption under Section 84 of the Act without its previous sanction.

CHAPTER-IX
SPECIAL PROVISIONS

Rule 102: [Framed U/S 87of the Act] Dangerous manufacturing process or operation The following operations when carried on in any factory are declared to be dangerous manufacturing process or operations under Section 87 of the Act :-

(I) Manufacture of aerated water and processes incidental thereto.

(II) Electrolytic plating or oxidation of metal articles by use of an electrolyte containing acids, bases or salts of metals such as chromium, nickel, cadmium, zinc, copper, sliver or gold. (III) Manufacture and repair of electric accumulators.

(IV) Glass manufacture.

(V) Grinding or glazing of metals.

(VI) Manufacture and treatment of lead and certain compounds of lead.

(VII) Generation of gas from dangerous petroleum.

(VIII) Cleaning, smoothening or roughening etc. of articles by a jet of sand, metal shot, grit or other abrasive propelled by a blast of compressed air of steam.

(IX) Liming and tanning of raw hides and skins and processes incidental thereto.

(X) Carrying on of certain processes of lead and lead material in Printing Presses and Type Foundries.

(XI) Chemical works.

(XII) Manufacture of pottery and ceramics.

(XIII) Compression of Oxygen and Hydrogen produced by the electrolysis of water:

(XIV) Manipulation of stone or any other material containing free silica;

(XV) Handling and processing of asbestos, manufacture of any article of asbestos and any other process of manufacture or otherwise in which asbestos is used in any form;

(XVI) Handling and manipulation of corrosive substances

(XVII) Use of ovens and driers in factories

(XVIII) Manufacture of Manipulation of Carcinogenic intermediates;

(XIX) Process extracting vegeta solvent extraction plants.

(XX) Manufacture and manipulation of manganese and its compounds.

(XXI) Protection against hazards of poisoning arising from benzene.

(XXII) Carbon disulphide plants.

(XXIII) Operations involving High Noise levels.

(XXIV) Manufacture or manipulation of dangerous pesticides.

(XXV) Manufacture of Rayon by Viscose

(XXVI) Highly Flammable liquids and Flammable Compressed Gases.

(XXVII) Operation in foundries

apply to operations

(3) The provisions specified in the Schedules annexed hereto shall any class or description of factories wherein dangerous specified in each Schedule are carried out.

(2-A)(a) - for the medical examination of workers to be conducted by the certifying surgeons as required by the Schedule annexed to these rules, the occupier of the factory shall pay fee at the rate of five rupees per examination of each worker;

(b) The fee prescribed in clause (a) shall be exclusive of any charges for biological, radiological or other tests which may have to be carried out in connection with the medical examination. Such charges shall be payable by the occupier;

(c) The fees to be paid for medical examination shall be paid into the local treasury under the head of account 0230-Labour and Employment

(Provincial) fee realized under the Factories Act, 1948", or though a crossed cheque on the State Bank of India, or through postal order drawn in favour of the Chief Inspector;

(3) Wherever a periodical medical examination has been prescribed under the different schedules, the occupier shall send a return in

Form No. 34, to the Chief Inspector of Factories, so as to reach him on or before the 5th of every month in respect of medical examination of the workers conducted during the preceding month.

(4) Notwithstanding anything contained in the Schedules annexed to this rule, the Inspector may issue order in writing to the Manager or Occupier or both, directing them to carry such measures, and within such time, as may be specified in such order with a view to remove conditions dangerous to the health of the worker or to suspend any process, where such process
constitutes in the opinion of the Inspector imminent danger of poisoning or toxicity.

(5) Any register or record of medical examinations and tests connected therewith required to be carried out, under any of the Schedule annexed hereto, in respect of any worker, shall be kept readily available to the Inspector and shall be preserved till the expiry of a period of one year after the worker ceases to be in employment of the factory.

SCHEDULE I

Manufacture of aerated waters and processes incidental thereto

1. Fencing of machines. - All machines for filling bottles or syphons shall be so constructed, placed or fenced, as to prevent, as far as may be practicable, a fragment of a bursting bottle or syphon form striking any person employed in the factory.

2. Face guards and gauntlets. –

(1) The occupier shall provide and maintain in good condition for the use of all persons engaged in filling bottles or siphons: -

(a) suitable face guards to protect the face, neck and throat; and

(b) suitable gauntlets for both arms to protect the whole hand and arms

Provided that:-

(i) paragraph 2(1) shall not apply where bottles are filled by means of an automatic machine so constructed that no fragment of a bursting bottle can escape.

(i) Where a machine is so constructed that only one arm of the bottler at work up to it is exposed to danger, a gauntlet need not be provided for the arm which is not exposed to danger.

(2) The Occupier shall provide and maintain in good condition for the use of all persons engaged in corking, crowning, screwing, wiring , foiling, capsuling, sighting or labelling bottles or syphons -

(a) suitable face-guards to protect the face, neck and throat; and

(b)suitable gauntlets for both arms to protect the arm and at least half of the palm and the space between the thumb and forefinger.

(3) Wearing of face guards and gauntlets. - All persons engaged in any of the processes specified in paragraph 2 of this schedule shall, while at work in such processes, wear the face guards and gauntlets provided under the provisions of the said paragraph.

Schedule – II

Electrolytic plating or oxidation of metal articles by use of an electrolyte containing acids, bases or salts of metals such as chromium, nickel, cadmium, zinc, copper, silver, gold etc.

1. **Definitions -** For the purposes of this Schedule –

(a) "electrolytic process" means the electrolytic plating or oxidation of metal articles by the use of an electrolyte containing acids ,bases or salts of metals such as chromium, nickel, cadmium, zinc, copper, silver, gold, etc.

(b) "bath" means any vessel used for an electrolytic process or for any subsequent process; and

(c) "Employed "means employed in any process involving contact with liquid from a bath.

2. **Exhaust draught :-**(a) an efficient exhaust draught shall be applied to every vessel in which an electrolytic process is carried on.

(b) The draught shall be provided by mechanical means and shall operate on the vapour or spray given off in the process as near as may be at the point of origin.

(c) The exhaust draught appliance shall be so constructed, arranged and maintained as to prevent the vapour or spray entering into any room or place in which work is carried on.

3. **Prohibition relating to women and young persons - No** women, adolescent or child shall be employed or permitted to work at a bath.

4. **Floor of workrooms -** The floor of every workroom containing a bath shall be impervious to water. The floor shall be maintained in good and level condition and shall be washed down at least once a day.

5. Protective devices -

(1) The occupier shall provide and maintain in good and clean condition the following articles of protective devices for the use of all persons employed on any process at which they are liable to come in contact with liquid from a bath and such devices shall be worn by the persons concerned

(a) waterproof aprons and bibs; and

(b) for persons actually working at a bath, loose fitting rubber gloves and rubber boots or other waterproof footwear, and chemical goggles.

(2) The occupier shall provide and maintain for the use of all persons employed suitable accommodation for the storage and drying of protective devices.

6. Water facilities -

(1) There shall be provided and maintained in good repairs for the use of all persons employed in electrolytic process and processes incidental to it-

(a) a wash place under cover, with either-

(i) a trough with a smooth impervious surface filled with a waste pipe , and of sufficient length to allow at least 60cms for every 5 persons employed

at any one time, and having a constant supply of water from taps or jets above the trough at intervals of not more than 60cms, or

(ii) at least one wash basis for every five such persons employed at any one time, fitted with a waste pipe and having a constant supply of water laid on.

(b) a sufficient supply of clean towels renewed daily, and soap or other suitable cleaning material.

(2) In addition to the facility in sub-paragraph 1, an approved type emergency shower with eye fountain shall be provided and maintained in good working order. Whenever necessary, in order to ensure continuous water supply, storage tank of 1500 litres capacity shall be provided as a source of clean water for emergency use.

7. **Cautionary placard -** A cautionary placard in the form specified below and printed in the language of the majority of the workers employed shall be affixed in a prominent place in the factory where it can be easily and conveniently read by the workers.

CAUTIONARY NOTICE

Electrolytic Plating

1. Chemicals handled in this plant are corrosive and poisonous.

2. Smoking, chewing tobacco, eating food or drinking, in this area is prohibited. No food stuff or drink shall be brought in this area.

3. Some of these chemicals may be absorbed through the skin and may cause poisoning.

4. A good wash shall be taken before meals.

5 Protective devices supplied shall be used while working in this area.

6 Spillage of the chemicals on any part of the body or on the floor shall be immediately washed away with water.

7. All workers shall report for the prescribed medical tests regularly to protect their own health.

8. Medical facilities and records of examinations and tests.- (1) The occupier of every factory in which electrolytic processes are carried on shall -

(a) employ a qualified medical practitioner for medical surveillance of the workers employed therein whose appointment shall be subject to the approval of the Chief Inspector of Factories;

(b) Provide to the said medical practitioner all the necessary facilities for the purpose referred to in clause (a); and

(c) maintain a sufficient supply of suitable barrier cream, ointment and impermeable water proof plaster in a separate box readily accessible to the workers ad used solely for the purpose of keeping these substances. In case cyanides are used in the both, the box shall also contain an emergency cyanide kit.

(2) The medical practitioner shall examine all workers before they are employed in electrolytic processes. Such examination in case of chrome plating shall includes inspection of hands, forearms and nose and will be carried out once at least in every fortnight

(3) The record of the examinations referred to in sub-paragraph (2)shall be maintained in a separate register approved by Chief Inspector of Factories which shall be kept readily available for inspection by the Inspector.

9. **Medical examination by the Certifying Surgeon -** (1) Every worker employed in the electrolytic processes shall be examined by a Certifying Surgeon before his first employment Such examination shall include X-ray of the chest and –

(a) in case of chromium plating include examination for nasal septum

(b) in case of nickel platting, test for nickel in urine; and

(c) in case of cadmium plating, test for cadmium in urine and -2 microglobulin in urine.

(2) No worker shall be employed in any electrolytic process unless certified fit for such employment by the Certifying Surgeon.

(3) Every worker employed in the electrolytic processes shall be re-examined by a Certifying Surgeon at least once in every year, except in case of the workers employed in cadmium, chromium and nickel plating processes for whom this examination shall be carried our once in every six months. Such re-examination shall, wherever the Certifying Surgeon considers appropriate, include tests as specified under sub-paragraph (1) excluding the X-ray of the chest which shall not be required normally to be carried out earlier then once in three years.

(4) The certifying surgeon after examining a worker, shall issue a Certificate of Fitness in

Form 32. The record of examination and re-examinations carried out shall be kept in the custody of the manager of the factory. The record of each examination carried out under sub-paragraphs (1) and (2) including the nature and the results of the tests, shall also be entered by the Certifying Surgeon in a health register in Form 34.

(5) The certificate of fitness and the health register shall be kept readily available for inspection by the Inspector.

(6) If at any time the Certifying Surgeon is of the opinion that a worker is no longer fit for employment in the electrolytic processes on the ground that continuance therein would involve danger to the health of the worker, he shall make a record of his findings in the said certificate and the health register. The entry of his findings in those documents should also include the period for which he considers that the said person is unfit for work in the said processes. The person declared unfit in such circumstances shall be provided with alternate placement facility unless he is fully incapacitated in the opinion of the Certifying Surgeon in which case the person affected shall be suitably rehabilitated.

(7) No person who has been found unfit to work as said in sub-paragraph (6) shall be re-employed or permitted to work in the said processes unless the Certifying Surgeon after further examination, again certifies him fit for employment in these processes.

Schedule – III

Manufacture and repair of electric accumulators

1. **Savings -** This schedule shall not apply to the manufacture or repair of electric accumulators or parts thereof not containing lead or any compound of lead; or to the repair on the premises, of any accumulator

forming part of a stationary battery.

2. **Definitions -** For the purposes of this schedule -

(a) "Lead process" means the melting of lead or any material containing lead, any casting, pasting, lead burning, or any other work, including trimming, or other abrading or cutting of pasted plates, involving the use, movement or manipulation of or contact with, any oxide of lead;

(b) "manipulation of raw oxide of lead" means any lead process involving any manipulation or movement of raw oxides of lead other than its conveyance in a receptacle or by means of an implement from one operation to another;

3. **Prohibition relating to women and young persons -** No women or young person shall be employed or permitted to work in any lead process or in any room in which the manipulation of raw oxide of lead or pasting is carried on.

4. **Separation of certain processes -** Each of the following processes shall be carried on in such a manner and under such conditions as to secure effectual separation from one another , and from other processes :-

a. manipulation of raw oxide of lend;

b. pasting;

c. drying of pasted plates;

d. formation with lead turning (tacking)necessarily carried on in connection therewith ; and

e. melting down of pasted plates.

5. **Air space -** In every room in which a lead process is carried on, there shall be at least 14.2 cubic meters of air space for each person employed therein, and in computing this air space no height over 3.65 meters shall be taken into account.

6. **Ventilation -** Every workroom shall be provided with inlets and outlets of adequate size as to secure and maintain efficient ventilation in all parts of the room.

7. **Distance between workers in pasting room -** In every pasting room the distance between the centre of the working position of any paster and that of the paster working nearest to him shall not be less than 1.5 meters.

8. Floor of workrooms -

(1) The floor of every room in which lead process is carried on shall be –

(a) of cement or similar material so as to be smooth and impervious to water; (b) maintained in sound condition; and

(c) kept free from materials, plant, or other obstructions not required for, or produced in, the process carried on in the room.

(2) In all such rooms other than grid casting shops the floor shall be cleansed daily after being thoroughly sprayed with water at a time when no other work is being carried on in the room.

(3) In grid casting shops the floor shall be cleansed daily.

(4) Without prejudice to the requirements of sub-paragraphs (1), (2) and (3), where

manipulation of raw oxide of lead or pasting is carried on, the floor shall also be -

(a) kept constantly moist while work is being done;

(b) provided with suitable and adequate arrangements for drainage; and (c) Thoroughly washed daily by means of hose pipe.

9. **Work-benches -** The work-benches at which any lead process is carried on shall -

(a) have a smooth surface and be maintained in sound condition;

(b) be kept free from all materials or plant not required for, or produced in, the process carried out there at;

and all such work-benches other than those in grid casting shops shall be cleaned daily either after being thoroughly damped or by means of suction cleaning apparatus at the time when no other work being carried on there at;

and all such work-benches in grid casting shops shall be cleaned daily;

and every work-bench used for pasting shall-

(a) be covered throughout with sheet lead and other impervious material; (b) be provided with raised edges;

(c) be kept constantly moist while pasting being carried on.

10. **Exhuaght draught-** The following provisions shall not be carried on without the use of an efficient exhaught draught:-

(a) Melting of lead or material containing lead.

(b) Manipulation of raw oxide of lead unless done in an enclosed apparatus so as to prevent the escape of dust into work-room.

(e) Pasting

(d) Trimming, brushing, filing or any other abrading or cutting or pasted plates giving rise to dust.

(e) Lead burning other than-

(i) "tacking" in the formation room

(ii) Chemical burning for making of lead linings for cell cases necessarily carried on in such a manner that the application of efficient exhaught is impracticable.

Such exhaught draught shall be affected by mechanical means and shall operate on the dust or fume given off as nearly as may be at the point of reason so as to prevent it entering the air of any room in which persons works.

11. **Fumes and gasses from melting pots –** The products of combustion produced in the heating of any melting pot shall not be allow to escape into a room in which persons work .

12. **Containers for dross –** A suitable receptacle with tightly fitting cover shall be provided and used for dross as it is removed from every melting pot . Such receptacle shall be kept covered while in thw work room accept when dross is being deposited therein .

13. **Container for lead waste –** A suitable receptacle shall be provided in every work room in which old plates and waste material which may give rise to shall be deposited .

14. **Racks and shelves drying room –** The racks and shelves provided in any drying room shall noy be more than 2.4 m from the floor and not more than 60 cm in width / provided that as regards racks or shelves set or drawn from both sides the total width shall noy exceed 1.2 m .

Such racks and shelves shall be cleaned only after being thoroughly damped unless so efficient suction cleaning apparatus is used for this purpose.

15. Medical facilities and records of medical examination and tests

(1) – The occupier of every factory in which manufacture and repair of electric accumulators is carried on shell –

(a) Employ a qualify medical practitioner for medical surveillance of the workers employed there in whose employment shall be subject to the approval of chief inspector ; and

(c) Provided to the set medical practitioner all necessary facilities for the purpose referred to enclose (a)

(2) The record of medical examinations and appropriate test carried out by the said medical practitioner shall be maintained in a separate register approved by the chief inspector .and such register shall be kept readily available for inspection by the inspector

15-A. Medical examination by the Certifying Surgeon - (1) every worker employed in a lead processes shall be examined by a Certifying Surgeon within 15 days of his first employment. Such examination shall include test for lead in urine and blood, ALA in urine, hemoglobin content, stippling of cells and steadiness test. No worker shall be allowed to work after 15 days of his first employment in the factory unless certified fit for such employment by the Certifying Surgeon.

(2) Every worker employed in the said processes shall be re-examined by a Certifying Surgeon at least once in every 3 calendar months and such re-examination shall, wherever the Certifying Surgeon considers appropriate, include tests specified in sub- paragraph(1) .

(3) The Certifying Surgeon after examining a worker, shall issue a Certificate of Fitness in

Form 32. The record of examination and re-examinations carried out shall be entered in the Certificate and the Certificate shall be kept in the custody of the manager of the factory. The record of each examination carried out under sub-paragraphs (1) and (2), including the nature and the results of the tests, shall also be entered by the Certifying Surgeon in a health register in Form 17.

(4) The Certificate of Fitness and the health register shall be kept readily available for inspection by the Inspector.

(5) If at any time the Certifying Surgeon is of the opinion that a worker is no longer fit for employment in the said processes on the ground that continuance therein would involve special danger to the health of the worker he shall make record of his findings in the said certificate and the health register. The entry of his findings in those
documents should also include the period for which he considers that the said person is unfit for work in the said processes.

(6) No person who has been found unfit to work as said in sub-paragraph (5) shall be re-employed or permitted to work in the said processes unless the Certifying Surgeon, after further examination, again certifies him fit for employment In those processes.

16. **Protective clothing**- protective clothing shall be provided and maintained in good condition for all person employed in-
(a) Manipulation of raw oxide of lead
(b) Pasting
© The formation room
And such clothing shall be worn by the person concerned.

The protective clothing shall consist of a water-proof apron and water-proof footwear; and also as required persons employed in the manipulation of raw oxide of lead or in the pasting the head covering shall be washed daily.

17. **Mess room -** There shall be provided and maintained for the use of all persons employed in a lead process and remaining on the premises during the meal intervals, a suitable mess room which shall be furnished with sufficient tables and benches.

The mess room shall placed under the charge of a responsible person and shall be kept clean.

18. **cloak room-** there shall be provided and maintained for the use of all persons employed in a lead process-
(a) a cloak room for clothing put-off during working hours with adequate arrangements for drying the clothes, if wet. Such accommodation shall be separate from mess room.

(b) separate and suitable arrangements for the storage of protective clothing provided as per sub-rule (16)

19. **Washing facilities -** (1) There shall be provided and maintained in a cleanly state and in good repair for the use of all persons employed in a lead process –

(a) a wash place with either –

(i) a trough with a smooth impervious surface fitted with a waste pipe without plug, and of sufficient length to allow at least 60 centimetres for every five such persons employed at any one time, and having a constant supply of

water from taps or jets above the trough at intervals of not more than 60 centimetres; or

(i) at least one wash basin for every five such persons employed at any one time, fitted with a waste pipe and plug and having a adequate supply of water laid on .

(ii) a sufficient supply of clean towels made of suitable materials renewed daily, which supply in case of pasters and person employed in manipulation of raw oxide of lead shall include a separate marked towel for each worker; and

(iv) a sufficient supply of soap or other suitable cleansing material and of nail brushes.

(b) There shall in addition be provided means of washing in close proximity to the rooms in which manipulation of raw oxide of lead or pasting is carried on if required by notice in writing from the Chief Inspector.

20. **Time allowed for washing -** Before each meal and before the end of the day's work, at least ten minutes, in addition to the regular meal times, shall be allowed for washing to each person employed in the manipulation of raw oxide of lead or in pasting.

Provided that if there is be one basin or 60 centimeters of trough for each such person, this paragraph shall not apply.

21. **Facilities for bathing-** sufficient bath accommodation to the satisfaction of the Chief Inspector shall be provided to all the persons engaged in manipulation of raw oxide of lead or in pasting and a sufficient supply of soap and clean towels.

22. **foods, drinks etc. prohibited in work-rooms-** no food, drink, pan and supari or tobacco shall be consumed or brought by any worker into any work-room in which any lead process is carried on.

Schedule – IV

Glass Manufacture

1. Exemption- If the Chief Inspector is satisfied in respect of any factory or any class of process that, owing to the special methods of work or the special conditions in a factory or otherwise, any of the requirements of this schedule can be suspended or relaxed without danger to the persons employed therein, or that the application of this schedule or any part thereof is for any reason impracticable, he may be certificate in writing authorize such suspension or relaxation as may be indicated in the certificate for such period and on such conditions as he may think fit.

2. Definitions - For the purpose of this schedule -

(a) "efficient exhaust draught" means localised ventilation effected by mechanical means for the removal of gas, vapour, dust or fumes so as to prevent them (as far as practicable under the atmospheric conditions usually prevailing) from escaping into the air of any place in which work is carried on. No draught shall be deemed efficient which fails to remove smoke generated at the point where such gas, vapour, fume, or dust originate;

(b) "lead compound" means any compound of lead other than galena which, when treated in the manner described below, yields to an aqueous solution of hydrochloric acid a quantity soluble lead compound exceeding, when calculated as lead monoxide, five percent of the dry weight of the portion taken analysis.

The method of treatment shall be as follows:-

A weighed quantity of the material which has been dried at 100 degrees centigrade and thoroughly mixed shall be continuously shaken for one hour at the common temperature with 1,000 times its weight of an aqueous solution of hydrochloric acid containing 0.25 per cent by weight of hydrogen chloride. This solution shall thereafter be allowed to stand for one hour and then filtered. The lead salt contained in the clear filterate shall then be precipitated as lead sulphide and weighed as lead sulphate.

3. Exhaust draught - The following processes shall not be carried on except under an efficient exhaust draught or such other conditions as may be approved by the Chief Inspector :-

(a) the mixing of raw materials to form a "Bator";

(b) the dry grinding, glazing and polishing of glass or any article of glass;

(c) all processes in which hydrofluoric acid fumes or ammonical vapours are given off;

(d) all processes in the making of furnace moulds or "pots" including the grinding or crushing of used "pots"; and

(e) All processes involving the use of a dry lead compound.

4. Prohibition relating to women and young person - No woman or young person shall be employed or permitted to work in any of the operations specified in paragraph 2 or at any place where such operations are carried on.

5. Floor and work-benches - The floor and work-benches of every room in which a dry compound of lead is manipulated or in which any process is carried on giving off silica dust shall be kept moist and shall comply with the following requirements :-

(a) ***The floor shall be*** *-*

(i) of cement or similar material so as to be smooth and impervious to water;

(ii) maintained in sound condition; and

(iii) cleansed daily after being thoroughly spread with water at a time when no other work is being carried on the room; and

(b) The work-benches shall -

(i) have a smooth surface and be maintained in sound condition, and

(ii) cleansed daily either after being thoroughly damped or by means of a suction cleaning apparatus at a time when no other work is being carried on thereat.

6. Use of hydrofluoric acid - The following provisions shall apply to rooms in which glass is treated with hydrofluoric acid :-

(a) there shall be inlets and outlets of adequate size so as to secure and maintain efficient ventilation in all parts of the room;

(b) the floor shall be covered with guttaparcha and be tight and shall slope gently down to a covered drain;

(c) the workplaces shall be so enclosed in projecting hoods that openings required for the bringing in the objects to be treated shall be as small as practicable; and

(d) The efficient exhaust draught shall be so contrived that the gases are exhausted downwards.

7. Storage and transport of hydrofluoric acid - Hydrofluoric acid shall not be stored or transported except in cylinders or receptacles made of lead or rubber.

8. Blow pipes - Every glass blower shall be provided with a separate blow pipe bearing the distinguishing mark of the person to whom it is issued and suitable facilities shall be readily available to every glass blower for sterilising his blow pipe.

9. Food, drinks, etc., prohibited in workrooms - No food, drink, pan and supari or tobacco shall be brought into or consumed by any worker in any room or workplace wherein any process specified in paragraph 2 is carried on.

10. Protective clothing - The occupier shall provide, maintain in good repair and keep in a clean condition for the use of all persons employed in the processes specified in paragraph 2 suitable protective clothing, footwear and goggles according to the nature of the work and such clothing, footwear, etc. shall be worn by the persons concerned.

11. Washing facilities - There shall be provided and maintained in a cleanly state and in good repair for the use of all persons employed in the processes specified in paragraph 2

(a) a wash place with either -

(i) a trough with a smooth impervious surface fitted with a waste pipe, without plug, and of sufficient length to allow of at least 60 centimetres for every five such persons employed at any one time, and having a

constant supply of water from taps or jets above the trough at intervals of not more than 60 centimetres; or

(ii) at least one wash basin for every five such persons employed at any one time, fitted with a waste pipe and plug and having an adequate supply of water laid on or always readily available;

(b) a sufficient supply of clean towels made of suitable material renewed daily with sufficient supply of soap or other suitable cleansing material and of nail brushes; and

(c) a sufficient number of stand pipes with taps the number and location of which shall be to the satisfaction of the Chief Inspector.

12. Medical facilities and record of examinations and tests - (1) The occupier of every factory in which glass manufacturing processes are carried out, shall -

(a) employ a qualified medical practitioner for medical surveillance of the workers employed therein whose appointment shall be subject to the approval of the Chief Inspector of Factories; and

(b) Provide to the said medical practitioner all the necessary facilities for the purpose referred to in clause (a).

(2) The records of medical examinations and appropriate tests carried out by the said medical practitioner shall be maintained in a separate register approved by the Chief Inspector of Factories, which shall be kept readily available for inspection by the Inspector.

12-A. **Medical Examination by Certifying Surgeon -** (1)Every workers employed in processes specified in paragraph 2 shall be examined by the Certifying Surgeon within 15 days of his first employment. Such examination shall include pulmonary function tests and in suspected cases chest X-ray as well as tests for lead and urine. No worker shall be allowed to work after 15 days of first employment in the factory unless certified for such employment by the Certifying Surgeon.

(2) Every worker employed in the said processes shall be re-examined by the Certifying Surgeon at least once in every twelve calendar months. Such re-examination shall, wherever the Certifying Surgeon considers appropriate, include tests as specified in sub-paragraph (1).

(3) The Certifying Surgeon after examining a worker, shall issue a Certificate of Fitness in

Form 32. The record of examination and re-examination carried out shall be entered in the Certificate and the Certificate shall be kept in the custody of the manager of the factory. The record of each examination carried out under sub-paragraph (1) and (2), including the nature and the results of the tests, shall also be entered by the Certifying Surgeon in a health register in Form 17.

(4) The Certificate of Fitness and the health register shall be kept readily available for inspection by the Inspector.

(5) If at any time the Certifying Surgeon is of the opinion that a worker is no longer fir for employment in the said processes on the ground that continuance therein would involve special danger to the health of worker, he shall make a record of his findings in the said certificate and the health register. The entry of his findings in those documents should also include the period for which he considers that the said person is unfit for work in the said processes. The person so suspended from the process shall be provided with alternate placement facilities unless he is fully incapacitated in the opinion of the Certifying Surgeon, in which the person affected shall be suitable rehabilitated.

(6) No person who has been found unfit to work as said in sub-paragraph (5) shall be re-employed or permitted to work in the said processes unless the Certifying Surgeon , after further examination, again certifies him fit for employment in those processes.

Schedule – V

Grinding or glazing of metals and processes incidental thereto

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1. **Definitions -** For the purposes of this schedule -

(a) "grindstone" means a grindstone composed of natural or manufactured sandstone but does not include a metal wheel or cylinder into which blocks of natural or manufactured sandstone are fitted;

(b) "abrasive wheel" means a wheel manufactured of bonded emery or similar abrasive;

(c) "grinding" means the abrasion, by aid of mechanical power, of metal, by means of a grindstone or abrasive wheel;

(d) "glazing" means the abrading, polishing or finishing, by aid of mechanical power, of metal, by means of any wheel, buff, mop or similar appliance to which any abrading or polishing substance is attached or applied;

(e) "racing" means the turning up, cutting or dressing of a revolving grindstone before it is brought into use for the first time;

(f) "hacking' means the chipping of the surface of a grindstone by a hack or similar tool; and

(g)) "rodding" means the dressing of the surface of a revolving grindstone by the application of a rod, bar or strip of metal to such surface.

Exception - (1) Nothing in this schedule shall apply to any factory in which only repairs are carried on except any part thereof in which one or more persons are wholly or mainly employed in the grinding or glazing of metals.

(2) Nothing in this schedule except paragraph 4 shall apply to any grinding or glazing of metals carried on intermittently and at which no person is employed for more than 12 hours in any week

2. **Equipment for removal of dust -** No racing, dry grinding or glazing shall be performed without -

(a) a hood or other appliance so constructed, arranged, placed and maintained as substantially to intercept the dust thrown off;

(b) a duct of adequate size, air tight and so arranged as to be capable of carrying away the dust, which duct shall be kept free from obstruction and shall be provided with proper means of access for inspection and cleaning, and where practicable, with a connection at the end remote from the fan to enable the Inspector to attach thereto any instrument necessary for ascertaining the pressure of air in the said duct; and

(c) a fan or other efficient means of producing a draught sufficient to extract the dust :

Provided that the Chief Inspector may accept any other appliance that is, in his opinion, as effectual for the interception, removal and disposal of dust thrown off as a hood, duct and fan would be.

3. **Restriction on employment on grinding operations -** Not more than one person shall at any time perform the actual process of grinding or glazing upon a grindstone, abrasive wheel or glazing appliance :

Provided that this paragraph shall not prohibit the employment of persons to assist in the manipulation of heavy or bulky articles at any such grindstone, abrasive wheel or glazing appliance.

4. **Glazing -** Glazing or other processes, except processes incidental to wet grinding upon a grindstone shall not be carried on in any room in which wet grinding upon a grindstone is done.

5. **Hacking and rodding -** Hacking or rodding shall not be done unless during the process either an adequate supply of water is laid on at the upper surface of the grindstone or adequate appliances for the interception of dust are provided in accordance with the requirements of paragraph 3.

6. **Examination of dust equipment -** (1) All equipment for the extraction or suppression of dust shall at least once in every six months be examined and tested by competent person, and any defect disclosed by such examination and test shall be rectified as soon as practicable.

(2) A register containing particulars of such examination and tests shall be kept in Form 25.

7. **Medical facilities and record of examinations and tests -** (1)The occupier of every factory in which grinding or glazing of metals are carried out, shall -

(a) employ a qualified medical practitioner for medical surveillance of the workers employed therein whose appointment shall be subject to the approval of the Chief Inspector of Factories; and

(b) Provide to the said medical practitioner all the necessary facilities for the purpose referred to in clause (a).

(2) The record of medical examinations and appropriate tests carried out by the said medical practitioner shall be maintained in a separate register approved by the Chief Inspector of Factories, which shall be kept readily available for inspection by the Inspector.

8. **Medical examination by the Certifying Surgeon -** (1) every worker employed in grinding or glazing of metal and processes incidental thereto shall be examined by a Certifying Surgeon within 15 days of his first employment. Such examination shall include pulmonary function tests and in suspected cases chest X-rays. No worker shall be allowed to work after 15 days of his first employment in the factory unless certified fit for such employment by the Certifying Surgeon.

(2) Every worker employed in the said processes shall be re-examined by a Certifying Surgeon at least once in every 12 calendar months. Such re-examination shall, wherever the Certifying Surgeon considers appropriate, include tests as specified in sub-paragraph (1).

(3) The Certifying Surgeon after examining a worker shall issue a Certificate of Fitness in

Form 32. The record of examination and re-examinations carried out shall be entered in the Certificate and the Certificate shall be kept in the custody of the manager of the factory. The record of each examination carried out under sub-paragraphs (1) and (2), including the nature and the results of the tests, shall also be entered by the Certifying Surgeon in a health register in Form 17.

(4) The Certificate of Fitness and the health register shall be kept readily available for inspection by the Inspector.

(5) If at any time the Certifying Surgeon is of the opinion that a worker is no longer fit for employment in the said processes on the found that continuance therein would involve special danger to the health of the worker he shall make record of his findings in the said certificate and the health register. The entry of his findings in those documents should also include the period for which he considers that the said person is unfit for work in the said processes. The person so suspended from the process shall be provided with alternate placement facilities unless he is fully incapacitated in the

opinion of the Certifying Surgeon, in suitably rehabilitated.

which case the person affected shall be

(6) No person who has been found unfit to work as said in sub-paragraph (5) shall be re-employed or permitted to work in the said processes unless the Certifying Surgeon, after further examination, again certifies him fit for employment in those processes.

10. **Exemption -** The Chief Inspector may by certificate in writing, subject to such conditions as he may specify therein, relax or suspend any of the provisions of this schedule in respect of any factory if owing to the special methods of work or otherwise such relaxation or suspension is practicable without danger to the health or safety of the persons employed.

Schedule – VI

Manufacture and treatment of lead and certain compounds of lead

1. **Exemption -** Where the Chief Inspector is satisfied that all or any of the provisions of this any factory from all or any of such provisions, subject to such conditions as he may specify. schedule are not necessary for the protection of the persons employed, he may by certificate in writing exempt

2. **Definitions -** For this purpose of this schedule -

(a) "lead compound" means any compound of lead other than galena which, when treated in the manner described below, yields to an aqueous solution of hydrochloric acid, a quantity of soluble lead compound exceeding, when calculated as lead monoxide, five per cent of the "dry weight" of the portion taken for analysis. In the case of paints and similar products and other mixtures containing oil or fat the "dry weight" means the dry weight of the material remaining after the substance has been thoroughly mixed and treated with suitable solvents to remove oil, fats, varnish or other media.

The method of treatment shall be as follows:-

A weighed quantity of the material which has been dried at 100 degree centigrade and thoroughly mixed shall be continuously shaken for one hour, at the common temperature with 1,000 times its weight of an aqueous solution of hydrochloric acid containing 0.25 per cent by weight of hydrogen chloride. This solution shall thereafter be allowed to stand for one hour and then filtered. The lead salt contained in the clear filtrate shall then precipitate as lead sulphate and weighed as lead sulphate;

(b) "efficient exhaust draught" means localised ventilation effected by mechanical means for the removal of gas, vapour, dust or fumes so as to prevent them (as far as practicable under the atmospheric conditions usually prevailing) from escaping into the air of any place in which work is carried on. No draught shall be deemed efficient which fails to remove smoke generated at the point where such gas, vapour, fume, or dusts originate.

3. **Application -** This schedule shall apply to all factories or parts of factories in which any of the following operations are carried on :-

(a) work at a furnace where the reduction or treatment of zinc or lead ores is carried on ;

(b) the manipulation, treatment or reduction of ashes containing lead, the desilvering of lead or the melting of scrap lead or zinc;

(c) the manufacture of solder or alloys containing more than ten percent of lead;

(d) the manufacture of any oxide, carbonate, sulphate, chromate, acetate, nitrate or silicate of lead;

(e) the handling or mixing of lead tetra-ethyl;

(f) any other operation involving the use of a lead compound; and

(g) The cleaning of workrooms where any of the operations aforesaid are carried on.

4. **Prohibition relating to women and young persons -** No women or young person shall be employed or permitted to work in any of the operations specified in paragraph 1.

5. **Requirements to be observed -** No person shall be employed or permitted to work in any process involving the use of lead compounds if the process is such that dust or fume from a lead compound is produced therein, or the persons employed therein are liable to be splashed with any lead compound in the course of their employment unless the provisions of paragraphs 5 to 13 are complied with.

6. **Exhaust draught -** Where dust, fume, gas or vapour is produced in the process, provision shall be made for removing them by means of an efficient exhaust draught to contrived as to operate on the dust, fume, gas or vapour as closely as possible to the point of origin.

7. **Medical facilities and record of examinations and tests -** (1) The occupier of every factory in which grinding or glazing of metals are carried out, shall -

(a) employ a qualified medical practitioner for medical surveillance of the workers employed therein whose appointment shall be subject to the approval of the Chief Inspector of Factories; and

(b) Provide to the said medical practitioner all the necessary facilities for the purpose referred to in clause (a).

(2) The record of medical examinations and appropriate tests carried out by the said medical practitioner shall be maintained in a separate register approved by the Chief Inspector of Factories, which shall be kept readily available for inspection by the Inspector.

8. **Medical examination by the Certifying Surgeon -** (1) every worker employed shall be examined by a Certifying Surgeon within 15 days of his first employment. Such examination shall include pulmonary function tests and in suspected cases chest X-rays. No worker shall be allowed to work after 15 days of his first employment in the factory unless certified fit for such employment by the Certifying Surgeon.

(2) Every worker employed in the said processes shall be re-examined by a Certifying Surgeon at least once in every 3 calendar months. Such re-examination shall, wherever the Certifying Surgeon considers appropriate, include tests as specified in sub-paragraph (1).

(3) The Certifying Surgeon after examining a worker, shall issue a Certificate of Fitness in

Form 32. The record of examination and re-examinations carried out shall be entered in the Certificate and the Certificate shall be kept in the custody of the manager of the factory. The record of each examination carried out under sub-paragraphs (1) and (2), including the nature and the results of the tests, shall also be entered by the Certifying Surgeon in a health register in Form 17.

(4) The Certificate of Fitness and the health register shall be kept readily available for inspection by the Inspector.

(5) If at any time the Certifying Surgeon is of the opinion that a worker is no longer fit for employment in the said processes on the ground that continuance therein would involve special danger to the health of the worker he shall make record of his findings in the said certificate and the health register. The entry of his findings in those
documents should also include the period for which he considers that the said person is unfit for work in the said processes. The person so suspended from the process shall be provided with alternate placement facilities unless he is fully incapacitated in the opinion of the Certifying Surgeon, in which case the person affected shall be suitably rehabilitated.

(6) No person who has been found unfit to work as said in sub-paragraph (5) shall be re-employed or permitted to work in the said processes unless the Certifying Surgeon, after further examination, again certifies him fit for employment in those processes.

9. **Food, drinks, etc. prohibited in workroom -** No food, drink, pan and supari or tobacco shall be brought into or consumed by any worker in any worker in any workroom in which the process is carried on and no person shall remain in any such room during intervals for meals or rest.

10. **Protective clothing -** Suitable protective overalls and head coverage shall be provided, maintained and kept clean by the occupier and such overalls and head coverings shall be worn by the persons employed.

11. **Cleanliness of workrooms, tools, etc. -** The rooms in which the persons are employed and all tools and apparatus used by them shall be kept in a clean state.

12. **Washing facilities -** (1)The occupier shall provide and maintain for the use of all persons employed suitable washing facilities consisting of -

(a) a trough with a smooth impervious surface fitted with a waste pipe, without plug, and of sufficient length to allow of at least two feet for every five such persons employed at any one time, and having a constant supply of water from taps or jets above the trough at intervals of not more than 60 centimetres; or

(b) At least one wash-basin for every ten persons employed at any one time, fitted with a waste pipe and plug and having a constant supply of clean water; together with, in either case, a sufficient supply of nail brushes, soap or other suitable cleansing material and clean towels.

(2) The facilities so provided shall be placed under the charge of a responsible person and shall be kept clean.

13. **Mess room or canteen -** The occupier shall provide and maintain for the use of the persons employed suitable and adequate arrangements for taking their meals. The arrangements shall cons eparate from any workroom

which shall be furnished with sufficient tables and benches, and unless a canteen serving hot meals is provided, adequate means of warming the food. The room shall be adequately ventilated by the circulation of fresh air, shall be placed under the charge of a responsible person and shall be kept clean.

14 Cloakroom - The occupier shall provide and maintain for the use of persons employed, suitable accommodation for clothing not worn during working hours, and for the drying of wet clothing.

Schedule – VII

Generating petrol gas from dangerous petroleum

1. **Prohibition relating to women and young persons -** No woman or young person shall be employed or permitted to work in or shall be allowed to enter any building in which the generation of gas from dangerous petroleum is carried on.

2. **Flame traps -** The plant for generation of gas from dangerous petroleum and associated piping and fittings shall be fitted with at least two efficient flame traps so designed and maintained as to prevent a flash back from any burner to the plant. One of these traps shall be fitted as close to the plant as possible. The plant and all pipes and valves shall be installed and maintained free

form leaks.

3. **Generating building or room -** All plants for generation of gas from dangerous petroleum erected after the coming into force of the provisions specified in this schedule, shall be erected outside the factory building proper in a separate well ventilated building (hereinafter referred to as "generating building"). In the case of such plants erected before the coming into force of the provisions specified in this schedule, there shall be no direct communication between the room where such plants are erected (hereinafter referred to as "the generating room") and the remainder of the factory building. So far as practicable, all such generating rooms shall be constructed of fire-resisting materials.

4. **Fire extinguishers -** An efficient means of extinguishing petrol fires shall be maintained in an easily accessible position near the plant for generation of gas from dangerous petroleum.

5. **Plant to be approved by Chief Inspector -** gas from dangerous petroleum shall not be manufactured except in a plant for generating gas, the design and construction of which has been approved by the Chief Inspector.

6. **Escape of dangerous petroleum -** Effective steps shall be taken to prevent dangerous petroleum from escaping into any drain or sewer.

7. **Prohibition relating to smoking -** No person shall smoke or carry matches, fire or naked light or other means of producing a naked light or spark in the generation room or building or in the vicinity thereof and a warning notice in the language understood by the majority of the workers shall be posted in the factory prohibiting smoking and the carrying of matches, fire or naked light or other means of producing a naked light or spark into such room or building.

