BIHAR FACTORY RULES 1950

Bihar Factories Rules, 1950 No. B/F1-106/50-L -7802 the 30th November. 1950. —In exercise of the powers conferred by the Factories Act, 1948 (LXIII of 1948), the Governor of Bihar is pleased to make the following rules, the same having been previously published as required under section 115 of lhe said Act : Chapter ! Preliminary

1. Short title, extent and These rules may be cited as the Bihtr Factories Rules, 1950.(2) These rules Shal! extend to the whole of the State of Bihar. (3) Save as otherwise expressly provided elsewhere, these rules shall come into force at once

2. Definitions.—ln 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 (e) (f) (h) (i) (j) into the air of a room by any artificial means whatsoever, except the unavoidable escape of steam or water vapour into the atmosp- here directly due to a manufacturing process : Provided that the intröduction of air directly from outside through moistened mats or screens placed in openings at times when the temperature of the room is 80 degree or more, shall not be deemed to be artificial humidification, 'Belt" includes any driving strap or rope. "Degrees" (of temperature) means degrees on the Fahrenheit scale. "Examining Surgeon" means a qualified medical practitioner autho• rised by a Certifying Surgeon under sub-section (2) of section IO of the Act to exercise any of the powers of such Certifying Surgeon under the Act. "Form" means a form appended to these-rules. "Fume" includes gas or vapour. "Health Offcer" means the Municipal Health Offcer or District Health Offcer or such other ofiicial as may be appointed by the State Government in that behalf. Hygrometer" means an accurate wet and dry bulb hygrometer conforming to the prescribed conditions as regard constructions and maintenance. 'Inspector" means an omcer appointed under section 8 of the Act and includes "Chief Inspector". 'Maintained" means maintained in an emcient state, in emcient working order and in good repair. i, Bihar Factories Rules, 1950 [Rule 3 (m) "Manager" means the person responsible to the occupier for the working of the factory for the purposes of the Act. "Section" means a section of the Act. (n) "Schedule" means a schedule appended to these rules. (o) "Qualified medical practitioner" means a person holding a quali- (p) fication granted by an Authority specified in the schedule to the Indian Medical Degrees Act, 1916 (VII of 1916) or in the Schedules to the Indian Medical Council Act, 1956 (102 of 1956.) 3. Approval of No site shall be used for the location of a factory or no building shall be constructed, re-constructed, extended or taken into use as a factory or a part of a factory unless an application in Form no. along with the documents and plans as prescribed in sub-rule (2) has been sub- mitted to, and the plans submitted have been approved by the Chief Inspector of Factories and previous permission in writing in respect thereof has been obt- ained, subject, however, to the provisions of sub- section (2) of section 6.] (2) The application mentioned in sub-rule (l) shall be in

Form no. I and shall be accompanied by the following documents, namely . (a) A flow diagram or chart of the manufacturing process to be carried on in the factory or in the part of factory, (b) A brief description of all the manufacturing processes and work proposed to be carried on in the factory or in the part of the fact- ory, and (c) The follov ing plans and drawing each in triplicate, drawn to scale (i) site plan of the factory showing its surrounding including other buildings, structures, open land, roads, drains, streams or rivers adjacent or close to the site, (ii) lay out plan of the factory and its premises, (iii) plans, elevations, and necessary cross-sections of all the buildings, indicating relevant details including those relating to natural lighting, ventilation and means Of escape in case of fire and showing clearly the position of the plant, machinery, aisles passage• ays and gang-ways. (3) The Chief Inspector of Factories, may approve the plan submitted in accordance with sub-rule (2) subject to such conditions as he may specify in writing and where any conditions are specified, the plan shall be deemed to have been approved only when the said conditions are fulfilled : Provided that the Chief Inspector may, if on account of practical diffcul- ties, is so satisfied, dispense with the details relating to the position of the plant, machinery, aisles, passage ways and gang-ways from the plan. (4) The Chief Inspector may require the applicant to furnish such other documents, informations and particulars as may be lacking or as he may consi- der necessary for the purpose of examination and approval of the plans. (5) The Chief Inspector shall communicate his decision to the applicant in writing and in case any plan is approved the Chief Inspector •shall return 1. subs by G. S. R- 82 dated 27-11-1976 Rules 3A-5] Bihar Factories Rules, 1950 [3 one copy of each of the approved plans along with the conditions, if any, imposed by him, and with such remarks as he may consider necessary. l[3-A. Certificate of Stability.—No manufacturing process shall be carried on in any building of a factory constructed, reconstructed or extended, or in any building which has been taken into use as a factory or part of a factory until a certificate of stability in respect of the building in Form no. 34 has been sent by the occupier or manager of the foctory to the Chie(Inspector, and accepted by him.] 4. Registration and grant of licence.—(l) Subject to the provisions of rule 5, no manufacturing process shall be started or carried on in any factory unless a licence in respect thereof has been granted by the 21 Inspector Of Factories I and the same is valid for the time being. Explanation.—The permission granted by the 21 Inspector of Factories] under sub-rule (1) of rule 5 shall be deemed to be a licence and shal : remain valid until— (a) the licence is granted, (b) the permission granted is withdrawn for having been failed to fulfil the conditions specified therein or any other reason, (c) the period, if any, for which the permission has been granted expires, or (d) the 21 Inspector of Factories] communicates in writing the reason for not granting the licence. (2) The occupier of a factory shall submit to the Chief Inspector an application in Form 2 in triplicate for the registration of the factory and grant of licence

5. Grant of Licence.—2[(I) An application for a licence to work a fac- tory shall be made in Form no. 2 and shall be submitted in triplicate to the Inspector of Factories of the area concerned who after making such enquiries as he may deem fit for satisfying himself about the correctness of the particulars and on payment of fees specified in schedules A, B, C and D may register the factory in a register to be kept in his office for the purpose and grant a licence for the factory in Form IV on such terms and conditions as may be specified with the approval of the Chief Inspector of Factories. Pending grant of such licence the Inspector of Factories of the area concerned may grant permission to start to carry on work in the factory subject to such conditions as he may specify in writing Provided that in every such case of grant of licence or permission to start or carry on works in the factory, the State Government may call for the rele- vant documents from lhe Chief Inspector Of Factories or the Inspector of Factories of the area concerned and review the decision taken in the case and subject to provisions of Section 107, wherever such review is made State Government's decision in the matter shall be final.] (2) Every licence granted or renewed under this chapter shall remain valid and in force up to the 31st December of the year for which it is granted or renewed

1. Ins.by S.O. 686 dated 18-7-1988

2. Subs.by S O. 1093 dated 30-10-1985. Bihar Factories Rules, 1950 [Rules 6-7 (3) The licence or a copy thereofl[x x x x] shall be exhibited at a conspicuous place in the factory near the main entrance, and a signboard with the licence number allotted to the factory in bold letters shall be displayed at the main entrance : Provided that the signboard shall not be smaller in size than 12" x 9 n and the letters thereon not less than 2" in height. The letters on the signboard shall be arranged as follows No 6. Amendment of A licence may be amended by the 21 Ins- pector of Factories] with the approval of the State Government. (2) When there is any increase in the number of workers employed or in the rated capacity of the machinery and plants installed In terms of H. P. or K. W. installed, resulting in an increase in the amounts of fee payable for the licence as compared to the fee already paid or when there is any other change requiring amendment in the licence already granted or renewed, the occupier of the factory shall, within 15 days of the increase or change as the case may be, submit an application to the 21 Inspector of Factories for amendment of the licence, stating therein the nature of amendment required and the reasons therefor. (3) The fee for the amendment of a licence shall be *lone hundred] rupees : Provided that when the amendment is required due to the increase in the number of workers or in the rated cåpacity of the machinery and plants insta- Iled the fee for amendment of licence shall be five rupees plus the amount by which the fec that would have beer, payable if the licence had originally been issued in the amended form exceeds the fee originally paid for the I:cence. (4) The:licence already,granted shall cease to remain valid after the change or increase in the number of workers or in the installed capacity as aforesaid unless the occupier has filed an application and paid the requiJed fee as laid down in these rules within fifteen days from the said date of change or increase. Every such application for amendment of a licence will be forwarded by the Inspector of Factories concerned through the Chief Inspector of Factories to the State Government for approval before the licence is amended.] 7. Renewal of An application for renewal of licence shall also be in

Form no. 2 and be submitted in triplicate -to the Inspector of Factories Of the area concerned not later than the date on which the licence expires and if the application is so made the factory, shall be deemed -to be duly licenced until such date as on which the Inspector of Factories renews the lice- nce or on which the Inspector of Factories communicates in writing the reasons for not renewing the licence.] 1. Omitted bv S. O. 1093 dmcd 30.10.1985

2. Subs.bv i hid. 3. subs for five" bv SO. 109 dated 31.3.1902

4. Ins bv S.O. 1093 dated 30.10.1985. Rules 8-10 J Bihar Factories Rules, 1950 [5 (2) The fee for the renewal of the licence shall be the same as that for grant thereof : IIProvided that if the application for renewal of licence is not received within fifteen days after the expiry of the licence the fee payable for licence renewal application shall be fifty percent more in addition to the fee prescri- bed in schedules A, B and C for three months and after three months fees for renewal of licence will be cent percent more in addition to the fees prescri- bed in schedules A, B and C.] 2[(3) A licence may be renewed by the Inspector of Factories with the approval of the Chief Inspector of Factories : Provided that the State Government may call for the relevant documents from the Chief Inspector of Factories or the Inspector of Factories of the area concerned and review the decision taken in the case and subject to the provi- sions of section 107, wherever such review is made the State Government's decision in the matter will be final. (4) The Chief Inspector may condone the additional fee prescribed in the proviso to sub-ruie (2), in case he is satisfied that the delay in submission of application for renewal of licence was due to any reason beyond the control of the occupier or due to any other reason of similar nature

3. Transfer of When there is any change of the occupier of factory before the expiry of the licence the new occupier shall within 15 days of the transfer, apply to the 2 [Inspector of Factories of the area concerned] for transfer of licence in his name : Provided that in the case of the death or insolvency of an occupier, the person succeeding or taking over the factory and functioning as the occupier shall apply for transfer and for amendment of the licence for the remairiing period as soon as practicable, but„in no case Jater than one month after the death or taking over : 31 Provided further that no such transfer of a licence will be made by the Inspector without obtaining prior approval of the Chief Inspector.] (2) The application for transfer shall be accompanied by a letter from the previous occupier or some other documentary evidence which may prove that the occupation of the factory has been transferred to the applicant. (3) The fee for transfer of licence shall be Ilone hundred] rupees and shall be payable by the new occupier applying for transfer of licence under sub-rule (l)

9. Loss of licence.—When a licence granted under these rule is lost or de stroyed, a duplicate may be granted on payment of a fee of Rs. 1[twentyfive.J I O. Paynent-of fees.—(l) Every application under these rules shall be accompanied by the Treasury Challan showing that the appropriate fee has been deposited in one of the treasuries •in the State ot Bihar under the head of acco- unt Labour and Employment—Fees realised under the Factories Act" : Provided that hen the head of account under which the licence fees have to b: deposited is changed the 21 Inspector of Factories] may direct the occu- piers to deposit the fees payable under these rules under such ottpr head of account as he may specify. Subs. by S. O dated 3 2. subs by S. O. 1093 dated 30-10-1985; 3. Ins. bv ibid 4. Subs vide new Head of Account. Bihar Factories Rules, 1950 [Rules 11-13 (2) The fee or any portion of the fee paid may be refunded to the appli- cant by the 11 Inspector of Factories of the area concerned] as refund of revenue if an application for grant, renewal, amendment or transfer of a licence is reje- cted or if for any cther reason fee or portion of the fee so paid, is considered by the 11 Inspector of Factories of the area concerned] as not payable. l. It shall be the duty of the occupier to submit to the IL Inspector of Factories, of the area concerned] application for registra tion and grant of licence or for renewal of licence or for transfer or amendment of the licence as may be necessary within the time prescribed in the foregoing rules

Form no. 2. 12-A. Notice of change of manager.—The notice of change of manager shall be in Form no 3. Chapter 11 Inspectors and Certifying Surgeons

13. Powers of Inspectors. An Inspector shall, for the purpose of giving effect to the provisions Of the Act, have powers to do all or any of the following things, that is to say (a) to photograph any worker; to inspect, examine, measure, copy, pho- (b) (c) (d) tograph, sketch or test, as the case may be, any building or room, any plant, machinery, appliance or apparatus, any register or docu- ment, or anything provided for the purpose of securing the health, safety or welfare of the workers employed in a factory ; in the case of an Inspector who is a duly qualified medical practi- tioner, to carry out such medical examinations as may be necessary for the purposes of his duties under the Act ; to file a complaint in a Court against the manager or the occupier ofa factory or against both or against any other person liable to be punished under the Act and to prosecute, conduct or defend before a court any complaint or other proceedings arising under the Act or in discharge of his duties as an Inspector ; to satisfy himself at each inspection that— (i) the provisions of the Act and of these rules regarding the health and safety of the workers employed in the factory are observed ; 1. (ii) the adolescent and children employed in the factory have been granted certificates of fitness and that no adolescent or child is employed who is obviously unfit ; (iii) the register of all workers employed in such factory, of their hours of work and the nature of their employment, is in the prescribed form ; (iv) the periods of rest and the holidays provided by the Act are granted, and that the limits of hours of work laid down therein are not exceeded; Subs by S. O. 1093 dated 30-10-1985. Rule 13A] (e) (f) (g) (h) (i) (f) Bihar Factories Rules, 1950 [7 (v) (vi) the provisions of section 59 and of the rules relating to the payment of overtime are duly observed and the notices required by sections 61 and 72 and the abstracts required by section 108 are duly affxed and that the reqisters required by these rules are properly maintained. to enquire into and investigate the cause of any accident or disease, or the possibility of any accident or disease : to note how far the defects pointed out at a previous inspection have been removed and how far orders previously issued have been complied with to point out all such illegalities, defects or irregularities as he may observe during the course of his inspection and to forward a copy of the inspection note to the manager or occupier ofa factory for removal of the illegalities, defects or irregularities. to seize any record or document for the purpose of examination and satisfying himself that the provisions of the Act and the rules thereunder were complied with or which he may consider relevant in respect of any offence under the Act which he may have reasons to believe or suspect has been committed by the occupier or the manager ; o direct by an order in writing the occupier or the manager to produce either personally or through his agent any prescribed record Of register at his offce or at any other place where he may be temporarily camping or at any other convenient place ; and to direct by an order in writing the manager or the occupier or any other employee of a factory to appear before him personally at his office, or at the place where he may be temporarily camping or at any other place, to be examined and interrogated by him on any matter connected with the compliance of the provisions of the Act or the Rules.