8. **Access to dangerous petroleum or container -** No unauthorized person shall have access to any dangerous petroleum or to a vessel containing or having actually contained dangerous petroleum.

9. **Electric fittings -** All electric fittings shall be of flameproof construction and all electric conductors shall either be enclosed in metal conduits or be lead-sheathed.

10. **Construction of doors -** All doors in the generating room or building shall be constructed to open outwards or to slide and no door shall be locked or obstructed or fastened in a such a manner that it cannot be easily and immediately opened from the inside while gas is being generated and any person is working in the generating room or building.

11. **Repair of containers-** No vessel that has contained dangerous petroleum shall be repaired in a generating room or building and no repairs to any such vessel shall be undertaken unless live steam has been blown into the vessel and until the interior is thoroughly steamed out or other equally effective steps have been taken to ensure that it has been rendered free from dangerous petroleum or inflammable vapour.

Schedule – VIII

Cleaning or smoothing, roughening, etc. of articles, by a jet of sand, metal shot, or grit, or other abrasive propelled by a blast of compressed air or steam

(Blasting Regulations) 1. **Definitions -**

For the purposes of this schedule -

(a) "blasting" means cleaning, smoothing, roughening, or removing of any part of the surface of any article by the use of an abrasive of a jet of sand, metal shot, or grit or other material, propelled by a blast of compressed air or steam ;

(b) "blasting enclosure" means a chamber, barrel, cabinet or any other enclosure designed for the performance of blasting therein;

(c) "blasting chamber" means a blasting enclosure in which any person may enter at any time in connection with any work or otherwise; and

(d) "cleaning of castings" where done as an incidental or supplemental process in connection with the making of metal castings, means the freeing of the casting from adherent sand or other substance and includes the removal of cores and the general smoothening of a casting, but does not include the free treatment.

2. **Prohibition of sand blasting -** Sand or any other substance containing free silica shall not be introduced as an abrasive into any blasting apparatus and shall not be used for blasting :

Provided that this clause shall come into force two years after the coming into operation of this schedule.

Provided further that no woman or young person shall be employed or permitted to work at any operation of sand blasting.

3. **Precautions in connection with blasting operations -** (A)Blasting shall not be done except in a blasting enclosure and no work other than blasting and any work immediately incidental thereto and clearing and repairing of the enclosure including the plant and appliances situated therein, shall be kept closed and air tight while blasting is being done therein.

(B) *Maintenance of blasting enclosure*: Blasting enclosure shall always be maintained in good condition and effective measures shall be taken to prevent dust escaping from such enclosure, and from apparatus connected therewith, into the air of any room.

(C) *Provision of separating apparatus:* There shall be provided and maintained for and in connection with every blasting enclosure, efficient apparatus for separating, so far as practicable, abrasive which has been used for blasting and which is to be used again as an abrasive, from dust or particles of other materials arising from blasting; and no such abrasive shall be introduced into any blasting apparatus and used for blasting until it has been so separated :

Provided that this clause shall not apply, except in the case of blasting chambers, to blasting enclosures constructed or installed before the

coming into force of this schedule, if the Chief Inspector is of opinion that it is not reasonably practicable to provide such separating apparatus.

(D) *Provision of ventilating plant*: There shall be provided and maintained in connection with every blasting enclosure efficient ventilating plant to extract, by exhaust draught effected by mechanical means, dust produced in the enclosure. The dust extracted and removed shall be disposed of by such method and in such manner that it shall not escape into the air of any room; and every other filtering or settling device situated in a room in which persons are employed, other than persons attending to such bag or other filtering or settling device, shall be completely separated from the general air of that room in an enclosure ventilated to the open air.

(E) *Operation of ventilating plant:* The ventilating plant provided for the purpose of sub- paragraph (4) shall be kept in continuous operation whenever the blasting enclosure is in use whether or not blasting is actually taking place therein, and in the case of a blasting chamber, it shall be in operation even when any person is inside the chamber for the purpose of cleaning.

4. **Inspection and examination** - (1) Every blasting enclosure shall be specially inspected by a competent person at least once in every week in which it is used for blasting. Every blasting enclosure, the apparatus connected therewith and the ventilating plant shall be thoroughly examined and in the case of ventilating plant, tested by a competent person at least once in every month.

(2) Particulars of the result of every such inspection, examination or test shall forthwith be entered in a register which shall be kept in a form approved by the Chief Inspector and shall be available for inspection by any workman employed in or in connection with blasting in the factory. Any defect found on any such inspection, examination or test shall be immediately reported by the person carrying out the inspection, examination or test to the occupier, manager or other appropriate person and without prejudice to the foregoing requirements of this schedule, shall be removed without avoidable delay.

5. **Provision of protective helmets, gauntlets and overalls -** (1) There shall be provided and maintained for the use of all persons who are employed in a blasting chamber, whether in blasting or in any work connected therewith or in cleaning such a chamber, protective helmets of a type approved by a certificate of the Chief Inspector; and every such person shall wear the helmet provided for this use whilst he is in the chamber and shall not remove it until he is outside the chamber.

(2) Each protective helmet shall carry a distinguishing mark indicating the person by whom it is intended to be used and no person shall be allowed or required to wear a helmet not carrying his mark or a helmet which has been worn by another person and has not since been thoroughly disinfected.

(3) Each protective helmet when in use shall be supplied with clean and not unreasonably cold air at a rate of not less 170 litres per minute.

(4) Suitable gauntlets and overalls shall be provided for the use of all persons while performing blasting or assisting at blasting, and every such person shall while so engaged, wear the gauntlet and overall provided.

6. **Precautions in connection with cleaning and other work -** (1) Where any person is engaged upon cleaning of any blasting apparatus or blasting enclosure or of any apparatus or ventilating plant connected therewith or the surroundings thereof or upon any other work in connection with any blasting apparatus or blasting enclosure or with any apparatus or ventilating plant connected therewith so that he is exposed to the risk of inhaling dust which has arisen from blasting, all practicable measures shall be taken to prevent such inhalation.

(2) In connection with any cleaning operation referred to in paragraph 5, and with the removal of dust from filtering or settling devices all practicable measures shall be taken to dispose of the dust in such a manner that it does not enter the air of any room. Vacuum cleaners shall be provided and used wherever practicable for such cleaning operations.

7. **Storage accommodation for protective wear -** Adequate and suitable storage accommodation for the helmets, gauntlets and overalls required to be provided by paragraph 5 shall be provided outside and conveniently near to every blasting enclosure and such accommodation shall be kept clean. Helmets, gauntlets and overalls when not in actual use shall be kept in this accommodation.

8. **Maintenance and cleaning of protective wear -** All helmets, guantlets, overalls and other protective devices or clothings provided and worn for the purposes of this schedule, shall be kept in good condition and so far as is reasonably practicable shall be cleaned on every weekday in which they are used. Where dust arising from the cleaning of such protective clothing or devices is likely to be inhaled, all practicable measures shall be taken to prevent such inhalation. Vacuum cleaners shall, wherever practicable, be used for removing dust from such clothing and compressed air shall not be used for removing dust from any clothing.

9. **Maintenance of vacuum cleaning plant -** Vacuum cleaning plant used for the purpose of this schedule shall be properly maintained.

10. **Restrictions in employment of young persons -** (1) No person under 18 years of age shall be employed in blasting or assisting at blasting or in any blasting chamber or in the cleaning of any blasting apparatus or any blasting enclosure or any apparatus or ventilating plant connected therewith or be employed on maintenance or repair work at such apparatus, enclosure or plant.

(2) No person under 18 years of age shall be employed to work regularly within twenty feet of any blasting enclosure unless the enclosure is in a room and he is outside that room where he is effectively separated from any dust coming from the enclosure.

11. **Power to exempt or relax -** (1) If the Chief Inspector is satisfied that in any factory or any class of factory, the use of sand or other substance containing free silica as an abrasive in blasting is necessary for a particular manufacture or process (other than the process incidental or supplemental to making of metal castings) and that the manufacture or process cannot be carried on without the use of such abrasive or that owing to the special conditions or special method of work or otherwise any requirement of this schedule can be relaxed without endangering the health of the persons employed or that application of any such requirements is for any reason impracticable or inappropriate, he may, with the previous sanction of the State Government, by an order in writing exempt the said factory or class of factory

from such provisions of this schedule, to such an extent and subject to such conditions and for such period as may be specified in the said order.

(2) Where an exemption has been granted under sub-paragraph (1), a copy of the order shall be displayed at a notice board at a prominent place at the main entrance or entrances to the factory and also at the place where the blasting is carried on.

12. **Medical facilities and records of examinations and tests -** (1) occupier of every factory to which the Schedule applies, shall -

(a) employ a qualified medical practitioner for medical surveillance of the workers employed therein whose employment shall be subject to the the approval of the Chief Inspector of Factories; and

(b) Provide to the said medical practitioner all the necessary facilities for the purpose referred to in clause (a).

(2) The record of medical examinations and appropriate tests carried out by the said medical practitioner shall be maintained in a separate register approved by the Chief Inspector of Factories, which shall be kept readily available for inspection by the Inspector.

13. **Medical examination by the Certifying Surgeon -** (1) every worker employed in any of the processes to which this schedule shall be examined by a Certifying Surgeon within 15 days of his first employment. Such examination shall include pulmonary function tests and chest X-rays. No worker shall be allowed to work after 15 days of his first employment in the factory unless certified fit for such employment by the Certifying Surgeon.

(2) Every worker employed in the said processes shall be re-examined by a Certifying Surgeon at least once in every 12 calendar months and such re-examination shall, wherever the Certifying Surgeon considers appropriate, include pulmonary function test and chest X-ray once in every three years.

(3) The Certifying Surgeon after examining a worker shall issue a Certificate of Fitness in

Form 32. The record of examination and re-examinations carried out shall be entered in the Certificate and the Certificate shall be kept in the custody of the manager of the factory. The record of each examination carried out under sub-paragraphs (1) and (2), including the nature and the results of the tests, shall also be entered by the Certifying Surgeon in a health register in Form 17.

(4) The Certificate of Fitness and the health register shall be kept readily available for inspection by the Inspector.

(5) If at any time the Certifying Surgeon is of the opinion that a worker is no longer fit for employment in the said processes on the ground that continuance therein would involve special danger to the health of the worker he shall make record of his findings in the said certificate and the health register. The entry of his findings in those documents should also include the period for which he considers that the said person is unfit for work in the said processes. The person so suspended from the process shall be provided with alternate placement facilities unless he is fully incapacitated in the opinion of the Certifying Surgeon, in suitably rehabilitated.

which case the person affected shall be

(6) No person who has been found unfit to work as said in sub-paragraph (5) shall be re-employed or permitted to work in the said processes unless the Certifying Surgeon, after further examination, again certifies him fit for employment in those processes.

Schedule – IX

Liming and tanning of raw hides and skins and processes incidental thereto.

1. **Cautionary notices -** (1) Cautionary notices as to anthrax in the form specified by the Chief Inspector shall be affixed in prominent positions in the factory where they may be easily and conveniently read by the persons employed.

(2) A copy of a warning notice as to anthrax in the form specified by the Chief Inspector shall be given to each person employed when he is engaged, and subsequently if still employed, on the first day of each calendar year.

(3) Cautionary notices as to the effects of chrome on the skin shall be affixed in prominent positions in every factory in which chrome solutions are used and such notices shall be so placed as to be easily and conveniently read by the persons employed.

(4) Notices shall be affixed in prominent places in the factory stating the position of the first-aid box or cupboard and the name of the person in charge of such box or cupboard.

(5) If any person employed in the factory is illiterate, effective steps shall be taken to explain carefully to such illiterate person the contents of the notice specified in sub- paragraphs (1), (2) and (4) and if chrome solutions are used in the factory, the contents of the notice specified in sub-paragraph (3).

2. **Protective clothing -** The occupier shall provide and maintain in good condition the following articles of protective clothing :-

(a) waterproof footwear leg coverings, aprons and gloves for persons employed in processes involving contact with chrome solutions, including the preparation of such solutions;

(b) gloves and boots for persons employed in lime yard;

(c) protective footwear, aprons and gloves for persons employed in processes involving the handling of hides and skins, other than in processes specified in sub- paragraphs (a) and (b) above :

Provided that the gloves, aprons, leg coverings or boots may be of rubber or leather, but the gloves and boots to be provided under sub-paragraphs (a) and (b) shall be of rubber.

Provided further that the gloves may not be provided to persons fleshing by hand or employed in processes in which there is no risk of contact with lime, sodium sulphide or other caustic liquor.

3. **Washing facilities, mess room and cloakroom -** There shall be provided and

(a) a trough with a smooth impervious surface fitted with a waste pipe, without plug, and of sufficient length to allow of at least 60 centimetres for every five such persons employed at any one time, and having a constant supply of water from taps or jets above the trough at intervals of not more than 60 centimetres; or

(b) at least on wash-basin for every ten such persons employed at any one time, fitted with a waste pipe and plug and having a constant supply of clean water; together with, in either case, a sufficient supply of nail brushes, soap or other suitable cleansing material and clean towels;

(c) a suitable mess room, adequate for the number remaining on the premises during the meal intervals, with sufficient tables and

benches and adequate means for warming food and for boiling water. The mess room shall –

(i) be separate from any room or shed in which hides or skins are stored, treated or manipulated;

(ii) be separate from the cloakroom; and

(iii) be placed under the charge of a responsible person; and

(d) the occupier shall provide and maintain for use of all persons employed suitable accommodation for clothing put off during working hours and another accommodation for protective clothing and also adequate arrangements for drying up the clothing in both the cases, if wet. The accommodation so provided shall be kept clean at all times and placed under the charge of a responsible person.

4. **Food, drinks, etc. prohibited in workrooms -** No food, drink, pan and supari or tobacco shall be brought into or consumed by any worker in any workroom or shed in which hides or skins are stored, treated or manipulated.

5. **Medical facilities and record of examinations and tests -** (1) The occupier of every factory in which the schedule applies, shall -

(a) employ a qualified medical practitioner for medical surveillance of the workers employed therein whose employment shall be subject to the approval of the Chief Inspector of Factories;

(b) Provide to the said medical practitioner all the necessary facilities for the purpose referred to in clause (a).

(c) arrange for inspection of the hands of all the persons keeping in contact with chromium substances to be made twice a week; and

(d) Provide and maintain and supply suitable ointment and plaster in a box readily accessible to the workers and solely used for the purpose of keeping the ointment and the plaster.

(2) The records of medical examinations and appropriate tests carried out by the said medical practitioner shall be maintained in a separate register approved by the Chief Inspector of Factories, which shall be kept readily available for inspection by the Inspector.

6. **Medical Examination by Certifying Surgeon -** (1) every worker employed in shall be examined by a Certifying Surgeon within 15 days of his first employment. Such examination shall include No worker shall be allowed to work after 15 days of his first employment in the factory unless certified fit for such employment by the Certifying Surgeon.

(2) Every worker employed in the said processes shall be re-examined by the Certifying Surgeon at least once in every twelve calendar months. Such re-examination shall, wherever the Certifying Surgeon considers appropriate, include tests as specified in sub- paragraph (1).

(3) The Certifying Surgeon after examining a worker shall issue a Certificate of Fitness in

Form 32. The record of examination and re-examination carried out shall be entered in the Certificate and the Certificate shall be kept in the custody of the manager of the factory. The record of each examination carried out under sub-paragraph (1) and (2), including the nature and the results of the tests, shall also be entered by the Certifying Surgeon in a health register in Form 17.

(4) The Certificate of Fitness and the health register shall be kept readily available for inspection by the Inspector.

(5) If at any time the Certifying Surgeon is of the opinion that a worker is no longer fir for employment in the said processes on the ground that continuance therein would involve special danger to the health of the worker, he shall make a record of his findings in the said certificate and the health register. The entry of his findings in those documents should also include the period for which he considers that the said person is unfit for work in the said processes. The person so suspended from the process shall be provided with alternate placement facilities unless he is fully incapacitated in the opinion of the Certifying Surgeon, in which can the person affected shall be suitable rehabilitated.

(6) No person who has been found unfit to work as said in sub-paragraph (5) above shall be re-employed or permitted to work in the said processes unless the Certifying Surgeon, after further examination, again certifies him fit for employment in those processes.

Schedule – X

Carrying on of certain processes of lead and lead material in Printing presses and type foundries

1. **Exemption -** Where the Chief Inspector is satisfied that all or any of the provisions of this schedule are not necessary for the protection of persons employed, he may by certificate in writing exempt any factory from all or any such provisions subject to such conditions as he may specify therein. Such certificate may at any time be revoked by the Chief Inspector.

2. **Definitions** - For the purpose of this schedule -

(a) "lead material" means material containing not less than five per cent of lead ;

(b) "lead process" means –

(i) the melting of lead or any lead material for casting and mechanical composing;

(ii) the recharging of machines with used lead material;

(iii) any other work including removal of dross from melting pots and cleaning of plungers; and

(iv) Manipulation, movement or other treatment of lead material.

(c) "efficient exhaust draught" means localised ventilation effected by head or mechanical means for the removal of gas, vapour, dust or fumes so as to prevent them from escaping into the air of any place in which work is carried on. No draught shall be deemed efficient which fails to remove smoke generated at the point where such gas, vapour, fume, or dust originate.

3. Exhaust draught -

(1) None of the following processes shall be carried on except with an efficient exhaust draught unless carried on in such a manner as to prevent free escape of gas, vapour, fumes or dust into any place in which work is carried on, or unless carried on in electrically heated and thermostatically controlled melting pots:-

(a) melting lead material or slugs; and

(b) Heating lead material so that vapour containing lead is given off.

Provided that the aforesaid processes may be carried on without efficient exhaust draught if they are carried on in such a manner as to prevent free escape of gas,vapour,fume or dust into any place in which work is being done or is carried on in electrically-heated and thermostatically controlled melting pots.

(2) Such exhaust draught shall be effected by mechanical means and so contrived as to operate on the dust, fume, gas or vapour given off as closely as may be at its point of origin.

4. **Prohibition relating to women and young persons**. - No woman or young person shall be employed or permitted to work in any lead process.

5. **Separation of certain processes.-** Each of the following processes shall be carried on in such a manner and under such conditions as to secure effectual separation from one another and from any other processes :-

(a) melting of lead or any lead material;

(b) casting of lead ingots; and

(c) Mechanical composing.

6. **Container for dross -** A suitable receptacle with tightly fitting cover shall be provided and used for dross as it is removed from every melting pot. Such receptacle shall be kept covered while in the workroom near the machine except when the dross is being deposited therein.

7. **Floor of workroom -** The floor of every workroom where lead process is carried on shall be -

(a) of cement or similar material so as to be smooth and impervious to water;

(b) maintained in sound condition; and

(a) Shall be cleansed throughout daily after being thoroughly damped with water at a time when no other work is being carried on at the place.

8. **Mess room -** There shall be provided and maintained for the use of all persons employed in a lead process and remaining on the premises during the meal intervals, a suitable messroom which shall be furnished with sufficient tables and benches.

9. **Washing facilities -** (1) There shall be provided and maintained in a cleanly state and in good repair for the use of all persons employed in a lead process –

(a) a wash place with either –

(i) a trough with a smooth impervious surface fitted with a waste pipe without plug, and of sufficient length to allow at least 60 centimetres for every five such persons employed at any one time, and having a constant supply of water from taps or jets above the trough at intervals of not more than 60 centimetres; or

(i) at least one wash basin for every five such persons employed at any one time, fitted with a waste pipe and plug and having a adequate supply of water laid on or always readily available; and

(b) a sufficient supply of clean towels made of suitable materials renewed daily, with a sufficient supply of soap or other suitable cleansing material.

10. **Medical facilities and record of examination and tests:-** (i) the occupier of every factory to which this Schedule applies, shall-

(a) employ a qualified medical practitioner for medical surveillance of the workers employed therein whose employment shall be subject to the approval of the Chief Inspector of Factories; and

(b) provide to the said medical practitioner all the necessary facilities for the purpose referred to in clause (a).

(2) The record of medical examinations and appropriate tests carried out by the said medical practitioner shall be maintained in a separate register approved by the Chief Inspector of Factories, which shall be kept readily available for inspection by the Inspector.

10-A. **Medical examination by Certifying Surgeon -** (1) Every worker employed in a lead processes shall be examined by a Certifying Surgeon within 15 days of his first employment. Such examination shall include tests for lead in urine and blood. ALA in urine, ha ling of cells and steadiness test.

No worker shall be allowed to work after 15 days of his first employment in the factory unless certified fit for such employment by the Certifying Surgeon.

(2) Every worker employed in the said processes shall be re-examined by a Certifying Surgeon at least once in every six calendar months. Such re-examination shall, wherever the Certifying Surgeon considers appropriate, include tests as specified in sub- paragraph (1).

(3) The Certifying Surgeon after examining a worker, shall issue a Certificate of Fitness in

Form 32. The record of examination and re-examinations carried out shall be entered in the Certificate and the Certificate shall be kept in the custody of the manager of the factory. The record of each examination carried out under sub-paragraphs (1) and (2), including the nature and the results of the tests, shall also be entered by the Certifying Surgeon in a health register in Form 17.

(4) The Certificate of Fitness and the health register shall be kept readily available for inspection by the Inspector.

(5) if at any time certifying surgeon is of the opinion that a worker is no longer fit for employment in the said process on the ground that continuance therein would involve special danger to the health of the worker he shall make a record of his findings in the said Certificate and the health register. The entry of his findings in these documents should also include the period for which he considers that the said person is unfit for work in the said processes. The person so suspended from the process shall be provided with alternate placement facilities unless he is fully incapacitated in the opinion of the Certifying Surgeon, in which case the person affected shall be suitably rehabilitated.

(6) No person who has been found unfit to work as said in sub-paragraph (5) above shall be re-employed or permitted to work in the said processes unless the Certifying Surgeon, after further examination, again certifies him fit for employment in those processes.

11. **Food, drinks, etc. prohibited in workrooms -** No food, drink, pan and supari or tobacco shall be consumed or brought by any worker into any workroom in which any lead process is carried on.

12. The occupier shall provide to all persons employed in lead process two full sleeve overall every year, arrange for their weekly washing and maintain these in good condition. The person employed in such a process shall wear these overall while engaged in such work.

Schedule – XI

Chemical Works

PART I

1. **Application -** This schedule shall apply to all manufacture and processes incidental thereto carried on in chemical works.

2. **Definitions -** For the purpose of this schedule –

(a) "chemical works" means any factory or such parts of any factory as are listed in appendix `A' to this schedule;

(b) "efficient exhaust draught" means localised ventilation effected by mechanical or other means for the removal of gas, vapour, fume or dust to prevent it from escaping into the air of any place in which work is carried on;

(c) "bleaching powder" means the bleaching powder commonly called chloride of lime;

(d) "chlorate" means chlorate or perchlorate;

(e) "caustic" means hydroxide of potassium or sodium;

(f) "chrome process" means the manufacture of chromate or bichromate of potassium or sodium, OT the manipulation, movement or other treatment of these substances;

(g) "nitro or amino process" means the manufacture of nitro or amino derivatives of phenol and of benzene or its homologues, and the making of explosives with the use of any of these substances;

(h) the term `permit to work' system means the compliance with the procedures laid down under para 20 of Part II;

(i) "toxic substances" means all those substances which when they enter into the human body, through inhalation or ingestion or absorption through skin, in sufficient quantities cause fatality or exert serious affliction of health, or chronic harmful effects on the health of persons exposed to it due to its inherent chemical or biological effects. In respect of substances whose TLV is specified in Rule 123-A, exceeding the concentration specified therein would make the substance toxic;

(j) "emergency" means a situation or condition leading to a circumstance or set of circumstances in which there is danger to the life or health of persons or which could result in big fire or explosion or pollution to the work and outside environment,
affecting the workers or neighbourhood in a serious manner, demanding immediate action;

(k) "dangerous chemical reactions" means high speed reactions, runaway reactions, delayed reactions, etc. and are characterised by evolution of large quantities of heat, intense release of toxic or flammable gases or vapours, sudden pressure build-up etc.;

(l) "manipulation" means mixing, blending, filling, emptying, grinding, sieving, drying, packing, sweeping, handling, using, etc.;

(m) "approved personal protective equipment" means items of personal protective equipment conforming to the relevant ISI specifications or in the

absence of it, personal protective equipment approved by the Chief Inspector of Factories;

(n) "appropriate personal protective equipment" means that when the protective equipment is used by the worker, he shall have no risk to his life or health or body; and

(o) "confined space" means any space by reason of its construction as well as in relation to the nature of the work carried therein and where hazards to the persons entering into or working inside exist or are likely to develop during working.

PART II
General
Requirements

Applying to all the works in Appendix `A'

1. Housekeeping –

(1) Any spillage of materials shall be cleaned up before further processing.

(2) Floors, platforms, stairways, passages and gangways shall be free of any obstructions.

(3) There shall be provided easy means of access to all parts of the parts of the plant to facilitate cleaning.

2. Improper use of chemicals-chemicals or solvents or empty containers containing chemicals or solvents shall be permitted to be used by workers for any purpose other than in the processes for which they are supplied.

3. Prohibition on the use of food, etc. - No food, drink, tobacco, pan or any edible item shall be stored or heated or consumed on or near any part of the plant or equipment.

4. Cautionary Notices and Instructions -

(1) Cautionary notices in a language understood by the majority of workers shall be prominently displayed in all hazardous areas drawing the attention of all workers about the hazards to health, hazards involving fire and explosion and any other hazard such as consequences of testing of material or substances used in the process or using any contaminated container for drinking or eating, to which the workers' attention should be drawn for ensuring their safety and health.

(2) In addition to the above cautionary notice, arrangement shall be made to instruct and educate all the workers including illiterate workers about the hazards in the process including the specific hazards to which they may be exposed to, in the normal course of their work. Such instructions and education should also deal with the hazards involved in unauthorised and unsafe practices including the properties of substances used in the process under normal conditions as well as abnormal conditions and the precautions to be observed against each and every hazard. Further, an undertaking from the workers shall be obtained within 1 month of their employment and for old workers employed, within one month of coming into operation of the rules, to the effect that they have read the contents of the cautionary notices and instructions, understood them and would abide by them. The training and

instructions to all workers and all supervisory personnel shall include the significance of different types of symbols and colours used on the labels stuck or painted on the various types of containers and pipe lines.

5. Evaluation and provision of safeguards before the commencement of process -

(1) Before commencing any process or any experimental work, or any new manufacture covered under Appendix `A', the occupier shall take all possible steps to ascertain definitely all the hazards involved both from the actual operations and the chemical reactions including the dangerous chemical reactions. The properties of the raw materials used, the final products to be made and any by-products derived during manufacture, shall be carefully studied and provisions shall be made for dealing with any hazards including effects on workers, which may occur during manufacture.

(2) Information in writing giving details of the process, its hazards and the steps taken or proposed to be taken from the design stage to disposal stage for ensuring the safety as in sub-para (1) above should be sent to the Chief Inspector at the earliest but in no case less than 15 days before commencing manufacture, handling, or storage of any of items covered under Appendix `A', whether on experimental basis, or as pilot plant or as trial production, or as large scale manufacture.

(3) The design, construction, installation, operation, maintenance and disposal of the buildings, plant and facilities shall take into consideration effective safeguards against all the safety and health hazards so evaluated.

(4) The requirements under the sub-Para (1) to (3) shall not act in lieu of or in derogation to, any other provisions contained in any Act governing the work.

6. Authorized entry - Authorized persons only shall be permitted to enter any section of the factory or plant where any dangerous operations or processes are being carried on or where dangerous chemical reactions are taking place or where hazardous chemicals are stored.

7. Examination of instruments and safety devices -

(1) All instruments and safety devices used in the process shall be tested before taking into use and after carrying out any repair to them and examined once in a month, by a competent person. Records of such tests and examinations shall be maintained in a register.

(2) All instruments and safety devices used in the process shall be operated daily or as often as it is necessary, to ensure its effective and efficient working at all times.

8. Electrical installations - All electrical installations used in the process covered in Appendix `A' shall be of an appropriate type to ensure safety against the hazard prevalent in that area such as suitability against dust, dampness, corrosion, flammability and explosivity etc. and shall confirm to the relevant ISI specifications governing their construction and use for that area.

9. Handling and storage of chemicals -

(1) The containers for handling and storage of chemicals shall be of adequate strength taking into consideration the hazardous nature of the contents. They shall also be provided w d colour coding arrangements to

enable identification of the containers and their contents indicating the hazards and safe handling methods and shall conform to the respective ISI standards. The instructions given in the label shall be strictly adhered to. Damaged containers shall be handled only under supervision of a knowledgeable and responsible person and spillage shall be rendered innocuous in a safe manner using appropriate means.

(2) The arrangements for the storage of chemicals including charging of chemicals in reaction vessels and containers shall be such as to prevent any risk of fire or explosion or formation of toxic concentration of substances above the limits specified in Rule 128.

(3) Without prejudice to the generality of the requirements in sub- Para (2) above, the arrangements shall have suitable ventilation facilities and shall enable the maintenance of safe levels in vessels and containers. Such arrangements shall also take into consideration, the type of flooring and the capacity of flooring and the compatibility requirements of substances with other chemicals stored nearby.

(4) (a) Storage of chemicals and intermediate products, which are highly unstable or reactive or explosive shall be limited to the quantities required for two months use.

(b) Whenever the quantities laid down in the above clause (a) are to be exceeded, the permission of the Chief Inspector shall be obtained.

(c) Notwithstanding anything contained in clause (a) and (b) above, the Chief Inspector of Factories may direct any factory carrying out processes covered in Appendix `A' to further limit the storage of hazardous substances to quantities less than two months on considerations of safety.

(d) Standby arrangements equal to the biggest container shall always be available to transfer the toxic substances quickly into the standby storage facility if any defect develops in any of the container resulting in the release of toxic substances.

(e) Any storage facility constructed using non-metallic material such as Fibreglass Reinforced Plastics (FRP), all glass vessels etc., shall have adequate strength to withstand the stress, if any, exerted by the contents and shall be properly anchored. Working platforms, access ladders, pipelines etc used in such storage facility shall not

have any support on the structure of the storage facility and shall be independently supported.

10. Facility for isolation - The plant and equipment shall be so constructed and maintained as to enable quick isolation of plant or part of plant or equipment, with appropriate indication. One copy of the layout plan indicating the isolation facilities shall always be available with the security personnel, the maintenance and the health and safety personnel and these isolation facilities shall be checked for its effectiveness once in a month.

11. Personal protective equipment -

(1) All workers exposed to the hazards in the processes covered by this Schedule shall be provided with appropriate and approved type of personal protective equipment.

Such equipment shall be in a clean, sterile and hygienic condition before issue.

(2) The occupier shall arrange to inform, educate and supervise all the workers in the use of personal protective equipment while carrying out the job.

(3) As regards any doubt regarding the appropriateness of any personal protective equipment, the decision of the Chief Inspector will be final.

12. Alarm Systems -

(1) Suitable and effective alarm systems giving audible and visible indications, shall be installed at the control room as well as in all strategic locations where process control arrangements are available so as to enable corrective action to be taken before the operational parameters exceed the predetermined safe levels or lead to conditions conducive for an outbreak of fire or explosion to occur. Such alarm systems shall be checked daily and tested every month at least once to ensure its performance efficiency at all times.

(2) The Chief Inspector of Factories may direct such system to be installed in case of plants or processes where toxic materials are being used and spillage or leakage of which may cause wide spread poisoning in or around the plant.

13. Control of escape of substances into the work atmosphere -

(1) Effective arrangements such as, enclosure, or by pass, or efficient exhaust draught, maintenance of negative pressure etc., shall be provided in all plants, containers, vessels, sewers, drains, flues, ducts, culverts, and buried pipes and equipment, to control the escape and spread or substances which are likely to give rise to fire or explosion or toxic hazards during normal working and in the event of accident or emergency.

(2) In the event of the failure of the arrangements for control resulting in the escape of substances in the work atmosphere immediate steps shall be taken to control the process in such a manner, that further escape is brought down to the safe level.

(3) he substances that would have escaped into the work atmosphere before taking immediate steps as required in sub-Para (2), shall be rendered innocuous by diluting with air or water or any other suitable agent or by suitably treating the substances.

14. Control of dangerous chemical reactions - Suitable provision, such as automatic and or remote control arrangements, shall be made for controlling the effects of `dangerous chemical reactions'. In the event of failure of control arrangements automatic flooding or blanketing or other effective arrangements shall come into operation.

15. Testing, examination and repair of plant & equipment -

(1) All parts of plant, equipment and machinery used in the process which in the likely event of their failure may give rise to an emergent situation shall be tested by a competent person before commencing process and retested at an interval of two years or after carrying out repairs to it. The competent person shall identify the parts of the plant, equipment and machinery required to be

tested as aforesaid and evolve a suitable testing procedures. In carrying out the test mentioned above in respect of pressure vessels or reaction vessels the following precautions shall be observed, namely –

(a) before the test is carried out, each vessel shall be thoroughly cleaned and examined externally, and as far as practicable, internally also for surface defects, corrosion and foreign matters. During the process of cleaning and removal of sludge, if any, all due precautions shall be taken against fire or explosion, if such sludge is of pyropheric nature or contains spontaneously combustible chemicals;

(b) as soon as the test is completed, the vessel shall be thoroughly dried internally and shall be clearly stamped with the marks and figures indicating the person by whom testing has been done, and the date of test; and

(c) any vessel which fails to pass the test or which for any other reason is found to be unsafe for use shall be destroyed or rendered unusable under intimation to the Chief Inspector.

(2) All parts of plant, equipment, machinery which is the likely event of failure may give rise to an emergent situation shall be examined once in a month by the competent person.

(3) Records of testing and examination referred to in paragraphs (1) and (2) shall be maintained as long as that part of the plant, equipment and machinery are in use.

(4) All repair work including alteration, modification and addition to be carried out to the plant, equipment and machinery shall be done under the supervision of a responsible person who shall evolve a procedure to ensure safety and health of persons doing the work. When repairs or modification is done on pipelines, and joints are required to be welded, butt welding of joints shall be preferred. Wherever necessary, the responsible person shall regulate the aforesaid work through a `Permit to work system'.

16. Staging -

(1) All staging that is erected for the purpose of maintenance work or repair work or for work connected with entry into confined spaces and used in the processes included in Appendix `A', shall be stable, rigid and constructed out of substantial material of adequate strength. Such staging shall conform to the respective Indian Standard specifications.

(2) Staging shall not be erected over any closed or open vessel unless the vessel is so constructed and ventilated to prevent exposure of persons working on the stages.

(3) All the staging constructed for the purpose of this Para shall have appropriate access which are safe and shall be fitted with proper hand rails to a height of one metre and toe board.

17. Seating Arrangements - The seating arrangements provided for the operating personnel working in processes covered in Appendix `A' shall be located in a safe manner as to prevent the risk of exposure to toxic, flammable and explosive substances evolved in the work environment in the course of manufacture or repair or

maintenance, either due to failure of plant and equipment or due to the substances which are under pressure, escaping into the atmosphere.

18. Entry into or work in confined spaces -

(1) The occupier of every factory to which the provisions of this schedule apply, shall ensure the observance of the following precautions before permitting any person to enter or work inside the confined spaces -

(a) identify all confined spaces and the nature of hazards that are encountered in such spaces, normally or abnormally, and arrange to develop the most appropriate safeguards for ensuring the safety and health of persons entering into or working inside, the confined spaces;

(b) regulate the entry or work inside the confined spaces through a `permit to work system' which should include the safeguards so developed as required under sub-clause (a) above;

(c) before testing the confined space for entry into or work, the place shall be rendered safe by washing or cleaning with neutralising agents; or purging with steam or inert gases and making adequate forced ventilation
arrangements or such measure which will render the confined space safe;

(d) Shall arrange to carry out such tests as are necessary for the purpose by a competent person and ensure that the confined space is safe for the persons to enter or work. Such testing shall be carried out as often as is necessary during the course of work to ensure its continued safety;

(e) shall arrange to educate and train the personnel who would be required to work in confined spaces about the hazards involved in the work. He shall also keep in readiness the appropriate and approved personal protective equipment including arrangements for, rescue resurrection and first aid, and shall arrange supervision of the work at all times by a responsible and
knowledgeable person.

(2) The manager shall maintain a log of all entry into or work in, confined spaces and such record shall contain the details of persons assigned for the work, the location of the work and such other details that would have a bearing on the log book so maintained shall be retained as long as the concerned workers are in service and produces to the Inspector when demanded.

19. Maintenance work etc -

(1) All the work connected with the maintenance of plants and equipment including cleaning of empty containers which have held hazardous substances used in the processes covered in this Schedule, shall be carried out under `permit to work system' employing trained personnel and under the supervision of responsible person, having knowledge of the hazards and precautions required to deal with them.

(2) Maintenance work shall be carried out in such a manner that there is no risk to persons in the vicinity or to persons who pass by. If necessary, the place of such work shall be cordoned off or the presence of unconnected persons effectively controlled.

20. Permit to work system - The permit to work system shall inter-alia include the observance of the following precautions while carrying out any specified work to be subjected to the permit to work system -

(a) all work subject to the permit to work system shall be carried out under the supervision of a knowledgeable and responsible person;

(b) all parts of plant or machinery or equipment on which permit to work system is carried out, shall remain isolated from other parts throughout the period of permit to

work and the place of work including the parts of plant, machinery shall be rendered safe by cleaning, purging, washing, etc.;

(c) All work subject to the permit to work system shall have predetermined work procedures which integrate safety with the work. Such procedures shall be reviewed whenever any change occurs in material or equipment so that continued safety is ensured;

(d) persons who are assigned to carry out the permit to work system shall be physically fir in all respects taking into consideration the demands and nature, of the work before entering into the confined space. Such person shall be adequately informed about the correct work procedures as well as the precautions to be observed while carrying out the permit to work system;

(e) adequate rescue arrangements wherever considered necessary and adequate first aid, rescue and resurrection arrangements shall be available in good working condition near the place of work while carrying out the permit to work system, for use in emergency;

(f) appropriate and approved personal protective equipment shall be used while carrying out the `permit to work system';

(g) after completion of work subject to the `permit to work system' the person responsible shall remove all the equipment and tools and restore to the original condition so as to prevent any danger while carrying out regular process.

21. Safety sampling personnel - The occupier shall ensure the safety of persons assigned for collecting samples by instructing them on the safe procedures. Such personnel shall be provided with proper and approved personal protective equipment, if required.

22. Ventilation - Adequate ventilation arrangements shall be provided and maintained at all times in the process area where dangerous or toxic or flammable or explosive substances could be evolved. These arrangements shall ensure that concentrations, which are either harmful or could result in explosion, are not permitted to be built up in the work environment.

23. Procedures for meeting emergencies -

(1) The occupier of every factory carrying out the works covered in Appendix `A', shall arrange to identify all types of possible emergencies that could occur in the processes during the course of work or while carrying out maintenance work or repair work. The emergencies so identified shall be reviewed every year.

(2) The occupier shall formulate a detailed plan to meet all such identified emergencies including arrangements for summoning outside help for rescue and fire fighting arrangements for making available urgent medical facilities.

(3) The occupier shall send the list of emergencies and the details of procedures and plans formulated to meet the emergencies, to the Chief Inspector of Factories.

(4) The occupier shall arrange to install distinctive and recognisable warning arrangements to caution all persons inside the plant as well as the neighbouring community, if necessary, to enable evacuation of persons and to enable the observance of emergency procedures by the persons who are assigned emergency duties. All concerned must be well informed about the warning arrangements and their meaning. The arrangements must be checked for its effectiveness every month.

(5) Alternate power supply arrangements shall be made and interlocked with the normal power supply system so as to ensure constant supply of power to the facilities and equipment meant for compliance with requirements of Paragraphs 10, 11, 12, 13, 14, 18, 22, and this paragraph of Part II, Part III, Part IV and Part V of this Schedule.

(6) The occupier shall arrange to suspend the further process work in a place where emergency is established and shall forthwith evacuate all persons in that area except workers who have been assigned emergency duties.

(7) All the employees of the factory shall be trained about the action to be taken by them including evacuation procedures during emergencies.

(8) All emergency procedures must be rehearsed every three months and deficiencies, if any, in the achievement of the objectives shall suitably be corrected.

(9) The occupier shall arrange to have ten percent of the workers trained in the use of First Aid Fire Fighting appliances and in the rendering of specific hazards of the particular process.

(10) The occupier shall furnish immediately on request the specific chemical identity of the hazardous substance to the treating physician where the information is needed to administer proper emergency or first-aid treatment to exposed persons.

24. Danger due to effluents -

(1) Adequate precautions shall be taken to prevent the mixing of effluents from different processes and operations which may cause dangerous or poisonous gases to be evolved.

(2) Effluents which contain or give rise in the presence of other effluents to poisonous gases shall be provided with independent drainage systems to ensure that they may be trapped and rendered safe.

PART III

Fire and Explosion Risks

1. Sources of ignition including lighting installation.-

(1) No internal combustion engine and no electric motor or other electrical equipment, and fittings and fixtures capable of generating sparks or otherwise causing combustion or any other source of ignition or any naked light shall be installed or permitted to be in the process area where there could be fire and explosion hazards.

(2) ll hot exhaust pipes shall be installed outside a building and other hot pipes or hot surface or surfaces likely to become hot shall be suitably protected.

(3) The classification of work areas in terms of its hazard potential and the selection of electrical equipment or other equipment that could constitute a source of ignition shall be in accordance with the respective Indian Standard.

(4) Where a flammable atmosphere may be prevalent or could occur, the soles of footwear worn by workers shall have no metal on them, and the wheels of trucks or conveyors shall be conductive type.

(5) All tools and appliances used for work in this area shall be of non-sparking type.

(6) Smoking in process areas where there are risks of fire and explosion shall be prohibited, and warning notices in the language understood by majority of workers shall be posted in the factory prohibiting smoking into specified areas.