(2) The Inspector shall keep a file of the records of his inspection in

Form no. 28. (3) Every order passed under the Act and these rules, shall be served on the manager of a factory— (a) by delivering a copy of it to him personally or at his omce, or (b) by registered post. 13-A. Qualifications or-an Inspector.—No person shall be appointed as an Inspector for the purposes of the Act, unless he possesses the qualifications hereunder— (a) he must not be less than 22 years or more than 35 years of age : Provided that in the case of a candidate belonging to Scheduled Castes or Scheduled Tribes, the upper age limit shall be 40 years. (b) he must have secured a degree or diploma, equiva}ent to a degree of a recognised University in any branch of Engineering, Technology or Medicine, r Rule 14 8] Bihar Factories Rules, 1950 (c) the Government may, in addition to the basic qualifications, by order, specify appropriate additional qualifications, if any, for a particular post • Prcvided that in the case of a person who has been working as an Inspe- ctor under the Act at the time of commencement of this rule, the Government may, subject to such conditions as it may specify, exempt such person from the provisions cf this rule. 14 Duties of Certifying Surgeon. —(1) For the purpose of the examina- tion and certification of young persons who wish to obtain certificates of fitness the Certifying Surgeonjshall arrange. suitable time and place for the attendance of such persons, and give previous notice in writing of such arrangements to the managers of factories situated within the local limits assigned to him. (2) (a) Every Certifying Surgeon shall keep bound books containing certification in Form no. 5 respectively in foil and counterfoil. In each book the form shall be numbered consecutively and shall be printed on cloth-backed paper. The foil and counterfoil shall be filled in and the left thumb mark of the person or his signature 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, the Certifying Surgeon shall sign the foil and initial the counterfoil and shall deliver the foil to the person in whose name the certificate is granted. The foil so delivered shall be the certi- ficate of fitness granted under section 69. All counterfoils in a book shall be preserved by the Certifying Surgeon for a period of at least two years after the issue of the last certificate in that book. (b) A certifying Surgeon revoking a certificate under sub-section (4) o f section 69 shall write the word "Revoked'S in red ink on the foil and counter- foil. (3) Any authority granted by a Certifying Surgeon under sub-section (2) of section IO to a qualified medical practitioner (herein-after referred to as the Examining Surgeon) to exercise the powers of the Certifying Surgeon under the Act shall be made in writing and shall state the factories or area tc which the jurisdiction of the Examining Surgeon is limited, and any cancellation of such authority shall be made by the Certifying Surgeon in writing. (4) An Examining Surgeon shall grant and revoke certificate in the manner provided in sub-rule (2). The word "Provisional" shall be printed or stamped in red ink at the top of each foil and countertoil. (5) (a) A person who loses a certificate of fitness which has been grant- ed to him may apply to the Surgeon who granted it for a copy of the certifi- cate and the said Surgeon after making such enquiry from such person's empl- oyer (or if such person is unemployed, from his last employer) and from such other sources, as he deems fit, may grant a duplicate of the lost certificate. The word "Duplicate" shall be clearly written in red ink across such duplicate certificate and initialled by the said Surgeon. The counterfoil in the bound book of forms shall be similarly marked "Duplicate" and initialled. (b) For every copy ofa duplicate certificate granted under clause (a), a fee of tifty Naye Paise shall be charged, which shall be credited to Government. The Certifying Surgeon or Examining Scrgeon shall maintain a register in Form no. 26 of all fees paid for the issueof duplicate certificates and shall initial each entry therein. Rule 14 J Bihar Factories Rules, 1950 [9 (c) No duplicate of certificate shall be granted to any person otherwise than in accordance with the provisions of this sub-rule. (6) (a) The Certifying Surgeon shall visit every factory within the local limits for which he is appointed in which adolescents or children are known to be employed, atleast once in three months. At each of these visits the manager shall produce before him all adolescents and children employed in the factory, whether actually at work or not. (b) The Certifying Surgeon shall personally examine every adolescent and child who is in possession ofa ' 'Provisional" certificate granted under sub-rule (4) and shall, if.satisfied that a certificate of fitness should be granted, destroy the provisional certificate and issue his own certificate of fitness in place of it. (c) If on such examination the Certifying Surgeon is of opinion that a person in possession of a child's provisional certificate of fitness is under the age of fourteen years or is not fit for employment as a child in a factory, or that a person in possession of an adult's provisional certificate of fitness is less than 15 years of age or is unfit to work as an adult, he shall impound the cer- tificate, write on it the word " Cancelled" and sign the same and shall forward the certificate with such remarks, if any, as he mav offer to the Inspector of Factories for information, and

inform the Examining Surgeon who granted such provisional certificate. (7) Tf the Certifying Surgeon refuses to grant any person a certificate of fitness, or if he cancels a 'Provisional Certificate of fitness, no fresh application for a certificate for such person shall be entertained until after the lapse of three months from the date of such refusal, unless the Certifying Surgeon other- wise gives permission in writing at the time of refusing to grant the certificate or at the time of cancelling a 'Provisional Certificate' : Provided that this sub-rule shall not prevent the immediate granting ofa certificate of fitness as a child to a person whose certificate of fitness as an adult has been revoked under clause (c) of sub-rule (6), if in the opinion of the Cer- tifying Surgeon such person is of age and fit to work in a factory as a child. (8) The Certifying Surgeon or the Examining Surgeon, as the case may be, at his periodical visits shall satisfy himself as to the fitness of all the adole- scents and children empioyed in the factory and shall revoke the certificate of fitness of any whom he deems to be unfit. (9) The Certifying Surgeon and the Examining Surgeon shall hand over to the manager a note in Form no. 27 detailing the result of each visit to the factory. (IO) The Certifying Surgeon shall, upon request by the Chief Inspector or an 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 it is reasonable to believe are due to the manufacturing process carri:d 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 a likelihood of injury to the health of workers employed in that manufacturing processn 10] Bihar Factories Rules, 1950 [Rule 14A (c) young persons are, or are about to be, employed in any work. (11) 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. (12) At such visits the Certifying Surgeon sha!l examine the persons employed in such processes and shall record the results of his examination in a register known as the Health Register (Form no. 16) which shall be kept by the factory manager and produced to the Certifying Surgeon at each visit. (13) Ifthe 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 em- ployed in that process without the written sanction of the Certifying Surgeon in the Health Register. (14) The manager 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. (15) The manager of a factory shall provide for the purpose of any medi- cal 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. Any register or record of medical examination and tests therewith required to be carried out under any of the schedule, annexed to rule 95 in respect of any worker shall be kept readily available and shall be preserved till the expiry of one year after the worker ceases to be in employment of the factory•] 14-A. Fees for Certifying Surgeon for examintion of young persons.— (I) The Certifying Surgeon shall be entitled to the following fees for examina- tion and grant of certificate of fitness under sub-section (2) of section 69 (i) Rs. 4 (Rupees four) for first young person and Re. 1 (Rupee one) for every subsequent person examined in a single day in a factory for the purpose of such examination (ii) Rs. 2 (Rupees two) for the first young person and Re. I (Rupee one) for every subsequent young person examined on a single day when the person to be examined go to the Certifying Surgeon for the purpose of such examination ; (iii) If a Certifying Surgeon has to travel beyond a radius of five miles Ins. from his dispensary or place of posting to examine any young person or persons, he shall be entitled to an additional fee at the rate of thirty seven Naya Paise only per mile for the total distance travelled by him. A Certifying Surgeon who is the servant of the State Government shall charge this additional fee from the occu- pier of a factory only if he does not charge any travelling allow- ance for the journey from the State Government. by S. O. 686 dated 13 7.1988. Rules 14B-14D] Bihar Factories Rules, 1950 Lil (2) The Certifying Surgeon shall send his bill of fees ditect to the occu- pier of the factory in which the young persons are examined or are to be emplo,l ed. (3) For the purpose of his duties, as specified in sub-rule 6 of rule 14, a Certifying Surgeon shall be entitled to the same rate of fee for examination and grant of certificates of fitness and the same rate of additional fee for trave- Iling as specified in sub-rule (I) of this