2. Static Electricity -

(1) All machinery and plant, particularly, pipe lines and belt drives, on which static charge is likely to accumulate, shall be effectively earthed. Receptacles for flammable liquids shall have metallic connections to the earthed supply tanks to prevent static sparking. Where necessary, humidity shall be regulated.

(2) Mobile tanker wagons shall be earthed during filling and discharge, and precautions shall be taken to ensure that earthing is effective before such filling or discharge take place.

3. **Lightning protection -** Lightening protection arrangement shall be fitted where necessary, and shall be maintained.

4. **Process heating -** The method of providing heat for a process likely to result in fire and explosion shall be as safe as possible and where the use of naked flame is necessary, the plant shall be so constructed as to prevent any escaping flammable gas, vapour, or dust coming into contact with the flame, or exhaust gases, or other sources likely to cause ignition. Wherever possible, the heating arrangement shall be automatically controlled at a pre-determined temperature below the danger temperature.

5. Leakage of flammable liquids -

(1) Provision shall be made to confine by means of bund walls, dykes, sumps etc. Possible leakages from storage vessels containing flammable liquids.

(2) aste material in contact with flammable substances shall be disposed off suitably under the supervision of knowledgeable and responsible person.

(3) Adequate and suitable fire-fighting appliances shall be installed in the vicinity of such vessels.

6. **Safety valves -** Every still and every closed vessel which gas is evolved or into which gas is passed, and in which the pressure is liable to rise above the atmospheric pressure, shall have attached to it a pressure gauge, and a proper safety valve or other equally efficient means to relieve the pressure. These appliances shall be maintained in good condition.

7. **Installation of pipe line etc -** All pipelines carrying flammable or explosive substances shall be prote mage and shall be examined by a

responsible person once a week to detect any deterioration or defects, or accumulation of flammable or explosive substances, and record kept of any defects found and repairs made.

8. Fire fighting systems -

(1) Every factory employing 500 or more persons and carrying out processes listed in Appendix `A' shall provide -

(a) Trained and responsible fire fighting squad so as to effectively handle the fire fighting and life saving equipment in the event of fire or other emergency. Number of persons in this squad will necessarily depend upon the size of risk involved, but in no case shall be less than 8 such trained persons to be available at any time. The squad shall consist of watch & ward personnel, fire pump man and departmental supervisors and operators trained in the operation of fire &emergency services.

(b) Squad leaders shall preferably be trained in a recognised government institution and their usefulness enhanced by providing residence on the premises.

(c) Squad personnel shall be provided with clothing and equipment including helmets, boots and belts.

(2) A muster roll showing the duties allocated to each member of the squad shall be prepared and copies supplied to each leader as well as displayed in prominent places so as to be easily available for reference in case of emergency.

(3) The pump man shall be thoroughly conversant with the location of all appliances. He shall be responsible for maintaining all fire fighting equipment in proper working order. Any defect coming to his notice shall be immediately be brought to the notice of squad leader.

(4) As far asis practicable, the fire pump room and the main gate(s) of the factory be connected to all manufacturing or storing areas through telephone inter lined and placed in a convenient location near such areas.

PART IV

Risks of Toxic Substances

1. Leakage -

(1) All plants shall be so designed and constructed as to prevent the escape of toxic substance. Where necessary, separate buildings, rooms, or protective structures shall be used for the dangerous stages of the process and buildings shall be so designed as to localise any escape of toxic substances.

(2) Catch pits, bund walls, dykes, or other suitable safeguards shall be provided to restrict the serious effects of such leakages. Catch pits shall be placed below joints in pipelines where there is danger involved to maintenance and other workers from such leakage.

2. **Drainage -** Adequate drainage shall be provided and shall lead to collection tanks specifically provided for this purpose wherein deleterious material shall be

neutralised, treated or otherwise rendered safe before it is discharged into public drains or sewers.

3. Covering of vessels -

(1) Every fixed vessel or structure containing any toxic substance and not so covered as to eliminate all reasonable risk of accidental contact of any portion of the body of a worker, shall be so constructed as to avoid physical contact.

(2) Such vessel shall, unless its edge is at least 90 centimetres above the adjoining ground or platform, be securely fenced to a height of at least 90 centimetres above such adjoining ground or platform.

(3) Where such vessels adjoin and the space between them, clear of any surrounding brick or other work is either less than 45 centimetres in width or is 45 or more centimetres in width, but is not securely fenced on both sides to a height of at least 90 centimetres, secure barriers shall be so placed as to prevent passage between them :

Provided that sub-paragraph (2) of this paragraph shall not apply to -

(a) saturators used in the manufacture of sulphate of ammonia; and

(b) That part of the sides of brine evaporating pans which require raking, drawing or filling.

4. Continuous exhaust arrangement -

(1) Any process evolving toxic vapour, gas, fume and substance shall have efficient continuous exhaust draught. Such arrangement shall be interlocked in the process control wherever possible.

(2) In the event of failure of continuous exhaust arrangement means shall be provided to automatically stop the process.

5. **Work Bench -** All the work benches used in the processes involving the manipulation of toxic substances, shall be graded properly and shall be made of smooth impervious surface which shall be washed daily after the completion of work.

6. Waste disposal -

(1) There shall be provided a suitable receptacle made of non-absorbable material with a tightly fitting cover for depositing waste material soiled with toxic substances and the contents of such receptacle shall be destroyed by burning or using other suitable methods under the supervision of a responsible person.

(2) During the course of manufacture, whenever any batch or intermediate products having toxicity is rejected on considerations of quality, sufficient precautions shall be taken to render them innocuous or otherwise treat them or inactivate them, before disposal.

(4) The empty containers of toxic substances shall be cleaned thoroughly before disposal under the supervision of a responsible person.

PART V

Special Provisions

1. Special precautions for Nitro or Amino Processes -

(1) Unless the crystallised intro or amino substances or any of its liquor is broken or agitated in a completely enclosed process so as not to give rise to dust or fume, such process shall be carried on under an efficient exhaust draught or by adopting any other suitable means in such a manner as to prevent the escape of dust or fume in the working atmosphere.

(2) No part of the plant or equipment or implements which was in contact with nitro or amino compounds shall be repaired, or handled unless they have been emptied and thoroughly cleaned and decontaminated.

(3) Filling of containers with nitro or amino compounds shall be done only by using a suitable scoop to avoid physical contact and the drying of the containers in the stove shall be done in such a manner that the hot and contaminated air from the stove is not drawn into the work room.

(4) Processes involving the steaming into or around any vessel containing nitro or amino compounds or its raw materials shall be carried out in such a manner that the steam or vapour is effectively prevented to be blown back into the working atmosphere.

(5) Suitable antidotes such as methylene blue injections shall always be available at designated places of work for use during emergency involving the poisoning with nitro or amino compounds.

2. Special precautions for `chrome processes -

(1) Grinding and sieving of raw materials in chrome processes shall be carried on in such a manner and under such condition as to secure effective separation from any other processes and under an efficient exhaust draught.

(2) There shall be washing facilities located very near to places where wet chrome processes such as leaching, acidification, sulphate settling, evaporation, crystallisation, centrifugation or packing are carried out, to enable quick washing of affected parts of body with running water.

(3) Weekly inspection of hand and feet of all persons employed in chrome process shall be done by a qualified nurse and record of such inspections shall be maintained in a form approved by the Chief Inspector of Factories.

(4) There shall be always available at designated places of work suitable ointment such as glycerine, vaseline, etc. and water proof plaster in a separate box readily accessible to the workers so as to protect against perforation of nasal septum.

3. Special precautions for processes carried out in all glass vessels -

(1) Processes and chemical reactions such as manufacture of vinyl chloride, benzyl chloride etc. which are required to be carried out in all glass vessels shall have suitable means like substantial wire mesh covering to protect persons working nearby in the event of breakage of glass vessel

(2) Any spillage or emission of vapour from the all glass vessel due to breakage, shall be immediately inactivated or rendered innocuous by suitable means such as dilution with water or suitable solvents so as to avoid the risks of fire or explosion or health hazards.

4. Special precautions for processes involving chlorate manufacture -

(1) Crystallisation, grinding or packing of chlorate shall not be done in a place used for any other purpose and such places shall have hard, smooth and impervious surface made of non-combustible material. The place shall be thoroughly cleaned daily.

(2) The personal protective equipment likes overall, etc. provided for the chlorate workers shall not be taken from the place of work and they shall be thoroughly cleaned daily.

(3) Adequate quantity of water shall be available near the place of chlorate process for use during fire emergency.

(4) Wooden vessels shall not be used for the crystallisation of chlorate or to contain crystallised ground chlorate.

5. Special precautions in the use of plant and equipment made from reinforced plastics -

(1) Alplant and equipment shall conform to appropriate Indian or any other National Standard.

(2) Care shall betaken during storage, transport, handling and installation of plant and equipment to avoid accidental damage.

(3) All plant and equipment shall be installed in such a way as to ensure that loads are distributed as intended in design or as per the recommendations of the manufacture.

(4) All pipe work shall be supported so that total loads local to the branches on the vessel or tank do not exceed their design values.

(5) After erection all plant and equipment shall be subjected to a pressure test followed by a thorough examination by a competent person. The test and examination shall be as per relevant Standard. A certificate of test and examination by a competent person shall be obtained and kept available at site.

(6) All plant and equipment shall be subjected to periodical test and examination and record maintained as per Paragraph 15 in Part II of this Schedule.

(7) Plant and equipment during their use shall not be subjected to over filling or over loading beyond rated capacity.

PART VI

Medical Requirements

1. **Decontamination facilities -** In all places where toxic substances are used in processes listed in Appendix `A' the following provisions shall be made to meet an emergency:

(a) fully equipped first aid box;

(b) readily accessible means of drenching with water persons, parts of body of persons, and clothing of persons who have been contaminated with such toxic and corrosive substances, and such means shall be as shown in the Table below :

No.of persons employed at any time	**No. of drenching showers showers**
Upto 50 persons	2
Between 51 to 10	

101 to 200 3 + 1 for every 50 persons thereafter 201 to
400 5 + 1 for every 100 persons thereafter 401 and above
7 + 1 for every 200 persons thereafter

(c) a sufficient number of eye wash bottles filled with distilled water or suitable liquid, kept in boxes or cupboards conveniently situated and clearly indicated by a distinctive sign which shall be visible at all times.

2. **Occupational health centre -** In all the factories carrying out processes covered in Appendix `A' there shall be provided and maintained in good order an occupational health centre with facilities as per scale laid down hereunder

(1) For factories employing upto workers –

(a) the services of a qualified medical practitioner hereinafter known as Factory Medical Officer, available on a retainership basis, in his notified clinic near to the factory for seeking medical help during emergency. He will also carry out the pre-employment and periodical medical examinations as stipulated in paragraph 4 of this Part.

(b) A minimum of five persons trained in first aid procedures, amongst whom at least one shall always be available during the working period.

(c) A fully equipped first aid box.

(2) For factories employing 51 to 200 workers –

(a) The occupational health centre shall have a room having a minimum floor area of 15 sq.m., with floors and walls made of smooth, hard and impervious surface and shall be adequately illuminated, ventilated and equipped.

(b) A part-time Factory Medical Officer will be in over all charge of the Centre who shall visit the factory minimum twice in a week and whose services shall be readily available during emergencies.

(c) There shall be one qualified and trained dresser-cum-compounder on duty throughout the working period.

(d) A fully equipped first aid box.

(3) For factories employing above 200 workers –

(a) There shall be one full-time Factory Medical Officer for factories employing upto 500 workers and one more medical officer for every 1000 workers or part thereof.

(b) The occupational health centre in this case shall have a minimum of 2 rooms each having a minimum floor area of 15 sq.m. with floors and walls made of smooth, hard and impervious surface and shall be adequately illuminated, ventilated and equipped.

(c) There shall be one trained nurse, one dresser-cum-compounder and one sweeper-cum-ward boy throughout the working period.

(d) The Occupational Health Centre in this case shall be suitably equipped to manage medical emergencies.

3. Ambulance van -

(1) In every factory carrying out processes covered in Appendix `A', there shall be provided and maintained in good condition, a suitably constructed and fully equipped ambulance van as per Appendix `C' manned by a full-time driver-cum-

mechanic and a helper, trained in first aid for the purposes of transportation of serious

cases of accidents or sickness unless arrangements for procuring such facility at short notice during emergencies have been made with the nearby hospital or other places. The ambulance van shall not be used for any purpose other than the purpose stipulated herein and will always be available near the Occupational Health Centre.

(2) The relaxation to procure Ambulance Van from nearby places provided for in sub- para (1) above will not be applicable to factories employing more than 500 workers.

4. Medical examination -

(1) Workers employed in processes covered in Appendix `A' shall be medically examined by a Factory Medical Officer in the following manner –

(a) Once before employment, to ascertain physical suitability of the person to do the particular job;

(b) Once in a period of 6 months, to ascertain the health status of the worker, and

(c) The details of pre-employment and periodical medical examinations carried out as aforesaid shall be recorded in the prescribed form.

(2) Any finding of the Factory Medical Officer revealing any abnormality or unsuitability of any person employed in the process shall immediately be reported to the Certifying Surgeon who shall in turn, examine the concerned workers and communicate his findings within 30 days. If the Certifying Surgeon is of the opinion that the person so examined is required to be suspended from the process for health protection he will direct the occupier accordingly, who shall not employ the said worker in the same process. However, the person so suspended from the process shall be provided with alternate placement facilities unless he is fully incapacitated in the opinion of the Certifying Surgeon, in which case the person affected shall be suitably rehabilitated :

Provided that the Certifying Surgeon on his own may examine any other worker whom he feels necessary to be examined for ascertaining the suitability of his employment in the process covered in Appendix `A' or for ascertaining the health status of any other worker and his opinion shall be final.

(3) No person shall be newly appointed without the Certificate of Fitness granted by the Factory Medical Officer. If the Factory Medical Officer declares a person unfit for being appointed to work in the process covered in Appendix `A', such person shall have a right of appeal to the Certifying Surgeon, whose opinion shall be final in this regard.

(4) The worker suspended from the process owing to the circumstances covered in sub-para (2) shall be employed again in the same process only after obtaining the Fitness Certificate from the Certifying Surgeon and after making entries to that effect in the health register.

PART VII

Additional Welfare Amenities

1. Washing facilities -

(1) There shall be provided and maintained in every factory for the use of all the workers taps for washing, at the rate of one every 15 persons including liquid soap in a container with tilting arrangements and nail brushes or other suitable means for effective cleaning. Such facilities shall be conveniently accessible and shall be kept in a clean and hygienic condition.

(2) If washing facilities as required above are provided for women, such facilities shall be separate for them and adequate privacy at all times shall be ensured in such facilities.

2. Mess room facilities -

(1) The occupier of all the factories carrying out processes covered in Appendix `A' and employing 50 workers or more, shall provide for all the workers working in a shift mess room facilities which are well ventilated and provided with tables and sitting facilities along with the provision of cold and hygienic drinking water facilities.

(2) Such facilities shall include suitable arrangements for cleaning and washing and shall be maintained in a clean and hygienic condition.

3. Cloakroom facilities -

(1) The occupier of every factory carrying out any process covered in Appendix `A' shall provide for all the workers employed in the process cloak room facilities with lockers. Each worker shall be provided with two lockers, one for work clothing and another separately for personal clothing and the lockers should be such as to enable the keeping of the clothing in a hanging position.

(2) The cloak room facilities provided in pursuance of sub-para (1) shall be located as far as possible near to the facilities provided for washing in pursuance of para 1(1). If it is not possible to locate the washing facilities the cloakroom facilities shall have adequate and suitable arrangements for cleaning & washing.

4. Special bathing facilities -

(1) The occupier of any factory carrying out the process covered under Appendix `B' shall provide special bathing facilities for all the workers employed and such facilities shall be provided at the rate of 1 for 25 workers and part thereof, and shall be maintained in a clean and hygienic condition.

(2) The occupier shall insist all the workers employed in the processes covered in Appendix `B' to take bath after the completion of the day's or shift work using the bathing facilities so provided and shall also effectively prevent such of those workers taking bath in any place other than the bathing facilities.

(3) Notwithstanding anything contained in sub-para (1) above, the Chief Inspector may require in writing the occupier of any factory carrying out any other process for which his opinion bathing facilities are essential from the health point of view, to provide special bathing facilities.

PART VIII

1. Duties of workers -

(1) Every worker employed in the processes covered in Appendix 'A' and Appendix 'B' shall not make safety device or appliance or any guarding or fencing arrangement, inoperative or defective and shall report the defective

condition of the aforesaid arrangements as soon as he is aware of any such defect.

(2) Before commencing any work, all workers employed in processes covered in Appendix 'A' shall check their workplace as well as the machinery, equipment or appliance used in the processes and report any mal-function or defect immediately to the supervisor or any responsible person of the management.

(3) All workers shall co-operate in all respects with the management while carrying out any work or any emergency duty assigned to them in pursuance of this schedule and shall always use all the personal protective equipment issued to them in a careful manner.

(4) All workers employed in the processes covered in Appendix `A' or Appendix `B' shall not smoke in the process area or storage area. If special facilities are provided by the management only such facilities should be used.

(5) All workers employed in the processes covered in Appendix `A' shall not remain in unauthorised place or carry cut unauthorised work or improvise any arrangement or adopt short out method or misuse any of the facilities provided in pursuance of the Schedule, in such a manner as to cause risk to themselves as well as or to others employed.

(6) The workers shall not refuse undergoing medical examination as required under these rules.

PART IX

Restrictions on the employment of young persons under 18 years of age and women

(1) The Chief Inspector of Factories may by an order in writing, restrict or prohibit the employment of women and young persons under the age of 18, in any of the processes covered in Appendix `A' of this schedule on considerations of health and safety of women and young persons.

(2) Such persons who are restricted or prohibited from working in the process due to the order issued in pursuance of sub-para (1) above shall be provided with alternate work which is not detrimental to their health or safety.

PART X

Exemptions

1. **Power of exemption -** The State Government or subject to the control of the State Government the Chief Inspector may exempt from the compliance with any of the requirements of this Schedule partly or fully, any factory carrying out processes covered in Appendix `A', if it is clearly and satisfactorily established by the occupier that the compliance with any of the requirement is not necessary to ensure the safety and health of persons employed suitable and effective alternate arrangements are available to any of the requirements covered in this schedule.

Appendix `A'

Any works or that part of works in which –

(a) the manufacture, manipulation or recovery of any of the following is carried on :-

(i) sodium, potassium, iron, aluminium, cobalt, nickel, copper, arsenic, antimony, chromium, zinc, selenium, magnesium, cadmium, mercury, beryllium and their organic and in es and hydroxides;

(ii) ammonia, ammonium hydroxide and salts of ammonium;

(iii) the organic or inorganic compounds of sulphurous, sulphuric, nitric, nitrous, hydrochloric, hydrofluoric, hydriodic, hydro sulphuric, hydrobromic, boric;

(iv) cyanogen compounds, cyanide compounds, cyanate compounds;

(v) phosphorous and its compounds other than oregano phosphorus insecticides.

(vi) chlorine

(b) hydrogen sulphide is evolved by the decomposition of metallic sulphides, or hydrogen

sulphide is used in the production of such sulphides;

(c) bleaching powder is manufactured or chlorine gas is produced in chlor-alkali plants;

(d) (i) gas tar or coal tar or bitumen or shale oil asphalt or any residue of such tar is distilled or is used in any process of chemicals manufacture;

(ii) tar based synthetic colouring matters or their intermediates are produced;

(e) nitric acid is used in the manufacture of nitro compounds;

(f) explosives are produced with the use of nitro compounds;

(g) aliphatic or aromatic compounds or their metallic and non-metallic derivatives or

substituted derivatives, such as chloroform, ethylene glycol, formaldehyde, benzyle
chloride, phenol, methyl ethyl keytone peroxide, cobalt carbonyl, tungsten carbide
etc. are manufactured or recovered.

Appendix `B'

Concerning Special Bathing Accommodation in pursuance of Para 4 of Part IV

1. Nitro or amido processes
2. All chrome processes
3. Processes of distilling gas or coal tar or processes of chemical manufacture in which tar is used
4. Processes involving manufacture, manipulation, handling or recovery of cyanogen compound, cyanide compound, cyanate compounds
5. Processes involving manufacture of bleaching powder orproduction of chlorine gas in chlor-
alkali plants
6. Manufacture, manipulation or recovery of nickel and its compounds
7. All processes involving the manufacture, manipulation or recovery of aliphatic or aromatic compounds or their derivatives or substituted derivatives.

Appendix `C'

Ambulance should have the following equipment :

General :

- An wheeled stretcher with folding and adjusting devices; Head of the stretcher must be capable of being tilted upward;

- Fixed suction unit with equipment;
- Fixed oxygen supply with equipment;
- Pillow with case; Sheets;
- Blankets;
- Towels;
- Emesis bag; Bed pan;
- Urinal;
- Glass

Safety equipment :

- Flares with life of 30 minutes
- Flood lights;
- Flash lights;
- Fire extinguisher dry powder type; Insulated gauntlets.

Emergency care equipment :-

Resuscitation :

- Portable suction unit;
- Portable oxygen unit;
- Bag-valve-mask, hand operated artificial ventilation unit; Airways;
- Mouth gags;
- Tracheostomy adapters;
- Short spine board;
- I.V. Fluids with administration unit;
- B.P. manometer;
- Cugg;
- Stethoscope

Immobilisation

- Long & short padded boards;
- Wire ladder splints;
- Triangular bandage;
- Long & short spine boards.

Dressings :

- Gauze pads - 4” x 4” ;
- Universal dressing 10” x 36” ;
- Roll of aluminium foils;
- Soft roller bandages 6” x 5 yards;
- Adhesive tape in 3” roll;
- Safety pins;
- Bandage sheets;
- Burn sheet.

Poisoning :

- Syrup of Ipecac; } } Pre packeted in doses
- Activated charcoal; }
- Snake bite kit;
- Drinking water.

Emergency Medicines:

- As per requirement (under the advice of Medical Officer only)

Schedule – XII

Manufacture of pottery

1 **Definitions -** For the purposes of this schedule -

(a) "pottery" includes earthenware, stoneware, porcelain, china tiles, and any other

articles made from such clay or from a mixture containing clay and other materials

such as quartz, flint, feldspar, and gypsum;

(b) "efficient exhaust draught" means localised ventilation effected by mechanical or

other means for removal of dust or fume so as to prevent it from escaping into air of

any place in which work is carried on. No draught shall be deemed efficient which

fails to remove effectively dust or fume generated at the point where dust or fume

originates;

(c) "fettling" includes scalloping, towing, sand papering, sand sticking, brushing or any other process of cleaning of potteryware in which dust is given off;

(d) "leadless glaze"means a glaze which does not contain more than one per cent of its dry weight, of a lead compound calculated as lead monoxide;

(e) "low solubility glaze" means a glaze which does not yield to dilute hydrochloric acid more than five per cent of its dry weight, of a soluble lead compound calculated as lead monoxide when determined in the manner described below :

A weighed quantity of the material which has been dried at 100 degrees centigrade and thoroughly mixed shall be continuously shaken for one hour at the common temperature with 1000 times its weight of an aqueous solution of hydrochloric acid containing 0.25 per cent by weight of hydrogen chloride. This solution shall thereafter be allowed to stand for one hour and then filtered. The lead salt contained in the clear filtrate shall then be precipitated as lead sulphide and weighed as lead sulphide;

(f) sound or powdered flint or quartz" does not include natural sands; and

(g) "potter's shop includes all places where pottery is formed by pressing or by any other process and all places where shaping, fettling or other treatment of pottery articles prior to placing for the biscuit fire is carried on.

2. **Efficient exhaust draught -** The following processes shall not be carried on without the use of an efficient exhaust draught -

(a) all processes involving the manipulation or use of a dry and unfritted lead compound;

(b) fettling operations of any kind, whether on greenware or biscuit, provided that this shall not apply to the wet fettling, and to the occasional finishing of pottery articles without the aid of mechanical power;

(c) sifting of clay dust or any other material for making tiles or other articles or other articles by pres

(i) his is done in an machine so enclosed as to effectually prevent the escape of dust; or

(ii) the material to be shifted is so damp that no dust can be given off;

(d) pressing of tiles from clay dust, an exhaust opening being connected with each press, and pressing from clay dust of articles other than tiles, unless the material is so damp that no dust is given off;

(e) fettling of tiles made from clay dust by pressure, except where the fettling is done wholly on, or with, damp material, and fettling of other articles made from clay dust, unless the material is so damp that no dust is given off;

(f) process of loading and unloading of saggars where handling and manipulation of ground and powdered flint, quartz, aluminia or other materials are involved;

(g) brushing of earthenware biscuit, unless the process is carried on in a room provided with efficient general mechanical ventilation or other ventilation which is certified by the Inspector of Factories as adequate having regard to all the circumstances of the case;

(h) fettling of biscuitware which has been fired in powdered flint or quartz except where this is done in machines so enclosed as to effectually prevent the escape of dust;

(i) where cleaning after the application of glaze by dipping or other process;

(j) crushing and dry grinding of materials for pottery bodies and saggars, unless carried on in machines so enclosed as to effectively prevent the escape of dust or is so damp that no dust can be given off;

(k) sieving or manipulation of powdered flint, quartz, clay grog or mixture of these materials unless it is so damp that no dust can be given off;

(l) grinding of tiles on a power driven wheel unless an efficient water spray is used on the wheel;

(m) lifting and conveying of materials by elevators and conveyors unless they are effectively enclosed and so arranged as to prevent escape of dust into the air in or near to any place in which persons are employed;

(n) preparation or weighing out of flow material, lawning of dry colours, colour dusting and colour blowing;

(o) mould making unless the bins or similar receptacles used for holding plaster of paris are provided with suitable covers; and

(p) manipulation of calcined material unless the material has been made and remains so wet that no dust is given off.

4. **Separation of processes -** Each of the following processes shall be carried on in such a manner and under such conditions as to secure effectual separation from one another, and from other wet processes:-

(a) crushing and dry grinding or sieving of materials, fettling, pressing of tiles, drying of clay and greenware, loading and unloading of saggars; and

(b) all processes involving the use of a dry lead compound.

4 **ion on use of glaze -** No glaze which is not a leadless glaze or a low solubility glaze

shall be used in a factory in which pottery is manufactured.

5. **Prohibition relating to women and young persons**.- No woman or young person shall be employed or permitted to work in any of the operations specified in paragraph 4, or at any place where such operations are carried on.

6. **potter's wheel.** - The potter's wheel (Jolly and Jigger) shall be provided with screens or so constructed as to prevent clay scrapings being thrown off beyond the wheel.

7. Control of dust during cleaning –

(1) All practical measures shall be taken by damping or otherwise to prevent dust arising during cleaning of floors.

(2) Damp saw-dust or other suitable material shall be used to render the moist method effective in preventing dust rising into the air during the cleaning process which shall be carried out after work has ceased.

8. **Floor of certain workrooms -** The floors of potter's shops, slip houses, dipping houses and ware cleaning rooms shall be hard, smooth and impervious and shall be thoroughly cleaned daily by an adult male using a moist method.

9. Medical facilities and records of examinations and tests -

(1) The occupier of every factory in which manufacture of pottery is carried on, shall –

(a) employ a qualified medical practitioner for medical surveillance of the workers employed therein whose employment shall be subject to the approval of the Chief Inspector of Factories; and

(b) provide to the said medical practitioner all the necessary facilities for the purpose referred to in clause (a).

(2) The record of medical examinations and appropriate tests carried out by the said medical practitioner shall be maintained in separate register approved by the Chief Inspector of Factories, which shall be kept readily available for inspection by the Inspector.

10. Medical examination by Certifying Surgeon -

(1) Every worker employed in any process mentioned under paragraph 3, shall be examined by a Certifying Surgeon within 15 days of his first employment. Such examination shall include tests for lead in urine and blood, ALA in urine, hemoglobin content, stippling of cells and. No worker shall be allowed to work after 15 days of his first employment in the factory unless certified fit for such employment by the Certifying Surgeon.

(2) All persons employed in any of the processes included under sub-paragraphs 3(a) and 3(n) shall be examined by a Certifying Surgeon once in every 3 calendar months. Those employed in any other processes mentioned in the remaining sub-paragraphs of paragraph 3 shall be examined by a Certifying Surgeon one in every 3 months. Such examinations in respect of all the workers shall include all the tests as specified in sub-paragraph (1) except chest X-ray which will be once in 3 years.

(3) The Certifying Surgeon after examining a worker, shall issue a Certificate of Fitness in

Form 32. The record of examination and re-examinations carried out shall be entered in the Certificate and the Certificate shall be kept in the custody of the manager of the factory. The record of each examination carried out under sub-paragraphs (1) and (2), including the nature and the results of the tests, shall also be entered by the Certifying Surgeon in a health register in Form 17.

(4) The Certificate of Fitness and the health register shall be kept readily available for inspection by the Inspector.

(5) If at any time the Certifying Surgeon is of the opinion that a worker is no longer fit for employment in the said process on the ground that continuance therein would involve special danger to the health of the worker he shall make a record of his findings in the said Certificate and the health register. The entry of his findings in these documents should also include the period for which he considers that the said person is unfit for work in the said processes. The person so suspended from the process shall be provided with alternate placement facilities unless he fully is incapacitated in the opinion of the Certifying Surgeon, in which case the person affected shall be suitably rehabilitated.

(6) No person who has been found unfit to work as said in sub-paragraph (5) above shall be re-employed or permitted to work in the said processes unless the Certifying Surgeon, after further examination, again certifies him fit for employment in those processes.

11. Protective equipment -

(1) The occupier shall provide and maintain suitable overalls and hand coverings for all persons employed in process included under paragraph 3.

(2) The occupier shall provide and maintain suitable aprons of a of a waterproof or similar material, which can be sponged daily, for the use of the dippers, dippers assistants, throwers, jolly workers, casters, mould makers and filter press and pug mill workers.

(3) Aprons provided in pursuance of paragraph 10(2) shall be thoroughly cleaned daily by the wearers by sponging or other wet process. All overalls and head coverings shall be washed, cleaned and mended at least once a week, and this washing, cleaning or mending shall be provided for by the occupier.

(4) No person shall be allowed to work in emptying sacks of dust materials, weighing out and mixing of dusty materials and charging of ball mills and plungers without wearing a suitable and efficient dust respirator.

12. Washing facilities -

(1) The occupier shall provide and maintain, in a clean state and in good repair for the use of all persons employed in any of the processes specified in paragraph 3 -

(a) a wash place under cover, with either –

(i) a trough with a smooth impervious surface fitted with a waste pipe without plug, and of sufficient length to allow of at least 60 centimetres for every five such persons employed at any one time, and having a constant supply of clean water from taps or jets above the trough at intervals of not more than 60 centimetres; or

(ii) at least one tap or stand pipe for every five such persons employed at any one time, and having a constant supply of clean water, the tap or stand pipe being spaced not less than 120 centimetres apart; and

(b) a sufficient supply of clean towels made of suitable materials changed daily, with a sufficient supply of soap and nail brushes.

13. **Time allowed for washing -** Before each meal and before the end of the day's work, at least ten minutes, in addition to the regular meal times, shall be allowed for washing to each person employed in any of the processes mentioned in paragraph 3.

14. Mess room -

(1) There shall be provided and maintained for use of all persons remaining within the premises during the rest intervals, a suitable messroom providing accommodation of 0.93 square meter per head and furnished with -

(a) a sufficient number of tables and chairs or benches with back rest;

(b) arrangements for washing utensils;

(c) adequate means for warming food; and

(d) adequate quantity of drinking water.

(2) The room shall be adequately ventilated by the circulation of fresh air and placed under the charge of a responsible person and shall be kept clean.

15. **Food, drinks, etc. prohibited in workrooms -** No food, drink, pan and supari or tobacco shall be brought into, or consumed by any worker in any workroom in which any of the processes mentioned in paragraph 3 are carried on and no person shall remain in any such room during intervals for meals or rest.

16. **Cloakrooms etc -** There shall be provided and maintained for the use of all persons employed in any of the processes mentioned in paragraph 3.

(a) a cloakroom for clothing put off during working hours and such accommodation shall be separate from any mess room; and

(b) Separate and suitable arrangements for the storage of protective equipment provided under paragraph 11

17. **Applications -** These provisions shall not apply to a factory in which any of the following articles, but no other pottery, are made :-

(a) unglazed or salt glazed bricks and tiles; and

(b) Architectural terra-cotta made from plastic clay and either unglazed or glazed with a leadless glaze only.

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18. **Exemption -** If in respect of any factory the Chief Inspector of Factories is satisfied that all or any of the provisions of this schedule are not necessary for the protection of the persons employed in such factory, he may by a certificate in writing exempt such factory from all or any of such provisions, subject to such conditions as he may specify therein. Such certificate may at any time be revoked by the Chief Inspector without assigning any reasons.

Schedule – XIII

Compression of oxygen and hydrogen produced by electrolysis of water

1. **Location of electrolyte plant -** The room in which electrolysis plant is installed shall be separate from the plant for storing and compressing the oxygen and hydrogen and also the electric generator room.

2. **Testing of purity -** (1)The purity of oxygen and hydrogen shall tested by a competent person at least once in every shift at the following posts:-

(a) in the electrolysis room;
(b) at the gas holder inlet; and
(c) at the suction and of the compressor.

(2) The purity figures shall be entered in a register and signed by the persons carrying out such test:

Provided, however, that if the electrolysis plant is fitted with automatic recorder of purity of oxygen and hydrogen with alarm lights, it shall be sufficient if the purity of gases is tested at the suction and of the compressor only.

3. **Restriction as to the compression -** The oxygen and hydrogen gases shall not be compressed if their purity as determined under paragraph 2 above falls below 98% at any time.

4. **Limit switch for gas holder -** The bell of any gas holder shall not be permitted to go within the 30 centimetres of its lowest position when empty and a limit switch shall befitted to the gas holder in such a manner as to switch off the compressor motor when the limit is reached.

5. **Provision of negative pressure switch -** In addition to the limit switch in the gas holder, a sensitive negative pressure switch shall be provided in or adjacent to the suction main for hydrogen close to the gas holder and between the gas holder and the hydrogen compressor to switch off the compressor motor in the event of the gas holder being emptied to the extent as to cause vacuum.

6. **Purity of caustic soda -** The water and caustic soda used for making lye shall be chemically pure within pharmaceutical limits.

7. **Precautions against reversal of polarity -** Electrical connections at the electolyser cells and at the electric generator terminals shall be so constructed as to preclude the possibility of wrong connections leading to the reversal of polarity and in addition an automatic device shall be provided to cut off power in the event of reversal of polarity owing to wrong connections either at the switch board or at the electric generator terminals.

8. **Colouring of gas pipes -** Oxygen and hydrogen gas pipes shall be painted with distinguishing colours and in the event of leakage at the joints of the hydrogen gas pipe, the pipe after reconnection shall be purged of all air before drawing in hydrogen gas.

9. **Use of flameproof fittings -** All electrical wiring and apparatus in the electrolyser room shall be of flameproof construction or enclosed in flameproof fittings and no naked light or flame shall be allowed to be taken either in the electrolyser room or where compression and filling of the gases is carried on and such warning notices shall be exhibited in prominent places.

10. **Prohibition of hot work -** No part of the electrolyser plant and the gas holders and compressor shall be subjected to welding, brazing, soldering or cutting until steps have been taken to remove any explosive substance from that part and render the part safe for such operations and after the completion of such operations no explosive substance shall be allowed to enter that part until the metal has cooled sufficiently to prevent risk of explosion.

11. **Repair, etc. to be done under supervision -** No work or operations, repair or maintenance shall be undertaken except under the direct supervision of a person who, by his training, experience and knowledge of the necessary precautions against risk of explosion is competent to supervise such work. No electric generator after erection or repairs shall be switched on/the electrolysers unless the same is certified by the competent persons under whose direct supervision erection or repairs are carried on to be in a safe condition and the terminals have been checked for the polarity as required by paragraph 7.

12.**checking of plant -** Every part of the electrolysis plant and the gas holders and compressor shall have a regular schedule of overhaul and checking and every defect noticed shall be rectified forthwith.

Schedule – XIV

Manipulation of stone or any other material containing free silica

1. **Application -** This schedule shall apply to all factories or parts of factories in which manipulation of stone or any other material containing free silica is carried on.

2. **Definitions-** For the purpose of this Schedule -

(a) "manipulation" means crushing, breaking, chipping, dressing, grinding, sieving, mixing, grading or handling of stone or any other material containing free silica or any other operation involving such stone or material;

(b) "Stone or any other material containing free silica" means a stone or any other solid material containing not less than 5% by weight of free silica.

3. **Precautions in manipulation-** No manipulation shall be carried out in a factory or part of a factory unless one or more of the following measures, namely -

(a) damping the stone or other material being processed,

(b) providing water spray,

(c) enclosing the process,

(d) isolating the process, and

(e) providing localised exhaust ventilation are adopted so as to effectively control the dust in any place in the factory where any person is employed, at a level equal to or below the maximum permissible level for silica dust as laid down in Table 2 appended to Rule 120.

Provided that such measures as above said are not necessary if the process or operation itself is such that the level of dust created and prevailing does not exceed the permissible level referred to.

4. Maintenance of floors-

(1) All floors or places where fine dust is likely to settle on and whereon any person has to work or pass shall be of impervious material and maintained in such condition that they can be thoroughly cleaned by a moist method or any other method which would prevent dust being airborne in the process of cleaning.

(2) The surface of every floor of every work room or place where any work is carried on or where any person has to pass during the course of his work, shall be cleansed of dust once at least during each shift after being sprayed with water or by any other suitable method so as to prevent dust being airborne in the process of cleaning.

5. **Prohibition relating young persons-** No young person shall be employed or permitted to work in any of the operations involving manipulation or at any place where such operations are carried out.

6. Medical Facilities and records of examinations and tests -

(1) The occupier of every factory to which the schedule applies, shall –

(a) employ a qualified medical practitioner for medical surveillance of the workers employed therein whose employment shall be subject to the approval of the Chief Inspector of Factories; and

(b) provide to the said medical practitioner all the necessary facilities for the purpose referred to in clause(1).

(2) The record of medical examinations and appropriate tests carried out by the said medical practitioner shall be maintained in separate register approved by the Chief Inspector of Factories, which shall be kept readily available for inspection by the Inspector.

7. Medical examination by Certifying Surgeon -

(1) Every worker employed in the processes specified in paragraph 1, shall be examined by a Certifying Surgeon within 15 days of his first employment. Such medical examination shall include tests for lead in urine and blood. ALA in urine, haemoglobin content, stippling of cells and steadiness test. No worker shall be allowed to work after 15 days of his first employment in the factory unless certified fit for such employment by the Certifying Surgeon.

(2) Every worker employed in the said processes shall be re-examined by a Certifying Surgeon at least once in every twelve months. Such re-examination shall, wherever the Certifying Surgeon considers appropriate, include all the tests as specified in sub- paragraph (1) except chest X-ray which will be once in 3 years.

(3) The Certifying Surgeon after examining a worker, shall issue a Certificate of Fitness in

Form 32. The record of examination and re-examinations carried out shall be entered in the Certificate and the Certificate shall be kept in the custody of the manager of the factory. The record of each examination carried out under sub-paragraphs (1) and (2), including the nature and the results of the tests, shall also be entered by the Certifying Surgeon in a health register in Form 17.

(4) The Certificate of Fitness and the health register shall be kept readily available for inspection by the Inspector.

(5) If at any time the Certifying Surgeon is of the opinion that a worker is no longer fit for employment in the said process on the ground that continuance therein would involve special danger to the health of the worker he shall make a record of his findings in the said Certificate and the health register. The entry of his findings in these documents should also include the period for which he considers that the said person is unfit for work in the said processes. The person so suspended from the process shall be provided with alternate placement facilities unless he fully is incapacitated in the opinion of the Certifying Surgeon, in which case the person affected shall be suitably rehabilitated.

(6) No person who has been found unfit to work as said in sub-paragraph (5) above shall be re-employed or permitted to work in the said processes unless the Certifying Surgeon, after further examination, again certifies him fit for employment in those processes.

8. **Exemptions -** If in respect of any factory, the Chief Inspector is satisfied that owing to the exceptional circumstances or in frequency of the processes or for any other reason, all or any of the provisions of this schedule is not necessary for protection of the workers in the factory, the Chief Inspector may by a certificate in writing, which he may in his discretion revoke at any time, exempt such factory from all or any of such provisions subject to such conditions, if any, as he may specify therein.

Schedule – XV

Handling and processing of Asbestos, manufacture of any article of Asbestos and any other process of manufacture or otherwise in which Asbestos is used in any form.

1. **Application -** This schedule shall apply to all factories or parts of factories in which any of the following processes is carried on :-

(a) breaking, crushing, disintegrating, opening, grinding, mixing or sieving of asbestos and any other processes involving handling and manipulation of asbestos incidental thereto;

(b) all processes in the manufacture of asbestos textiles including preparatory and finishing processes;

(c) making of insulation slabs or sections, composed wholly or partly of asbestos, and processes incidental thereto;

(d) making or repairing of insulating mattresses, composed wholly or partly of asbestos, and processes incidental thereto;

(e) manufacture of asbestos cardboard and paper;

(f) manufacture of asbestos cement goods;

(g) application of asbestos by spray method;

(h) sawing, grinding, turning, abrading and polishing in dry state of articles composed wholly or partly of asbestos;

(i) cleaning of any room, vessel, chamber, fixture or appliance for the collection of asbestos dust; and

(j) Any other processes in which asbestos dust is given off into the work environment.

2. **Definition -** For the purpose of this Schedule -

(a) "asbestos" means any fibrous silicate mineral and any admixture containing actionlite, amosite, anthophyllite, dhrysotile, crocidolite, tremolite or any mixture thereof, whether crude, crushed or opened;

(b) "asbestos textiles" means yarn or cloth composed of asbestos or asbestos mixed with any other material;

(c) "approved" means approved for the time being in writing by the Chief Inspector;

(d) "breathing apparatus" means a helmet or face piece with necessary connection by means of which a person using it breathes air free from dust, or any other approved apparatus;

(e) "Efficient exhaust draught" means a localised ventilation by mechanical means for the removal of dust so as to prevent dust from escaping into air of any place in which work is carried on. No draught shall be deemed to be efficient which fails to control dust produced at the point where such dust originates;

(f) "preparing" means crushing, disintegrating, and any other processes in or incidental to the opening of asbestos;

(g) "Protective clothing" means overalls and head covering, which (in either case) will when worn exclude asbestos dust.

3. **Tools and equipment -** Any tools or equipment used in processes to which this schedule applies shall be such that they do not create asbestos dust above the permissible limit or are equipped with efficient exhaust draught.

4. Exhaust draught -

(1) An efficient exhaust draught shall be provided and maintained to control dust from the following processes and machines :

(a) manufacture and conveying machinery namely -

(i) preparing, grinding, or dry mixing machines;
(ii) carding, card waste and ring spinning machines, and looms;
(iii) machines or other plant fed with asbestos;
(iv) machines used for the sawing, grinding, turning, drilling, abrading or polishing; in the dry state, of articles composed wholly or partly of asbestos;

(b) cleaning, and grinding of the cylinders or other parts of a carding machine;

(c) chambers, hoppers or other structures into which loose asbestos is delivered or passes;

(d) work-benches for asbestos waste sorting or for other manipulation or asbestos by hand;

(e) workplaces at which the filling or emptying of sacks, skips or other portable containers, weighing or other process incidental thereto which is effected by hand, is carried on;

(f) sack cleaning machines;

(g) mixing and blending of asbestos by hand; and

(h) any other process in which dust is given off into the work environment.

(2) Exhaust ventilation equipment provided in accordance with sub-paragraph (1) shall, while any work of maintenance or repair to the machinery, apparatus or other plant or equipment in connection with which it is provided is being carried on, be kept in use so as to produce an exhaust draught which prevents the entry of asbestos dust into the air of any work place.

(3) Arrangements shall be made to prevent asbestos dust discharged from exhaust apparatus being drawn into the air of any workroom.

(4) The asbestos bearing dust removed from any workroom by the exhaust system shall be collected in suitable recepticles or filter bags which shall be isolated from all work areas.

5. Testing and examination of ventilating systems -

(1) All ventilating systems used for the purpose of extracting or suppressing dust as required by this schedule shall be examined and inspected once every week by a responsible person. It shall be thoroughly examined and tested by a competent person once in every period of 12 months. Any defects found by such examinations or test shall be rectified forthwith.

(2) A register containing particulars of such examination and tests and the state of the plant and the repairs or alternations (if any) found to be necessary shall be kept and shall be available for inspection by an Inspector.

6. **Segregation in case of certain process -** Mixing or blending of asbestos by the hand, or making or repairing of insulating mattresses composed wholly or partly of asbestos shall not be carried on in any room in which any other work is done.

7. Storage and distribution of loose asbestos –

All loose asbestos shall while not in use be kept in suitable closed receptacles which prevent the escape of asbestos dust threrefrom and such asbestos shall not be distributed in the factory except in such receptacles or in totally enclosed system of conveyance.

8. Asbestos sacks

(1) All sacks used as receptacles for the purpose of transport of asbestos within the factory shall be constructed of impermeable materials and shall be kept in good repair.

(2) A sack which has contained asbestos shall not be cleaned by hand beating but by a machine, complying with paragraph 4.

9. Maintenance of floors and workplaces -

(1) In every room in which any of the requirements of this schedule apply –

(a) the floors, work-benches, machinery and plant shall be kept in a clean state and free from asbestos debris and suitable arrangements shall be made for the storage of asbestos not immediately required for use; and

(b) the floors shall be kept free from any materials, plant or other articles not immediately required for the work carried on in the room, which would construct the proper cleaning of the floor.

(2) The cleaning as mentioned in sub-rule (1) shall so for as is practicable, as carried out by means of vacuum cleaning equipment so designed and constructed and so used that asbestos dust neither escapes nor is discharged into the air of any work place.

(3) When the cleaning is done by any method other than that mentioned in sub-paragraph (2), the persons doing cleaning work and any other person employed in that room shall be provided with respiratory protective equipment and protective clothing.

(4) The vacuum cleaning equipment used in accordance with provisions of sub-paragraph (2), shall be properly maintained and after each cleaning operation, its surfaces kept in a clean state and free from asbestos waste and dust.

(5) Asbestos waste shall not be permitted to remain on the floors or other surfaces at the work place at the end of the working shift and shall be transferred without delay to suitable receptacles. Any spillage of asbestos waste occurring during the course of the work at any time shall be removed and transferred to the receptacles maintained for the purpose without delay.

10. Breathing apparatus and protective clothing -

(1) An approved breathing apparatus and protective clothing shall be provided and maintained in good conditions for use of every person employed -

(a) in chambers containing loose asbestos;

(b) in cleaning, dust settling or filtering chambers of apparatus;

(c) in cleaning the cylinders, including the defer cylinders, or other parts of a carding machine by means of hand-strikes;

(d) in filling, beating , or levelling in the manufacture or repair of insulating mattresses; and

(e) in any other operation or circumstances in which it is impracticable to adopt technical means to control asbestos dust in the work environment within the permissible limit.

(2) Suitable accommodation in conveniently accessible position shall be provided for the use of persons when putting on or taking off breathing apparatus and protective clothing provided in accordance with this rule and for the storage of such apparatus and clothing when not in use.

(3) All breathing apparatus and protective clothing Washing not in use shall be stored in the accommodation provided in accordance with sub-rule (2) above.

(4) All protective clothing in use shall be de-dusted under an efficient exhaust draught or by vacuum cleaning and shall be washed at suitable intervals. The cleaning schedule and procedure should be such as to ensure the efficiency in protective the wearer.

(5) All breathing apparatus shall be cleaned and disinfected at suitable intervals and thoroughly inspected once every month by a responsible person.

(6) A record of the cleaning and maintenance and of the condition of the breathing apparatus shall be maintained in a register provided for that purpose which shall be readily available for inspection by an Inspector.

(7) No person shall be employed to perform any work specified in sub-paragraph (1) for which breathing apparatus is necessary to be provided under that sub-paragraph unless he has been fully instructed in the proper use of that equipment.

(8) No breathing apparatus provided in pursuance of sub-paragraph (1) which has been worn by a person shall be worn by another person unless it has been thoroughly cleaned and disinfected since last being worn and the person has been fully instructed in the proper use of that equipment.

11. **Separate accommodation for personal clothing -** A separate accommodation shall be provided in a conveniently accessible position for all persons employed in operation to which this schedule applies for storing of personal clothing. This should be separated from the accommodation provided under sub-paragraph (2) of paragraph 10 to prevent contamination of personal clothing.

12. Washing and bathing facilities –

(1) There shall be provided and maintained in a clean state and in good repair for the use of all workers employed in the processes covered by the schedule, adequate washing and bathing places having a constant supply of water under cover at the rate of one such place for every 15 persons employed.

(2) The washing places shall have standpipes place at intervals of not less than one metre.

(3) Not less than one half of the total number of washing places shall be provided with bathrooms.

(4) Sufficient supply of clean towels made of suitable material shall be provided: Provided that such towels shall be supplied individually for each worker if so ordered by the Inspector.

(5) Sufficient supply of soap and nail brushes shall be provided.

13. Mess room -

(1) There shall be provided and maintained for the use of all worker employed in the factory covered by this schedule, remaining on the premises during the rest intervals, a suitable mess room which shall be furnished with:-

(a) sufficient tables and benches with back rest, and (b) adequate means for warming food.

(2) The mess room shall be placed under the charge of a responsible person and shall be kept clean.

14. **Prohibition of employment of young persons -** No young person shall be employed in any of the process covered by this schedule.

15. **Prohibition relating to smoking -** No person shall smoke in any area where processes covered by this schedule are carried on. A notice in the language understood by majority of the workers shall be posted in the plant prohibiting smoking at such areas.

16. Cautionary notices -

(1) Cautionary notices shall be displayed at the approaches and along the perimeter of every asbestos processing area to warn all persons regarding -

(a) hazards to health from asbestos dust,
(b) need to use appropriate protective equipment,
(c) Prohibition of entry to unauthorised persons, or authorised persons but without protective equipment.

(2) Such notices shall be in the language understood by the majority of the workers.

17. **Air monitoring -** To ensure the effectiveness of the control measures, monitoring of asbestos fibre in air shall be carried out once at least in every shift and the record of the results so obtained shall be entered in a register specially maintained for the purpose.

18. **Medical facilities and records of medical examinations and tests -** (1) The occupier of every factory or part of the factory to which the schedule applied, shall-

(a) employ a qualified medical practitioner for medical surveillance of the workers covered by this schedule whose employment shall be subject to the approval of the Chief Inspector of Factories;

(b) Provide to the said medical practitioner all the necessary facilities for the purpose referred to in clause(a).

(2) The record of medical examinations and appropriated tests carried out by the said medical practitioner shall be maintained in a separate register approved by the Chief Inspector of Factories, which shall be kept readily available for ins .

19. Medical examination by Certifying Surgeon -

(1) Every worker employed in the processes specified in paragraph 1 shall be examined by a Certifying Surgeon within 15 days of his first employment. Such examination shall include pulmonary function test, tests for detecting asbestos fibers in sputum and chest X-ray. No worker shall be allowed to work after 15 days of his first employment in the factory unless certified fit for such employment by the Certifying Surgeon.

(2) Every worker employed in the process referred to sub-paragraph (1) shall be re- examined by a Certifying Surgeon at least once in every twelve calendar months. Such examination shall, wherever the Certifying Surgeon considers appropriate, include all the tests specified in sub-paragraph (1) except chest X-ray which will be carried out once in 3 years.

(3) The Certifying Surgeon after examining a worker shall issue a Certificate of Fitness in

Form 32. The record of examination and re-examinations carried out shall be entered in the certificate and the certificate shall be kept in the custody of the manager of the factory. The record of each examination carried out under sub-paragraphs (1) and (2), including the nature and the results of the tests, shall also be entered by the Certifying Surgeon in a health register in Form 17.

(4) The certificate of Fitness and the health register shall be kept readily available for inspection by the Inspector.

(5) If at any time the Certifying Surgeon is of the opinion that a worker is no longer fit for employment in the said processes on the ground that continuance therein would involve special danger to the health of the worker, he shall make a record of his findings in the said certificate and the health register. The entry of his findings in those documents should also include the period for which he considers that the said person is unfit to work in the said processes. The person so suspended from the process shall be provided with alternate placement facilities unless he is fully incapacitated in the opinion of the Certifying Surgeon, in which case the person affected shall be suitably rehabilitated.

(6) No person who has been found unfit to work as said in sub-paragraph (5) shall be re-employed or permitted to work in the said processes unless the Certifying Surgeon, after future examination, again certifies him fit for employment in these processes.

20. **Exemptions -** If in respect of any factory, the Chief Inspector is satisfied that owing to the exceptional circumstances or infrequency of the processes or for any other reason, all or any of the provisions of this schedule is not necessary for protection of the workers in the factory, the Chief Inspector may by a certificate in writing, which he may at his discretion revoke at any time, exempt such factory from all or any of such provisions subject to such conditions, if any, as he may specify therein.

Schedule – XVI

Handling or manipulation of corrosive substances

1. **Definitions -** For the purposes of this schedule **-**

(a) "corrosive operation" means an operation of manufacturing, storing, handling processing, packing, or using any corrosive substance in a factory; and

(b) "corrosive substance" includes sulphuric acid, nitric acid, hydrochloric acid, hydrofluoric acid, carbolic acid, phosphoric acid, liquid chlorine, liquid bromine, ammonia, sodium hydroxide and potassium hydroxide and a mixture thereof, and any other substance which the State Government by notification in the Official Gazette specify to be corrosive substance.

2. **Flooring -** The floor of every workroom of a factory in which corrosive operation is carried on shall be made of impervious, corrosion and fire resistance material and shall be so constructed as to prevent collection of any corrosive substance. The surface of such flooring shall be smooth and cleaned as often as necessary and maintained in a sound condition.

3. **Protective equipment-** (a) the occupier shall provide for the use of all persons employed in any corrosive operation suitable protective wear for hands and feet, suitable aprons, face shields, chemical safety goggles, and respirators. The equipment shall be maintained in good order and shall be kept in clean and hygienic condition by suitably treating to get rid of the ill effects of any absorbed chemicals and by disinfecting. The occupier shall also provide suitable protective creams and other preparations wherever necessary.

(b) The Protective equipment and preparations provided shall be used by the persons employed in any corrosive operation.

4. **Water facilities -** Where any corrosive operation is carried on, there shall be provided as close to the place of such operation as possible, a source of clean water at a height of 210 centimetres from a pipe of 1.25 centimetres diameter and fitted with a quick acting valve so that in case of injury to the worker by any corrosive substance, the injured part can be thoroughly flooded with water. Whenever necessary, in order to ensure continuous water supply, a storage tank having a minimum length, breadth and height of 210 centimetres, 120 centimetres and 60 centimetres respectively or such

dimensions as are approved by the chief inspector shall provided as the source of clean water.

5. **Cautionary notice -** A cautionary notice in the following form and printed in the language which majority of the workers employed understand, shall be displayed prominently close to the place where a corrosive operation is carried out and where any of the operation mentioned in clause 2 above is carried out and where it can be easily and conveniently read by the workers. If any worker is illiterate, effective steps shall be taken to explain carefully to him the contents of the notice so displayed.

CAUTIONARY NOTICE

DANGER

Corrosive substances cause severe burns and vapours thereof may be extremely hazardous. In case of contact, immediately flood the part affected with plenty of water for at least 15 minutes.

Get medical attention quickly.

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6. **Transport -** (1) Corrosive substances shall not be filled, moved or carried except in containers or through pipes and when they are to be transported in containers, they shall be placed in crates of sound construction and of sufficient strength.

(2) A container with a capacity of 11.5 litres or more of a corrosive substance shall be placed in a receptacle or crate and then carried by more than one person at a height below the waist line unless a suitable rubber wheeled truck is used for the purpose.

(3) Containers for corrosive substances shall be plainly labelled.

7. **Devices for handling corrosive -** (1) Tilting, lifting of pumping arrangements shall be used for emptying jars, carboys and other containers of corrosives.

(2) Corrosive substance shall not be handled by bare hands but by means of a suitable scoop or other device.

8. **Opening of valves -** Valves fitted to containers holding a corrosive substance shall be opened with great care. If they do not work freely, they shall not be forced open. They shall be opened by a worker suitably trained for the purpose.

9. **Cleaning tanks, stills, etc. -** (1) In cleaning out or removing residues from stills or other large chambers used for holding any corrosive substance, suitable implements made of wood or other material shall be used to prevent production of arseniuretted hydrogen (arsine).

(2) Whenever it is necessary for the purpose of cleaning or other maintenance work for any worker to enter chamber, tank, vat, pit or other confined space where a corrosive substance had been stored, all possible precautions required under section 36 of the Act shall be taken to ensure the worker's safety.

(3) Wherever possible, before repairs are undertaken to any part of equipment in which a corrosive substance was handled, such equipment or part thereof shall be freed of any adhering corrosive substance by adopting suitable methods.

10. **Storage -** (1)Corrosive substances shall not be stored in the same room with other chemicals, such as turpentine, carbides, metallic powders and combustible materials, the accidental mixing with which may cause a reaction which is either violent or gives rise to toxic fumes and gases.

(2) Pumping or filling overhead tanks, receptacles, vats or other containers for storing corrosive substances shall be so arranged that there is no possibility of any corrosive substance overflowing and causing injury to any person.

(3) Every container having a capacity of twenty litres or more and every pipeline, valve, and fitting used for storing or carrying corrosive substances shall be thoroughly examined every year for finding out any defects, and defects so found out shall be removed forthwith. A register shall be maintained of every such examination made and shall be produced before the Inspector whenever required.

11. **Fire extinguishers and fire fighting equipment -** An adequate number of suitable types of fire extinguishers or other stored, shall be provided. Such extinguishers or other equipment shall be regularly tested and refilled. Clear instructions as to how the extinguishers or other equipment should be used, printed in the language which majority of the workers employed understand, shall be affixed near each extinguisher or other equipment.

12. **Exemption -** If in respect of any factory on application made by the manager, the Chief Inspector is satisfied that owing to the exceptional circumstances, or the infrequency of the process or for any other reason to be recorded by him in writing, all or any of the provisions of this schedule are not necessary for the protection of the persons employed therein, he may by a certificate in writing, which he may at any time revoke, exempt the factory from such of the provisions and subject to such conditions as he may specify therein.

Schedule – XVII

Use of ovens and driers in factories

1. **Application**- this schedule shall apply to ovens and driers, except those used in laboratories and kitchens of any establishment and those which have a capacity below 325 liters.

2. **Definitions-** for the purpose of this schedule, oven or drier means any enclosed structure,receptacle,compartment or box which is used for baking, drying or other wise processing of any article or substance at a temperature higher than that ambient temperature of air in the room of space in which the oven or drier is situated, and in which the flammable or explosive mixture of air and flammable substance is likely to be evolved with the enclosed structure ,receptacle, compartment or box or part there of on account of article or substance which is baked or dried or otherwise processed within it.

3. **Separate electric connection-** Electric power supplied to every oven or drier shall be by means of separate circuit provided with an isolated switch.

4. **Design,construction,examination and testing-** (a) every oven or drier shall be properly designed on sound engineering practice and be of good construction, sound materials and adequate strength free from any patent defect and safe, if properly used.

(b) no oven or drier shall be taken into use in factory for the first time unless a co it is to be used and a certificate of such examination and tests signed by that competent person has been obtained and are kept available for inspection.

© all parts of an oven or drier has undergone any alteration or repair which has the effect of modifying any of the design characteristics, shall not be used unless a thorough examination and tests as have been mentioned in clause (b) have been carried by the competent person and a certificate of such examination and tests signed by that competent person has been obtained and are kept available for inspection.

5. **Safety, Ventilation**- (a) every oven or drier shall be provided with a positive and effective safety ventilation system using one or more motor driven centrifugal fans so as to dilute any mixture of air and flammable substance that m oven or drier and maintain the

concentration of the flammable substance in the air at safe level of dilution.

(b) The safe level of dilution referred to in clause (a) shall be so as to achieve a concentration of concerned flammable material in air of not more than 25 % of its lower explosive limit;

Provided that level of concentration in the air up to 50% of the lower explosive limit of the concerned flammable substance may be permitted to exist subject to installation and maintenance of an automatic device which:-

(I) Shows continuously the concentration of the flammable substance in air present in the oven or drier at any instant;

(II) Sounds an alarm when the concentration of the flammable substance in air present in any part of oven or drier reaches a level of 50% of explosive limit

(III) Shuts down the heating system of the oven or drier automatically when the concentration of the flammable substance in air present in any part of oven or drier reaches a level of 60% of lower explosive limit

© No oven or drier shall be operated without its safety ventilation system working in efficient manner.

(d) no oven or drier shall be operated with a llevel of dilution less than what is referred in clause (b)

(e) exhaust ducts of safety ventilation system should be so designed and placed that their ducts discharge the mixture of air and flammable substance away from the work room and not near windows or doors or other openings from where the mixture could re- enter the work room.

(f) The fresh air admitted into the oven or drier by means of safety ventilation system shall be circulated adequately by means of circulating fans or fans through all parts of the oven or drier so as to ensure that their are no location where the flammable substance can accumulate in the air become pocketed to any dangerous degree.

(g) Throttling dampers in any safety ventilation system should be so designed by cutting away the portion of damper or otherwise that system will handle at least the minimum ventilation rate required for safety when they are set in their maximum throttling position.

6. **Explosion panels –** (a) every oven or drier having an internal total space of not less than half cubic meter shall be provided with suitably design explosion panel so as to allow the release of the pressure of any possible explosion within the oven or drier through explosions vents. The area of opening of any access doors which are provided with suitable arrangements for there release in case of an explosion shall not be less than 2200 sq cm for every 1 cu m of the volume of the oven or drier. The design of the explosion panel and doors as stated above shall be such as to secure there complete release under an internal pressure of 0.25 kg/sq cm .

(b) The explosion releasing panel shall, as far as practicable, be situated on the roof of the oven or drier or at those portions of the walls where persons don't remain in connection with operation of oven or drier.

7. **Inter locking arrangement** – In each oven or drier efficient inter locking arrangement shall be provided and maintain to insure that

(a) All ventilating fa hose failure would adversely

effect the ventilation rate of flow pattern, are in operation before any mechanical conveyor that may be provided for feeding the article or substances to be processed in the oven or drier, input into operation

(b) Failure of any of the ventilating or circulating fans will automatically stop any conveyor as referred to in clause (a) as may be provided as well as so the fume supply by closing the shut of valve and shut off the ignition in the case of gas or oil fired ovens and in case of electrically heated oven switch off the electrical supply to the heater

(c) The afore said mechanical conveyor is set in operation before the said shut off valve can be energies

(d) The failure of the aforesaid conveyor will automatically closed the said shut off valve in the case of oven and drier heated by gas , oil or steam and deactivate the ignition system or cut off the electrical heater in the case of electrically heated ovens are furnaces

8. **Automatic ventilation; -** Every oven or drier heated by oil, gas, steam or electricity shall be provided with an efficient arrangement for automatic ventilation consisting of at least three volume changes with fresh air by operation of safety ventilation fans and circulating fans so as to effect purging of the oven or drier of any mixture of air and flammable substance before the heating system can be activated and before the conveyor can be placed in position.

9. **Temperature control –** Every oven or drier shall be provided with an automatic arrangement to ensure that the temperature which does not exceed a maximum temperature required in respect of the particular process is being carried out 10. **Multi stage processes** – What ever material are to be processed in ovens or driers in successive operation suitable arrangements should be provided to ensure that the operating temperature necessary for safe operation at each stage are maintain within the design limit

11. **Combustible substances not to drip on electrical heater or burner flame –** Effecting arrangement shall be provided in every oven or drier to prevent dripping of combustible substances on electrical heater or burner flame used for heating.

12. **Periodical examination, testing and maintenance** – (a) All parts of every oven or drier shall be properly maintain and thoroughly examined and the various control as mentioned in the schedule and the working of the oven or drier shall be tested at frequent interval to ensure its safe operation by a responsible person authorized by the occupier or manager in this behalf who by his experience and knowledge of necessary precaution against risk of explosion, is fit to undertake such work

(b) A register shall be maintained in which the details of various tests carried out from time to time under clause (a) shall be entered and every entry shall be signed by the person making the test.

13: - Training of operator – No person shall be assigned any task connected with operation of any oven or drier unless his has completed 18 yrs of a and is properly trained

14. Polymerizing machine – (a) Printed fabric shall be thoroughly dried by

passing them over drying canes or through hot flue or other equally effecting means before the same is allowed to pass through polymerizing machines
(b) Infra ray heater of polymerizing machines shall be cut off while running the print

Schedule – XVIII

Manufacture or manipulation of carcinogenic dye intermediates

1. **Application -** The schedule shall apply in respect of all factories or any part thereof where processes in which the process of manufacturing or manipulation of a carcinogenic Dye Intermediates (here in referred to as the said manufacturing processes) is carried on.

Provided that Paragraphs 25 and 26 shall only to the a process involving manufacturing, manipulation of compounds mentioned in Appendix B (here in referred to as the said manufacturing processes B)

PART-I

1. **Definition –** (a) For the purpose of this schedule a nitro or amino compounds means a nitrated or aminated compound of aromatic hydrocarbons mentioned in Appendix A or B attached there to.

(b) "Approved "means approved by Chief Inspector.

(c) "Omitted"

(d) "efficient exhaust draught" means localised ventilation effected by mechanical means for the removal of gas, vapour, dust or fume so as to prevent them from escaping into the air of any place in which work is carried on. No draught, shall be deemed to be efficient which fails to remove smoke generated at the point where such gas, vapour, fume or dust originates; and

(e) Manipulation shall include mixing, blending, filling, emptying, grinding, sieving, drying, packing, sweeping, handling, using or chemical processing of a nitro-amino compound.

(f) "Air line respirator" means a helmet or face piece with necessary connections by means of which a person using it in a poisonous or irritatant atmosphere breathes ordinary air or any suitable apparatus approved in writing by Chief Inspector.

3. **Cautionary placards -** Cautionary placards in the form specified in appendix attached to this schedule and printed in the language of the majority of the workers employed in the said processes shall be affixed in prominent places frequented by them in the factory, where the placards can be conveniently read. Arrangements shall be made by the manager to instruct periodically all such workers regarding the precautions contained in the cautionary placards.

4. **Prohibition relating to employment of women and young persons -** No woman or young person shall be employed or permitted to work in any room in which the said processes are carried on.

5. **Air space-** in every room in which the said manufacturing process is carried on there shall at least 15 cubic-meters of air space excluding any space occupied by machinery equipments or any other article for each person employed there in and in computing this air space no height over 4.25 meters shall be taken into account.

6. **Efficient exhaught draught- unless** the said process is completely enclosed so as to

not to give rise to dust or fume it shall not be carried on without the use of an efficient

exhaught draught when a nitro oa amino compound;

(a) Is introduced into a tank, hopper, machine, or container or filled into cartridge;or

(b) Is ground, crushed, mixed, sieved,or blended.

7. **Floors of workroom -** The floor of every workroom in which the said processes are

carried on shall be

(a) Smooth and impervious to water provided that asphalt or tar shall not be used in

the composition of the floor,

(b) Maintained in a state of good repair,

(c) With a suitable slope for easy draining and provided with gutters and

(d) Thoroughly washed daily with the drain water being led into a sewer through a

closed channel.

8. **Work benches-** work benches on which a nitro or amino compound is manipulated

shall-

(a) Have a smooth impervious surface preferably of stainless steel; and

(b) Be washed daily with hose-pipe or cleaned by means of suction cleaning apparatus at the time when no other work is carried on there at.

9. Waste disposal -

(1) There shall be provided a suitable receptacle made of non-absorbable material with

a tightly fitting cover for depositing waste material like cloth paper or other material

soiled with a nitro or amino compound.

(2) Such receptacle shall be destroyed by burning or using other suitable methods

under the supervision of a responsible person.

10. **Disposal of empty containers -** Empty containers used for holding compounds included under Appendix_A shall be thoroughly cleaned of their contents and treated with an

inactivating agent before being discarded.

11. Decontamination of Pits, Tanks etc.-

(a) before a worker enters a pit,tank,kettle or any other confined space which contains a nitro or amino copmpound it shall be thoroughly washed and cleaned.

(b) No part of the plant which contains nitro or amino compounds shall be repaired or opened for repairs unless it has been emptied of such compounds and thoroughly cleaned & decontaminated.

© Records of such treatments shall be maintained in a register approved by the Chief Inspector and the register shall be made available for inspection when required by Inspector. 12. **Manual handling -** Controlled substances shall not be allowed to be mixed, filled, emptied or handled except by means of a scoop with a handle. Such scoop shall be thoroughly cleaned daily

13 Protective wears- the occupier shall provide, maintain clean and in good condition protective clothing and other equipments as specified in the table below:-

TABLE

Process	Protective clothing and other equipments
For manipulation of compounds Mentioned in Appendix-A	(A) Long trousers and shirts or overalls with full sleeves and head coverings. The shirt or overall shall cover the neck completely; and (B) rubber hand gloves, rubber aprons, rubber gum boots and airline
For manipulation of compounds Mentioned in Appendix-B	(A) White clean clothing mentioned in (A) as above in addition to white clean shirts. Singlet and protective equipments as mentioned in (B) above

14. **Instructions regarding risk -** Every worker on his first employment in the said processes shall be fully instructed on the properties of the toxic chemicals to which he is likely to be exposed to, of the dangers involved and the precautions to be taken. Workers shall also be instructed on the measures to be taken to deal with an emergency.

15. **Medical facilities and records of examinations and tests -** (1) the occupier of every factory to which this schedule applies, shall -

(a) employ a qualified medical practitioner for medical surveillance of the workers employed therein whose employment shall be subject to the approval of the Chief Inspector of Factories; and

(b) Provide to the medical practitioner all the necessary facilities for the purpose referred to in clause (a).

(2) The record of such examinations carried out by the medical practitioner shall be maintained in a separate, register approved by the Chief Inspector of Factories, which shall be kept readily available for inspection by the Inspector.

16. **Medical examination by certifying Surgeon -** (1) every worker employed in the processes specified in paragraph 1 shall be examined by a Certifying Surgeon within 15 days of his first employment. Such examinations shall include skin test for dermatitis and no worker shall be allowed to work after 15 days of his first employment in the factory unless certified fit for such employment by the Certifying Surgeon.

(2) Every worker employed in a manganese process shall be re-examined by a Certifying Surgeon at least once in every three calendar months and such examination shall, wherever the Certifying Surgeon considers appropriate, include all the tests in sub-paragraph (1).

(3) The Certifying Surgeon after examining a worker shall issue a Certificate of Fitness in

Form 32. The record of examination and re-examinations carried out shall be entered in the Certificate and the Certificate shall be kept in the custody of the manger of the factory. The record of each examination carried out under sub-paragraph (1) and (2), including the nature and the results of this test, shall also be entered by the Certifying Surgeon in a health register in Form 17.

(4) The Certificate of Fitness and the health register shall be kept readily available for inspection by the Inspector.

(5) If at any time the Certifying Surgeon is of the opinion that a worker is no longer fit for employment in the said processes on the ground that continuance therein would involve special danger to the health of the worker, he shall make a record of his findings in the said certificate and the health register. The entry of his findings in those documents should also include the period for which he considers that the said person is unfit to work in the said process shall be provided with alternate placement facilities unless he is fully incapacitated in the opinion of the Certifying Surgeon , in which case the person affected shall be suitably rehabilitated.

(6) No person who has been found unfit to work as said in sub-paragraph (5) shall be re-employed or permitted to work in the said processes unless the Certifying Surgeon , after further examination, again certifies him fit for employment in those processes.

17. Washing and bathing facilities -

(1) The following washing and bathing facilities shall be provided and maintained in a clean state and in good repair for the use of all workers employed in the said processes :-

(a) a wash place under cover having constant supply of water and provided with clean towels, soap and nail brushes and with at least one stand pipe for every five such workers;

(b) 50 percent of the stand pipes provided under clause (a) shall be located in bathrooms where both hot and cold water shall be made available during the working hours of the factory and for one hour thereafter;

(c) The washing and bathing facilities shall be in close proximity of the area housing the said processes;

(d) Clean towels shall be provided individually to each worker; and

(e) in addition to the taps mentioned under clause (a), one stand pipe, in which warm water is made available, shall be provided on each floor.

(2) Arrangement shall be made to wash factory uniforms and other work clothes everyday.

18. **Washing and bathing**- (a) all the workers employed in the said manufacturing process shall carefully wash their hands and faces before taking food or leaving factory.

(b) Bath register- the workers employed in the said manufacturing process shall take bath at factory premises and will enter their names in the bath register as token of having done so.

19. **Food, drinks, etc. prohibited in workroom -** No worker shall consume food, drink, pan, supari or tobacco or shall smoke in any workroom in which the said processes are carried on and no worker shall remain in any such room during intervals for meals or rest.

20. **Cloakroom -** There shall be provided and maintained in a clean state and in good repair for the use of the workers employed in the said processes

(a) a cloakroom with lockers having two compartments - one for street clothes and the other for work clothes, and

(b) a place separate from the locker room and the messroom, for the storage of protective equipment provided under paragraph 7. the accommodation so provided shall be under the care of a responsible person and shall be kept clean.

21. **Mess room -** There shall be provided and maintained for the use of workers employed in the said processes who remain on the premises during the meal intervals, a mess room which shall be furnished with tables and benches and provided with suitable means for warming food.

The mess room shall be placed under the charge of a responsible person and shall be kept clean.

22. **Time allowed for washing -** Before each meal and the end of the day at least 10 minutes addition to the regular interval shall be allowed for washing to each person who has been employed in the said process.

23. **Drying stoves-** (a) every drying stove shall be efficiently ventilated to the out side air in such a manner that hot air from stove shall not be drawn into any work room.

(b) No person shall enter into stove to remove the contents until a free current of air has been passed through by mechanical means.

24. **non-sparking tools-** non sparking tools shall be provided for the purpose of cleaning or repairing machinery or or operating any process where vapours of betanaphthyl amine are evolved.

25. **Testing of atmosphere**- Amines in the atmosphere of the work room where the manufacturing process is carried on shall be estimated once in every week and records of such estimations shall be made available when required by an Inspector.

PART-II

26. **Separation of process**- the said manufacturing process 'B' shall be carried on in rooms which shall not communicate with the other rooms except through a passage open entirely to outside atmosphere.

27. **Limitation of exposure**- (a) no worker under the age of 40 years shall be engaged in the factory for the said manufacturing process 'B for the first time after the date on which these rules come into force.

(b) before the end of the day at least one hour shall be allowed for bathing to each person who is employed in the said manufacturing process 'B' including the time allowed under paragraph 22.

28. **Exemptions -** If in respect of any factory, the Chief Inspector is satisfied that owing to the exceptional circumstances or infrequency of the processes or for any other reason, all or this schedule is not necessary for

the protection of the workers in the factory, the Chief Inspector may be a certificate in writing (which he may in his discretion revoke at any time), exempt such factory from all or any of such provisions subject to such conditions, if any, as he may specify therein.

APPENDIX-A

[SEE PARAGRAPH2, 10, 13]

The benzenes, Toulenes, Xylenes, having undergone nitration once or several times (nitro, dinitro and trinitro benzene and its homologues) and chlorinated compounds, naphalenes, having undergone nitration once or several times, anilines and its homologues(toludine, Xlidine, cuminide) anisidine, phenetidine and their chlorinated nitrated and alkylaled compounds(dimethylailine, toluylendiamine, toludine phenyhydrazine, toluylhydrazine)

APPENDIX-B

[SEE PARAGRAPH2 & 13]

1. Alphanaphthylamine
2. betanaphthylamine
3. Benzidine and its salts
4. dianisidine
5. Toludine
6. Dichlorobenzidine

APPENDIX – C

CAUTIONARY PLACARD/NOTICE

Carcinogenic dye intermediates

1. Nitro and amino compounds are aromatic hydro carbons are dangerous .In this factory you have to handle them carefully.

2. All items of protective wear provided should be made use of to safeguard your health

3. Maintain cleanliness at all times .Before meals wash hands and feet . A bath before leaving the factory is essential taking care to wash the hands well.

4. If any chemicals falls on your body wash it off immediately with soap and water. Change clothing at once .If soap with a cynoticnitromino compound contact the appointed doctor immediately.

5. Do not handle any nitro or amino compounds bare hand .Use a long handle scoop .

6. Avoid alcoholic drinks as these can cause risk of poisioning .

7. In case of illness contact the factory manager and the appointed doctor

8. Don't chew, eat, drink or smoke in the work roonm or with soiled hands .Keep food and drinks away from te work place

9. If you work with betanaphthylamine or benzedine or its salt alphanapthalymine or dianisidine :-

(a) Remember the serious effects will follow after a number of year if great care is not taken to observe absolute cleanliness of body , close , missionary and tools

(b) At meal time wash face and hands twice with soap and water to remove all chemicals; wear a long sleeve clean apron while eating

(c) Before leaving the factory take a bath using soap and water twice after this put on your home clothes

Schedule – XX

Process of extracting oils and fats from vegetables and animal sources in solvent extraction plants

1. **Definitions -** For the purposes of this schedule –

(a) "solvent extraction plant" means a plant in which the process of extracting oils and fats from vegetable and animal sources by use of solvents is carried on;

(b) "solvent" means an flammable liquid such as pentane, hexane and heptane use for the recovery of vegetable oils;

(c) "flameproof enclosure" as applied to electrical machinery or apparatus means an enclosure that will withstand, when covers or other access doors are properly secured, an internal explosion of the flammable gas or vapour which may enter or which may originate inside the enclosure without suffering damage and without communicating internal inflammation (or explosion) to the external flammable gas or vapour;

(d) "competent person" for the purpose of this schedule shall be at least a member of the Institution of Engineers (India) or an Associate Member of the said Institution with 10 years experience in a responsible position as may be approved by the Chief Inspector:

Provided that a graduate in mechanical engineering or chemical technology with specialised knowledge of oils and fats and with a minimum experience of 5 years in a solvent extraction plant shall also be considered to the a competent person.

Provided further that the State Government may accept any other qualifications if in its opinion they are equivalent to the qualifications aforesaid.

2. **Location and layout -** (1) No solvent extraction plant shall be permitted to be constructed or extended to within a distance of 30 meters from the nearest residential locality.

(2) A 1.5 meter high continuous wire fencing shall be provided around the solvent/ extraction plant upto a minimum distance of 15 meters from the plant.

(3) No person shall be allowed to carry any matches or an open flame or fire inside the area round by the fencing.

(4) Boiler houses and other buildings where open flame processes are carried on shall be located at least 30 meters away from the solvent extraction plant;

(5) If god owns and preparatory processes are at a distance of less than 30 metres from the solvent extraction plant, these shall be at least 15 meters distant from the plant, and a continuous barrier wall of non-combustible material 1.5 meters high shall be erected at a distance of not less than 15 meters from the solvent extraction plant so that it extends to at least 30 meters of vapour travel around its ends from the plant to the possible sources of ignition.

3. **Electrical installations -** (1) all electrical motors and wiring and other electrical equipment installed or housed insolvent extraction plant shall be of flameproof construction.

(2) All metal parts of the plant and building including various tanks and containers wher or are present and all parts of

electrical equipment not required to be energised shall be properly bonded together and connected to earth so as to avoid accidental rise in the electrical potential of such parts above the earth potential.

4. **Restriction on smoking -** Smoking shall strictly prohibited within 15 meters distance from solvent extraction plant. For this purpose, "NO smoking" sings shall be permanently displayed in the area.

5. **Precautions against friction -** (1) All tools and equipment including ladders, chains and other lifting tackle required to be used in solvent extraction plant shall be of non- sparking type.

(2) No machinery or equipment in any solvent extraction plant shall be belt driven, unless the belt used is of such a type that it does not permit accumulation of static electricity to a dangerous level.

(3) No person shall be allowed to enter and work in the solvent extraction plant if wearing clothes made of nylon or such other fibre that can generate static electrical charge, or wearing footwear which is likely to cause sparks by friction.

6. **Fire fighting apparatus -** (1) Adequate number of portable fire extinguishers suitable for use against flammable liquid fires shall be provided in the solvent extraction plant.

(2) An automatic water spray sprinkler system on a wet pipe or open-head deluge system with sufficient supply of storage water shall be provided over solvent extraction plant and throughout the building housing such plant.

7. **Precautions against power failure -** Provision shall be made for the automatic cutting off of steam in the event of power failure and also for emergency overhead water- supply for feeding water by gravity to condensers which shall come into play automatically with the power failure.

8. **Magnetic Separators -** Oil cake shall be fed to the extractor by a conveyer through a hopper and a magnetic separator shall be provided to remove any pieces of iron during pressure in the event of fire.

9. **Venting -** (1) Tanks containing solvents shall be protected with emergency venting to relieve excessive internal pressure in the event of fire.

(2) All emergency relief vents shall terminate at least 6 meters above the ground and be so located that vapours will not re-enter the building in which solvent extraction plant is located.

10. **Waste water -** Process waste water shall be passed through a flash evaporator to remove any solvent before it is discharged into a sump which should be located within the fenced area but not closer than 8 meters to the fence.

11. **Ventilation -** The solvent extraction plant shall be well ventilated and if the plant is housed in a building, the building shall be provided with mechanical ventilation with provision for at least six air changes per hour.

12. **Housekeeping -** (1) Solvents shall not be stored in an area covered by solvent extraction plant except in small quantities which shall be stored in approved safety cans.

(2) Waste materials such as oily rags, other wastes and absorbents used to wipe off solvent and paints and oils shall be deposited in approved containers and removed from the premises at least once a day.

(3) Space within the solvent extraction plant and within 15 meters from the plant shall be kept free form any combustible materials and any spills of oil or solvent, shall be cleaned up immediately.

13. **Examination and repairs -** (1) the solvent extraction plant shall be examined by the competent person to determine any weakness or corrosion and wear once in every 12 months. Report of such examination shall be supplied to the Inspector with his observation as to whether or not the plant is in safe condition to work.

(2) No repairs shall be carried out to the machinery or plant except under the direct supervision of the competent person.

(3) Facility shall be provided for purging the plant with inert gas or steam before opening for cleaning or repairs and before introducing solvent after repairs.

14. **Operating personnel -** The operation of the plant and machinery in the solvent extraction plant shall be in the charge of such duly qualified and trained persons as are certified by the competent person to be fit for the purpose and no other person shall be allowed to operate the plant and machinery.

15. **Employment of women and young persons -** No woman or young person shall be employed in the solvent extraction plant.

16. **Vapour detection -** A suitable type of flameproof and portable combustible gas indicator shall be provided and maintained in good working order and a schedule of routine sampling of atmosphere at various locations as approved by the chief inspector shall be drawn out and entered in a register maintained for the purpose.

17. **Exemption -** If in respect of any factory, the Chief Inspector is satisfied that owing to the exceptional circumstances or infrequency of the processes or for any other reason, all or any of the provisions of this schedule is not necessary for the protection of the workers in the factory, the Chief Inspector may by a certificate in writing (which he may in his discretion revoke at any time) exempt such factory from all or any of such provisions subject to conditions, if any, as he may specify therein.

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Schedule – XX

Manufacture or manipulation of manganese and its compounds

1. **Definitions -** For the purposes of this schedule -

(a) "manganese process" means processing, manufacture or manipulations of manganese or any ore or any mixture containing manganese;

(b) "first employment" means first employment in any manganese process and includes also re-employment in any manganese process followed any cessation of employment for continuous period of 3 calendar months.