rule. (4) The fees and additional fees prescribed in this rule shall be paid by the occupier of the factory concerned. (5) The fees and the additional fees for the renewal of certificate of fit- ness shall be the same as prescribed in these rules for grant of certificate of fitness (6) An Examining Surgeon shall be entitled to the same fees and additi- onal fees as prescribed for a Certifying Surgeon. 14-B. Fees for Certifying Surgeon for carrying on examination under sub- rule (IO) of rule 14.—A Certifying Surgeon shall be paid by the occupier of the factory besides the additional fee for travelling, a daily professional fee at the rate of Rs. 16 per day irrespective of the number of person examined but this fee shall be reduced to Rs. 8 if the examination does not take more than half of a day . Provided that if the number of factories visited exceeds four on a single day, the professional fee payable above shall be raised to Rs. 24 per day. 14-C. Fee for medical practitioners.—(l) On receipt of a report under sub-section (2) of section 89 from a Medical Practitioner and after getting the report confirmed by a certificate of a Certifying Surgeon or otherwise, the Chief Inspector shall pay a fee of Rs. 4 (rupees four) only to the Medical Practitioner concerned for each person suffering from any disease specified in the Schedule to the Act. (2) The Chief Inspector shall send a written demand to the occupier of the factory concerned by registered post under acknowledgement due for the amount paid by him under sub-rule (l). (3) On receipt of such demand the occupier of the factory concerned shall within a fortnight deposit the amount into the nearest Treasury or Sub- Treasury by means of a Challan under the head 11 "0230—104 Labour & Employment—Fees realised under the Factories Act" and shall immediately send the Challan in original by Registered Post to the Chief Inspector in compliance with the notice of demand. (4) If any occupier fails to deposit the amount demanded by the Chief Inspector within a fortnight of the receipt of the notice of demand, the Chief Ipspector shall take steps to recover the amount as an arrear of Land Revenue from the occupier of the factory concerned. 14-D. Fees for examination of persons employed in dangerous operations. — The fees and additional fees for examination of persons employed in dange- rous operations as specified in rule 95 shall be the same as prescribed in the 1 Subs. vide new Head of Account. 12.1 Bihar Factories Rules, 1950 [Rules 14E.16 rule 14-A, and shall be payable by the occupier of the factory in which the persons examined are employed. 14-E. Debiting of fee payable by the Chief Inspector under rule 14 C— The fees payable by the Chief Inspector under rule 14.C shall be debited to the head and Employment—Other receipts" 14-F. Arrear of fees and additional fees to be recovered from the occupier as arrears of land revenue. —If the occupier of any factory fails to pay the fees or additional fees, or both, prescribed under rules 14-A, 14-B and 14-D to any Certifying Surgeon, the same shall, on an application received from the Certi- fying Surgeon Fy the Chief Inspector, be recoverable as an arrear of land reve- nue from the occupier of the factory concerned and paid to the Certifying Surgeon concerned. Chapter Ill Health 15. Record of white washing, etc.—The record of dates on which white washing, colour-washing, varnishing, etc., are carried out shall be entered in a register maintained in Form no. 7

16. Disposal of wastes and effluents.—(l) In this rule, unless there be anything repugnant rn the subject or context, the word "Stream" shall include any river, stream, water course, inland water tank, reservoir, or the like, whe- ther natural or artificial, and "wastes" unless specifically mentioned shall include "effluents" whether solid, liquid or gaseous. (2) Such effluents as may be harmless and as do not need any treatment to make them harmless shall be separated from other effluents and shall be carried in separate drains : Provided that if the quantity of such effluents is very small, the Chief Inspector may permit all the effluents to be carried in one drain. (3) All wastes unless they are harmless shall be cleaned, treated and puri- fied effectively by such electrical, mechanical, chemical or other means by a combination of any of these, as may be appropriate considering the nature and quality of the waste, so as to make the waste innocuous and harmless. (4) The waste shall be purified to such a degree and shall be disposed of in such a manner as may not pollute any stream or atmosphere or may not cause any damage or harm to any fish, animal or plant life or may not cause any injury to the health of, or be a source of nuisance to the inhabitants of the area in the -vicinity of the factory or in the area over or through which the wastes may spread or pass. (5) Effcient drains shall be provided for the effluents from the points of origin to the place of treatment and the place!of disposal The drains shall be of such capacity as to be adequate for draining out the entire effluents without allowing them to over-flow and shall be construct- ed of masonry, concrete, or bricks and cement and be covered unless iron or concrete pipes are used for carrying the effluents Provided that the Chief Inspector may, by an order in writing, relax the requirements of this sub-rule to such extent and subject to such c w Heyd Of Accou nt. Rule 16] Bihar

Factories Rules, 1950 [13 he may specify, if he is satisfied that compliance with the provision thereof is not necessqry or practicable. (6) Wastes which are gaseous or a mixture of gases and solids shall be removed by means of a mechanical exhaust system or by such other means as may be effective and practicable and the system of exhaust shall be of adequate capacity and the wastes removed'shall be disposed of in such manner as to ensure that they do not escape in any work-room or that they do not spread and cause nuisance in the vicinity of the factory. Where the gaseous vastes contain solid particles in such quantity as may create nuisance in the locality, effective arrangements shall be made to separate solid materials from the gaseous wastes before allowing the gaseous wastes to escape in the atmosphere and effective arrangement shall be made for the collection and disposal of the collected solid wastes : Provided that the provisions of this sub-rule shall not apply to a factory which is already in existence on the date on, which these amendments came into force but in case of such factories the Chief Inspector may direct the occ- upier and the manager of the factory to take such steps and to make such arr- angements to prevent or minimise the nuisance as may be practicable Provided further that the Chief Inspector may relax the requirements of this rule to such extent and subject to such conditions as he may specify in writing if he is satisfied that compliance with the provisions of this sub-rule is not practicable or necessary in consideration of the capacity of the factory or the degree of nuisance created thereby. (7) Solid wastes shall not be allowed to spread in any workroom or in any part of the factory. Such wastes shall be collected in suitable receptable, at convenient places and arrangements shall be made for the disposal of such wastes at frequent intervals. (8) In case of a factory which comes into existence after this rule comes into effect, no manufacturing process shall be started in the factory unless complete details, as specified in sub-rules (9) and (IO) of the arrangements for the treatment and the disposal of the wastes and effluents have been submitted to and approved by the Chief Inspector and unless arrangements as approved have been Fade • Provided that in case of factories which are already in existence on the date on which this rule comes into force, the above mentioned details shall be submitted to the Chief Inspector within three months and the arrangements as approved shall be made within six months of the date of approval. The Chief Inspector may, however, extend these periods up to six months and 12 months respectively Provided further that the approval of the Chief Inspector mentioned in this sub-rule shall not be necessary in the following circumstances (a) Where the-drainage system of the factory is connected to the public sewerage system or where the wastes of the factory are proposed to be discharged into the public sewerage. In the case of such a factory, complete details and particulars in respect of the proposed arrangements for the treatment and disposal of the wastes shall be submitted to the authority under whose co ntrol the public sewer- age functions and no manufacturing process shall be started in 14] Bihar Factories Rules, 1950 [Rule 16 the factory and the wastes shall not be discharged into public sewerage system unless the arrangements have been approved by the said authority, and where the approval has been given by the said authority an attested copy of the letter of approval along with the details of the arrangements shall be submitted to the Chief Inspector within one month of the date of approval. (b) When the arrangement and scheme for the treatment and disposal of the wastes of the factory have been approved by the Director of Health Services. In the case of such a factory, an attested copy of the lettez of approval with complete details of the arrangements and the scheme for the treatment and disposal of wastes shall be submitted to the Chief Inspector within one month of the date of approval and no manufacturing process shall be started in the factory unless the approval of the Director of Health Services has been obtained and unless arrangements as approved have been made. (9) The following details and particulars in respect of the arrangements for treatment and disposal of wastes shall be submitted to the Chief Inspector for approval • (a) Three copies of the layout plan of the factory showing the point of origin and the place of discharge or disposal of the wastes and the layout and arrangements of drains and other devices for carr- ying and disposal of the wastes from the point of origin to the point of disposal or discharge. (b) Three copies of the site plan of factory along with its environs showing the alignment of drains or channels for carrying the wastes as well as showing the area or through which the wastes are likely to spread or pass. In the site plan, the villages, residential areas, agricultural fields* etc., through or over which the wastes and the effluents may pass shall be clearly indicated. (c) (d) (e) (f) (h) (i) (j) Nature and description of different wastes produced in the factory. The quantity of each of the wastes produced per day. The chemical composition of the wastes, chemical analysis and B. O. D. value of the liquid wastes. The maximum quantity of the wastes required to be treated and disposal on any one day. The maximum temperature of the wastes at the place where it is to

be disposed of. Where the wastes are to be discharged in a stream, the lowest rate of flow of the stream, in chse it is a flowing stream, and size and capacity of the stream otherwise. Three copies of the plans showing complete details of the treat- ment plant, or the arrangements for the treatment of wastes. Three copies of the detailed description of the entire arrangement for treatment and disposal of wastes. (IO) The Chief Inspector or an Inspector may require such other details, particulars or informations to be furnished as he may consider necessary in Rule 17 J Bihar Factories Rules, 1950 [15 order to be able to examine the scheme for treatment and disposal of the wastes. (l l) On receipt of complete details as prescribed above, the Chief Ins- pector may approve the arrangements with such conditions as he may specify in writing. (12) If the Chief Inspector finds that any arrangement whiéh was appro- ved was not effective he may direct the occupier and the Manager to re-exa- mine and modify the arrangement in such a manner, to such qn extent and within such a period as he may specify in writing

17. When artificial humidification not allowed.—There shall be no arti- ficial humidification in any room of a cotton spinning or weaving factory— (a) by the use of steam during any period when the dry bulb tempe- rature 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 in relation to the dry bulb reading of the hygrometer at that time; or as regards a dry bulb reading intermediate between any two dry bulb readings indi- cated consecutively in the Schedule when the dry bulb reading does not exceed the wet bulb reading to the extent indicated in relation to the lower of these two dry bulb readings : SCHEDULE. Dry bulb. Wet bulb. Dry bulb. Dry bulb. 60.0 61.0 62.0 63.0 64.0 65.0 66.0 67.0 68.0 69.0 70.0 71.0 72.0 73.0 74 0 75.0 76.0 Wet bulb. 58.0 59.0 60.0 61.0 62.0 63.0 64.0 65.0 66.0 67.0 68.0 69.0 70.0 71.0 72.0 730 74.0 77.0 78.0 79.0 80 0 81.0 820 83.0 84.0 85.0 86.0 87.0 88.0 89.0 90.0 91.0 920 93 0 75.0 76.0 770 78.0 79. 80.0 80.5 81.0 82.0 82.5 83.0 83.5 84.0 84.5 850 85 5 86.0 94.0 950 96 0 97.0 980 99.0 100.0 101.0 102 0 103.0 104 0 105.0 106.0 107.0 108 0 109.0 110.0 Wet bulb. 86.0 87,0 87.5 88 .o 88.5 89.0 89.5 90.0 90.0 90.5 90.5 91.0 91.0 91.5 91.5 92.0 92.0 provided, however, the clause (b) shall not apply when the difference between the wet bulb temperature as indicated by the hygrometer in the depa- r Rules 18-20 16] Bihar Factories Rules, 1950 rtment concerned and the wet bulb temperature taken with a hygrometer outside in the shade is less than 3.5 degrees

18. General In every room in a factory in which wor- kers are ordinarily employed and which is not ventilated by mechanical means, there shall be sufficient openings in the walls or roof for the admission or egress of air to maintain the atmosphere in the room in a fresh and reasonably cool condition.(2) If in any part of a factory the Inspector, having due regard to the weather cc;nditions than prevailing, considers the atmosphere to be unduly vitiated or stagnant and that this is due to insuffcient openings, he shall by written order require the manager to— (a) increase the openings in the walls or in the roof to an aggregate area equal to 75 per cent of the area found by the applicable for- mula in Appendix I or to such less extent as he deems reasonable in the circumstances, or (b) provide mechanical means to produce a continuous change of air at the rate of three complete changes in the hour or at such rate as he deems sumcient in the circumstances

19. Measures required for cooling.—lf in any room of a factory the coo- ling properties of the air appear to the Chief Inspector to be at times insuff- cient to secure workers against injury to health or serious discomfort he may by written order require the manager to carry out any or all of the following measures before a specified date : (a) Electric or other fans to be used to produce adequate movement of air over the workers. The Chief Inspector may require such movement to be such that the rate of cooling by evaporation at a height of five feet from the floor level, as found by the use ofa kata thermometer, is two and a half times what it would be if the air were not moved by such fans ; (b) The height of the room from floor to roof or ceiling to be increa- sed to a height of 16 feet or such less height as the Chief Inspec- tor deems reasonable in the circumstances : Provided that where any process generating heat is carried on in a buil- ding, the Chief Inspector may, by an order in writing, require the height of the roof to be raised to eighteen feet. (c) A layer of tiles, wood or other substance which is bad conductor of heat to be added to the roof or substituted for other materials or a ceiling or a double roof to be provided ; (d) Sun shades of specified size to be placed before or fitted to such openings as admit direct sunlight upon the workers