(c) "Manipulations" means mixing, blending, filling, emptying, grinding, sieving, drying, packing, sweeping, or otherwise handling of manganese, or mixture containing manganese; and

(d) "efficient exhaust ventilation" means localised ventilation effected by mechanical means for the removal of dust or fume or at its source of origin so as to prevent it from escaping into the atmosphere of any place where any work is carried on. No draught shall be deemed to be efficient which fails to remove the dust or fume or mist at the point where it is generated and fails to prevent it from escaping into and spreading into the atmosphere of a work place.

2. **Application -** This schedule shall apply to every factory in which or in any part of which any manganese process is carried on.

3. **Exemption -** If in respect of any factory, the Chief Inspector is satisfied that owing to any exceptional circumstances, or infrequency of the process, or for any other reason, application of all or any of the provisions of this schedule is not necessary for the protection of the persons employed in such factory, he may by an order in writing which he may at his discretion revoke, exempt such factory from all or any of the provisions on such conditions and for such period as he may specify in the said order.

4. **Isolation of a process -** Every manganese process which may give rise to dust, vapour or mist containing manganese, shall be carried on in a totally enclosed system or otherwise effectively isolated from other processes so that other plants and processes and other parts of the factory and persons employed on other processes may not be affected by the same.

5. **Ventilation of process -** No process in which any dust, vapour or mist containing manganese is generated, shall be carried out except under an efficient exhaust ventilation which shall be applied as near to the point of generation as practicable.

6. **Medical facilities and records of examinations and tests.-** (1) The occupier of every factory to which this schedule applies, shall-

(a) employ a qualified medical practitioner for medical surveillance of the workers employed therein whose employment shall be subject to the approval of the Chief Inspector of Factories; and

(b) Provide to the medical practitioner all the necessary facilities for the purpose referred to in clause (a).

(2) The record of medical examinations and appropriate tests carried out by the said medical practitioner shall be maintained in a separate, register approved by the Chief Inspector of Factories, which shall be kept readily available for inspection by the Inspector.

6-A. **Medical examination by certifying Surgeon -** (1) Every worker employed in any manganese process shall be medically examined by a Certifying Surgeon within 15 days of his first employment. Such examinations shall include tests for detection of serum calcium, serum phosphate and manganese in blood and urine and also include steadiness tests and other neuro-muscular coordination tests. No worker shall be allowed to work after 15 days of his first employment in the factory unless certified for such employment by the Certifying Surgeon.

(2) Every worker employed in a manganese process shall be re-examined by a Certifying Surgeon at least once in every three calendar months and such examination shall, wherever the Certifying Surgeon considers appropriate, include all the tests in sub-paragraph (1).

(3) The Certifying Surgeon after examining a worker shall issue a Certificate of Fitness in

Form 32. The record of examination and re-examinations carried out shall be entered in the Certificate and the Certificate shall be kept in the custody of the manager of the factory. The record of each examination carried out under sub-paragraph (1) and (2), including the nature and the results of this test, shall also be entered by the certifying Surgeon in a health register in Form 17.

(4) The Certificate of Fitness and the health register shall be kept readily available for inspection by the Inspector.

(5) If at any time the Certifying Surgeon is of the opinion that a worker is no longer fit for employment in the said processes on the ground that continuance therein would involve special danger to the health of the worker, he shall make a record of his findings in the said certificate and the health register. The entry of his findings in those documents should also include the period for which he considers that the said person is unfit to work in the said process shall be provided with alternate placement facilities unless he is fully incapacitated in the opinion of the Certifying Surgeon, in which case the person affected shall be suitably rehabilitated.

(6) No person who has been found unfit to work as said in sub-paragraph (5) shall be re-employed or permitted to work in the said processes unless the Certifying Surgeon, after further examination, again certifies him fit for employment in those processes.

7. **Personal protective equipment -** (1) the occupier of the factory shall provide and maintain in good and clean condition suitable overalls and head coverings for all persons employed in any manganese process and such overalls and head coverings shall be worn by the persons while working on a manganese process.

(2) The occupier of the factory shall provide suitable respiratory protective equipment for use by works in emergency to prevent inhalation of dusts, fumes or mists. Sufficient number of complete sets of such equipment shall always be kept near the work place and the same shall be properly maintained and kept always in a condition to be used readily.

(3) The occupier shall provide and maintain for the use of all persons employed, suitable accommodation for the storage and make adequate arrangements for cleaning and maintenance if personal protective equipment.

8. **Prohibition relating to women and young persons -** No women or young persons shall be employed or permitted to work in any manganese process.

9. **Food, drinks, etc. prohibited in the work rooms -** No food, drink, pan and supari or tobacco shall be allowed to be brought into or consumed by any worker in any workroom in which any manganese process is carried on.

10. **Mess room -** There shall be provided and maintained for the use of the persons employed in a manganese process a suitable mess room which shall be furnished with sufficient tables and benches and adequate means for warming of food. The mess room shall be placed under the charge of a responsible person and shall be kept clean.

11. **Washing facilities -** There shall be provided and maintained in a clean state and in good condition, for the use of persons employed on manganese process –

(a) A wash place under cover, with either –

(i) a trough with a smooth impervious surface fitted with a waste pipe without pl h to allow at least 60 centimetres

for every ten such persons employed at any one time, and having a constant supply of water from taps or jets above the trough at intervals of not more than 60 centimetres;

(ii) at least on wash basin for every five such persons employed at any one time, fitted with a waste pipe and plug and having a constant supply water; and

(b) sufficient supply of soap or other suitable cleaning material and nail brushes and clean towels.

12. **Cloakroom -** If the Chief Inspector so requires there shall be provided and maintained for the use of persons employed in manganese process a cloakroom for clothing put off during working hours with adequate arrangements for drying the clothing.

13. **Cautionary placard and instructions -** Cautionary notices in the form specified in appendix and printed in the language of the majority of the workers and employed, shall be affixed in prominent places in the factory where they can be easily and conveniently read by the workers and arrangement shall be made by the occupier to instruct periodically all workers employed in a manganese process regarding the health hazards connected with their duties and the best preventive measures and methods to protect themselves. The notices shall always be maintained in a legible condition.

APPENDIX

CAUTIONARY NOTICE
Manganese and Manganese Compounds

1. Dust free and mists of manganese and its compounds are toxic when inhaled or when ingested.

2. Do not consume food or drink near the work place.

3. Take a good wash before taking meals.

4. Keep the working area clean.

5. Use the protective clothing and equipment provided.

6. When required to work in situations where dusts, fumes or mists are likely to be inhaled, use respiratory protective equipment provided for the purpose.

7. If you get severe head-aches, prolonged sleeplessness or abnormal sensations on the body, report to the manager who would make arrangements for your
examination and treatment.

Schedule – XXI

Manufacture, handling and usage of benzene and substances containing benzene

1. **Application -** This schedule is made to provide protection against hazards of poisoning from benzene and shall apply in respect of factories or parts thereof in which benzene or substances containing benzene are manufactured, handled or used.

2. **Definitions -** For the purpose of this schedule -

(a) "substances containing benzene" means substances wherein benzene content exceeds 1 per cent by volume;

(b) "substitute" means a chemical which is harmless or less harmful than benzene and can be used in place of benzene;

(c) "enclosed system" means a system which will not allow escape of benzene vapours to the workers atmosphere; and

(d) "efficient exhaust draught" means localised ventilated effected by mechanical means for the removal of gases, vapours and dusts or fumes so as to prevent them from escaping into the air of any workroom. No draught shall be deemed to be efficient if it fails to remove smoke generated at the point where such gases, vapours, fumes or dusts originate.

3. Prohibition and substitution -

(1) Benzene and substances containing benzene shall not be used as solvent or diluent unless the process in which it is used is carried on in an enclosed system or unless the process is carried on in manner which is considered equally safe as if it were carried out in an enclosed manner.

Use of benzene and substances containing benzene is prohibited in the following processes :-

(a) manufacture of varnishes, paints and thinners; and (b) Cleaning and degreasing operations.

(2) Where suitable substitutes are available, they shall be used instead of benzene or substances containing benzene. This provision, however, shall not apply to the processes specified in Appendix A.

(3) The Chief Inspector may, subject to confirmation by the State Government, permit exemptions from the percentage laid down in sub-paragraph 2(a) and also from the provisions of sub-paragraph (2) of this paragraph temporarily under

conditions and within limits of time to be determined after consultation with the employers and workers concerned.

4. Protection against installation -

(1) The process involving the use of benzene or substances containing benzene shall be as far as practicable be carried out in an enclosed system.

(2) Where, however, it is not practicable to carry out the process in an enclosed system, the workroom in which benzene or substances containing benzene are used shall be equipped with an efficient exhaust draught or other means for the removal of benzene vapours to prevent their escape into the air of the workroom

so that the concentration of benzene in the air does not exceed 10 parts per million by volume or 30 milligrams per cubicmeter.

(3) Air analysis for the measurement of concentration of benzene vapours in air shall be carried out every 8 hours or at such intervals as may be directed by the Chief Inspector at places where process involving use of benzene is carried on and the result of such analysis shall be recorded in a register specially maintained for this purpose. If the concentration of benzene vapours in air as measured by air analysis, exceeds 10 parts per million by volume or 30 milligrams per cubicmeter, the Manager shall forthwith report the concentration to the Chief Inspector stating the reasons for such increase.

(4) Workers who for special reasons are likely to be exposed to concentration of benzene in the air of the workroom exceeding the maximum referred to in sub-paragraph (2) shall be provided with suitable respirators or face masks. The duration of such exposure shall be limited as far as possible.

5. Measures against skin contact -

(1) Workers who are likely to come in contact with liquid benzene or liquid substances containing benzene shall be provided with suitable gloves, aprons, boots and where necessary vapour tight chemical goggles, made of material not affected by benzene or its vapours.

(2) The protective wear referred to in sub-paragraph (1) shall be maintained in good condition and inspected regularly.

6. **Prohibition relating to employment of women and young persons -** No woman or young person shall be employed or permitted to work in any workroom involving exposure to benzene or substances containing benzene.

7. **Labelling -** Every container holding benzene or substances containing benzene shall have the word "Benzene" and approved danger symbols clearly visible on it and shall also display information on benzene content, warning about toxicity and warning about infallibility of the chemical.

8. Improper use of benzene-

(1) The use of benzene substances containing benzene by workers for cleaning their hands or their work clothing shall be prohibited.

(2) Workers shall be instructed on the possible dangers arising from such misuse.

9. **Prohibition of consuming food, etc. in workrooms -** No worker shall be allowed to store or consume food or drink in the workroom in which benzene or substances containing benzene are manufactured, handled or used. Smoking and chewing tobacco or pan shall be prohibited in such workrooms.

10. **Instructions as regards risks -** Every worker on his first employment shall be fully instructed on the properties of benzene or substances containing benzene which he has to handle and of the dangers involved. Workers shall also be instructed on the measures to be taken to deal with in an emergency.

11. **Cautionary notices -** Cautionary notices in the form specified in appendix and printed in the language easily read and understood by the majority of the workers shall be displayed in prominent places in the workrooms where benzene or substances containing benzene are manufactured, handled or used.

12. **Washing facilities, cloakroom and mess room -** In factories in which benzene or substances containing benzene are manufactured, handled or used, the occupier shall provide and maintain in a clean state and in good repair –

(a) washing facilities under cover, of the standard of at least one tap for every 10 persons having constant supply of water with soap, and a clean towel provided individually to each worker if so ordered by the Inspector;

(b) cloakroom with lockers for each worker, having two compartments - one for street-clothing and one for work-clothing; and

(c) a mess room furnished with tables and benches with means for warming food, provided that where a canteen or other proper arrangements exist for the workers to take their meals, the requirements of mess room shall be dispensed with.

13. Medical facilities and records of examinations and tests -

(1) The occupier of every factory to which this schedule applies, shall-

(a) employ a qualified medical practitioner for medical surveillance of the workers employed therein whose employment shall be subject to the approval of the Chief Inspector of Factories; and

(b) Provide to the medical practitioner all the necessary facilities for the purpose referred to in clause (a).

(2) The record of such examinations carried out by the medical practitioner shall be maintained in a separate, register approved by the Chief Inspector of Factories, which shall be kept readily available for inspection by the Inspector.

14. Medical examination by Certifying Surgeon -

(1) Every worker employed in the processes specified in paragraph 1 shall be examined by a Certifying Surgeon within 15 days of his first employment. Such examinations shall include skin test for dermatitis and no worker shall be allowed to work after 15 days of his first employment in the factory unless certified fit for such employment by the Certifying Surgeon.

(2) Every worker employed in a manganese process shall be re-examined by a Certifying Surgeon at least once in every 12 months and such examination shall, wherever the Certifying Surgeon considers appropriate, include all the tests in sub- paragraph (1).

(3) The Certifying Surgeon after examining a worker, shall issue a Certificate of Fitness in

Form 32. The record of examination and re-examinations carried out shall be entered in the Certificate and the Certificate shall be kept in the custody of the manger of the factory. The record of each examination carried out under sub-paragraph (1) and (2), including the nature and the results of this test, shall also be entered by the Certifying Surgeon in a health register in Form 17.

(4) The Certificate of Fitness and the health register shall be kept readily available for inspection by the Inspector.

(5) If at any time the Certifying Surgeon is of the opinion that a worker is no longer fit for employment in the said processes on the ground that continuance therein would involve special danger to the health of the worker, he shall make a record of his findings in the said certificate and the health register. The entry of his findings in those documents should also include the period for which he considers that the said person is unfit to work in the said process shall be provided with alternate placement facilities unless he is fully incapacitated in the opinion of the Certifying Surgeon , in which case the person affected shall be suitably rehabilitated.

(6) No person who has been found unfit to work as said in sub-paragraph (5) shall be re-employed or permitted to work in the said processes unless the Certifying Surgeon, after further examination, again certifies him fit for employment in those processes.

APPENDIX-A
[SEE CLAUSE 3(B)]

1 production of benzene
2 process where benzene is used for chemical synthesis 3 motor spirits (used as fuel)

APPENDIX-B

[SEE CLAUSE 11]

CAUTIONARY NOTICE

Benzene and substances containing benzene

1. Hazards:

(a) Benzene and substances containing benzene are harmful.

(b) Prolonged or repeated breathing of benzene vapours may result in acute or chronic poisoning.

(c) Benzene can also be absorbed through skin which may cause skin or other diseases.

2. Preventive measures:

(a) Avoid breathing of benzene vapours.

(b) Avoid prolonged or repeated contact of benzene with the skin.

(c) Remove benzene soaked or wet clothing promptly.

(d) If any time you are exposed to high concentration of benzene vapours and exhibit signs and symptoms such as dizziness, difficulty in breathing, excessive excitation and losing of consciousness, immediately inform your factory manager.

(e) Keep all the containers of benzene closed

(f) Handle, use and process benzene and substances containing benzene carefully in order to prevent their spillage on floor.

(g) Maintain good housekeeping.

3. Protective equipment:

(a) Use respiratory protective equipment in places where benzene vapours are present in high concentration.

(b) In emergency, use self generating oxygen mask or oxygen or air cylinder masks.

(c) Wear hand gloves, aprons, goggles and gum boots to avoid contact of benzene with your skin and body parts.

4. First-aid measures in case of acute benzene poisoning :

(a) Remove the clothing immediately if it is wetted with benzene.

(b) If liquid benzene enters eyes, flush thoroughly for at least 15 minutes with clean running water and immediately secure medical attention.

(c) In case of unusual exposure to benzene vapour, call a physician immediately. Until he arrives, do the following :-

(i) If the exposed person is conscious -

(a) Move him to fresh air in open.

(b) Lay down without a pillow and keep him quiet and warm.

(ii) If the exposed person is unconscious -

(aa) Lay him down preferably on the left side with the head low.

(bb) Remove any false teeth, chewing gum, tobacco or other foreign objects which may be in his mouth.

(cc) Provide him artificial respiration in case difficulty is being experienced in breathing.

(dd) In case of shallow breathing or cyanosis (blueness of skin, lips, ears, finger nail beds), he should be provided with medical oxygen or oxygen carbon dioxide mixture. If needed, he should be given artificial respiration. Oxygen should be administered by a trained person only.

Schedule – XXII

Manufacturing process or operation in carbon disulphide plants

1. **Application -** This schedule shall apply to all electric furnaces in which carbon disulphide is generated and all other plants where carbon disulphide after generation, is condensed, refined and stored. This schedule is in addition to and not in derogation of any of the provisions of the Act and Rules made there under.

2. Construction, installation and operation-

(1) The buildings in which electric furnaces are installed and carbon disulphide after generation is condensed and refined shall be segregated from other parts of the factory and shall be of open type to ensure optimum ventilation and the plant layout shall be such that only a minimum number of workers are exposed to the risk of any fire or explosion at any one time.

(2) Every electric furnace and every plant in which carbon disulphide is condensed, refined and stored with all their fittings and attachments shall be of good construction, sound material and of adequate strength to sustain the internal pressure to which the furnace or the plant may be subjected to and shall be so designed that carbon disulphide liquid and gas are in closed system during their normal working.

(3) The electric furnace supports shall be firmly grouted about 60 centimetres in concrete or by other effective means.

(4) Every electric furnace shall be installed and operated according to manufacturers' instructions and these instructions shall be clearly imparted to the personnel in charge of construction and operation.

(5) The instructions regarding observance of correct furnace temperature, sulphur dose, admissible current or power consumption and periodical checking of charcoal level shall be strictly complied with.

3. Electrodes -

(1) Where upper ring electrodes made of steel are used in the electric furnace, they shall be of seamless tube construction and shall have arrangement for being connected t cooling water system through a siphon built in the electrodes or through a positive pressure water-pump.

(2) The arrangement for cooling water referred to in sub-paragraph (1) shall be connected with automatic alarm system which will actuate in the event of interruption of cooling water in the electrodes and give visible and audible alarm signals in the control room and simultaneously stop power supply for the furnace operation and to stop the further supply of water. The alarm system and the actuating device shall be checked every day.

4. **Charcoal level indicator and vibrator –** Means shall be provided on each electric
furnace for indicating the correct level of charcoal in the furnace and vibrating the charcoal.
This mean shall employed often as necessary to maintain correct charge and level of charcoal.

5. **Charcoal separator -** A cyclone type of charcoal separator shall be fitted on the off take

pipe between the electric furnace and sulphur separator to prevent entry of pieces of charcoal
into the condensers and piping.

6. Rupture discs and safety seal -

(1) At least two rupture discs of adequate size which shall blow off at a pressure twice the maximum operating pressure shall be provided on each furnace and
shall either be mounted directly on the top of the furnace or each through an independent pipe as close as possible to the furnace.

(2) A safety water seal shall be provided and tapped from a point between the
charcoal separator and the sulphur separator.

7. Pyrometer and manometers -

(1) Each electric furnace shall be fitted with adequate number of pyrometers to
give an indication of the temperature as correctly as reasonably practicable at various
points in the furnace. The dials for reading the temperatures shall be located in the
control room.

(2) Manometers or any other suitable devices shall be provided for indicating pressure –

(a) In the off take pipe before and after the sulphur separator; and

(b) In primary and secondary condensers.

8. **Check valves -** All piping carrying carbon disulphide shall be fitted with check valves at
suitable positions so as to prevent gas from flowing back into any electric furnace in the
event of its shut down.

9. Inspection and maintenance of electric furnaces -

(1) Every electric furnace shall be inspected internally by a competent person.

(a) Before being placed in service after installation;

(b) Before being placed in service after reconstruction or repairs; and

(c) Periodically every time the furnace is opened for cleaning or de- or for replacing electrodes.

(2) When an electric furnace is shut down for cleaning or de--

(a) The brick lining shall be checked for continuity and any part found defective removed;

(b) After removal of any part of the lining referred to in (a) the condition of the shell shall be closely inspected; and

(c) Any plates forming shall found corroded to the extent that safety of

the furnace is endangered shall be replaced.

10. **Maintenance of records -** The following hourly records shall be maintained in a log book.

(a) Manometer readings at the points specified in sub-paragraph 7(2);

(b) Gas temperature indicated by pyrometers and all other vital points near the sulphur separator and primary and secondary condensers;

(c) Water temperature and flow of water through the siphon in the electrodes; and

(d) Primary and secondary voltages and current and energy consumed.

11. **Electrical apparatus, wiring and fittings -** All buildings in which carbon disulphide id refined or stored shall be provided with electrical apparatus, wiring and fittings which shall afford adequate protection from fire and explosion.

12. **Prohibition relating to smoking -** No person shall smoke or carry matches, fire or naked light or other means of producing a naked light or spark in buildings in which carbon disulphide is refined or stored, and a notice in the language understood by a majority of the workers shall be posted in the plant prohibiting smoking and carrying of matches, fire or naked light or other means of producing naked light or spark into such rooms.

13. **Means of escape -** Adequate means of escape shall be provided and maintained to enable persons to move to a safe place as quickly as possible in case of an emergency. At least two independent staircases of adequate width shall be provided in every building housing the furnaces at reasonable intervals at opposite ends. These shall always be kept clear of all obstructions and so designed to afford easy passage.

14. **Warnings in case of fire -** There shall be adequate arrangements for giving warnings in case of fire or explosion which shall operate on electrically and in case of failure of electricity by some mechanical means.

15. Fire-fighting equipment -

(1) Adequate number of suitable fire extinguishers or other fire-fighting equipment shall be kept in constant readiness for dealing with risks involved and depending on the amount and nature of materials stored.

(1) (2) Clear instructions as to how the extinguishers or other equipment should be used printed in the language which the majority of the workers employed understand, shall be affixed to each extinguisher or other equipment and the personnel trained in their use.

16. Bulk Sulphur -

(1) Open or semi-enclosed spaces for storage of bulk sulphur shall be sited with due regard to the dangers which may arise from sparks given off by nearby locomotives, etc., and precautions shall be taken to see that flames, smoking and

matches and other sources of ignition do not come in contact with the clouds of dust arising during handling of bulk sulphur.

(2) All enclosures for bulk sulphur shall be of non-combustible construction, adequately ventilated and so designed as to provide a minimum of ledges on which dust may lodge.

(3) The bulk sulphur in the enclosures shall be handled in such a manner as to minimise the formation of dust clouds and no flame, smoking and matches or other sources of ignition shall be employed during handling and non-sparking tools shall be used whenever sulphur is shovelled or otherwise removed by hand.

(4) No repairs involving flames, heat or use of hand or power tools shall be made in the enclosure where bulk sulphur is stored.

17. **Liquid sulphur -** Open flames, electric sparks and other sources of ignition, including smoking and matches, shall be excluded from the vicinity of molten sulphur.

18. Training and supervision -

(1) All electric furnaces and all plants in which carbon disulphide is condensed, refined or stored shall be under adequate supervision at all times while the furnaces
and plant are in operation.

(2) Workers in charge of operation and maintenance of electric furnaces and
the plants shall be properly qualified and adequately trained.

19. Washing facilities -

(1) The occupier shall provide and maintain in a clean state and in good repair, for the use of all persons employed wash place under cover with at least one tap or
stand-pipe, having a constant supply of clean water for every five such persons, the
taps or stand-pipes being spaced not less than 120 centimetres apart with a sufficient
supply of soap and clean towels, provided that towels shall be supplied individually to
each worker if so ordered by the Inspector.

(2) All the workers employed in the sulphur storage, handling and melting
operations shall be provided with a nail brush.

20. Personal protective equipment -

(1) Suitable goggles and protective clothing consisting of overalls without
packets, gloves and foot-wear shall be provided for the use of operatives –

(a) when operating valves or cocks controlling fluids etc.,

(b) drawing off a molten sulphur from sulphur pots;

(c) handling charcoal or sulphur.

(2) Suitable respiratory protective equipment shall be provided and stored in

the appropriate place for use during abnormal conditions or in an emergency.

(3) Arrangements shall be made for proper and efficient cleaning of all such protective equipment.

21. **Cloakrooms -** There shall be provided and maintained for the use of all persons employed in the processes a suitable cloakroom for clothing put off during work hours and a suitable place separate from the cloakroom for the storage or overalls or working clothes. The accommodation so provided shall be placed in the charge of a responsible person and shall be kept clean.

22. **Unauthorized persons -** Only maintenance and repair personnel, persons directly connected with the plant operation and those accompanied by authorized persons shall be admitted into the plant.

Schedule – XXIII

Operations involving high noise levels

1. **Application -** This schedule shall apply to all operations in any manufacturing process having high noise level.

2. **Definitions** - For the purpose of this schedule -

(a) “Noise” means any unwanted sound.

(b) ”High noise level” means any noise level measured on the A-weighted scale is 90 dB or above.

(c) ”Decibel” means one-tenth of “Bel” which is the fundamental division of a logarithmic scale used to express the ratio of two specified or implied quantities, the number of “Bels” denoting such a ratio being the logarithm to the base the of 10 of this ratio. The noise level (or the sound pressure level) 6 corresponds to a reference pressure of 20 x 10 power(-6) Newton per square meter or 0.0002 dynes per square centimetre which is the threshold of hearing, that is, the lowest sound pressure level necessary to produce the sensation of hearing in average healthy listeners. The decibel in abbreviated

form is dB.

(d) "Frequency" is the rate of pressure variations expressed in cycles per second or hertz.

(e) "dBA" refers to sound level in decibels as measured on a sound level meter operating on the A-weighting net work with slow meter response.

(f) "A-weighting" means making graded adjustments in the intensities of sound of various frequencies for the purpose of noise measurement, so that the sound pressure level measured by an instrument reflects the actual response of the human ear to the sound measured.

3. Protection against noise –

(1) In every factory, suitable, a suitable engineering control or administrative measures shall be taken to ensure, so far as is reasonably practicable, that no worker is exposed to sound levels exceeding the maximum permissible noise exposure levels specified in Tables 1 and 2.

Table 1

Permissible exposure in cases of continuous noise

Total time of exposure (continuous Sound pressure level in or a number of short term exposures)	dBA per day, in hours
8	90
6	92
4	95
3	**97**
2	100
1 ½	102
1	105
¾	107
½	110
¼	115

Notes: 1. No exposure in excess of 115 dBA is to be permitted.

2. For any period of exposure falling in between any figure and the next higher or lower figure as indicated in column 1, the permissible sound pressure level is to be determined by extrapolation on a proportionate basis.

Table 2

Permissible exposure levels of impulsive or impact noise

Peak sound pressure level in dB	Permitted number of impulses or impact per day
140	100
135	315
130	1,000
125	3,160
120	10,000

Notes: 1. No exposure in excess of 140 dB peak sound pressure level is permitted.

2. For any peak sound pressure level falling in between any figure and the next higher or lower figure as indicated in column 1, the permitted number of impulses or impacts per day is to be determined by extrapolation on a proportionate basis.

(3) For the purposes of this schedule, if the variations in the noise level involve maximum at intervals of one second or less, the noise is to be considered as a continuous one and the criteria given in Table 1 would apply. In other cases, the noise is to be considered as impulsive or impact noise and the criteria given in Table 2 would apply.

(3) When the daily exposure is composed of two or more periods of noise exposure at different levels their combined effect should be considered, rather than the individual effect of each. The mixed exposure should be considered to exceed the limit value if the sum of the fractions C1/T1 + C2/T2 +. ..... Cn/Tn exceeds unity, -

Where the C1, C2 etc. indicate the total time of actual exposure at a specified noise level and T1, T2, etc. denote the time of exposure of less than 90 dBA may be ignored in the above calculation.

(4) Where it is not possible to reduce the noise exposure to the levels specified in sub-rule (1) by reasonably practicable engineering control or administrative measures, the noise exposure shall be reduced to the greatest extent feasible by such control measures, and each worker so exposed shall be provided with suitable ear protectors so as to reduce the exposure to noise to the levels specified in sub-rule (1).

(5) Where the ear protectors provided in accordance with sub-paragraph (2) and worn by a worker cannot still attenuate the noise reaching near his ear, as determined by subtracting the attenuation value in dBA of the ear protectors concerned from the measured sound pressure level, to a level permissible under Table 1 or Table 2 as the case may be, the noise exposure period shall be suitably reduced to correspond to the permissible noise exposures specified in sub-paragraph (1).

(6) (a) In all cases where the prevailing sound levels exceed the permissible levels specified in sub-paragraph (1) there shall be administered an effective hearing conservation programme which shall include among other hearing conservation measures, pre-employment and periodical auditory surveys conducted on workers exposed to noise exceeding the permissible levels, and rehabilitation of such workers either by reducing the exposure to the noise levels or by transferring them to places where noise levels are relatively less or by any other suitable means.

(b) Every worker employed in areas where the noise exceeds the maximum permissible exposure levels specified in sub-rule (1) shall be subjected to any auditory examination by a Certifying

Surgeon within 14 days of his first employment and thereafter, shall be re-examined at least once a every 12 months. Such initial and periodical examinations shall include tests which the Certifying Surgeon may consider appropriate and shall include determination of auditory thresholds for pure tones of 125, 250, 500, 1000, 2000, 4000 and 8000 cycles per second.

Schedule – XXIV

Manufacture or manipulation of dangerous pesticides

1. *Application* - ***This schedule shall apply in respect of all factories or any part thereof in which the process of manufacture or manipulation of dangerous pesticide hereinafter referred to as the said manufacturing process is carried on.***

2. **Definitions -** For the purpose of this Schedule -

(a) "dangerous pesticides" means any product proposed or used for controlling, destroying or repelling any pest or for preventing growth or mitigating effects of such growth including any of its formulations which is considered toxic under and is covered by the Insecticides Act, 1968 and the rules made there under and any other product, as may be notified from time to time by the State Government;

(b) "manipulation" includes mixing, blending, formulating, filling, emptying, packing or otherwise handling;

(c) "efficient exhaust draught" means localised mechanical ventilation for removal of smoke, gas, vapour, dust, fume or mist so as to prevent them from escaping into the air of any work room in which work is carried on. No exhaust draught shall be considered efficient if it fails to remove smoke generated at the point where such gas, fume, dust, vapour or mist originates from the process.

3. **Instruction to workers -** Every worker on his first employment shall be fully instructed on the properties including dangerous properties of the chemicals handled in the said manufacturing process and the hazards involved. The employees shall also be instructed in the measures to be taken to deal with any emergency. Such instructions shall be repeated periodically.

4. **Cautionary notice and placards -** Cautionary notices and placards in the form specified in appendix to this schedule and printed in the language of the majority of the workers shall be displayed in all work places in which said manufacturing process is carried on so that they can be easily and conveniently read by the workers. Arrangements shall be made by the occupier and the manager of the factory to periodically instruct the workers regarding the health hazards arising to in the said manufacturing process and methods of protection. Such notices shall include brief instructions regarding the periodical clinical tests required to be undertaken for projecting health of the workers.

5. **Prohibition relating to employment of women or young persons -** No woman or young person shall be employed or permitted to work in any room in which the said manufacturing process is carried on or in any room in which dangerous pesticide is stored.

6. **Food drinks, and smoking prohibition -** (1) No food, drink, tobacco, pan or supari shall be brought into or consumed by any worker in any workroom in which the said manufacturing process is carried out.

(2) Smoking shall be prohibited in any workroom in which the said manufacturing process is carried out.

7. **Protective clothing and protective equipment -** (1) Protective clothing consisting of long pants th long sleeves and head

coverings shall be provided for all workers employed in the said manufacturing process.

(2) (a) Protective equipment consisting of rubber gloves, gum boots, rubber aprons, chemical safety goggles and respirators shall be provided for all workers employed in the said manufacturing process.

(b) Gloves, boots, aprons shall be made from synthetic rubber where a pesticide contains oil.

(3) Protective clothing and equipment shall be worn by the workers supplied with such clothing and equipment.

(4) Protective clothing and equipment shall be washed daily from inside and outside if the workers handle pesticides containing nicotine or phosphorous and shall be washed frequently if handling other pesticides.

(5) Protective clothing and equipment shall be maintained in good condition.

8. **Floors and work-benches -** (1) Floors in every workroom where dangerous pesticides are manipulated shall be of cement or other impervious material giving a smooth surface.

(2) Floors shall be maintained in good repair, provided with adequate slope leading to a drain and thoroughly washed once a day with the hose pipe.

(3) Work-benches where dangerous pesticides are manipulated shall be made of smooth, non-absorbing material preferably stainless steel and shall be cleaned at least once daily.

9. **Spillage and waste -** (1) If a dangerous pesticide during its manipulation splashes or spills on the work-bench, floor or on the protective clothing worn by a worker,

immediate action shall be taken for through decontamination of such areas or articles.

(2) Cloth, rags, paper or other material soaked or soiled with a dangerous pesticide shall be deposited in a suitable receptacle with tight fitting cover.

Contaminated waste shall be destroyed by burning at least once a week.

(3) Suitable deactivating agents, where available, shall be kept in a readily accessible place for use while attending to a spillage.

(4) Easy means of access shall be provided to all parts of the plant for cleaning, maintenance and repairs.

10. **Empty containers used for dangerous pesticides -** Containers used for dangerous pesticides shall be thoroughly cleaned of their contents and treated with an inactivating agent before being discarded or destroyed.

11. **Manual handling -** (1) A dangerous pesticide shall not be required or allowed to be manipulated by hand except by means of a long handled scoop.

(2) Direct contact of any part of the body with a dangerous pesticide during its manipulation shall be avoided.

12. **Ventilation -** (1) In every workroom or area where a dangerous pesticide is manipulated, adequate ventilation shall be provided at all times by the circulation of fresh air.

(2) Unless the process is completely enclosed, the following operations during manipulation of a dangerous pesticide shall not be undertaken without an efficient exhaust draught :-

(a) emptying a container holding a dangerous pesticide;

(b) blending a dangerous pesticide;

(c) preparing a liquid or powder formulation containing a dangerous pesticide; and

(d) Changing or filling a dangerous pesticide into a container, tank hopper or machine or small sized containers.

(3) In the event of a failure of the exhaust draught provided on the above operation, the said operations shall be stopped forthwith.

13. **Time allowed for washing -** (1)Before each meal and before the end of the day's work at least ten minutes in addition to the regular rest interval shall be allowed for washing to each worker engaged in the manipulation of dangerous pesticide.

(2) Every worker engaged in the manipulation of dangerous pesticides shall have a thorough wash before consuming any food and also at the end of the day's work.

14. **Washing and bathing facilities -** (1) There shall be provided and maintained in a clean state and in good repair for the use of all workers employed in the factory where the said manufacturing process is carried on, adequate washing and bathing places having a constant supply of water under cover at the rate of one such place for every 5 persons employed.

(2) The washing places shall have standpipes placed at intervals of not less than one meter.

(3) Not less than one half of the total number of washing places shall be provided with bathrooms.

(4) Sufficient supply of clean towels made of suitable material shall be provided :

Provided that such towels shall be supplied individually for each worker is so

ordered by the Inspector.

(5) Sufficient supply of soap and nail brushes shall be provided.

15. **Cloakroom -** There shall be provided and maintained for the use of all workers employed in the factory where the said manufacturing process is carried on -

(a) a cloakroom for clothing put off during working hours with adequate arrangements for drying clothing, if wet; and

(b) separate and suitable arrangements for the storage of protective clothing provided under paragraph 7.

16. **Mess room -** (1) There shall be provided and maintained for the use of all workers

employed in the factory in which the said manufacturing process is carried on and
remaining on the premises during the rest intervals, suitable mess room which shall be
furnished with -

(a) sufficient tables and benches with back rest, and

(b) Adequate means for warming food.

(2) The mess room shall be placed under the charge of responsible person and shall
be kept clean.

17. **Manipulation not be undertaken -** Manufacture or manipulation of a pesticides shall
not be undertaken in any factory unless a certificate regarding its dangerous nature or
otherwise is obtained from the Chief Inspector.

18. **Medical facilities and records of examinations and tests -** (1) The occupier of every
factory to which this schedule applies, shall -

(a) employ a qualified medical practitioner for medical surveillance of the
workers employed therein whose employment shall be subject to the approval of the
Chief Inspector of Factories; and

(b) Provide to the medical practitioner all the necessary facilities for the purpose referred to in clause (a).

(2) The record of such examinations carried out by the medical practitioner shall be maintained in a separate, register approved by the Chief Inspector of Factories, which shall be kept readily available for inspection by the Inspector.

19. **Medical examination by certifying Surgeon -** (1) every worker employed in the processes specified in paragraph 1 shall be examined by a Certifying Surgeon within 15 days of his first employment. Such examinations in respect of Halogenated Pesticides,shall include tests for determination of chemical in blood and in fat tissues, E.E.G. abnormalities and memory tests.In respect of organo phosphate compounds,such examinations shall include tests for depression of cholinesterase in plasma and red blood cells. No worker shall be allowed to work after 15 days of his first employment in the factory unless certified fit for such employment by the Certifying Surgeon.

(2) Every worker employed in the said process shall be re-examined by a Certifying Surgeon at least once in every six calendar months. Such examination shall, wherever the Certifying Surgeon considers appropriate, include the tests specified in sub-paragraph (1). Further every worker employed in the said processes shall also be examined once in every three months by the factory medical officer.

(3) The Certifying Surgeon after examining a worker, shall issue a Certificate of Fitness in

Form 32. The record of examination and re-examinations carried out shall be entered in the Certificate and the Certificate shall be kept in the custody of the manager of the factory. The record of each examination carried out under sub-paragraph (1) and (2), including the nature and the results of these test, shall also be entered by the certifying Surgeon in a health register in Form 17.

(4) The Certificate of Fitness and the health register shall be kept readily available for inspection by the Inspector.

(5) If at any time the Certifying Surgeon is of the opinion that a worker is no longer fit for employment in the said processes on the ground that continuance therein would involve special danger to the health of the worker, he shall make a record of his findings in the said certificate and the health register. The entry of his findings in those documents should also include the period for which he considers that the said person is unfit to work in the said process shall be provided with alternate placement facilities unless he is fully incapacitated in the opinion of the Certifying Surgeon, in which case the person affected shall be suitably rehabilitated.

(6) No person who has been found unfit to work as said in sub-paragraph (5) shall be re-employed or permitted to work in the said processes unless the Certifying Surgeon, after further examination, again certifies him fit for employment in those processes.

20. **Exemption -** If in respect of any factory the Chief Inspector is satisfied that owing to the exceptional circumstances or the infrequency of the said manufacturing process or for

any other reason which shall record in writing all or any of the provisions of this schedule are not necessary for the protection of workers employed in the factory, he may by a certificate in writing exempt such factory, from all or any of the provisions on such condition as he may specify therein

APPENDIX
CAUTIONARY
NOTICE

Insecticides and pesticides

1. Chemicals handled in this plant are poisonous substances.

2. Smoking, eating food or drinking, chewing tobacco in this area is prohibited. No food stuff or drink shall be brought in this area.

3. Some of these chemicals may be absorbed through skin and may cause poisoning.

4. A good wash shall be taken before meals.

5. A good bath shall be taken at the end of this shift.

6. Protective clothing and equipment supplied shall be used while working in this area.

7. Containers of pesticides shall not be used for keeping food stuffs.

8. Spillage of the chemicals on any part of the body or on the floor or work- bench shall be immediately washed away with water.

9. Clothing contaminated sue to splashing shall be removed immediately.

10. Scrupulous cleanliness shall be maintained in this area.

11. Do not handle pesticides with bare hands, use scoops provided with handle.

12. In case of sickness like nausea, vomiting, giddiness, the manager should be informed who will make necessary arrangements for treatment.

13. All workers shall report for the prescribed medical tests regularly to protect their own health.

Schedule – XXV

Manufacture of Rayon by viscose process

1. **Definitions -** For the purpose of this schedule -

(a) ”approved” means approved for the time being in writing by the Chief Inspector;

(b) ”breathing apparatus” means a helmet or face piece with necessary connections by means of which the person using it in a poisonous, asphyxiating or irritant atmosphere breathes unpolluted air; or any other approved apparatus;

(c) ”churn” means the vessel in which alkali cellulose pulp is treated with carbon disulphide;

(d) ”dumping” means transfer of cellulose xanthate from a dry churn to a dissolver;

(e) ”efficient exhaust draught” means localised ventilation by mechanical means for the removal of any gas or vapour, so as to prevent it from escaping into the air of any place in which work is carried on. No draught shall be deemed to be efficient if it fails to control effectively any gas or vapour generated at the point where such gas or fume originates;

(f) ”fume process” means any process in which carbon disulphide or hydrogen sulphide is produced, used or given off;

(g) ”life belt” means a belt made of leather or other suitable material which can be securely fastened round the body with a suitable length of rope attached to it, each of which is sufficiently strong to sustain the weight of a man;

(h) ”protective equipment” means apron, goggles, face shields, footwear, gloves and overalls made of suitable materials.

2. **Ventilation -**

(1) In all workrooms where a fume process is carried on, adequate ventilation by natural or mechanical means shall be provided so as to control, in association with other control measures, the concentration of carbon-di-sulphide and hydrogen sulphide in the air of every work environment within the permissible limits.

(2) Notwithstanding the requirements in sub-paragraph (1) an efficient exhaust draught shall be provided and maintained to control the concentration of carbon-di- sulphide and hydrogen sulphide in the air at the following locations :-

(a) dumping hoppers of dry churns;
(b) spinning machines;
(c) trio rollers and cutters used in steple fibre spinning; (d) gydro-extractors for yarn cakes;
(e) after treatment processes; and
(f) spin baths.

(3) In so far as the spinning machines and trio rollers and cutters used in staple fibre spinning are concerned, they shall be, for the purpose of ensuring

the effectiveness of the exhaust draft to be provided as required in sub-paragraph (1),

enclosed as fully as practicable and provided with suitable shutters in sections to enable the required operations to be carried out without giving rise to undue quantities of carbon-di-dulphide escaping to the work environment.