20. Ventilation and temperature in new factories or rooms.—ln any fac- tory or part of a factory which has been built or brought into use after the enforcement of these rules, no worker shall be allowed to work

unless— (a) if no mechanical means for general ventilation and for reduction of temperature is employed, and Rule 21] Bihar Factories Rules, 1950 [17 (i) the width of the room exceeds 18 meters (59 ft..) or its floor area exceeds 560 sq. meters (6, 128 sq. feet), the aggregate area of ventilating openings as approved or directed by the Chief Inspector • (ii) the width of the room does not exceed 18 meters or its floor area does not exceed 560 sq. meters, lhe aggregate area of ventilating openings js not less than the area found from the applicable formula in Appendix I : Provided that the Chief Inspector in consideration of the special circumstances ofa factory, may permit smaller ventila- ting openings to be provided Provided further that for computing the aggregate area of ventilating openings no account shall be taken of doors (except doors without shutters), ventilators or sky-lights; (b) if ventilating openings in any room or building are not adequate mechanical ventilation is provided and funs or other means emp- loyed for this purpose are of such capacity as to circulate through the room or the building six times in every hour a volume Of air equal to the cubic capacity of the room or building, and (c) the internal height of the roof or the ceiling of any room or shed at the lowest point is not less than 14 feet from the floor level : Provided that the Chief Inspector may allow a lower height of any roof, if— (i) the roof includes sufficient layer of earthenware, tiles. wood, com- pressed asbestos or any other substance which is a bad conductor of heat; or (ii) it is a double roof with an air space not less than six inches in depth open to the atmosphere at the eaves and in caseof slopping roofs with sufficient means of egress of hot foul air at the apex; or (iii) a ceiling with sumcient air-space has been provided under the roof; or (iv) the room is air conditioned or other emcient arrangements have been made to keep the temperature of the room within reasonable limits; or (v) the room _has re-inforced concrete or other kind of terraced roof ; or (vi) on account of the climatic or other conditions or the size of the factory the Chief Inspector considers that a height of 14 feet is not necessary or practicable Provided further that the Chief Inspector may require the internal height to be increased up to 20 feet, If any process generating heat is carried on within thc room or shed. 21 . Provision of Hygrometer.—ln 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 18] Bihar Factories Rules, 1950 Rules 22-25 Inspector. The number of hygrometers 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 Department.—One hygrometer for each room of less than 100,000 cubic feet capacity and one extra hygrometer for each 2,00,000 cubic feet or part thereof, in excess of this. (c) One additional hygrometer shall be provided and maintained out- side each cotton spinning and weaving factory wherein artificial humidification is adopted, and in a position approved by the Inspector, for taking hygrometer shade readings

22. Exemption from maintenance of hygrometers.—When the Inspector is satisfied that the limits of humidity allowed by the Schedule to rule i 7 are never exceeded, he may, for any department other than the weaving depart- ment, grant exemption from the maintenance. of the hygrometer. The Inspector Shal' record such exemption in writing

23. Copy of Schedule to rule 17 to be affixed near every hygrometer.— A legible copy of the Schedule to rule 17 shall be amxed near each hygro- meter

24. Temperature to be recorded at each hygrometer.—At each hygro- meter maintained in accordance with rule 21, correct wet and dry bulb tera- peratures shall recorded thrice daily during each working day. The tem- perature shall be taken between 7 A. 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 certifv the correctness of the entries. The Register shall always be available for inspection by the Inspector

25. Specifications of Each hygrometer shall comprise two mercurial thermometers of wet bdlb 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) The wet bulb shall be closely covered with a single layer of muslin kept wet by means ofa 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 or grease. (3) No part of the wet bulb shall be within 3 inches from the dry bulbs or less than I inch from the surface of the water in the reservoir and the water reservoir shall be below it, on 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 positions of the top of the mercury column shall be readily distinguishable at a distance of 2 feet. Rules 26-30] Bihar Factories Rules, 1950 [19 (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 mar- ked by horizontal lines on the steam, each fifth and tenth degree shall be ma- rked by longer marks than the intermediate degrees and the temperature mark- ed 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 temper- ature between 50 and 120 degrees shall be indicated readings, be in error by more than two-tenths ofa 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, New Delhi, or any other Laboratory, Institution or com- petent authority approved by the Chief Inspector in writing and such certifi- cate shali always be kept attached to the Humidity Register

26. Thermometer to be maintained in efficient order.—Each thermo- meter 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 et bulb shall be renew- ed once a week; (b) the reservoir shell be filled with water which shall be completely renewed once a day. The Chief Inspector may direct the use of distilled vater or pure rain water in any particular mill or milis in certain localities; (c) no water shall be applied directly to the wick or covering during the period of employment

27. An 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 acc- urate unless and until it has been re-examined as prescribed and a fresh certi- ficate obtained which certificate shall be kept attached to the Humidity Register

28. Hygrometer not to be affixed to wall, etc.unless protected by wood. (l) No hygrometer shall be afiixed to a q all, pillar or other surface unless pro- tected therefrom by wood or other non-conducting material at least half an inch in dhickness and distant at least one inch from the bulb of each thermometer. (2) No hygrometer shall be affxed at a height of more than 5 feet 6 inches from the floor to the top of thermometer stem or in the direct draughts from a fan window, or ventilating opening

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

30. How to introduce steam for humidification.—ln any room in which steam pipes are used for the introduction of steam for purpose of artificial humidification of the air the following provisions shall apply:— (a) The diameter of such pipes shall not exceed two inches and in the case of pipes Installed after 1st day of January, 1951 the diameter shall not exceed one Inch. 20 J Bihar Factories Rules, 1950 [Rules 31-33 (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 effcient insulator not less than half an inch in thickness. (d) No uncovered jet from such pipes shall project more than 4 inches beyond the outer surface of any cover. (e) The steam presure shall be as Iow as practicable and shall not exce- ed 70 lbs. per square inch. (f) The pipes employed for the introduction of steam into the air in a department *hall be effectively coverd v ith such-conducting material, as may be approved by the Inspector in order to minimise the amount of heat radiated by them into the department

31. General lighting in factories.—-Without any prejudice to the provi- sions of rules 32 to 35, adequate and suitable lighting, whether natural or arti- ficial, shall be provided and maintained in every part of a factory including yards and open spaces where any person may be employed or may have to pass through Provided that if in the opinion of an Inspector, lighting ofa better stan- dard or ofa better or different quality is requried in a factory or in any part of a factory he may direct the manager or the occupier, by an order in writing to take such measures as he may consider necessary, and the direction so given shall be carried out within the time specified in the order, if any