(4) No dry churn shall be opened after completion of reaction without initially exhausting the residual vapours of carbon-di-sulphide by operation of a suitable and efficient arrangement for exhausting the vapours which shall be continued to be operated as long as the churn is kept opened.

(5) Whenever any ventilation apparatus normally required for the purpose of meeting the requirements in sub-paragraphs (2), (3), and (4) is ineffective, fails, or is stopped for any purpose whatsoever, all persons shall be required to leave the work areas where the equipment or processes specified in the above said sub-paragraphs are in use, as soon as possible, and in any case not later than 15 minutes after such an occurrence.

(6) (a) All ventilating systems provided for the purposes as required in sub- paragraphs (2), (3) and (4) shall be examined and inspected once every week by a responsible person. It shall be thoroughly examined and tested by a competent person once In every period of 12 months. Any defects found by such examinations or test shall be rectified forthwith.

(b) A register containing particulars of such examinations and tests, and the state of the systems and the repairs or alterations (if any) found to be necessary shall be kept and shall be available for inspection by an Inspector.

3. **Waste from spinning machines-** Waste yarn from the spinning machines shall be deposited in suitable containers provided with close fitting covers. Such waste shall be disposed off as quickly as possible after decontamination.

4. **Lining of dry churns -** The inside surface of all dry churns shall be coated with a non-sticky paint so that cellulose xanthate will not stick to the surface of the churn. Such coating shall be maintained in good condition.

5. Air monitoring -

(1) To ensure the effectiveness of the control measures, monitoring of carbon-di-sulphide and hydrogen sulphide in air shall be carried out once atleast in every shift and the record of the results so obtained shall be entered in a register specially maintained for the purposes.

(2) For the purpose of the requirement in sub-paragraph (1), instantaneous gas detector tubes shall not be used. Samples shall be collected over duration of not less than 10 minutes and analyzed by an approved method. The locations where such monitoring is to be done shall be as directed by the Inspector.

(3) If the concentration of either carbon disulphide or hydrogen sulphide exceeds the permissible limits for such vapour or gas as laid down in Rule 123A, suitable steps shall be taken for controlling the concentrations in air of such contaminants. A report of such occurrences shall be sent to the Chief Inspector forthwith.

6. **Prohibition to remain in fume process room -** No person during his intervals for meal, or rest shall remain in any room wherein fume process is carried on.

7. **Prohibition relating to employment of young persons -** No young person shall be employed or permitted to work in any fume process or in any room in which any such process is carried on.

8. **Protective equipment -** (1) the occupier shall provide and maintain in good condition protective equipment as specified in the Table for use of persons employed in the processes referred to therein.

Table

No.	Process	Protective equipment
1.	Dumping	Overalls, face-shields, gloves and footwear – all made of suitable material
2	.Spinning	Suitable aprons, gloves and footwear
3	Process involving or likely to involve contact with viscose solution	Suitable gloves and footwear
4	.Handling of sulphur	Suitable chemical goggles
	Any other process involving contact with hazardous chemicals	Protective equipment as may be directed by the Chief Inspector by an order in writing

(2) A suitable room, rooms or lockers shall be provided exclusively for the storage of all protective equipment supplied to workers and no such equipment shall be stored at any place other than the room, rooms or lockers so provided.

9. **Breathing apparatus -** (1)There shall be provided in every factory where fume process is carried on, sufficient supply of -

(a) breathing apparatus,

(b) oxygen and a suitable appliances for its administration, and (c) life belts.

(2) (a) The breathing apparatus and other appliances referred to in sub- paragraph (1) shall be maintained in good condition and kept in appropriate locations so as to be readily available.

(b) The breathing apparatus and other appliances referred to in clauses (a) and (b) of sub-paragraph (1) shall be cleaned and disinfected at suitable intervals and thoroughly inspected once every month by a responsible person.

(c) A record of the maintenance of the condition of the breathing apparatus and other appliances referred to in sub-clause (1) shall be entered in a register provided for that purpose which shall be readily available for inspection by an Inspector.

(3) Sufficient number of workers shall be trained and periodically retrained in the use of breathing apparatus and administering artificial

respiration so that at least 2 such trained persons would be available during all the working hours in each room in which fume process is carried on.

(4) Breathing apparatus shall be kept properly labeled in clean, dry, light-proof cabinets and if liable to be affected by fumes, shall be protected by placing them in suitable containers.

(5) No person shall be employed to perform any work for which breathing apparatus is necessary to be provided under sub-paragraph (1) unless he has been fully instructed in the proper use of that equipment.

(6) No breathing apparatus provided in pursuance of sub-paragraph (1) which has been worn by a person shall be worn by another person shall be worn by another person unless it has been thoroughly cleaned and disinfected since last being worn and the person has been fully instructed in the proper use of that equipment.

10. **Electric fittings -** All electric fittings in any room in which carbon-di-sulphide is produced, used or given off or is likely to be given off into the work environment, other than a spinning room, shall be of flame-proof construction and all electric conductors shall either be enclosed in metal conduits or be lead-sheathed.

11. **Prohibition relating to smoking, etc. -** No person shall smoke or carry matches, fire or naked light or other means of producing a naked light or spark in a room in which fume process is carried on.

A notice in the language understood by the majority of the workers shall be posted at prominent locations in the plant prohibiting smoking and carrying of matches, fire or naked light or other means of producing naked light or spark into such rooms.

Provided that fire, naked light or other means of producing a naked light of spark may be carried on in such room only when required for the purposes of the process itself under the direction of a responsible person.

12. **Washing and bathing facilities -** (1)There shall be provided and maintained in a clean state and in good repair for the use of all workers employed and in the processes covered by the schedule, adequate washing and bathing places having a constant supply of water under cover at the rate of one such place for every 25 persons employed.

(2) The washing places shall have standpipes placed at intervals of not less than one meter.

(3) Not less than one half of the total number of washing places shall be provided with bathrooms.

(4) Sufficient supply of clean towels made of suitable material shall be provided.

Provided that such towels shall be supplied individually for each worker if so ordered by the Inspector.

(5) Sufficient supply of soap and nail brushes shall be provided.

13. Rest Room -

(1) A rest room shall be provided for the workers engaged in doffing operations of filament yarn spinning process.

(2) Such rest room shall be provided with fresh air supply and adequate seating arrang

14. **Cautionary notice and instructions -** (1) the following cautionary notice shall be prominently displayed in each fume process room.

Cautionary Notice

I. Carbon disulphide (CS2) and Hydrogen Sulphide (H2S) which may be present in this room are hazardous to health.

II. Follow safety instructions.

III. Use protective equipment and breathing apparatus as and when required.

IV. Smoking is strictly prohibited in this area."

This notice shall be in a language understood by the majority of the workers and displayed where it can be easily and conveniently read. If any worker is illiterate, effective steps shall be taken to explain carefully to him the contents of the notice so displayed.

(2) Arrangements shall be made to instruct each worker employed in any room in which a fume process is carried on regarding the health hazards connected with their work and the preventive measures and methods to protect themselves. Such instructions shall be given on his first employment and repeated periodically.

(3) Simple and special instructions shall be framed to ensure that effective measures will be carried out in case of emergency involving escape of carbon- di-sulphide and hydrogen sulphide. Those instructions shall be displayed in the concerned areas and workers shall be instructed and trained in the actions to be taken in such emergencies.

15. **Medical facilities and records of examinations and tests -** (1) the occupier of every factory to which this schedule applies, shall-

(a) employ a qualified medical practitioner for medical surveillance of the workers employed therein whose employment shall be subject to the approval of the Chief Inspector of Factories; and

(b) Provide to the said medical practitioner all the necessary facilities for the purpose referred to in clause (a).

(2) The record of such examinations carried out by the medical practitioner shall be maintained in a separate, register approved by the Chief Inspector of Factories, which shall be kept readily available for inspection by the Inspector.

16. **Medical examination by certifying Surgeon -** (1) every worker employed in the processes specified in paragraph 1 shall be examined by a Certifying Surgeon within 15 days of his first employment. Such examinations shall include skin test for dermatitis and no worker shall be allowed to work after 15 days of his first employment in the factory unless certified fit for such employment by the Certifying Surgeon.

(2) Every worker employed in a manganese process shall be re-examined by a Certifying Surgeon at least once in every three calendar months and such examination shall, wherever the Certifying Surgeon considers appropriate, include all the tests in sub-paragraph (1).

(3) The Certifying Surgeon after examining a worker shall issue a Certificate of Fitness in

Form 32. The record of examination and re-examinations carried out shall be entered in the Certificate and the Certificate shall be kept in the custody of the manger of the factory. The record of each examination carried out under sub-paragraph (1) and (2) including the nature and the results of these test, shall also be entered by the Certifying Surgeon in a health register in Form 17.

(4) The Certificate of Fitness and the health register shall be kept readily available for inspection by the Inspector.

(5) If at any time the Certifying Surgeon is of the opinion that a worker is no longer fit for employment in the said processes on the ground that continuance therein
would involve special danger to the health of the worker, he shall make a record of his findings in the said certificate and the health register. The entry of his findings in those documents should also include the period for which he considers that the said person is unfit to work in the said process shall be provided with alternate placement facilities unless he is fully incapacitated in the opinion of the Certifying Surgeon , in which case the person affected shall be suitably rehabilitated.

(6) No person who has been found unfit to work as said in sub-paragraph (5) shall be re-employed or permitted to work in the said processes unless the Certifying Surgeon, after further examination, again certifies him fit for employment in those processes.

17. **Exemptions -** If in respect of any factory, the Chief Inspector is satisfied that owing to the exceptional circumstances or infrequency of the processes or for any other reason, all or any of the provisions of this schedule is not necessary for the protection of the workers in the factory, the Chief Inspector may be a certificate in writing which he may in his discretion revoke at any time, exempt such factory from all or any of such provisions subject to such conditions, if any, as he may specify therein.

Schedule – XXVI

Highly Flammable Liquids and Flammable Compressed Gases

1. **Application -** These rules will be applicable to all factories where highly flammable liquids or flammable compressed gases are manufactured, stored, handled or used.

2. **Definition -** For the purpose of this schedule –

(a) "highly flammable liquid" means any liquid including its solution, emulsion or suspension which when tested in a manner specified by sections 14 and 15 of the Petroleum Act, 1934, (30 of 1934) gives off flammable vapours at a temperature less than 32 degree centigrade;

(b) "flammable compressed gas" means flammable compressed gas as defined in section 2 of the Static and Mobile Pressure Vessels (Unfired) Rules 1981 framed under the Explosive Act, 1884.

3. Storage -

(1) Every flammable liquid or flammable compressed gas used in every factory shall be stored in suitable fixed storage tank, or in suitable closed vessel located in a safe position under the ground, in the open or in a store room of adequate fire resistant construction.

(2) Except as necessary for use, operation or maintenance, every vessel or tank which contains or had contained highly flammable liquid or flammable compressed gas shall be always kept closed and all reasonably practicable steps shall be taken to contain or immediately drain off to a suitable container any spill or leak that may occur.

(3) Every container, vessel, tank, cylinder, or store room used for storing highly flammable liquid or flammable compressed gas shall be clearly and in bold letters marked **"Danger-Highly Flammable Liquid" or "Danger-Flammable Compressed Gas".**

4. **Enclosed Systems for Conveying Highly Flammable Liquids -** Wherever it is reasonably practicable, highly flammable liquids shall be conveyed within a factory in totally enclosed systems consisting of pipe lines, pumps and similar appliances from the storage tank or vessel to the point of use. Such enclosed systems shall be so designed, installed, operated and maintained as to avoid leakage or the risk of spilling.

5. **Preventing Formation of Flammable Mixture with Air -** Wherever there is a possibility for leakage or spill of highly flammable liquid or flammable compressed gas from any equipment, pipe line, valve, joint or other part of a system, all practicable measures shall be taken to contain, drain off or dilute such spills or leakage as to prevent formation of flammable mixture with air.

6. Prevention of Ignition -

(1) In every room, work place or other location where highly flammable liquid or flammable combustible gas is stored, conveyed, handled or used or where there is danger of fire or explosion from accumulation of highly flammable liquid or flammable compressed gas in air, all practicable measures shall be taken to exclude the sources of ignition. Such precautions shall include the following:

(a) All electrical apparatus shall either be excluded from the area of risk or they shall be of such construction and so installed and maintained as to prevent the danger of their being a source of ignition;

(b) Effective measures shall be adopted for prevention of accumulation of static charges to a dangerous extent;

(c) no person shall wear or be allowed to wear any foot wear having iron or steel nails or any other exposed ferrous materials which is likely to cause sparks by friction;

(d) Smoking, lighting or carrying of matches, lighters or smoking materials shall be prohibited;

(e) Transmission belts with iron fasteners shall not be used; and

(f) all other precautions, as are reasonably practicable, shall be taken to prevent initiation of ignition from all other possible sources such as open flames, frictional sparks, overheated surfaces of machinery or plant, chemical or physical-chemical reaction and radiant heat.

7. **Prohibition of smoking -** No person shall smoke in any place where highly flammable liquid or flammable compressed gas is present in circumstances that smoking would give a risk of life. The occupier shall take all practicable measures to ensure compliance with this requirement including display of a bold notice indicating prohibition of smoking at every place where this requirement applies.

8. **Fire Fighting -** In every factory where highly flammable liquid or flammable compressed gas is manufactured, stored, handled or used, appropriate and adequate means of fighting a fire shall be provided. The adequacy and suitability of such means which expression includes the fixed and portable fire extinguishing systems, extinguishing material, procedures and the process of fire fighting, shall be to the standards and levels prescribed by the Indian Standards applicable, and in any case not inferior to the stipulations under Rule 66 of Punjab Factory Rules,1952.

9. **Exemptions -** If in respect of any factory, the Chief Inspector is satisfied that owing to the exceptional circumstances or infrequency of the processes or for any other reason, all or any of the provisions of this schedule is not necessary for the protection of the workers in the factory, the Chief Inspector may be a certificate in writing which he may in his discretion revoke at any time, exempt such factory from all or any of such provisions subject to such conditions, if any, as he may specify therein.

Schedule – XXVII

Operations in Foundries

1. **Application -** Provisions of this schedule shall apply to all parts of factories where any of the following operations or processes are carried on:

(a) the production of iron castings or, as the case may be, steel castings by casting in moulds made of sand, loam, moulding composition or other mixture of materials, or by shall moulding, or by centrifugal casting and any process incidental to such production;

(b) the production of non-ferrous castings by casting metal in moulds made of sand, loam , metal, moulding composition or other material or mixture of materials, or by shall mouldings, die-casting (including pressure die casting), centrifugal casting or continuous casting and any process incidental to such production; and

(c) the melting and casting of non-ferrous metal for the production of ingots, billets, slabs or other similar products, and the stripping thereof;

But shall not apply with respect to -

(a) Any process with respect to the smelting and manufacture of lead and the Electric Accumulators;

(b) Any process for the purpose of a printing works; or

(c) Any smelting process in which metal is obtained by a reducing operation or any process incidental to such operation; or

(d) The production of steel in the form of ingots; or

(e) Any process in the course of the manufacture of solder or any process incidental to such manufacture; or

(f) the smelting and casting of lead or any lead-based alloy for the production of ingots, billets, slabs or other similar products or the stripping thereof, or any process incidental to such melting, casting or stripping.

2. **Definition -** For the purpose of this schedule -

(A) ”approved respirator’ means a respirator of a type approved by the Chief Inspector;

(B) ”cupola of furnace” includes a receiver associated therewith;

(C) ”dressing or fettling operations” includes stripping and other removal of adherent sand, cores, runners, risers, flash and other surplus metal from a casting and the production of reasonably clean and smooth surface, but does not include (a) the removal of metal from a casting when performed incidentally in connection with the machining or assembling of castings after they have been dressed or fettled, or (b) any operation which is knock-out operation within the meaning of this schedule;

(D) ”foundry” means those parts of a factory in which the production of iron or steel or non-ferrous castings (not being the production of pig iron or the production of steel in the form of ingots) is carried on by casting in moulds made of sand, loam, moulding composition or other mixture of materials, or by shell moulding or by
centrifugal casting in metal moulds lined with sand, or die casting including

pressure die casting, together with any part of the factory in which any of the following processes are carried on as incidental processes in connection with and in course of, such production, namely, the preparation and preparation of moulds and cores, knock out operations and dressing or fettling operations;

(E) "knock-out operations" means all methods of removing castings from moulds and the following operations, when done in connection therewith, namely, stripping, coring-out and the removal of runners and risers;

(F) "pouring aisle" means an aisle leading from a main gangway or directly from a cupola or furnace to where metal is poured into moulds.

3. Prohibition of use of certain materials as parting materials -

(1) A material shall not be used as a parting material if it is a material containing compounds of silicon calculated as silica to the extent more than 5 percent by weight of the dry material :

Provided that this prohibition shall not prevent the following being used as a parting material if the material does not contain an admixture of any other silica -

(a) Zirconium silicate (Zircon)
(b) Calcined china clay
(c) Calcined aluminous fireclay
(d) Sillimanite
(e) Calcined or fused alumina
(f) Olivine
(g) Natural sand

(2) Dust or other matter deposited from a fettling or blasting process shall not be used as a parting material or as a constituent in a parting material.

4. **Arrangement and storage -** For the purposes of promoting safety and cleanliness in workrooms the following requirements shall be observed:-

(a) moulding boxes, loam plates, ladles, patterns, pattern plates, frames, boards, box weights, and other heavy articles shall be so arranged and placed as to enable work to be carried on without unnecessary risk;

(b) Suitable and conveniently accessible racks, bins, or other receptacles shall be provided and used for the storage of other gear and tools;

(c) Where there is bulk storage of sand, fuel, metal scrap or other materials or residues, suitable bins, bunkers or other receptacles shall be provided for the purpose of such storage.

5. Construction of floors -

(1) Floors of indoor workplaces in which the processes are carried on, other than parts which are of sand, shall have been surface of hard material.

(2) No part of the floor of any such indoor workplace shall be of sand except where this is necessary by reason of the work done.

(3) All parts of the surface of the floor of any such indoor workplace which are of sand shall, so far as practicable, be maintained in an even and firm condition.

6. Cleanliness of indoor workplaces.-

(1) All accessible parts of the walls of every indoor workplace in which the processes are carried on and of everything affixed to those wall shall be effectively cleaned by a suitable method to a height of not less than 4.2 metres from the floor at least once in every period of fourteen months. A record of the carrying out of every such effective cleaning in pursuance of this paragraph including the date (which shall be not less than five months nor more than nine months after the last immediately preceding washing, cleaning or other treatment.)

(2) Effective cleaning by a suitable method shall be carried out at least once every working day of all accessible parts of the floor of every indoor workplace in which the processes are carried on, other than parts which are of sand; and the parts which are of sand shall keep in good order.

7. Manual operations involving molten metal -

(1) There shall be provided and properly maintained for all persons employed on manual operations involving molten metal with which they are liable to be splashed, a working space for that operation -

(a) Which is adequate for the safe performance of the work and

(b) Which, so far as reasonably practicable, is kept free from obstruction?

(2) Any operation involving the carrying by hand of a container holding molten metal shall be performed on a floor all parts of which where any person walks while engaged in the operation shall be on the same level:

Provided that, where necessary to enable the operation to be performed without undue risk, nothing in this paragraph shall prevent the occasional or exceptional use of a working space on a different level from the floor, being a space provided with a safe means of access from the floor for any person while engaged in the operation.

8. Gangways and pouring aisles -

(1) In every workroom to which this paragraph applies constructed, reconstructed or converted for use as such after the making of this Schedule and, so far as reasonably practicable, in every other workroom to which this Paragraph applies, sufficient and clearly defined main gangway shall be provided and properly maintained which -

(a) shall have an even surface of hard material and shall, in particular, not be of sand or have on them more sand than is necessary to avoid risk of flying metal from accidental spillage;

(b) shall be kept, so far as reasonably practicable, free from obstruction;

(c) if not used for carrying molten metal, shall be at least 920 millimetres in width;

(d) if used for carrying molten metal shall be -

(i) Where truck ladles are used exclusively, at least 600 millimetres wider than the overall width of the ladle;

(i) Where hand shanks are carried by not more than two men, at least 920 millimetres in width;

(ii) Where hand shanks are carried by more than two men, at least 1.2 matters in width; and

(iv) Where used for simultaneous travel in both directions by men carrying hand shanks, at least 1.8 metres in width.

(2) In workroom to which this Paragraph applies constructed, reconstructed or converted for use as such after the making of this Schedule, sufficient and clearly defined pouring aisles shall be provided and properly maintained which -

(a) shall have an even surface of hard material and shall, in particular, not be sand or have on them more sand than is necessary to avoid risk of flying metal from accidental spillage;

(b) Shall be kept so far as reasonably practicable free from obstruction;

(c) if molten metal is carried in hand ladles or bulk ladles by not more than two men per ladle, shall be at least 460 millimetres wide, but where any moulds alongside the aisle are more than 510 millimetres above the floor of the aisle, the aisle shall be not less than 600 millimetres wide;

(d) if molten metal is carried in hand ladles or bull ladles by more than two men per ladle, shall be at least 760 millimetres wide;

(e) if molten metal is carried in crane, trolley or truck ladles, shall be of a width adequate for the safe performance of the work.

(3) Requirements of sub-paragraph (1) and (2) shall not apply to any workroom or part of a workroom if, by reason of the nature of the work done therein, the floor of that workroom or, as the case may be, that part of a workroom has to be of sand.

(4) In this paragraph "workroom to which this paragraph applies" means a part of a ferrous or non-ferrous foundry in which molten metal is transported or used, and a workroom to which this paragraph applies shall be deemed for the purposes of this paragraph to have been constructed, reconstructed or converted for use as such after the making of this schedule if the construction, reconstruction or conversion thereof was begun after the making of this schedule.

9. **Work near cupolas and furnaces -** No person shall carry out any work within a distance of 4 metres from a vertical line passing through the delivery end of any spout of a cupola or furnace, being a spout used for delivering molten metal, or within a distance of 2.4 metres from a vertical line passing through the nearest part of any ladle which is in position at the end of such a spout, except, in either case, where it is necessary for the proper use of maintenance of a cupola or furnace that work should be carried out within that distance of that work is being carried out at such a time and under such conditions that there is no danger to the person carrying it out from molten metal which is being obtained from the cupola or furnace or is in a ladle in position at the end of the spout.

10. Dust and fumes.-

(1) Open coal, coke or wood fires shall not be used for heating or drying ladles inside a workroom unless adequate measures are taken to prevent, so far as practicable, fumes or other impurities from entering into or remaining in the atmosphere of the workroom.

(2) No open coal, coke or wood fires shall be used for drying moulds except in circumstances in which the use of such fires is unavoidable.

(3) Mould stoves, core stoves and annealing furnaces shall be so designed constructed, maintained and worked as to prevent, so far as practicable, offensive or injurious fumes from entering into any workroom during any period when a person is employed therein.

(4) All knock-out operations shall be carried out **-**

(a) in a separate part of foundry suitably partitioned off, being a room or part in which, so far as reasonably practicable, effective and suitable local exhaust ventilation and a high standard of general ventilation are provided; or

(b) in an area of the foundry in which, so far as reasonably practicable, effective and suitable local exhaust ventilation is provided, or where compliance with this requirement is not reasonably practicable, a high standard of general ventilation is provided.

(5) All dressing or fettling operations shall be carried out -

(a) In a separate room or in a separate part of foundry suitably partitioned off; or

(b) In an area of the foundry set apart for the purpose;

and shall, so far as reasonably practicable, be carried out with effective and suitable local exhaust ventilation or other equally effective means of suppressing dust, operating as near as possible to the point of origin of the dust.

11. Maintenance and examination of exhaust plant -

(1) All ventilation plant used for the purpose of extracting, suppressing or controlling dust or fumes shall be properly maintained.

(2) All ventilating plant used for the purpose of extracting, suppressing or controlling dust or fumes shall be examined and inspected once every week by a responsible person. It shall be thoroughly examined and tested by a competent person at least once in every such examination and test shall be entered in an approved register which shall be available for inspection by an Inspector. Any defect found on any such examination and carrying out the examination and test to the occupier or manager of the factory.

12. Protective equipment -

(1) The occupier shall provide and maintain protective equipment specified for the protection of workers,

(a) suitable gloves to other protection for the hands for workers engaged in handling any hot material likely to cause damage to the hands by burn, scald, or scar, or in handling pig iron, rough castings or other articles likely to cause damage to the hands by cut or abrasion;

(b) approved respirators for workers carrying out any operations creating a have dust concentration which cannot be dispelled quickly and effectively by the existing ventilation arrangements.

(2) No respirator provided for the purposes of clause 1(b) has been worn by a person shall be worn by another person if it has not since been thoroughly cleaned and disinfected.

(3) Persons who for any of their time -

(a) work at a spout of or attend to, a cupola or furnace in such circumstances that material there from may come into contact with the body, being material at such a temperature that its contact with the body would cause a burn; or

(b) Are engaged in, or in assisting with, the pouring of molten metal; or

(c) carry by hand or move by manual power any ladle or mould containing molten metal; or

(d) are engaged in knocking-out operations involving material at such a temperature that its contact with the body would cause a burn;

Shall be provided with suitable footwear and gaiters which worn by them prevent, so far as reasonably practicable, risk of burns to his feet and ankles.

(4) Where appropriate, suitable screens shall be provided for protection against flying materials (including splashes of molten metal and sparks and chips thrown off in the course of any process).

(5) The occupier shall provide and maintain suitable accommodation for the storage and make adequate arrangements for cleaning and maintaining of the protective equipment supplied in pursuance of this paragraph.

(6) Every person shall make full and proper use of the equipment provided for his protection in pursuance of sub-paragraph (1) and (4) and shall without delay report to the occupier, manager, or other appropriate person any defect in, or less of, the same.

13. Washing and bathing facilities -

(1) There shall be provided and maintained in clean state and good repair for the use of all workers employed in the foundry -

(a) A wash place under cover with either -

(i) a trough with impervious surface fitted with a waste pipe without plug, and of sufficient length to allow at least 60 centimetres for every 10 such persons employed at any one time and having a constant supply of clean water from taps or jets above the trough at intervals of not more than 60 centimetres or

(ii) at least one tap or stand pipe for every 10 such persons employed at any one time, and having a constant supply of clean water, the tap or stand pipe being spaced not less than 1.2 metres apart; and

(b) Not less than one half of the total number of washing places provided under clause (a) shall be in form of bath rooms.

(c) A sufficient supply of clean towels made of suitable material changed daily, wi il brushes and soap.

(2) The facilities provided for the purposes of sub-paragraph (1) shall be placed in charge of a responsible person or persons and maintained in a clean and orderly condition.

14. **Disposal of dross and skimming -** Dross and skimming removed from molten metal or taken from a furnace shall be placed forthwith in suitable receptacles.

15. **Disposal of waste -** Appropriate measures shall be taken for the disposal of all waste products from shell moulding (including waste burnt sand) as soon as reasonably practicable after the castings have been knocked-out.

16. **Material and equipment left out of doors -** All material and equipment left out of doors (including material, and equipment so left only temporarily or occasionally) shall be so arranged and placed as to avoid unnecessary risk. There shall be safe means of access to all such material and equipment and, so far as reasonably practicable, such access shall be by roadways or pathways which shall be properly maintained. Such roadways or pathways shall have a firm and even surface and shall, so far as reasonably practicable be kept free from obstruction.

17. **Medical facilities and records of examinations and tests -** (1) The occupier of every factory to which this schedule applies, shall-

(a) employ a qualified medical practitioner for medical surveillance of the workers employed therein whose employment shall be subject to the approval of the Chief Inspector of Factories; and

(b) Provide to the medical practitioner all the necessary facilities for the purpose referred to in clause (a).

(2) The record of such examinations carried out by the medical practitioner shall be maintained in a separate, register approved by the Chief Inspector of Factories, which shall be kept readily available for inspection by the Inspector.

18. **Medical examination by certifying Surgeon -** (1) every worker employed in the processes specified in paragraph 1 shall be examined by a Certifying Surgeon within

15 days of his first employment. Such examinations shall include skin test for dermatitis and no worker shall be allowed to work after 15 days of his first employment in the factory unless certified fit for such employment by the Certifying Surgeon.

(2) Every worker employed in a manganese process shall be re-examined by a Certifying Surgeon at least once in every 12 months and such examination shall, wherever the Certifying Surgeon considers appropriate, include all the tests in sub- paragraph (1).

(3) The Certifying Surgeon after examining a worker, shall issue a Certificate of Fitness in

Form 32. The record of examination and re-examinations carried out shall be entered in the Certificate and the Certificate shall be kept in the custody of the manger of the factory. The record of each examination carried out under sub-paragraph (1) and (2) including the nature and the results of these test, shall also be entered by the Certifying Surgeon in a health register in Form 17.

(4) The Certificate of Fitness and the health register shall be kept readily available for inspection by the Inspector.

(5) If at any time the Certifying Surgeon is of the opinion that a worker is no longer fit for employment in the said processes on the ground that continuance therein would involve special danger to the health of the worker, he shall make a record of his findings in the said certificate and the health register. The entry of his findings in those documents should also include the period for which he considers that the said person is unfit to work in the said process shall be provided with alternate placement facilities unless he is fully incapacitated in the opinion of the Certifying Surgeon , in which case the person affected shall be suitably rehabilitated.

(6) No person who has been found unfit to work as said in sub-paragraph (5) shall be re-employed or permitted to work in the said processes unless the Certifying Surgeon, after further examination, again certifies him fit for employment in those processes.

19. **Exemptions -** If in respect of any factory, the Chief Inspector is satisfied that owing to the exceptional circumstances or infrequency of the processes or for any other reason, all or any of the provisions of this schedule is not necessary for the protection of the workers in the factory, the Chief Inspector may be a certificate in writing which he may in his discretion revoke at any time, exempt such factory from all or any of such provisions subject to such conditions, if any, as he may specify therein.

Rule 103: [Framed U/S 88of the Act]

Notification of Accidents and Dangerous Occurrences

(1) When any accident which results in the death of any or which results in such bodily injury to

any person as is likely to cause his death, or any dangerous occurrence specified in the Schedule to this rule takes place in a factory, the manager of the factory shall forthwith send a notice thereof by telephone, special messenger or telegram to the Inspector and the Chief Inspector.

(2) When any accident or any dangerous occurrence specified in the Schedule to this rule which results in the death of any person or which results in such bodily injury to any person as is likely to cause his death, takes place in a factory, a notice as mentioned in sub-rule (1) shall also be sent to-

(a) the District Magistrate or Sub-Divisional Magistrate;

(b) the Officer-in-charge of the Police Station; and

(c) the relatives of the injured or deceased person.

(3) Any notice given as required under sub-rules (1) and (2) shall be confirmed by the manager of the factory to the authorities mentioned in sub-rules (1) and (2) within twelve hours of the accident or the dangerous occurrence by sending them a written report in

Form 18 in the case of an accident or dangerous occurrence causing death or bodily injury to any person in Form 18-A in the case of dangerous occurrence which has not resulted in any bodily injury to any person.

(4) When any accident or dangerous occurrence specified in the Schedule below takes place in a factory and it causes such bodily injury to any person as prevents the person injured from working for a period of forty-eight hours or more immediately following the accident or the dangerous occurrence, as the case may be, the manager of the factory shall send a report thereof to the Inspector and Chief Inspector in

Form 18 within twenty-four hours after the expiry of the forty-eight hours from the time of the accident or the dangerous occurrence:

Provided that if an in the case of an accident or dangerous occurrence, death occurs of any person injured by such accident or dangerous occurrence after the notices and reports referred to in the foregoing sub-rule have been sent, the manager of the factory shall forthwith send a notice thereof by telephone, special messenger or telegram to the authorities and persons mentioned in sub-rules (1) and (2) and also have this information confirmed in writing within twelve hours of the death;

Provided further that, if the period of disability from working for forty-eight hours or more referred to in sub-rule (4) does not occur immediately following the accident, or the dangerous
occurrence, but later on occurs in more than one spell, the report referred to in clause (3) shall be sent to the Inspector and Chief Inspector in

Form 18 within twenty-four hours immediately following the hour when the actual total period of disability from working resulting from the accident or the occurrence dangerous becomes forty-eight hours.

SCHEDULE

The following class of dangerous occurrence whether or not attended by personal injury or displacement, shall be dangerous occurrence within the meaning of rule 103:-

(a) Bursting of plant used for containing or supplying of steam under pressure greater than atmospheric pressure.

(b) Collapse or failure of crane, derrick, winch, hoist or any other appliance used in raising or lowering persons or goods or any other part thereof, or the over turning of crane.

(c) Explosion, fire, bursting out, leakage or escape of any molten metal or hot liquid or gas causing bodily injury to any person or damage to any room or place in which persons are employed or fire in the room of cotton pressing factories where cotton opener is in use.

(d) Explosion of receiver or container used for storage of pressure greater than atmospheric pressure of any gas(including air) or any liquid or solid resulting from the compression of gas.

(e) Collapse or subsidence of any floor, gallery, roof, bridge, tunnel, chimney, wall, building or any other structure.

Rule 104: [Framed U/S 89 of the Act]
Notice of poisoning or disease under section 89

A notice in

Form 19 should be sent forthwith both to the Chief Inspector and to the Certifying Surgeon by the Manager of a factory in which there occurs a case of lead, phosphorus, mercury, manganese, arsenic, carbon bisulphide or benzene poisoning or poisoning by nitrous fumes, or by halogen or halogen derivatives of the hydrocarbons of the aliphatic series; or of chrome ulceration, anthrax, silicosis, toxic anaemia, toxic jaundice, primary opitheliomatous cancer of the skin, or pathological manifestations due to radium or other radio-active substances or X- Rays.

Rule 104A: [Framed U/S 41-F & 112 of the Act]

Permissible levels of certain chemical substances in work environment

Without prejudice to the requirements in any other provisions in the Act or the rules made there under, the requirements specified in the Schedule given below shall apply to all factories:--- **SCHEDULE**

1. Definitions: for the purpose of this schedule -

(a) “mg/m3” means milligrams of a substances per cubic metre of air;

(b) “mppem” means million particles of a substance per cubic metre of air;

(c) “ppm” means parts of vapour or gas per million parts of air by volume at

25 degrees centigrade and 760 mm of mercury pressure;

(d) ”Time weighted average concentration” means the average concentration of a substance in the air at any work location in a factory computed from evaluation of adequate number of air samples taken at that location, spread over the entire shift on any day, after giving weightage to

the duration for which each such sample is collected and the concentration prevailing at the time of taking the sample.

$$\text{Time weighted average Concentration} = \frac{C1T1 + C2T2 + \ldots\ldots CnTn}{T1 + T2 + \ldots\ldots Tn}$$

Where C1 represents the concentration of the substance for duration T1 (in hours); C2 represents the concentration of the substance for duration T2 (in hours); and Cn represents

(e) “Work location” means a location in a factory at which a worker works or may be required to work at any time during any shift on any day.

2. Limits of concentration of substances at work location: - (I) The time weighted average concentration of any substance listed in table 1 or 2 of the schedule, at any work location in a factory during any shift on any day shall not exceed the limit of the permissible time weighted average concentration specified in respect of that substance: Provided that in the case of a substance mentioned in Table 1 in respect of which a limit in terms of short term maximum concentration is indicated, the concentration of such a substance may exceed the permissible limit of the time weighted average concentration for the substance for short periods not exceeding 15 minutes at a time, subject to the condition that-

(a) Such periods during which the concentration exceeds the prescribed time weighted average concentration are restricted to not more than 4 per shift;

(b) the time interval between any two such periods of higher exposure shall not be less than 60 minutes; and

(c) At no time the concentration of the substance in the air shall exceed the limit of short term maximum concentration.

(II) In the case of any substance given in Table 3, the concentration of the substance at any work location in a factory at any time during any day shall not exceed the limit of exposure for that substance specified in the table.

(III) In the cases where the word "skin" has been indicated against certain substance mentioned in Tables 1 and 3, appropriate measures shall be taken to prevent absorption through cutaneous routes particularly skin, mucous membranes, and eyes as the limits specified in these Tables are for conditions where the exposure is only through respiratory tract.

(IV) (a) In case, the air at any work location contains a mixture of such substances mentioned in Table 1, 2 or 3, which have similar toxic properties, the time weighted concentration of each of these substances during the shift should be such that when these time weighted concentration divided by the respective permissible time weighted average concentration specified in the above mentioned tables, and the fractions obtained are added together, the total shall not exceed unity.

$$\frac{C1}{L1} + \frac{C2}{L2} + \cdots + \frac{Cn}{Ln}$$

Where C1, C2..... Cn are the time weighted concentration of toxic substances 1, 2----- ----- ,and n respectively, determined after measurement at work location;

And L1, L2 .....Ln are the permissible time weighted average concentration of the toxic substances 1, 2, and n respectively.

(b) In case the air at any work location contains a mixture of substances, mentioned in Table 1, 2, 3 and these do not have similar toxic properties, then the time weighted concentration of each of these substances shall not exceed the permissible time weighted average concentration specified in the above mentioned tables, for that particular substance.

(c) The requirement in clauses (a) and (b) shall be in addition to the requirements in paragraphs 2 (1) and 2(2).

3. Sampling and evaluation procedures.-

(1) Notwithstanding provisions in any other paragraphs, the sampling and evaluation procedures to be adopted for checking compliance with the provisions in the schedule shall be as per standard procedures in vogue from time to time.

(2) Notwithstanding the provisions in paragraph 5, the following conditions regarding the sampling and evaluation procedures relevant to checking compliance with the provisions in the schedule are specified.

(a) For determination of the number of particles per cubic meter in item 1 (a)(i)(1) in Table 2, samples are to be collected by standard or midget impinger and the counts made by light-field technique.

(b) The percentage of quartz in the 3 formulae given in item 1(a)(i) of Table 2 is to be determined from air borne samples.

(c) For determination of number of fibres as specified in item 2(a) of Table 2, the membrane filter method at 430 x magnification (4mm objective) with phase contrast illumination should be used.

(d) Both for determination of concentration and percentage of quartz for use of the formula given in item 1(a)(i)(2) of Table 2, the fraction passing through a size-selector with the following characteristics should only be considered.

Aerodynamic diameter (unit density sphere)	Percentage allowed by size-selector
2.0	90
2.5	75
3.5	50
5.0	25
10.0	0

4. Power to require assessment of concentration of substances.-(1)An Inspector may, by an order in writing, direct the occupier or manager of a factory to get before any specified date, the assessment of the time weighted average concentration at any work location of any of the substances mentioned in Table 1,2 or 3 carried out.

(2) The results of such assessment as well as the method followed for air sampling and analysis for such assessment shall be sent to the Inspector within 3 days from the date of completion of such assessment and also a record of the same kept readily available for inspection by an Inspector.

5. Exemption.- If in respect of any factory or a part of a factory, the Chief Inspector is satisfied that, by virtue of the pattern of working time of the workers at different work locations or an account of other circumstances, no worker is exposed, in the air at the work locations, to a substance or substances specified in Tables 1,2 or 3 to such an extent as is likely to be injurious to his health, he (the Chief Inspector) may by an order in writing, exempt the factory or a part of the factory from the requirements in paragraph 2, subject to such conditions, if any, as he may specify therein.

TABLE - 1

Substance	permissible level of exposure			
	Time-weighted average concentration		short-term maximum concentration	
	ppm	mg/m3	ppm	mg/m3
Acetic acid	10	25	15	37
Acrelein	0.1	0.25	0.3	0.8
Aldrin-skin	-	0.25	-	0.75
Ammonia	25	18	35	27
Aniline-skin	2	10	5	20
Anisidine (o-poisoners) -skin	0.1	0.5	-	-
Arsenic & compounds (as)				

- 0.2 --				
Benzene	10 30	-	-	
Bromine 0.1 0.7	0.3	2		
2 Butanene Methylethyl				
Ketone – MEK	200	590	300	885
N-Butyl acetate	150 710	200	950	
Sec/tert.Butyl acetate	200	950	250	1190
Cadmium-dust and				
Salts (as Cd)	-	0.05	- 0.2	
Calcium Oxide	-	2	- -	
Carbaryl (Sovin) -	5	-	10	
Carbofuran (Furadan)	- 0.1	-	-	
Carbon disulphide-skin	2 60 30	90		
Carbon monoxide	50	55	400	440
Carbon tetrachloride-skin	10 65	20	130	
Carbonyl chloride				
(Phosgene)	0.1	0.4	- -	
Chlordane-skin	-	0.5	-	2
Chlorobenzene				
(mono chloro- benzene) 75	350	-	-	
Chlorine	1 3	3	9	
bis-Chloromethyl ether 0.001	- -	-		
Chromic acid and				
Chromates (as Cr.) - 0.05	-	-		
Chromium, Sel-Chromic,				
Chromous salts (as Cr)	-	0.5	-	-
Copper fume -	0.2	-	-	
Cotton dust, raw	- 0.2 -	0.6		
Cresol, all isomers-skin	5	22	-	-
Cyanides, (as CN)-skin	-	5	-	-
Cyanogen 10	20	-	-	
DDT				
(Dichlorodiphenyl-trichlore-ethane) -	-	-		3
Demeton-skin	0.01 0.1	0.03	0.3	
Diazion-skin	-	0.1 -	0.3	
Dibutyl phthalate	- 5	- 10		
Dichlorves (DDVP)				
-skin	0.1 1	0.3	3	
Dieldrin-skin - 0.25		- 0.75		
Dinitrobenzene				
(all isomers) skin			3	

Dinitrotoluene-skin	- 1.5	-	5	
Diphenyl 0.2 1.5	0.6	4		
Endosulfan (Thiodan)-skin	-	0.1	-	0.3
Endrin-skin	-	0.1 -	0.3	
Ethyl acetate	400 1000		-	-
Ethyl alcohol 1000	1900	- -		
Ethyl amine	10	18 -	-	
Flourides (as F) - 2.5	-	-		
Flourine	1 2	2	4	
Hydrogen Cyanide-skin	10	11	15 16	
Hydrogen sulfide	10	15	15	27
Iron oxide fume (Fe2O3 as Fe) - 5	-	10		
Isoamyl alcohol 100 360 125 450				
Isobutylalcohol	50 150	75	225	
Lead, inorg, fumes and dusts (as Pb)	-	0.15-	0.45	
Lindane-skin	-	0.5	-	1.5
Mala thion-skin	-	10 -	-	
Manganese fume (as Mn) -	1	-	3	
Mercury (as Hg)	- 0.05		-	0.15
Mercury (alkyl compounds) -skin (as Hg) 0.001	0.01	0.003	0.03	
Methyl alcohol (methanol) skin	200	260	250	310
Methyl cellosolve-skin (2-methoxy ethanol) 25	80 35	120		
Methyl isobutyl ketone-skin 100	410	125	510	
Naphthalene	10	50	15	75
Nickel carbonyl (as Ni)	0.05	0.35 -	-	
Nitric acid 2 5	4	10		
Nitric oxide	25	30	35	45
Nitrobenzene-skin 1 5	2	10		
Oil mist-mineral	-	5	-	10
Parathion-skin -	0.1 -	0.3		
Phenel-skin 5	19	10	38	
Phorate (Thimet)-skin	- 0.05		-	0.2
Phosgene (Carbonyl chloride) 0.1	0.4	-	-	
Phosphine	0.3	0.4 1	1	
Phosphorous (yellow) -	0.1 -		0.3	
Phosphorous pentachloride	-	1	-	3

Phosphorous trichloride	0.5	3	-	-
Picric acid-skin	-	0.1	-	0.3
Pyridine	5	15	10	30
Silane (silicon tetrahydride)	0.5	0.7	1	1.5
Styrene, monomer (phenyl-ethylene)	100	420	125	525
Sulphur dioxide	5	13	-	-
Sulphuric acid	-	1	-	-
Toluene (toluol)-skin	100	375	150	560
0-Toludine	5	22	10	44
Trichloroethylene	100	535	150	800
Vinyl chloride	5	10	-	-
Welding fumes (NOC)	-	5	-	-
Xylene (o-m-isomers)-skin	100	435	150	655

TABLE – 2

Substance	Permissible time weighted average concentration
1. Silica	
(a) Crystalline	
(i) Quartz	1060 ----------Mppcm
(1) In terms of dust count: -	% Quartz + 10
(2) In terms of respirable dust	10 ---------- Mg/m3
	% respirable quartz + 2
(3) In terms of total dust:	30 ---------- mg/m3
	% quartz + 3
(ii) Cristobalite	
Half the limits given against quartz	
(iii) Tridymite	
(iv) Silica fused	
Half the limits given against quartz	Same limit as for quartz
(v) Tripoli	Same limit as in formula in item 2 Given against quartz
(b) Amorphous	705 mppcm
2. Silicate having less than 1% Free silica by weight	
(a) Asbestos (fibres longer than 5 microns)	2 fibres/cubic centimetre
(b) Mica	705 mppcm
(c) Mineral Wool fibre	10 mg/m3
(d) Porlite	1060 mppcm

(e) Portland cement 1060 mppcm

(f) Soap stone 705 mppcm

(g) Talc (nonobostiform) 705 mppcm

(h) Talc (fibrous)

(i) Tromolite

3. Coal dust

same limit as for asbestos same limit as for asbestos

(1) For airborne dust having less
Than 5 % silicon dioxide
By weight 2mg/m3

(2) For airborne dust having same limit as prescribed by
Over 5% silicon dioxide formulas in item (2) against quartz.

TABLE - 3

Substance	Permissible limit of exposure	
	ppm	mg/m3
Acetic anhydride	5	20
O-Dichlorobenzene	50	300
Formaldehyde	2	3
Hydrogen Chloride	5	7
Manganese & compounds (as Mn)		-5
Nitrogen dioxide	5	9
Nitroglycerin-skin	0.2	2
Potassium hydroxide	-	2
Sodium hydroxide	-	2
2, 4, 6 - Trinitrotoluene (TNT)	-	0.5

CHAPTER-X SUPPLEMENTAL

Rule 105: [Framed U/S 107(3) of the Act]
Procedure in appeals

(1) An appeal presented under section 107 shall lie to the Chief Inspector, or in cases where the order appealed against is an order passed by that officer, to the state commissioner, and shall be in the form of a memorandum setting forth concisely grounds of objection to the order and bearing court-fees stamp in accordance with Article II of Schedule II to the Court-fees Act, 1870, and shall be accompanied by a copy of the order appealed against.

(2) *Appointment of assessors* - On receipt of the memorandum of appeal, the appellate authority may, if it thinks fit or ested that the appeal should be

heard with the aid of assessors, call upon the body specified in sub-rule (4) being the representative of the industry concerned to appoint an assessor within a period of 14 days. If an assessor is nominated by such body, the appellate authority shall appoint a second assessor itself. It shall then fix a date for the hearing of the appeal and shall give due notice of such date to the appellant and to the Inspector whose order is appealed against, and shall call upon the two assessors to appear upon such date to assist him in the hearing of the appeal.

(3) The appellant shall state in the memorandum presented under sub-rule (1) whether he is a member of one or more of the following bodies:-
(A) The Punjab Chamber of Commerce, New Delhi.
(B) The Federation of Industries, Amritsar.

(C) The Textile Manufacturers' Association,
Amritsar. (D) The Factory Owners
Association, Batala.
(E) Desi Beopar Mandal, Ambala.

(4) The body empowered to appoint the assessor shall-

(a) if the appellant is a member of one of such bodies, by that body;
(b) if he is a member of two such bodies, by the body which the appellant desires should appoint such assessor; and
(c) if the appellant is not a member of any of the aforesaid bodies or if he does not state in the memorandum which of such bodies he desires should appoint the assessors, the body which the appellate authority considers as the best fitted to represent the industry concerned.

(5) *Remuneration of assessors*.-An assessor appointed in accordance with the provisions of sub-rules (2) and (3) shall receive for the hearing of the appeal, a fee to be fixed by the appellate authority subject to a maximum of fifty rupees per diem. He shall also receive the actual traveling expenses. The fees and traveling expenses shall be paid to the assessor by Government; but where assessors have been appointed at the request of the appellant and the appeal has been

decided wholly or partly against him the appellate authority may direct that the fees and traveling expenses of the assessor shall be paid in whole or in part by the appellant.

Rule 106: [Framed U/S 108 of the Act]
Display of notices

The abstract of the Act and of the Rules required to be displayed in every factory shall be in

Form No.20.

Rule 107: [Framed U/S 110 of the Act]

Returns

The manager of every factory shall furnish to the Chief Inspector or other officer appointed by the State Government in this behalf the following returns, namely:--

Form No.21, in duplicate.

(2) Ommited (Vide Notification No. G.S.R. 5/C.A.63/1948/S-112/Amd.(32)/2015 dated 11th March, 2015) .

Rule 108: [Framed U/S 109 of the Act]

Service of notices

The dispatch by post under registered cover of any notice or order shall be deemed sufficient service on the occupier, owner or manager of a factory of such notice or order.

Rule 109: [Framed U/S 109 of the Act]

Information required by the Inspector

The occupier or manager of a factory shall furnish any information that an Inspector may require for the purpose of satisfying himself whether any provisions of the Act and the rules made there under have been complied with or whether any order of an Inspector has been duly carried out.

Any demand by an Inspector for any such information, if made, during the course of an inspection, shall be complied with forthwith if the information is available in the factory, or if made in writing, shall be complied with within seven days of receipt thereof.

Rule 110:[Framed U/S 112 of the Act] **(1) M**

The manager of every factory[except the factories as envisaged under the provision 85 of the Act] shall maintain a muster-roll of all the workers employed in the factory in

Form No.25 showing (a) the name of each worker, (b) the nature of his work, and (c) the daily attendance of the worker which, in case of factories employing more than 200 workmen, shall be marked within two hours and in other cases within one hour of the start of the duty:

Provided that, if the daily attendance is noted in the Register of Adult Workers in Form No.12 or the particulars required under this Rule are noted in any other register, a separate muster-roll required under this Rule need not be maintained:

Provided further that the Chief Inspector may be written order exempt from the provisions of this sub-rule, any factory which has card punching or other satisfactory arrangement of marking the attendance.

(2) The manager of the factory shall be responsible to keep the muster-roll available for inspection by an Inspector during the periods of work of the factory.

(3) (i) No worker shall be required or allowed to work unless he/she has in his/her possession attendance card with upto date entries, in Form No. 25-A to be supplied by the occupier. The attendance card shall always remain with the worker. The manager or his agent shall demand it only to make relevant entries therein, whenever necessary.

(ii) If a worker loses his attendance card, the manager shall provide him/her with another copy duly completed from his record on payment of twenty-five paise within two days of the payment.

Rule 111: [Framed U/S 112 of the Act]
Register of accidents and dangerous occurrences

The manager of every factory shall maintain a register of all accidents and dangerous occurrences which occur in the factory in

Form No. 26 showing the-

(a) name of injured person (if any);

(b) date of accident or dangerous occurrence;

(c) date of report on Form No.18 to Inspector;

(d) nature of accident or dangerous occurrence;

(e) date of return of injured person to work; and

(f) number of days of absence from work of injured person.

Rule 112: [Framed U/S 112 of the Act]

Maintenance of Inspection Book

The manager of every factory shall maintain an inspection book in from No.35 and shall produce it when so required by the Inspector or Certifying Surgeon

Rule 113: [Framed U/S 112 of the Act]

Intimation of the intended closure of factory

The occupier or manager of every factory shall send a report to the Chief Inspector with a copy to the Inspector of any intended closure of the factory or any section or department thereof at least one month before such closure stating:--

(i) the reason for closure;

(ii) the number of workers on rolls on the date of submission of report;

(iii) the number of workers likely to be affected by the closure; and

(iv) the probable period of closure.

The occupier or manager shall also send intimation to the Chief Inspector and the Inspector

before the factory or the section of the department thereof, as the case may be, starts working

again:

Provided that in case of sudden closure of factory or any section or department thereof for

reasons beyond the control of the management the occupier or manager shall send such a

report within forty-eight hours of such closure:

Provided further that in case of seasonal factory, when it is being closed for the season the

occupier or manager may extend the date of closure by giving a further notice to the Chief

Inspector with a copy to the Inspector at least one week before the original date of closure.

(v) Information as to the particulars and quantity of chemicals stored and action taken proposed

to be taken thereof to ensure safety during such closure.

The occupier or the manager shall also send intimation to the Chief Inspector and the Inspector

before the factory or the section of the department thereof as the case maybe starts working again.

Provided that in case of sudden closure of factory or any other section or department thereof for

reasons beyond the control of the management the occupier or manager shall send such a

report within 48 hours of such closure.

Provided further that in case of seasonal factories when it is being closed for the season the occupier or manager shall extend the date of closure of giving a further notice to the Chief

Inspector with a copy to the Inspector at least one week before the original date of closure.

Rule 114: Maintenance of registers in electronic or digital format.- (1) Occupier or factory

Manager shall have an option to maintain the registers mentioned in the Schedule given below in electronic or digital format with time stamp, geo positioning and digital signatures of

the occupier or factory manager in the same format as specified for the said registers in these rules.

SCHEDULE

Serial.	Name of Register	Section	Rule
1.	Particular of Rooms Register	6	3-A
2.	Lime-Washing Register	11 18	
3.	Humidity Register	15 24	
4.	Tight-cloth Register	22	58
5.	Compensatory Holidays register	53	83
6.	Overtime muster roll for exempted workers Register	59 85	
7.	Adult Workers Register	62	87
8.	Child Labour Register	73	93
9.	Leave With Wages Register	83	94-A
10.	Health Register	87	102
11.	Muster Roll	112	110
12.	Accident Register	112	111
13.	Inspection Book	112	112

(2) The Occupier or Manager shall provide access to the Inspector to inspect such registers

as and when required and shall also make a provision for signing of such registers digitally by the Inspector.

The Occupier or Manager shall preserve such registers as required under the provisions of the Act and these rules".

FORM-1

[PRESCRIBED UNDER SUB-RULE (3) OF RULE 2A]

Application for grant of certification of competency to a person 1 Name

2 Date of birth

3 Name of the organization

4 Designations

5 Educational qualifications (copies of testimonials to be attached) 6 Details of professional experience

Name of the organization	Period of service	designation	Area of responsibility

7 memberships, if any, of professional bodies

8 (i) Details of facilities (examination, testing etc.)

(ii) Arrangements of calibrating and maintaining the accuracy of these facilities)

9 purpose for which competency certificate sought (specify the section of the Act)

10 whether the applicant has been declared as a competent person under any other statute (if so furnish details)

11 any other relevant information

I ---------- hereby declare that the information furnished above is true.

I undertake

(a) That in the event of any change in facilities at my disposal (either addition or deletion) or my leaving the aforesaid organization, I will promptly inform the Chief Inspector of Factories. (b) to maintain the facilities in good working order calibrating periodically as per manufacturer's instructions or as per National standards; and

© to fulfill and abide by all conditions stipulated in the certificate of competency and instructions issued by Chief Inspector of Factories from time to time.

Place signature Date

To be filled by the institution (if employed)

I ---------- certify that shri ---------- whose details are furnished above, is in our employment and nominate on the behalf of organization for the purpose of being declared as competent person under the Act; I also undertake that I will-

(a) Notify to the Chief Inspector of Factories in case the competent person leaves our employment.

(b) Provide and maintain in good order all facilities at his disposal as mentioned above © notify to Chief Inspector of Factories any change in facilities(either addition or deletion)

Date

Signature

Designation

Official seal

FORM-1-A

[PRESCRIBED UNDER SUB-RULE (3) OF RULE 2A]

Application for grant of certification of competency to an institution

1 Name and full address of the organization.

2 organization's status (specify whither Government, autonomous, co-operative, corporate or private)

3 purpose for which competency certificate sought (specify the section of the Act)

4 whether the organization has been declared as a competent person under any other statute (if so furnish details)

5 Particulars of persons employed and possessing qualification as experience as set out in Schedule annexed to sub-rule (1) of rule 2-A

S.No.	Name of the organization	Qualification	Experience	Section(s)/rule(s) Under which competency sought

6 (i) Details of facilities (examination, testing etc.)

(ii) Arrangements of calibrating and maintaining the accuracy of these facilities)

7 any other relevant information

I ---------- hereby declare that the information furnished above are correct to the best of my knowledge. I undertake. To maintain the facilities in good working order calibrating periodically as per manufacturer's instructions or as per National standards; and (a) to fulfill and abide by all conditions stipulated in the certificate of competency and
instructions issued by Chief Inspector of Factories from time to time.

Place

Signature of the
Head of the Institution or the person
authorized To sign on this behalf
Date

FORM-1-
B
[SEE
RULE 2-A
(3)]

Form of certificate of competency issued to a person or an institution in pursuance to sub-rule (3) of rule 2-A

I ---------- in exercise the power conferred on me under clause (ca) of section 2 of the Factories Act,1948 and the rules made there under, here by recognize- ---------- ---------- or shri---------- employed in ---------- ---------- to be competent person for the purose of carrying tests, examinations, inspections and certification for such buildings, dangerous machinery, lifts, tackles, pressure plants, confined space, ventilation or plant and equipment as the case may be in a factory located in---------- under section ----- ------- and the rules made there under.

This certificate is valid from----------

This certificate is subject to the following conditions as stipulated there under-

1 tests, examinations, inspections and shall be carried out in accordance with the provisions of Act and the rules made there under.

2 tests, examinations, inspections and shall be carried out under the direct supervision of competent person or a person authorized by institution recognized to be competent.

3 the certificate of competency shall stand cancelled if the person declared competent leaves the organization mentioned in his application

4 the institution recognizer as competent shall keep Chief Inspector of Factories informed of the names, designations, qualifications of the persons authorized by it to carry out tests,
examinations, inspections

Station official seal signature of chief Inspector Date

Note- a separate certificate should be issued under each relevant section. A person or institution may be recognized competent person for the purpose of more than one section of the Act."

"FORM NO.1-C

(see rule 3-A)

Application for submission of Building Plans to construct, extend, alteration or take into use any

building as a factory

1. Name and address of the : ……
   Competent Person ……
2. Full name and postal address : ……..
   of factory. ……..
3. Location of the factory:-
   State : ……..
   District:

Town or Village: ……..

4. Particulars of plant to be installed :

Date: Signature of Competent Person ".

Note: This application shall be accompanied by the following documents:-

(a) A flow chart of the manufacturing process supplemented by a brief description of the process in its various stages;

(b) plans, in duplicate, drawn to scale showing –

(i) The site of the factory and immediate surroundings including adjacent buildings and other structures, roads, drains, etc.; and

(ii) The plan, elevation and necessary cross-sections of the various buildings indicating all relevant details relating to natural lighting, ventilation and means of escape in case of fire.

The plans shall also clearly indicate the position of the plant and machinery, aisles and passage-ways; and

(c) Such other particulars as the Chief Inspector may require.

	Name of room in factory		
	Length in Mt.		
	Breadth in Mt.		
	Maximum in Mt.		
	Minimum in Mt.		
	Average		
	Total Area in Sq. Mt.		
	Floor area occupied by machinery in the room		
	Breathing space (contents incubic Mt.)		
	Total volume of air in the room in cubic Mt.		
	Number and size of the doors		
	Number and size of window openings		
	Number and size of skylight openings		
	Total Area in sq. Mt.		
	Maximum capacity of the room		
	Maximum number of persons intended to be employed in the room		

	Whether the room is to be used as a work-room or for a storage-room
	Date of construction
	Remarks

QUESTIONNAIRE ANNEXED T0 FORM NO. 1-E

(Prescribed under rule 3)

Careful attention to the questionnaire will assist in drawing, up the plans in accordance with the law, and thus prevent delay in dealing with the plans.

Note. -- The site plan should be drawn to minimum scale of 12m =1 centimeter and the other plans drawn to a minimum scale of (120 cm. =1 cm.) 1. (a) is the

Form No. 1 E submitted filled in for all work-rooms, god owns, etc., which are proposed to be constructed or extended?

(b) Is the sectional elevation of each room or shed, etc,, shown separately?

(c) Is the minimum height of every room, sheds, etc., shown clearly in?

Sectional elevation?

(d) Is the material of which the room is constructed indicated in the sectional elevation?

(e) Are the position of various machines fitted or proposed to be fitted, shown in drawing together with their names?

(f) Are the maximum number of persons working or proposed to be working in different ro sheds, etc. mentioned in the drawing?

(g) Are all new buildings, parts of buildings or, alterations is existing building shown by boundaries duly marked by a distinctive co lour ?

2. Is the breathing space of a work room, sheds, etc. calculates as shown below?

(a) Floor area of a room multiplied by height of the room (the maximum height for calculation sh exceed 4.2 meters)

(b) Is the maximum number of persons shown as the lower Value of the two calculations shown

(i) Floor area of a room less area occupied by machinery in the room divided by 36.

(ii) Breathing space [as in (a above] DIVIDED BY 500.

(c) Is the window and skylight area provided at the minimum rate of 1 sq. meter to every 15 s floor area of room?

It is recommended that window and sky light may be provided one opposite another so as to cross-ventilation.

3. Doors.

(a) 1s every work-room provided with at least 2 doors?
(b) Is the minimum size of every door 1.95 meter X
.90 meter? (c) Are all the doors opening outwards?

4. *Fire-escapes*: - If any factory building is of more than one storey------

(a) Are two fire-escapes provided on either side of building?

(b) Are the fire-escapes accessible from every room in the building?

(c) Is the material used in construction on the fire-escapes non-combustible?

(d) Are the windows or doors giving access to an external staircase, arranged to open immediat inside?

5. Latrines and urinals.

(a) Are the latrines and urinals provided separately?

(b) Are these sufficient to meet the requirements of section 19 read with Rules 42 & 47?

(c) Is the minimum distance of the
nearest building shown?

(d) Is the minimum distance of the nearest well shown?

(e) Is the surrounding ground up to art distance of 1,2 meter all round made of impermeable materi *(f)* Is the surrounding ground raised to at least 15 centimeter above ground level?

(g) Is any latrine, ventilator or opening in the proximity of any opening of main building?

(h) Are these latrines flush type?

(i) Are all the drains, pipes, and sewers for carrying sullage, sewage water effluent and waste p running in factory premises constructed for impermeable material?

(j) Are the drains of flush-type latrines connected to drainage system of the local board? *(k)* Is an efficient system of septic tanks provided, if no drainage system exists?

(l) Are the latrines provided with roofing?

6. Drinking Water -----

(a) Is the drinking water provided from a source provided by local board?

(b) Is any well constructed in the premises of the factory for drinking water or humidification purp (c) Is the cylinder of the well pucca and impervious to wafer throughout and up to a depth not lowest level of sub-soil water?

(d) Are the position of water centers shown in the plans?

Form No. 1 submitted in triplicate direct to the Chief inspector of Factories, Punjab, for approval.

8. A certificate of stability signed by a person having the qualifications laid down under Rules shall be submitted on

Form No. 1-B before the manufacturing process with The aid of power is begun in the building.

Signature _____

Designation _____

FORM NO. 1-F

(SEE RULE-4)

1. Name of the factory

2. Village, town and district in which the factory is situated

3. Full postal address of the factory

4. Name of occupier of the factory

5. Nature of manufacturing process to be carried on in the factory.

6. Number of floors on which workers will be employed

I certify that I have inspected the building/buildings, the plans of which have bee approved by the Chief Inspector.-vide his---------- letter No ---------- date and examined the various parts including the foundations with special reference t the machinery, plant, etc. that have been installed. I am of the opinion that th building/buildings which has/have been constructed/reconstructed/extended/take into use is/are in accordance with the plans approved by the Chief Inspector vide h letter mentioned above, that it/they is/are structurally sound and that its/their use factory/part of the factory for the manufacture of----------for which th machinery, plant etc. installed is intended.

Signature _____

Qualification._

Address_____

If employed by a company or association, name and address of the comp association.

FORM - 2

APPLICATION FOR REGISTRATION AND GRANT OF RENEWAL OF LICENCE FOR THE YEAR. ..... AND NOTICE OF OCCUPATION SPECIFIED IN SECTIONS 6 AND 7

(To be submitted in triplicate)

1.Full name of the factory with factory license number

If already registered before :

2.(a) Full postal address and situation of the factory :

(b) Full postal address to which communications

Relating to factory should be sent :

3.Nature of manufacturing process or processes –

(a) Carried on in the factory in the last twelve months

(In the case of factories already in existence); and :

19 to be carried on in the factory during the next

Twelve months (in the case of all the factories) :

4 Names and values of principal products manufactured

During the last twelve months (in the case of factories

Already in existence) :

5. (a) Maximum number of workers proposed to be

Employed in any one day during the year :

20 Maximum number of workers employed on any

One day during the last twelve months

(In the case of factories already in existence) :

(c) Number of workers to be ordinarily employed in the factory:

6.(a) Nature and total amount of power in H.P. Installed or :

Proposed to be installed :

(b)Maximum amount of power in H.P. proposed to be used :

7.Full name and residential address of the person and name of father

Who shall be the manager of the factory for the purposes of the Act :

8.Full name and residential address of the occupier and name of father : -

21 the proprietor of the factory in case of a private firm or

Proprietary concern :

(b)Partner in case of partnership firm

(c)The directors in case of a public limited liability company

or firm

(d)The managing agent in case where managing agent has been appointed :

(e)The shareholders in case of a private company where no managing agent

is employed, or :

(f)The chief administrative head in case of a Government or local fund factory

9. Full name and address of the owner of the premises or building (including the Precincts thereof) referred to in section 93

10. In the case of a factory constructed or extended after the date of Commencement of the rules –

(a) Reference number and date of approval of the plans for site whether for old Or new building and for construction or extension of factory by the State Government/ Chief Inspector; and :

(b) Reference number and date of approval of the arrangements, if any, Made for the disposal of trade waste and effluents and the name of the Authority granting such approval :

11.(a) Amount of fee paid :
Rs. .....

(b)In case of payment in Treasury -
(i)name of Treasury :
(ii)date of payment; and :
(iii)challan number(challan to be enclosed) :

(c)In case of transmission by crossed cheque -
(i) name of nationalised bank :
(ii) crossed cheque number; an :
(iii) date of cheque :
(Crossed cheque drawn in favour of the Chief Inspector of Factories to be enclosed)

(d)In case of transmission by crossed postal order -
(i)Name of post office :
(ii)Crossed postal order number; and :
(iii)Date of postal order :
(Crossed postal order drawn in favor of the Chief Inspector Of Factories to be enclosed)

Signature of occupier :
Signature of manager Date
Date :

Notes:

1. This form should be completed in ink in block letters or typed.

2. If power is not used at the time of filling up this form, but is introduced later, the fact should be communicated to the Chief Inspector of Factories immediately.

3. If any of the persons named against item 8 is minor, the fact should be clearly stated.

4. In the case of a factory where under the proviso to sub-sections (1) and (2) of section 100, a person has been nominated as the occupier, information required in item 8 should be supplied only in respect of that person.

5. In the case of a factory where a managing agent or agents have been appointed as occupiers under the Indian Companies Act, 1956, information required in item 8 should be supplied only in respect

of that person or persons.

FORM – 2-A

Prescribed under Rule 15-A

NOTICE OF CHANGE OF MANAGER

1.Name of the factory current license number of the factory:
2.Postal address of the factory :
3.Name of outgoing manager :
4.Name of new manager with the residential address and Telephone number 5.Date of appointment of new manager
6.Signature of new manager :

Signature of occupier :
Date :

FORM - 4

Prescribed under Rule 8

REGISTRATION AND LICENCE TO WORK A FACTORY

Reg.No. ----------
Fee Rs----------
Serial No. ----------

License is hereby granted ---------- valid only for the premises described below for use as a factory employing not more than ---------- persons on any one day during the year and using motive power not exceeding----------H.P. Subject to the provisions of Factories Act 1948 and rules made there under.

This license shall remain in force till the Thirty-First day of December, ----------

The ---------- 19---- 20-----. Chief Inspector of factories

Description of the licensed premises The license premises shown on plan No---------- - dated----------

Situated in---------- and consist of----------

Date of renewal	Renewal/Date of expiry	Signature of Chief Inspector of factories

TRANSFERS

Date of transfer	To whom transferred	Signature of Chief Inspector of factories

AMENDMENTS

Reason of amendment	Date of amendment	Changed category	Additional fee	Signature of Chief Inspector of factories

FORM 2-B

(See rule 10-A)

APPLICATION FOR AUTOMATIC RENEWAL OF LICENCE FOR THE

YEAR.....

1. Full name of the factory and address of the factory:

2. Nature of manufacturing process or processes, bye-products to be carried in factory:

3. Maximum number of workers proposed to be employed in any one day during the year for

which licencse is sought:

4. Amount of power in K.W. Installed or proposed to be installed:

5. Full name, residential address and name of father of the person who shall be the manager of

the factory for the purposes of the Act:

6. Full name, residential address and name of father of person who is occupier for the purpose of

Act:

(a) Proprietor in case of proprietary concern

(b) Partner in case of partnership firm/LLP

(c) The directors in case of a private/public limited Liability Company

(d) Person appointed by Government in case of a Government or local authority factory

(e) Managing Director of society in case of co-operative societies

7. Full name and address of the owner of the premises or building (including the Precincts thereof) referred to in section 93:

8. Reference number and date of approval of the plans and stability:

9. Amount of fee paid: Rs. Date of payment…….

Digital Signature of occupier:

Digital Signature of manager:

FORM-5

(Prescribed under rule 17)

Certificate of fitness

1. serial No.----------

Date----------

2. Name----------

3 Father's Name----------

4 Sex---------- 5 Residence----------

6 Date of birth(if available & certified the age)----------

7 Physical fitness----------

8 Descriptive marks----------

9 Reasons for;

(i) refusal of certificate----------

(ii) Certificate being revoked----------

Thumb impression initials of certifying surgeon Serial no----------

Date----------

I certified that I have personally examined----------

Son/daughter of----------

Residing at----------

Who is desirous of being employed in the factory and whose date of birth is being produced in age certificate ---------- or as nearly as can be ascertained from my examination is --------years and he/she is fit for employment in factory as an adult/child

Thumb impression initials of certifying surgeon

FORM-6

(Prescribed under rule 24)

Humidity register

Department----------

Distinctive mark or no----------

- Hygrometer

Position in department----------

-

	Reading of hygrometer							
Date, year Month, day	Between 7AM & 9AM		Between 11AM & 2 PM (not in rest period)		Between 4PM & 5.30 PM		If no humidity inserted	remarks
1 2 3	Dry bulb	Wet bulb	Dry bulb	Wet bulb	Dry bulb	Wet bulb		
4 5 6 So On								

Certified that the above entries are correct signature----------

Form No. 7
(Prescribed under Rule 18)
Record of Lime washing,
Painting etc.

Part of factory e.g. name of room	Parts lime-washed, painted, varnished or oiled e.g. walls, ceiling, wood work	Treatment, whether lime-washed, painted varnished or oiled	Date on which lime-washing, painting varnishing or oiling was carried out (according to the English calendar			Remarks
			Date	Month	Year	

Signature of
Factory Manager **Form No. 7-A**
(Prescribed under Schedule VI to Rule 55 7 58)

No	Name and father's name of worker	Designation or nature of work	Department	Date when tight clothes given	Signature or thumb impression of worker
1	2	3	4	5	6

FORM 8

[Prescribed under rule 61]

Report of examination of pressure vessel 1 name of occupier

2 situation and address of factory

3 name, description and distinctive number of pressure vessel

4 name and address of manufacturer

5 name of process in which it is used

6 nature of process in which it is used

(a) date of construction

(b) thickness of walls

© date on which vessel was first taken into use

(d) safe working pressure recommended by manufacturer

7 date of last hydraulic test & pressure applied

8 is the vessel is in open or otherwise exposed to weather or to damp 9 what parts (if any) accessible?

10 what examination and tests were made? Specify pressure if hydraulic test was carried out 11 condition of vessel (state any defect materially affecting the safe working pressure or the safe working of the vessel)

External----------

Internal----------

12 are the required fittings and appliances provided in accordance with the rules for pressure vessel?

13 are the fittings and appliances are maintained in good condition?

14 repair (if any) required and period within which they should be executed and any other condition which the person making the examination thinks necessary to specify for securing safe working pressure.

15 safe working pressure calculated from dimensions and from the thickness and other data ascertained by the present examination, due allowance being made for conditions of working if unusual or exceptionally severe (state minimum thickness measured during the examination)

16 where repair affecting the safe pressure are required state the working pressure:- (a) before the expiration of period specified in 14

(b) after the expiration of such period if the required repairs have-not been executed © after completion of required repairs

17 other observations

I certify that on ---------- the pressure vessel described above was thorough cleaned and made accessible for thorough examination and that on the said date thoroughly examined this pressure vessel, including fittings, and the the above report is true of my examination.

Signature----------

Qualification----------

Address----------

Date----------

FORM NO. 8-A

(Prescribed under sub-rule (4) of rule 67-F)

RECORD OF EYE EXAMINATION

1	2	3	4	5	6	7	8	9	10	11
Serial Number	Depart-ment/ works	Name of Worker	Sex	Age (on last birth day)	Occupation employ-ment	Nature Date of sight	Examina-tion of eye mologist	Date Results	Signature of opthal	Remarks

FORM No. 8-B

(See rule 67-H)

APPLICATION FOR THE SITE APPRAISAL COMMITTEE

1. Name and address of the applicant.

2. Site Ownership Data:
, Revenue details of the site such a Survey No., Plot No.
Whether the proposed site attracts the provisions of section 3 of Environments Protection Act, 1986, if so the nature of the restrictions: and

Local authority under whose jurisdiction the site is located.

3. Site Plan :

Site plan with clear identification of boundries and total area proposed to be occupied and showing details nearby the proposed site

(a) Name of adjoining manufacturing units and human habits, educational and training institutions, petrol installa- tions, storages liquified Petroleum Gas and other hazardous substances, if any, *within one kilometer from the proposed* unit.

(b) Water sources (crivers, streams, canal dams, water filteration plants) in the vicinity.

(c) Nearest hospitals, Fire-stations, Civil Defence Stations and Police Station and their distances.

(d) Details of high tension electrical transmission lines, pipe lines for oil, gas
sewerage, if any, passing through the site, and

(e) Location of railway stations, railway lines, Scheduled road, byepass,, if any near the site.

Plot Plan of the factory, showing entry and, exit points, roads.

4 Project Report.

A summary of the salient features of Project.

Maximum number of persons like be working in the factory.

Maximum amount of power and requirements and source of supply.

Block diagrams of the buildings *installations, in the proposeds* and

Details of housing colony, hospital, school and other infrastructural facilities proposed.

5. Organisation structure of the proposed manufacturing unit/factory :

Person responsible far protection of safety, health and environment.

Proposed health and safety policy of the proposed enterprise.

6. Manufacturing Process Information :

Process flow diagrams.

Brief write up on process and technology.

Critical Process parameters such as pressure build- up, temperature rise and run-away reaction.

Other external effections critical to the process having safety implications such as ingrass of moisture or water, contact with incompatiable substances sudden power failure ; and

High lights of the built-in-safety/pollution control devices or measures incorporated in the manufacturing technology.

7. Information of Hazardous Materials :

Raw materials, intermediates, products and bye- products and their quantities (enclosed Material Safety Data Sheet in respect of each hazardous substances).

Main and intermediate storages proposed far raw material /intermediates/products/Bye Products (maximum quantities to be stored at any time)

Transportation methods to be used for materials in flow and out flow, their quantities to be stored at any time ; and

Safety measures proposed for :

-----handing of materials.

-----internal and external transportation, and

-----disposal (packing and forwarding of finished products).

8. Information ort Dispersal/Disposal of wastes and pollutants ;

8.1 Major Pollutants (gas, liquids, solid)their characteristics and quantities (average and at peak loads).

Quality. And quantity of solid wastes generated, methods of their treatment and disposal.

Air, Water and Soil Pollution problems anticipated and the proposed measures to control .the same, including treatment and disposal of effluents.

9. Process Hazards Information :

Enclose a copy of the report on environmental impact assessment.

Enclosed a copy of the report an Risk Assessment Study : and

Published (open or classified) reports if any, on accident situation/occupational health hazards or similar plants (within or outside the country).

10. Information of proposed Safety and Occupational Health Measure ;

Details of fire fighting facilities and minimum quantity of water cartaoridi- oxide and other fire fighting measures needed to meet the emergencies ; and

Details of in-house medical facilities Proposed.

11. Information on Emergency preparedness :

On Site Emergency Plan : and

Proposed arrangements, if any for mutual aid scheme with the group of neighbouring factories.

I certify that the information furnished above is correct to the best of my knowledge and nothing has been concealed while furnishing it.

Signature

Date

Designation

FORM NO. 8 C

[See rules 67-J (1) and 67-L]

Form for Material Safety

Data Sheet

1. CHEMICAL IDENTITY

Chemical Name			Chemical Classification
Synonyms	Trade Name		
Formula	C.A.S. No.		U.N. No.
Regulated Identification	Shipping Name Codes / Label Hazardous Waste I.D. No.		Hazchem No.
Hazardous Ingredients	C.A.S. No.	Hazardous Ingredients	C.A.S. No.
1.		2.	
3.		4.	

2. PHYSICAL AND CHEMICAL DATA :

Boiling Range/Point	^{0}C	Physical State	Appearance
Melting Freezing Point	^{0}C	Vapur Pressure at 35^0 C mm	Odour H g
Vapur Density (Air-I)	Solubility in Water at 30^0 C		Others
Specific Gravity Water-1	H p		

3. FIRE AND EXPLOSION HAZARD DATA :

Flammability Yes/No LEL	% Flash Point	^{0}C Autoignition Temperature	8^{0}C
TDG Falmmability	UEL	%Flash point ^{0}C	
Explosive Sensitivity to impact	Explosion Sensivity to Static Electricity	Hazardous Combustion Products	
Hazardous Polymerisation			

Combustible Liquid	Explosive Material	Corrosive Material
Flammable Material	Oxidiser	Others
Pyrophoric Material	Organic Peroxide	

4. REACTIVITY DATA :

Chemical Stability	
Incompatibility With other Material	
Reactivity	
Hazardous Reaction Products	

5. HEALTH HAZARD DATA :

Routes of Entry	
Effects of Exposure / Symptoms	
Emergency Treatment	

ILV (ACGIH)	ppm	mg/m3	STEL	ppm	mg/m3
Permissible Exposure Limit ld	ppm mg/m3		Odour Threshold	ppm mg/m3	
50			LD 50		

NFPA	Hazards Signals	Health	Flammability	Stability	Special

6. PREVENTIVE MEASURES :

Personnel Protective Equipment	
Heading and Storage Precautions	

7. EMERGENCY AND FIRST AID MEASURE :

FIRE	FIRE EXTINGUISHING Media
FIRE	Special Procedures

Unusal Hazards
8. ADDITIONAL INFORMATION OR REFERENCE :
9. MANUFACTURE OF AUPPLIERS DATA :
Name of Firm Mailing Address Telephone / Telex Nos. Telegraphic — Contact person in Emergency
Packing Tramcard
10. DISCLAIMER-

Information contained in this material data sheet is believed to be railable but no representation guarantee or warranties of any kind are made as to its accuracy, suitability for a particular application or results to be obtained from them. It is up to the manufacturer / seller to ensnre that the information contained in the material safety data sheet is relevant to the prodect manufacture handled or sold by him as the case may be. The Government makes, no warranties expressed or implied in respect of the adequacy of this document for any particular purpose.

Form No. 9
(Prescribed under Rule 83)
Register of
Compensatory Holidays

						Weekly rest days lost due to the exempting order in				Date of compensatory holidays given in				
Serial	Number in the register	Name	of Group	Number & Date	Year	to January March	to April June	to July September	to October December	to January	to April	to July	to October	Last rest days carried
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15

	No. in Register
	Name
	Department
	Dates on which
	Extent overtim
	Total overtime
	Normal Hours
	Normal rate of
	Overtime rate
	Normal earnin
	Overtime earni
	(Cash equivale advantage accr food grains and articles)

												Total earning		
												Dates on which		
Periods Of work	Men					women					Description of group		Remar	
groups	Total number of men employed					Tota l number women emp loyed					Group letters	Nature of work		
	A	B	C	D	E	F	G	H	I	J				
Relay	1 2 3	1 2 3	1 2 3	1 2 3	1 2 3	1 2 3	1 2 3	1 2 3	1 2 3	1 2 3				
On Working Day From To From To From To On Partial Working Day From To From to											A B C D E F G H I J			

Date on which notice first exhibited----------

Signature of Factory Manager

FORM NO. 12
(Prescribed under Rule 87)
Register of Adult Workers

Serial No.	Name Residential Address	Father's Name	Nature of Work	Letter of group as in	Number of relay, if working	Number a nd date of Certific te, if an a adolescent Number of Certificate	Token Number reference	Remarks
1	2	3	4	No. 5	6	7	Certificate 8	9

FORM NO. 13
(Prescribed under Rule 92)

Notice of Periods of Work for Child Workers Name of Factory..... Place.....
District.....

Periods of Work	Children			Description of groups		Remarks
	Total number of children employed			Group letter	Nature of work	
relays	A	B	C			
From To				A B C		

Date on which this notice is first exhibited----------

Signature of Factory Manager

Form No. 14
(Prescribed under Rule 93)
Register of Child Workers

Serial No.	Name	Father's Name	Date of first employment	Number of certificate and its date	Token Number giving reference to the Certificate	Letter of group as in Form No.	Number of relay, if working in shifts	Remark
1	2	3	4	5	6	7	8	9

FORM NO. 15

(Prescribed under Rule 94)

Register of Leave with Wages Name of factory.....

Serial No. ..... Part I ----

---------- Adult Department..... Part Ii ---

---------- Child Serial No. in the Register of Adult/ Child workers....

Name.....

..

Date of entry into service,

Father's Name.....

Date of Discharge.....

Date of amount of payment in lieu of leave due.....

1	2	3	4	5	6	7	8	9	10
Calendar year of Service	Wage Period	Wage s earned From.. To.....	Number of days worked during the calendar year				Total of col.	Leave to Credit	
								Balance	Leave
			d during the wages period	No. of days of work performed	No. of days of day-off	No. of days of maternity leave	No. of days leave enjoyed	4 to 7	of leave from preceding year	earned during the year mentioned in

11	12	13	14	15	16	17	18
Total of cols. 9 to 10	Whether leave in accordance with scheme under section 79(8) was refused	Leave.... enjoyed From to..... No. of days.....	Balance of leave to credit	Normal rate of wages	equivalent of advantage according through concessional sale of food grains & other articles	Rate of wages for the leave period (total of cols. 15 & 16)	Remark

FORM NO. 17

(Prescribed under Rule 14)

[Schedule II,III,IV,V,VI,IX,X,XII,XIV,XV,XVIII,XX,XXI,XXIV,XXV]

Health Register

(in respect of persons employed in occupation declared to be dangerous operations under section 87)

Name of Certifying Surgeon:

(a) shri---------- from---------- to ---------- (b) shri---------- from---------- to ---------- (c) shri---------- from---------- to ----------

S. No	Work No.	Name of Worker	Sex	Age (last Birthday)	Date of Employment on present work	Date of leaving Or Transferred Ot other work	Reason for leaving Transfer Or discharge	Nature of Job or occupation	Raw Material or by product handled
1	2	3	4	5	6	7	8	9	10

(In respect of persons employed in occupations declared to be dangerous operations under Section 87) Name of Certifying Surgeon :

Date of medical examination by Certifying Surgeon / results of medical examination	If suspended from work, state period of suspension with detailed reasons	Recertified fit to resume duty on (with signature of Certifying Surgeon	If certifying of unfitness or suspension issued t o worker	S ce
11	12	13	14	1

Note- (i) Column 8:- detailed summery of reasons of transfer or discharge should be stated (ii)column11:- should be expressed as fit/unfit/suspended

FORM-17 A

(Prescribed under rule 16)

Certificate of fitness

serial No.----------

Date----------

I certified that I have personally examined---------- Son/daughter of---------- Residing at---------- Who is desirous of being employed in the factory and whose date of birth is being produced in age certificate ---------- or as nearly as can be ascertained from my examination is --------years and he/she is fit for employment in factory as an adult/child

Thumb impression initials of certifying surgeon

I certify that I have examined the person mentioned above on	I extend this certificate until	Signature of certifying surgeon	Note of symptoms

FORM-17B

[SEE RULE 16]

S. No	Deptt/ Work	Name of Worker	Age (last Birthday)	Date of Employment on present work	Date of leaving Or Transferred Ot other Work	Nature of Job or occupation	Raw Material or by product handled	Date of weekly Examination With results	Nature of sympto	Si w ce su
1	2	3	4	5	6	7	8	9	10	1

Form No. 18

(Prescribed under Rule 103)
NOTICE OF ACCIDENT OR DANGEROUS OCCURRENCE RESULTING IN DEATH OR BODILY INJURY

1 name of occupier of factory/
employer
ESI Employer's code

2 Address of works/premises where accident or dangerous occurrence took place?

3 Nature of Industry

4 Branch or Department and exact place where the accident or dangerous, occurrence happened.

5 Injured person's name and address (ESI Insurance
code) 6 (a) Sex
(b) Age (last birthday and)
(c) Occupation of injured person

7 Local ESI office to which the injured person was attached,

8 Date ,shift and hour of accident or dangerous occurrence

9 (a) Hour at which the injured person was payable to him for the day of accident or dangerous occurrence.