32. Lighting of interior parts.—(l) The general illumination over those interior parts of a factory where persons are regularly employed shall be not less than 3 foot candles measured in the horizontal plane at a level of 3 feet above the floor: Provided that in any such parts in which the mounting height of the light source for general illumination necessarily exceeds 25 feet 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 I foot candle and where work is actually being done the illumination shall not be less than 3-feet candles. (2) The illumiration 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 0-5 foot candles 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 iighting sum- cient and suitable for the nature of the wcrk

33. Prevention of Where any source of artificial light in the factory is less than 16 feet above floor level, no part of the light source or of the lighting fitting having a brightness greater than IO candless per square inch shall be visible to persons whilst normally employed within 100 feet of the source, except where the angle of elevation from the, eye to the source or part ihe fitting as the case may be exceeds 200.(2) Any local light, that is to say, an .artificial light designed to illumi- nate particularly the alea or part of the area of work of a single operative or Rules 34-36] Bihar Factories Rules, 1950 [21 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 8 normal working place, or shall be so placed that no such person is exposed to glare therefrom

34. Power of Chief Inspector to 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 rules 31 to 33 is inappropriate or is not reasonably practicable, he may by order in wciting exempt the factory or .part thereof, or description of workroom or process from such requirement to such extent and subject to such conditions as he may specify

35. Exemption from Rule 32.—(1) Nothing in rule 32 shall apply to the parts of factories respectively specified in Part I of the Schedule annexed hereto. (2) Nothing in sub-rule (I) of rule 32 shall apply to the factories or parts of factories respectively specified in part 11 of the said Schedule. Schedule Part 1 Parts of factories in which light sensitive photographic materials are made or used in an exposed condition. Part 11 Cement works. Works for the crushing and grinding of lime stone. Gas works. Coke oven works. Electrical stations. Flour Mills. Maltings and breweries. Parts of factories in which the follo Ning processes are carried on :— Concrete or artificial stone making. Conversion of iron into steel. Smelting of iron ore. Iron or steel rolling. Hot rolling or forging, tempering or annealing of metals. Glass blowing and other working in molten glass. Tar distilling Petroleum refining and blending 36. Quantity of drinking The quantity of drinking water to be provided for the workers in every factory shall be at least as many gallons a day as there are workers employed in the factory and such drinking water shall be readily available at all times during working hours. (2) Where the Chief Inspector is satisfied in respect of any particular factory that the existing arrangement of drinking water provides substantially 22] Bihar Factories Rules, 1950 [Rules 37-41 the same facilities, he may exempt the factory from such requirement to such extent and subject to such conditions as he may specify

37. Source of supply.—The water provided for drinking shall be supplied (a) from a public water supply system, or (b) from any other source approved in writing by the Health Offcer. —If drinking water is not supplied direct from taps 38. Means of supply. either connected with public water supply system of the factory approved by the Health Offcer, it shall be kept in suitable vessels, receptacles or tanks fitted with

taps and having dust proof covers placed or raised stand or plat- forms in shade and having suitable arrangements of drainage to carry away the spilt w ater, such vessels, receptacles and tanks shall be kept clean and measures shah be taken to ensure that the water is free from contamination

39. Cleanliness of well or Drinking water shall not be supplied from any open well or reser Oir 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 sterilised once a week cr more frequently if the Inspector by written order so requires, and the date on which sterilising is carried cut shall be recorded: Provided that this requirement shall not apply to any such well or reser- voir if the water therein is filtered and treated to the satisfaction of the Health Offcer before it is supplied for consumption

40. Report from Health Officer.—The Inspector may by order in writing direct the manager to obtain, at such time or at such intervals as he may direct, a report from the Health Offcer as to the fitness for human con- sumption 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 Offcer

41. Cooling of water.—In every factory wherein more than two hund- red and fifty workers are ordinarily employed— (a) (b) (c) (d) the drinking water supplied to the workers shall from the 1st April to the 30th September, in every year, be cooled by ice or other effective method : 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. the cooled drinking water shall be supplied in every canteen, Junch room and also at conveniently accessible points throughout the factory which for the purpose of these rules shall be called "Water Centre". the water centres shall be sheltered from the weather and adeq- uately drained. the number of ater centres to be provided shall be one "Centre' 9 for every 150 persons employed at any one time in the factory : Rules 42-43] Bihar Factories Rules, 1950 [23 Provided that in the case of the factory where the number of persons employed exceeds 500 it shall be sumcient if there is one such "Centre" as aforesaid for every 150 persons upto the first 500 and one for every 500 persons thereafter. (e) every "Water centre" shall be maintained in a cle?n and orderly condition. (f) every "water centre" shall be in charge ofa suitable person who shalt distribute the water. Such person shall be provided with •clean clothes while on duty. 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

42. Latrine accommodation.—Latrine accommodation shall be provided in every factory, on the following scale (I) where the maximum number of workers working at any one time does not exceed one l!undred there shall be at least one latrine for every twe- nty-five of such workers ; (2) where the maximum number of workers working at any one time exceeds one hundred, there shall be one latrine for every twenty-five workers for the first hundred workers and one for every fifty thereafter ; (3) where women workers me employed, separate latrine shall be provi- ded for men and women and the number of latrines required to be provided for each shall be calculated separately on the basis of their respective numbers in the manner specified in clauses (I) and (2) Provided that in calculating the number of latrines required under the rule, any number of workers less than twenty-five or fifty, as the case may be, shall be reckoned as twenty-five or fifty

43. Requirements to which latrines should conform. Service (bucket •or pan type) latrines.—All latrines provided in factories after these amend- ments come into force. shall be of the sanitary (water closed or flushing) type conforming to the specifications prescribed in this rule : Provided that in a factory employing less than 250 workers and is not situated in a Municipal area, the Chief Inspector may, in writing, permit the service (bucket or pan) type of latrines, with such conditions as he may spe- cify. (2) Sanitary (water closed or flushing type) latrines.— (i) All sanitary (water closed or flushing type) latrines shall be conn- ected to a municipal or common water borne sewerage system or to a septic tank or shall be as qua privy latrines; (ii) Closet. —Water closets in the latrines shall be of glazed porcelaine, be of the "wash down type" unless otherwise specified by the Inspector of Factories; (iii) Water connection.—Each water closet shall p)ssess a flushing rim and a suitable connection for one and half inches down pipe from the cistern and shall be fitted with a trap which shall consist eitner of glazed stoneware or cast iron; 24 | Bihar Factories Rules, 1950 [Rules 44-46 I (iv) Flushing cistern.—Each water closet shall be provided with a flu- shirg cistern Ofa capacity not less than three gallons and shall also be provided with a metal-

pull-chain and suitable handle or a metal ring. (v) Reserved tanks for cistern.— Unless there is twenty-four hour piped water supply a reserve tank of proper construction and adequate capacity for supply of water to the flushing cistern shall be provided. The capacity of this tank shall be such as to provide adequate water supply to the cistern of all the latrines throughout working hours of the factory. (vi) Septic tanks — Latrines, other than those connected with an em- cient water borne sewerage system. shall be connected with an efficient and adequate septic tank along with other necessary acce- ssories, including arrangements for ventilation. The septic tanks shall be cleaned at intervals of not more than one year. (3) Where service (bucket) type of latrines are provided there shall be arrangements for cleaning the buckets at least twice in every shift. (4) All drains emanating for the latrines shall be cleaned at least once in everyday and shall always be kept in a clean and sanitary conditions. (5) Properly constructed and lighted approach roads or path ways shall be provided to each latrine or block of latrines and such roads or path ways shall be regularly cleaned and maintained