(b) Whether wages in full or part payable to the injured person for the day of accident or dangerous occurrence

10 Cause or nature of accident or dangerous occurrence

11 Cause or nature of accident or dangerous occurrence

(a) If caused by machinery:

(i) Give name of the machine and part causing the accident or dangerous occurrence, and (b) (i)

(ii) State whether it was moved by mechanical power

(b) State exactly what injured person was doing at the time of accident or dangerous occurrence

(c) In your opinion the injured person at the time of accident or dangerous occurrence

(i) acting in contravention of provision of any law applicable to him, or

(ii) acting in contravention of provision of any order given by or on the behalf of employer, or

(iii) acting without instruction from employer

(d) in case reply to (c) (i), (c) (ii), (c) (iii) is in affirmative state whether the act was done for the purpose of and in connection with employer's trade or business.

12 in case the accident or dangerous occurrence happened while traveling in employer1s transport state whether:-

(a) the injured person was traveling as a passenger to or from his place of work.

(b) the injured person was traveling with the express or implied permission of employer (c) The transport is being operated by or on the behalf of the employer or some other ovided in pursuance of

arrangement made with employer, and (d) The vehicle being/not being operated in the ordinary course of public transport service

(e) in case the accident or dangerous occurrence happened while meeting emergency, state- its nature

(f) whether the injured person was at the time of accident or dangerous occurrence was employed for the purpose of and in connection with employer's trade or business.

13 Describe briefly how the accident or dangerous occurrence occurred.

14 Name and addresses of witnesses

15 (a) Nature and extent of injuries (e.g.) fatal, loss of finger fracture of leg scald, and scratch followed by.....
Sepsis.....

(b) Location of injury

16 (a) If accident or dangerous occurrence is not fatal, state whether injured person was disabled for 48 hour or more

(b) date and hour of return to work

17 (a) Physician, dispensary or hospital from whom or in which the injured person received or is receiving treatment

(b) name of dispensary or panel of doctors attending the injured person

19 (i) has injured person died

(ii) If so, date of death

I certify that to the best of my knowledge and belief the above particulars are correct in every respect.

Signature of Occupier or Manage

Name and designation of occupier or manager/employer

Employer`s address and code no----------

FormNo.18A

(Prescribed under Rule 103)

(Notice of dangerous occurrence which does not result in death or Bodily injury) **(Vide Para 2 of Schedule under Rule 103**

1 Name and address of the factory

2Name of the Occupier

3Name of the Manager

4Nature of Industry

5Branch or Department and exact place where the dangerous occurrence took place

6Date and Hour of occurrence

(State exactly what happened)

I certify that, to the best of knowledge and belief the above particulars are correct in every respect.

Signature of the Occupier

/Manager Date of dispatch of Report

be completed by Inspector of Factories).

District Date of receipt

D.O.No.

Date of

Investigation

Causation No.

Result of Investigation

Form No.19

(Prescribed under Rule 104)

NOTICE O F POISONING OR DISEASE Factory Particulars

1 Name of Factory

2 Address of factory

3 Address of office or private residence of occupier 4 Nature of industry

5 Name and Works Number of Patient

6 Address of Patient

7 Sex and Age of Patient

8 Precise occupation of Patient

9 Nature of Poisoning or Disease from which patient is suffering **10** Has the case been reported to the Certifying Surgeon

General Particulars

Signature of Factory Manager

Dated

Form No.20

(Prescribed under Rule No.106)

ABSTRACT OF FACTORIES ACT, 1948 AND THE DELHI FACTORIES RULES, 1950

FACTORIES RULES, 1950

(To be fixed in a conspicuous and convenient place at or near the main entrance to the factory)

Interpretation

Factory" means any premises including the precincts thereof-

(i) whereon ten or more workers are working, or were working on any day of the preceding twelve months, and in any part of which a manufacturing process is being carried on with the aid of power, or is ordinarily so carried on, or

(ii) whereon twenty or more workers are working or were working on any day of the preceding twelve months, and in any part of which a manufacturing process is being carried on without the aid of power, or is ordinarily so carried on, but does not include a mine subject to the operation of the Indian Mines Act, 1923 (IV of 1923), or a railway running shed.

Worker" means a person employed, directly or through any agency, whether for wages or not in any manufacturing process or in cleaning any part of the machinery or premises used for a manufacturing process in any other kind of work incidental to, or connected with the manufacturing process, or the subject of the manufacturing process.

"Manufacturing process" means any process for making, altering, repairing ornamenting, finishing, packing, oiling, washing, cleaning, breaking up, demolishing, or otherwise treating or adopting any article or substance with a view to its, sale, transport, delivery or disposal, or pumping oil, water or sewage, or generating, transforming power or composing types for printing, printing by letter press, lithography, photogravure or other similar processes or book binding or constructing reconstructing, repairing, refitting, finishing or breaking up ships or vessels.

Working hours, holidays, intervals for rest, etc.

1 **Hours of work (Adults). Sections 51 and 54-** No Adult worker shall be required, or allowed to work in a factory for more than 48 hours in any week and for more than 9 hours in any day, or with the previous approval of the Chief Inspector, the daily maximum specified in Sec. 51 may be exceeded in order to facilitate the change of shifts.

2. Relaxation of hours of Work (Adults). Section 64- The ordinary limits on working hours of adults may be relaxed in certain special cases, e.g. workers engaged on urgent repairs; in preparatory or complementary work which must necessarily be carried on outside the limits laid down for the general working of the factory, in work which is necessarily so intermittent that the intervals during which they do not work while on duty ordinarily amount to more than the intervals for rest in work which for technical reasons must be carried on continuously throughout the day; in making or supplying articles of prime necessity which must be made or supplied every day; in a manufacturing process which cannot be carried on except during fixed seasons, or at times dependent on the irregular action of natural forces in engine rooms or boiler houses or in attending to power plant or transmission machinery, or in printing of news

paper held upon account of the breakdown of machinery, or the loading or unloading of railway wagons.

Except in the case of urgent repairs, the relaxation shall not exceed the following limits-

(i) the total number of hours of work in any day shall not exceed ten;
(ii) the total number of hours of overtime work shall not exceed 50 for anyone quarter; (iii) the spread over inclusive of intervals for rest shall not exceed 12 hours in anyone day.

In the case of any or all adult workers in any factory, the ordinary limits on working hours of adults may be relaxed, for a period or periods not exceeding in the aggregate 3 months in any year, to enable the factory to deal within exceptional press of work.

3 **Payment for Overtime. Section 59**- Where a women works in a factory for more than 9 hours in any day or for more than 48 hours in any week he shall, in respect of overtime work, be entitled to wages at the rate of twice his ordinary rate wages.

4 **Exemption of supervisory Staff. Section 64- Chapter VI of the Act-** Working hours of adults-does not apply to persons holding position in a factory.

5 **Weekly Holiday (Adult). Section 52**- No adult worker shall be t required or allowed to work in a factory on the first day of the week unless he has, or will have, a holiday for a whole day on one of the three days immediately before or after the said day, and the manager of the factory has, before the said day or the substituted day, whichever is earlier, delivered a notice at the office of the Inspector of his intention to require the worker to work on the said day and of the day which is to be substituted, and displayed a notice to that effect in the factory.

Provided that no substitution shall be made which will result in any worker working for more than ten days consecutively without a holiday for a whole day.

Where a worker in a factory, as a result of exemption from the ordinary provision relating to weekly holidays is, deprived of any of the weekly holidays he shall be allowed, within the month in which the holidays were due to him or within the two months immediately following that month compensatory holidays of equal number of the holidays so lost.

6 **Intervals for Rest (Adults). Sections 55 and 56-** The periods of work of adult workers in a factory each day shall be so fixed that no period shall exceed 5 hours before he has had an interval for rest of at least half hour and that inclusive of his intervals for rest they shall not spread over more than 10 hours in any day or, with the permission of the Chief Inspector in writing, 12 hours.

7 **Prohibition of Double Employment. Sections 60,71 and 99**- No child or, except in certain circumstances an adult worker, shall be required or allowed to work in any factory on any day on which he has already been working in any other factory.

In a child works in a factory on any day on which he has already been working in another factory, the parent or guardian of the child or the person having custody of or control over him or obtaining any direct benefit from his wages shall be punishable with fine, which may extend to Rs. 50 unless it appears to the court that the child so worked without the consent or connivance of such parent, guardian or person.

8 **Prohibition of Employment of Children under 14 Section 67**- No child who has not completed his fourteenth year shall required or allowed to work in any factory.

9 **Hours of Work (Children). Section 71-**Nochild shall be employed or permitted to work in any factory for more than 4Y2 hours in any day and between the hours of 7 P.M. and 6 A.M. The period of work of all children employed in a factory shall be limited to two shifts which shall not

overlap or spread over more than 5 hours each and each child shall be employed in only one of relays

The provision relating to weekly holidays shall also apply to child workers and no exemption from this provision may be granted in respect of any child.

3 **Prohibition of Employment of Women. Section 66-** No Woman shall in any circumstances be employed in any factory more than 9 hours in any day or between the hours of 7 P.M. and 6 A.M. There shall be no change of shifts except after a weekly holiday or any other holiday.

Leave with wages

11 Leave with Wages. Section 79 and 80/83 and Rules- Every worker who has worked for a period of 240 days or more in a factory during a calendar year shall be allowed during the subsequent calendar year, leave with wages for a number of days calculated at the rate of-

(i) If an adult, one day for every twenty days of work performed by him during the previous calendar year;

(ii) If a child, one day for every 15 days of work performed by him during the previous calendar year;

Any days of layoff, by agreement or contract, or as permissible under the standing orders; in case of a female worker, maternity leave for any number of days not exceeding twelve weeks, and the leave earned in the year prior to that in which the leave is enjoyed shall be deemed to be days on which the worker has worked in a factory for the computation of the period of 240 days or more but he shall not earn leave for these days.

The leave admissible under Sec. 79 shall be exclusive of all holidays, whether, occurring during or at either end of the period of leave.

A worker whose service commences otherwise than on the first day of January, shall be entitled to leave with wages at the rate laid down in Sec. 79 (i) if he has worked for two-thirds of the total days in the remainder of the calendar year.

If a worker is discharged or dismissed from service during the course of the year he shall be entitled to leave with wages at the rates laid down in Sec. 79 (1) even if he has not worked in the entire calendar year.

Fraction of leave of half a day or more shall be treated as one full day's leave and fraction of less than half a day shall be omitted.

If a worker does not in anyone calendar year take the whole of the leave allowed to him, any leave not taken by him shall be added to the leave to be allowed to him in the succeeding calendar year provided total number of days of leave that may be carried forward to a succeeding year shall not exceed thirty in case of adult and forty in the case of a child. Un availed leave shall be carried forward without any limit provided a

worker who has applied for leave with wages but has not been given such leave in accordance with any scheme laid down under Sec. 79(8), (9).

A worker may at any time apply in writing to the manager of a factory not less than fifteen days before the date on which he wishes leave to being and thirty days before that date if he is employed in a public utility service provided that the number of time in which leave may be taken during any year shall not exceed three. If a worker wants to avail himself of leave with wages due to him to cover a period of illness he shall be granted leave even if application is not made within the time specified above

An application for leave with wages which does not contravene any scheme lodged under sec. 79 (8), (9) shall not be refused if it is made within the time specified above.

If the employment of a worker who is entitled to leave under Section 79 terminated by the occupier before he has taken the entire leave to which he is entitled, or if having applied for and having not been granted such leave, the worker quits his employment before he has taken the leave, the occupier of the factory shall pay him the amount payable in respect of the leave not taken and such payment shall be made before the expiry of the second working day on which his employment is terminated.

Un availed leave of a worker shall not be taken into consideration in computing the period of any notice required to be given before discharge or dismissal.

Form No.14 and shall provide each worker with a book called the 'Leave Book' in the prescribed Form No.15. The Leave Book shall be the property of the worker and the manager or his agent shall not demand it except to make entries of the dates of holidays or interruptions in service and shall not keep it for more than a week at a time. If a worker loses his Leave Book, the manager shall provide him with another copy on payment of one anna and shall complete it from his record.

Health

12 cleanliness. Section 11- Except in cases specially exempted all inside walls and partition, all ceilings or tops of rooms and all walls, sides arid tops of passages and staircases in a factory shall be kept white-washed or colour-washed. The white-washing or colour-washing shall be carried out at least once in every period of fourteen months. The floors of every workroom shall be cleaned at least once in every week by washing using disinfectant, where necessary or some other method.

13 Disposals of Wastes & Effluents. Section 12- Effective arrangement shall be made in every factory for the disposal of wastes and effluents due to the
manufacturing process carried on therein.

14 Ventilation and Temperature. Section 13- Effective and suitable provision shall be made in every factory securing and maintaining in every workroom adequate ventilation by the circulation of fresh air and such a temperature as will secure to workers therein reasonable conditions of comfort and prevent injury to health.

15 Overcrowding. Section 16- Unless exemption has been granted, there be in every workroom of a factory in existence on 1st April, 1949 at least 350 cubic feet and of a factory built after this date at least 500 cubic feet of space for every worker employed therein and for this purpose no account shall be taken of any space which is more than 14 ft, above the level of the floor of the room, **16 Lighting. Section 17-** In every part of a factory where workers are working or passing, there shall be provided and maintained sufficient and suitable light, natural or artificial or both.

17 Drinking Water .Section 18- In every factory effective arrangements shall be made to provide and maintain in suitable points, conveniently situated for all workers employed therein, a sufficient supply of wholesome drinking water,

In every factory wherein more than 250 workers are ordinarily employed the drinking water shall during the hot weather, be cooled by ice or other effective methods. The cooled drinking water shall be supplied in every canteen. Lunch room and rest room and also at conveniently accessible points throughout the factory,

18 Latrines and Urinals. Section 19 and Rules-In every factory sufficient latrine and urinal accommodation of the prescribed type (separate enclosed
accommodation for male and female workers) shall be provided conveniently situated and accessible to workers at all times while they are at the

Every latrine shall be under cover and so partitioned off as to secure privacy and shall have a proper door and fastening. Sweepers shall be employed whose primary duty It would be to keep clean latrine urinals and washing places.

19 Spittoons. Section 20- In every factory, there shall be provided a sufficient number of spittoons of the type prescribed in convenient places and, they shall be maintained in a clean and hygienic condition, No person shall spit within the premises of a factory except in the spittoons provided for the purpose. Whoever spits in contravention of this provision shall be punishable with fine not exceeding five rupees.

Safety

20 Fencing of Machinery. Section 21-In every factory dangerous parts of machines e.g., every moving part of a prime mover and every fly-wheel

connected to a prime mover etc., shall be securely fenced by safeguards of substantial construction which shall be kept in position while the parts of machinery they are fencing are in motion or in use.

21 Work on or near Machinery in motion. Section 22- No women or young person shall be allowed to clean, lubricate, or adjust any part of a prime mover or of any transmission machinery while the prime mover or transmission machinery is in motion, or to clean, lubricate or adjust any part of any machine if the cleaning, lubrication or adjustment thereof would expose the woman or young person to risk injury from any moving part either of that machine or of any adjacent machinery

22 Employment of young Persons on Dangerous Machinery Section 22- No young person shall work at any machine declared to be dangerous unless he has been full instructed as to the dangers arising in connection with the

machine and the precautions to be observed and has received sufficient training in work at the machine or is under adequate supervision by a person who has a thorough knowledge and experience of the machine.

23 Casing of new Machinery. Section 26- In all machinery driven by power and installed in any factory after 1st August, 1950, every set screw, bolt or key on any revolving shaft, spindle, wheel or pinion shall be so sunk, encased or otherwise effectively guarded as to prevent danger; all spur, worm and other toothed or friction gearing which does not require frequent adjustment while in motion shall be completely encased, unless it is so situated as to be as safe as it would be if it were completely encased.

Whoever sells or lets on hire or as agent of a seller or hirer, causes or procures to be sold or let on hire, for use in a factory any machinery driven by power which does not comply with these provisions, shall be punishable with imprisonment for a term which may extend to three months or with fine which may extend to five hundred rupees or with both.

24 prohibition of employment of Women and Children near Cotton Openers Sectio

No woman or child shall be employed in any part of a factory for pressing cotton in which a cotton opener is at work.

25 Excessive Weights. Section 34- No woman or young person shall unaided by another person lift, carry or move by hand, any material article, tool or appliance exceeding the following limits:-

Adolescent male – 29 Kgs.

Adolescent female – 20 Kgs.

Male child – 16 Kgs.

Female child – 13.5 Kgs.

26. Protection of Eyes. Section 35- Effective screens or suitable goggles shall be provided for the protection of persons employed in or in the vicinity of processes which involve risk or injury to the eyes from particles or fragments thrown off in the course of the process or which involve risk of injury to the eyes by reason of exposure to excessive light.

27. Precautions in case of fire. Section 38- Every factory shall be provided with adequate means of escape in case of fire for the persons employed therein. The doors affording exit from any room shall, unless they are of the sliding type be constructed to open outwards. Every window, door or other exit in affording a means of escape in a case of fire, other than the means of exit in ordinary use shall be distinctively marked. Effective and clearly audible means of giving warning in a case of fire to every person employed in the factory shall be provided. Effective measures shall be taken to ensure that wherein more than twenty workers are ordinarily employed in any place above the ground floor or where in explosive or highly inflammable materials are used or stored all the workers are familiar with the means of escape in ease of fire and have been adequately trained in the routine to be followed in such case.

Welfare

28 Washing Facilities. Section 42-Ineveryfactory adequate and suitable facilities for washing shall be provided and maintained for the use of the workers therein. Such facilities shall include soap and nail brushes or other suitable means of cleaning and the facilities shall be conveniently accessible and shall be kept in a clean and orderly condition.

If female workers are employed separate facilities shall be provided and so enclosed or screened that the interiors are not visible from any place where persons of the other sex work or pass.

29 Facilities for storing and Drying Clothing. Section 43 and Rule-In the case of certain dangerous operations e.g., lead processes, liming and tanning of raw hides and skins etc. Suitable placesior keeping clothing not worn during working hours and for the drying of wet clothing shall be provided and maintained.

30 Facilities for Sitting. Section 44- In every factory suitable arrangements for sitting shall be provided and maintained for all workers obliged to work in a standing position in order that they may take advantage of any opportunities for rest which may occur in the course of their work.

31 First aid and Ambulance Room. Section 45- There shall in every factory be provided and maintained so as to be readily accessible during all working hours first- aid boxes or cupboards equipped with the prescribed contents. Each first aid box or cupboard shall be kept in the charge of a separate responsible person who is trained

in first aid treatment and who shall always be readily available during the working hours of the factory.

In every factory wherein more than 500 workers are employed there shall be provided and maintained and ambulance room of the prescribed size and containing the prescribed equipment. The ambulance room shall be in charge of a qualified medical practitioner assisted by at least on qualified nurse and such other staff as may be prescribed.

32 Canteens. Section 46 and Rules- In specified factories wherein more than 250 workers are ordinarily employed a canteen or canteens shall be provided and

maintained by the occupier for the use of this workers. Food, drink and other items served in the canteen shall be sold on a non-profit basis and the prices charged shall be subject to the approval of a Canteen Managing Committee which shall be

appointed by the Manager and shall consist of an equal number of persons nominated by the occupier and elected by the workers. The number of elected workers shall be in the proportion of 1 for every 1,000 workers employed in the factory provided that in no case shall there be more than 5 or less than 2 workers on the Committee. The Committee shall be consulted from time to time on to the quality and quantity of food-stuffs to be served in the Canteen, the arrangement of the menus, etc.

33 Shelters, Rest Rooms and Lunch Rooms. Section 47- In every factory wherein more than 150 workers are ordinarily, employed, adequate and suitable shelters or rest rooms and a suitable lunch room, with provision for drinking water, where workers can eat meals, brought by them, shall be provided and maintained for the use of the workers.

34 Crèches. Section 48 and Rules- In every factory wherein more than 50 women workers are ordinarily employed, there shall be provided and maintained a suitable room or rooms for the use of children under the age six years of such women. The Crèches shall be adequately furnished and equipped and in particular there shall be one suitable cot or a cradle with the necessary bedding for each child, at least one chair or equivalent seating accommodation for the use of the mother while she is feeding or attending to her child and sufficient supply of suitable toys for older children.

There shall be in or adjoining the Crèche a suitable wash-room for the washing of the children and their clothing. An adequate supply of clean cloths, soap and clean towels shall be made available for each child while it is in the Crèche. At least half a pint of clean pure milk shall be available for each child on every day it is accommodated in the Crèche and the mother of such a child shall be allowed in the course of her daily work suitable intervals to feed the child. For children above two years of age there shall be provided, in addition,

an adequate supply of wholesome refreshments. A suitably fenced and shady open air play-ground shall also be provided for the older children.

35 Welfare Officers. Section 49- In every factory wherein 500 or more workers are ordinarily employed the occupier shall employ in the factory such number of welfare Officers as may be prescribed. Special Provisions

SPECIAL PROVISIONS

36 Dangerous Operations. Section 87 and Rules- Employment of women, adolescents and children is prohibited or restricted in certain operation declared to be dangerous, e.g. manufacture of aerated water, electroplating, manufacture and repair of electric accumulators, glass manufacture grinding or glazing of metals, manufacture and treatment of lead and certain compounds of lead, generating petrol gas from petrol, sandblasting, liming and tanning of raw hides and skins, and certain lead process in Printing Presses and Type Foundries.

37 Notices of Accidents. Section 88 and Rules- Where in any factory an accident occurs which causes death or which causes bodily injury by reason of which the person injured is prevented from working for a period of 48 hours or more immediately following the accident or which, though not attended by personal injury or disablement is of one of the following types :-

(I) Bursting of vessel used for containing steam under pressure greater than atmospheric pressure other than plant which comes within the scope of the Indian Boilers Act;

(II) Collapse or failure of a crane, derrick, hoist or other appliances used in raising or lowering persons or goods, or any part thereof, or the overturning of a crane;

(III) Explosion or fire causing damage to any room or place in which persons are employed or fire in rooms of cotton pressing factories, where a cotton opener is in use;

(IV) Explosion or fire causing damage to any room or place in which persons are employed or fire in rooms of cotton pressing factories, where a cotton opener is in use;

(V) Collapse or subsidence of any floor, gallery, roof, bridge, tunnel, chimney, wall or building, forming part of a factory or within the compound or cartilage of factory.

The Manager of the factory shall forthwith send notice thereof to the Chief Inspector, if the accident is fatal or of such a serious nature that it is likely to prove fatal, notice shall also be sent to the District Magistrate or the Sub Divisional Officer and the Officer-in-Charge of the nearest Police Station

38 Notice of Certain Diseases. Section 89 and Rules- Where any worker in a factory contracts any of the following diseases the Manager of the factory shall send notice thereof forthwith both to the Chief Inspector and the Certifying Surgeon:

Lead, phosphorus, mercury, manganese, arsenic, carbon bisulphide or benzene poisoning by nitrous fumes, or by halogens or halogen derivatives of the hydrocarbon of the aliphatic series; or of chrome ulceration, anthrax, silicosis, toxic anemi opitheliomatous cancer of the

skin, or pathological manifestations due to radium or other radioactive substances or X-rays

39 No Charge for Facilities and Conveniences. Section 114- No fee or charge shall be realized from any respect of any arrangements or facilities to be provided or any equipments or appliances to be supplied by the occupier under the provision of the Act.

40 Powers of Inspectors. Sections 9 and 82- Inspectors have power to inspect factories any time and may require the production of registers, certificates etc, prescribed under the Act and the Rules.

Any Inspector may institute proceeding on behalf of any workers to recover any sum required to be paid by an employer under the provisions relating to leave with wages, which the employer has not paid.

41 Obligations of Workers. Sections 97 and 111-Noworker in a factory :-

(I) shall willfully interfere with or misuse any appliance, convenience or other thing provided in a factory for the purposes of securing the health, safety or welfare of the workers therein.

(II) shall willfully and without any reasonable cause do any thing likely to endanger himself or others, and

(III) Shall willfully neglect to make use of any appliance or other thing provided in the factory for the purposes of securing the health or safety of the workers therein.

If any worker employed in a factory contravenes any of these provisions or any rule or order made there under he shall be punishable with imprisonment for a term which may extend to three months, or which may extend to Rs. 100 or with both.

If any worker employed in a factory contravenes any provision of the Act or any rules or orders made thereunder imposing any duty or liability on workers he shall be punishable with fine which may extend to Rs. 20.

42 Certificates of Fitness. Sections 68, 70 and 98- No child who has completed his fourteenth year or an adolescent shall be required or allowed to work in any factory unless a certificate of fitness granted with reference to him is in the custody of the Manager of the factory and such child or adolescent carries, while he is at work, at token giving a reference to such certificate. Any fee payable for such a certificate shall be paid by the occupier and shall not be recoverable from the young person, his parents or guardian.

An adolescent who has been granted a certificate of fitness to work in a factory as an adult and who while a work in a factory carries a token giving reference to the certificate shall be deemed to be an adult for all the purposes of the provision of the Act relating to the working hours of adult and the employment of young persons. An adolescent who has not been granted a certificate of fitness to work in a factory as an adult shall, notwithstanding his age, be deemed to be a child for all the purposes of the Act.

Whoever knowingly uses or attempts to use, as a certificate of fitness granted to himself a certificate granted to another adolescent to work in a factory as an adult, or who having procured such certificate knowingly allows it to be used o be made, by another person,

shall be punishable with imprisonment for a term which may extend to one month or with fine which may extend to Rs. 50 or with both.

43 Registers, Notices and Returns. Sections 61, 63, 72, 74, 79, 80 and 110- A register of adult workers in the prescribed

Form No.12 and a register of child workers in the prescribed Form No.14 shall be maintained by the Manager of every factory.

A notice of periods of work for adults and a notice of periods of work of children in the prescribed

Form No.11 (a) or 11 (b) and 12 shall be correctly maintained and displayed in every factory. No adult worker or child shall be required or allowed to work in any factory otherwise than in accordance with their respective notice of periods of work displayed in the factory.

The Owners Occupiers or Managers of factories shall submit the prescribed periodical returns to the Inspector regularly

Form No.21
(Prescribed under rule 107)
ANNUAL RETURN

For the Year ending 31st December,

1 Registration number of factory.

2 Name of factory.

3. Location of factory with address

4 Full postal address of factory.

5 (a) Name of occupier.

(b) Telephone number

6 (a) Name of the manager.

(b) Telephone number

7 (a) Nature of industry.

(b) Nature of major manufacturing process(mention exactly what is being man ufactured) (c) Total investment made

8 Code

9 whether the factory is in
(a) Public sector
(b) Private sector
(c) Joint sector
(d) Co-operative sector

Number of workers and particulars of employment

10 is the factory is seasonal?

11 no. of days worked in year.

12 (i) No. of Man-days worked during the year.

(a) Men.

(b) Women.

(c) Children.

(ii) Number of workers, attendance, days worked and wages paid.

month	Number of workers	Total attendance.	Number of days worked	Total amount of wages paid.

13 Average number of workers employed daily

(a) Adults.

(i) Men.

(ii) Women.

(b) Adolescents

(i) Male.

(ii) Female.

(c) Children

(i) Male.

(ii) Female.

14 Total No. of man-hours worked including overtime. a. Men.

b. Women.

c. Children

15 Average number of hours worked per day work a. Men.

b. Women.

c. Children

16 (a) Does the factory carry out any process or operation declared as hazardous unde

Name of the dangerous Process of operations carried on	Average No. of persons employed daily in each of the processes or operations given in Col. 1

Leave with wages

17 Total number of workers employed during the year.

a. Men.

b. Women.

c. Children

18 Number of workers who were entitled to annual leave with wages during the year. d. Men.

e. Women.

f. Children

19 Number of workers who were granted leave during the year a. Men.

b. Women.

c. Children

20 (a) Number of workers who were discharged, or dismissed from the service, or

quit employment, or were superannuated, or who died while in service during the year.

(b) Number of such workers in respect of whom wages in lieu of leave were paid.

Safety officers

21 (a) Number of Safety Officers required to be appointed as per notification under Section 40-B.

(b) Number of Safety Officers appointed

AMBULANCE ROOM

22 Is there an ambulance room provided in the factory as required under Section 45 ?

CANTEEN

23 (a) Is there a canteen provided in the factory as required under Section 46?

a. Is the canteen provided managed

(i) departmentally, or

(j) Through a contractor?

SHELTERS OR REST ROOMS AND LUNCH ROOMS

24 (a) Are there adequate and suitable shelters or rest rooms provided in the factory as required under Section 47?

(b)Are there adequate and suitable lunch rooms provided in the factory as required under Section 47?

CRECHES

25 Is there a crèche provided in the factory as required under Section 48?

WELFARE OFFICERS

26(a) Number of Welfare Officers to be appointed as required under Section 49?

(b) Number of Welfare Officers appointed.

ACCIDENTS 26 (a) Total number of accidents (See explanatory note) (i) Fatal.

(ii) Non-fatal.

(b) Accidents in which workers returned to work during the year (aa) Number of accidents.

(bb) Man-days lost due to accidents

(ii) Accidents (workers injured) occurring in the previous year in which injured workers returned to work during the year to which this return relates :

(aa) Number of accidents.

(bb) Man-days lost due to accidents

(c) Accidents (workers injured) occurring during the year in which injured workers did not return to work during the year to which the return relates.

(i) Number of accidents.

(ii) Man-days lost due to accidents.

(d) Attach Form No 18 in case of those accidents, intimation of which has not been sent to Chief Inspector of Factories at the time of accident.

SUGGESTION SCHEME 27 (a) Is a suggestion Scheme in operation in the factory

(b) If so, the number of suggestions

(i) Received during the year

(ii) Accepted during the year

(c) Amount awarded each prizes during the period

(i) Amount awarded each prizes during the period (ii) Value of the maximum cash prize awarded (iii) Value of maximum cash prize awarded

Certified that the information furnished above is to the best of my knowledge and belief, correct.

Signature of the manager

Date.....

Explanatory Notes :

1 The average number of workers employed daily should be calculated by dividing the aggregate number of attendance on working days (that is, men-days worked) by the number of working days in the year. In reckoning attendance, attendance by temporary as well as permanent employed should be counted, and all employees should be included, whether they are employed directly or under contractors. Attendance on separate shifts (e.g. night and day shifts) should be counted, separately. Days on which the factory was closed for whatever cause, and days on which the manufacturing processes were not carried on should not be treated as working days. Partial attendance for less than half a shift on a working day should be ignored, while attendance for half a shift or more on such day should be treated as full attendance.

2 For seasonal factories, the average number of workers employed during the working season and the off-season should be given separately. Similarly the number of days worked and average number of man hours worked per week during the working and off-season should be given separately.

3 The average number of hours worked per week means the total actual hours worked by all workers during the year excluding the rest intervals but including overtime work divided by the product of total number of workers employed in the factory during the year and 52. In case the factory has not worked for the whole year, the number of weeks during which the factory worked should be used in view of the figure 52.

4 Every person killed or injured should be treated as one separate accident. If in one occurrence six persons were injured or killed it should be counted as six accidents.

5 In item 24(a), the number accident which took place during the year should be given. In case of non-fatal accidents only.

Form No.23

(Prescribed under Rule 60)

Prescribed for Report of Examination of Hoist or Lift/ Occupier/ (or owner) of Premises 1 (a) Name of the occupier or owner of the premises

(b) Address

2 (a) Type of hoist or lift and Identification number or description.

(b) Date of construction or re-construction (if ascertainable).

3 Design and construction.

Are all parts of the hoist or life of good mechanical construction sound material and adequate strength (so as ascertainable).

4 Maintenance.

Are the following parts of the hoist or lift properly maintained and in good working order, If not, state what defects have been found :-

(a) Enclosure of hoistway or liftway.

(b) Landing gates and cage gate(s).

(c) Interlocks on the landing gates and cage gate(s).

(d) Other gates fastenings.

(e) Cage and platform and fittings guides, buffers, interior of the hoistway or liftway.

(f) Over-running devices.

(g) Suspension ropes or chain and their attachments.

(h) Safety gear, i.e. arrangements for preventing fall of platform or cage brakes.

(i) Brakes.

(j) Worm or super gearing.

(k) Other electrical equipment.

(l) Other parts.

5 What parts (if any were) inaccessible.

6 Repairs, renewals or alterations (if any) required and the period with which they should be executed.

7 Maximum safe working load subject to repairs, renewals or alterations (if any) specified in (5).

8 Others.

I/We verify that on ..... I/We thoroughly examined this hoist of life and that above is correct report of the result.

Signature..... Counter signature..... Signature..... Counter signature.....

If employed by a company or association give names and address. Qualification.....

Address.....

Date.....

Form No.24
(Prescribed under Rule 102)

1 Description of system

2 Hood

(a) Serial No. of Hood.

(b) Contaminant captured.

(c) Capture velocities (at points to be specified).

(d) Volume exhausted at Hood.

(e) Hood static pressure Design Actual Value

3 Total pressure drop at

(a) Joints

(b) Other points of system (to be specified)

4 Transport Velocity in Duct (at points alone dust to be specified)

5 Air cleaning Device.

(a) Type used.

(b) Velocity at inlet.

(c) Static Pressure at inlet.

(d) Velocity at outlet.

(e) State Pressure at outlet.

6 Fan.

(a) Type used.

(b) Volume handled.

(c) Static pressure.

(d) Pressure drop at outlet of fan.

7 Fan Motor. (a) Type

(b) Speed and horse Power.

8 Particulars of defects, if any, disclosed during test in any of the above components.

I certify that on this.....day of ..... the above dust extraction system was thoroughly cleaned and (so far as its construction permits) made accessible for thorough examination. I further certify that on the said date, I thoroughly examined the above dust extraction system including its components and that the above is a true report of my examination.

Signature .....

Qualification.....

Address .....

Date .....

If employed by a Company or Association give name and address.

Form No. 25
(Prescribed under Rule 110)
MUSTER ROLL

Name of Factory..... Place District

Serial No.	Name	Father's Name	Nature of Work	For the Period ending						Remarks
				1	2	3	4	5	6	

Form No. 25-A
(Prescribed under Rule 110(3)(i))
ATTENDENCE CARDS

MONTH

1 Name of the factory and address
2 Name of the worker
3 Father`s name
4 Token No.
5 Designation

Period of work		
Date	from	to

Intials of time-keeper----------

Signature of Manager.....

Form No. 26

(Prescribed under Rule 111)

REGISTER OF ACCIDENTS AND DANGEROUS OCCURRENCES

Name of injured persons (if any)	Date of accident or dangerous occurrence	Date of report (in Form No.18) to	Nature of accident or dangerous occurrence	Date of return of injured person	No. of days injured person was absent from
1	**2**	**3**	**4**	**5**	**6**

Form No. 27
(Prescribed under Schedule VI to Rule 102)
SPECIAL CERTIFICATE OF FITNESS

(In respect of persons employed in operations involving use of lead compounds)

Serial No.....

Dated.....

I hereby certify that I have personally examined ..... son of .....residing at ..... Who is desirous of being employed as .....in the .....and that his age .....as nearly as can be ascertained from my examination, is .....years, and that he is, in my opinion, fit for employment at work involving the use of lead compounds. His descriptive marks are :-

Left thumb impression of person examined

Certifying Surgeon

I certify that I examined the person mentioned above on	I extend that Certifying Surgeon	Signature of Certifying Surgeon	Note, of symptoms of lead poisoning

Form No.31

(Prescribed under sub-rule(4) rule 107)

ACCIDENTS-ANNUAL RETURN

6 name of the factory

7 Number of accidents and dangerous occurrences which took place during the year

8 Number of the persons-

(a) Killed

(i) men

(ii) women

(iii) children

(b) Injured

(i) men

(ii) women

(iii) children

9 Number of injured persons who retuned to work

10 Number of men-days lost on accont of absence due to injury in case of persons who return to work

Signature of Manager.....

[1]FORM No. 32

CERTIFICATE OF FITNESS FOR DANGEROUS OPERATIONS

[3](Prescribed under *Rule 102, Schedule (2) of Rule 67-P]'*

[2]*[Schedule No.l II Ill IV V VI IX Xll XIV XV XVIll XXI XXIV & XXV]*

1. Serial No._____ Serial Number_____

I certify that I have Personally examined_____

2. Name of person examined_____
_____(name), son of_____
(Father's
Name), residing at_____
3. Father's Name_____
_____(address) who is
desirous
of being employed as_____ 4.
Sex_____ in _____ (department and
as nearly as can be ascertained
(name of factory)
process), and that
5. Address_____
fro
m my examination is fit/unfit for employment at the
ab
ovenoted factory.
_____
2. He is
fit to be employed and may be employed on
6. Name of the factory in which employed/in which
some
other non- hazardous operation such as_____
wishes to be employed_____ 3. He
may be produced for further examination after
a period
of_____
7. Process or department employed/wishes to be
4. He is
advised following examination : --
employed_____
_____
_____
8. Whether certificate granted_____
5.
He is advised following treatment : --
9. Whether declared unfit and certificate refused__
_____
_____
6. The
serial
number of the previous certificate is __
10. Reference number of previous certificate granted
or refused_____
L.T.I. of person examined Signature of L.T.I. of person
examined Signature of
Certifying Surgeon.
Certifying Surgeon.

FORM-33
[Prescribed under
rule 56-A]

1 serial No. Gasholder as required under sub-rule(3) of rule 56-A

2 Particulars of Manufacturer-

(a) Maker`s name
(b) Date of manufature
(c) Capacity
(d) Name of lifts
(e) Preesure thrown by holder when full of gas

3 Date of inspection carried-out as required under sub-rules(4) & (5) of rule 56-A and by whom carried-out.

4 Method of inspection

5 Date of paintong

6 Nature of repair

7 Name of person carrying out repairs

8 Remarks

Signature of Occupier..... Signature of Manager.....

Date---------- Date----------

FORM No. 33-A
(Prescribed under Rule 56A)
REPORT OF EXAMINATION OF WATER-SEALED GASHOLDER

1 Name of Occupier of Factory

2 Situation and address of Factory

3 Name, description, distinguishing number or letter and type of gasholder.

4 Name and address of the manufacturer.

5 (a) No. of lifts.

(b) Maximum capacity in cub-meters (cub. ft.)

© Pressure thrown by holder when full of gas.

6 Particulars of gas to be stored in the holder.

7 Particulars as to be condition of-

(a) Crown

(b) Side sheeting, including grips and cups.

© Guiding Mechanism (Roller carriages, rollers, pins, guide rails or ropes.). (d) Tank.

(e) Other structure, if any (columns, framing and bracing).

8 Particulars as to position of the lifts at the time of examination

9 Particulars as to whether the tank and lifts were found sufficiently level for safe working and if not, as to the steps taken to remedy the defect.

10 Date of examination and by whom it was carried out.

11

Condition of vessel
External
Internal

12 Are all fittings, appliances properly maintained and in a good condition repairs, if any, required and period within which they should be execute and any other condition which the person making the examination thinks it necessary for safe working.

13 Other observations.

14 I certify that on the gasholder described above was thoroughly examined and such of the tests as were necessary made on the same day and that the above is a true report of my examination.

Signature

.....

Qualification

.....

FORM NO. 34[1]

(PRESCRIBED [2][UNDER RULE 102 (3) & sub-rule (1) of Rule 67-P]) Return for the month ending on……..

Name of the factory ……..

Name of the Hazardous (Manufacturing) Processes undertaken……. Full Postal address……District……..

Number of workers normally employed during the month	Number of workers employed in the hazardous manufacturing process	Hours of work per day and per worker	Date of examination of the worker engaged in the hazardous manufacturing	Name and address of the examining certifying Surgeon	Number of workers examined	Number of workers declared fit	Number of workers declared unfit with details	Det alte wor to w who dec
1	2	3	4	5	6	7	8	
							Token No.	Disc fron suff

N.B. – The examination by Certifying Surgeon should not be conducted on holiday.

FORM NO.
35[1]

(Prescribed under
Rule, 112)

Inspection Book

Date and time of inspection	Name of the Inspecting Officer	Details of violations observed	Section of the Factories Act and Rules violated	Remarks including any passed inspecting Office
1	2	3	4	5