44. Accommodation in and privacy of latrines and urinals —Every latrine and urinal shall have adequate space in order to enable a person to sit com- fortably and be of adequate height and under cover and so partitioned of as to secure privacy and shall have proper door and fastening

45. Signboards to be displayed.—Where workers of both sexes are em- ployed, there shall be displayed outside each latrine and urinal or block of latrines and urinals, a notice or a signboard, permanently fixed, in the langu- age understood by the majority of the workers, "for men ooly" or "for women only" as the case may be. The notice or signboard shall also bear the figure of a man or of a woman, as the case may be

46. Urinal I) Where the maximum number of wor- kers v€orking at any one time does not exceed five hundred there shall be at least one urinal for every fifty such workers.(2) Where the maximum number of workers working at any one time exceeds five hundred, there shall be one uripal for every fifty workers for the first five hundred and one for every hundred thereafter. (3) Where women workers are employed, separate urinals shall be pro- vided for men and women workers and the number of urinals required to be provided shall be calculated separataly on the basis of their respective.num- bers in the manner specified in sub-rules (I) and (2) . Provided that in calculating the number of urinals required under the rule any odd number of workers less than fifty or hundred as the case may be shall be reckoned as fifty or hundred : Provided further that two feet length of urinal & commodation shall be- deemed to be equivalent to one urinal. Rules 47-49] Bihar Factories Rules, 1950 [25 47. Requirements to which urinals should Ordinary urinals.—Tn factories wherein the number of workers generally employed does not exceed two hundred and fifty, ordinary common type of urinals connected to a sewer or drain may be provided. (2) Sanitary (flushing type) urinals— (a) (b) (c) (d) In factories where;n the number of workers generally employed exceeds two hundred and fifty, constant flushing type of urinals or any other sanitary type approved by the Chief Inspector shall be provided. Construction.—Sanitary (flushing type) urinals shall have white glazed stoneware through and buff stoneware squatting seat. The face shall be lined with white glazed tiles to a height of four feet. Flushing.—-Unless it is of constant flushing type the urinals shall be flushed from a tank, the capacity of which shall not be less than 3 gallons per urinal or seat, by a inch connection and down the faces by means of a galvanised iron perforated pipe. Sewer connection.— Unless connected to a municipal or common sewerage system, the urinals shall be connected to septic tanks provided for sanitary latrine,} or provided separately for the urinals. (3) Urinals and drains connected thereto shall be maintained in a clean and sanitary condition in the same manner as prescribed for latrines

48. Certain latrines and urinals to be connected to sewerage system.— (1) 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 situa ted in such locality shall, if the factory is situated with* in 100 feet of an existing sewer, be connected with that sewerage system. (2) No worker shall make use of any other place within the factory as Jatrine or urinal, other than the latrine and the urinal accommodation provid- ed under these rules. (3) The design and the site or situation of latrines and urinals acco- mmodation shall be subject to the approval of the Director of Public Health and the construction shall be subject to the approval of the Chief Inspector. (4) They shall be situated, unless otherwise approved in writing by the Inspector, within the factory precincts and so located that (a) every worker may have ready access thereto and (b) no effiuvia therefrom can arise within a work-room

49. White-washing, colour-washing of latrines and urinals.—The walls, ceilings and partitions of every latrine and urinal shall be white-washed or colour-washed and the white-washing or colour&ashing shall be repeated at least once in every period of four months. The dates on which the white- washing or colour-washing is carried out shall be entered in the register in Form no

7. The dates on which white-washing or colour-washing is carried out shall also be conspicuously written on the objects white-washed or colour.washed : 26] Bihar Factories Rules, 1950 [Rules 50-55 Provided that this Rule shall not apply to latrines and urinals, the walls, ceilings 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

50. Construction and maintenance of drains.—AII drains carrying waste or sullage water shall be constructed in masonry or other impermeable material and shall be regularly flushed and the emuent disposed of by connecting such drains with a suitable drainage line: Provided that, where there is no such drainage line, the effluent shall be deodorized and rendered innocuous and then disposed of in a suitable manner to the satisfaction of the Health Officer

51. Water taps in latrines.—(l) Where piped water supply is availa ble a suffic:ent number of water taps conveniently accessible shall be provided in or near such latrine accommodation. (2) If piped wauer supply is not available, sufficient quantity of water shall be kept stored in suitable receptacles near the latrines

52. Number and location of spittoons.—The number and location of the spittoons to be provided shall be to the satisfaction of the Inspector

53. Type of spittoons.—The spittoons shall be of any 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, c'ean sand, and covered with a layer of bleaching powder ; (c) any other type approved by the Chief Inspector

54. Cleaning of spittoons.—The spittoonsmentioned 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 ayer of sand as often as necessary or at least once every day. Chapter IV Safety 55. Further safety precautions.—Without prejudice to the provisions of sub-section (l) of section 21 in regard to the fencing of machines, the further precautions specified in the schedules annexed hereto shall apply to the machines noted in each schedule. i[ScbcduIe I Texiile Machinery except Machinery used in Jute Mills. (I) Application.—The requirements of this schedule shall apply to machinery in factories engaged in the manufacture or processing of textiles 1. Subs. by S. O. 636 d.:ted 13-7-1988. Rule 55] Bihar Factories Rules, 1950 | 27 other than Jute textiles. The schedule would not apply to machinery in facto- ries engaged exclusively in the manufacture of synthetic fibres. (2) Definitions.—For the purposes of this schedule— (a) "Calender" means a set of heavy rollers mounted on vertical side frames and arranged to pass cloth between them. Calenders may have two or mcre rollers, or bowls, someof which may be heated. (b) "Embossing calender" means a calender with two or more rollers one of which is engraved for producing figure effects of various kinds on a fabric. (c) "Card" means a machinery consisting of cylinders of various sizes and in certain cases flats covered with card clothing and set in relation to each other so that fibres in staple

form may be separated into individual relationship. The speed of the cylinders and their direction of relation may vary. The finished product is delivered as a sliver. Cards include the revolving flat card, the roller and clearer card etc. (d) "Card clothing" means the material with which the surface 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 are pressed many fine closely spaced specially bent wires, or mounted saw toothed wire. (e) "Comber" means a machine for combing fibres of cotton, wool etc. The essential parts are a device for feeding forward a fringe of fibres at regular intervals and an arrangement of combs or ptns which at the right time, pass through the fringe. All tangled fibres, short fibres and nips are removed and the long fibres are laid parallel. (f) "Combing machinery" includes a general classification of machi- nery including combers, sliver lap machines, ribbon lap machines, and gilt boxes but excluding cards. (g) "Rotary staple cutter" means a machine consisting of one or more rotary blades used for the purpose of cutting textile fibres into staple lengths. (h) "Garnett machine" means any of a numbér of types of machines for opening hard twisted waste of wool, cotton, silk, etc. Note.—EssentiaIIy. such machines consists of a licker of one or more cylinders, each having a complement worker and stripper rolls; and a fancy roll and doffer. 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 garnett wire instead of card clothing. (i) "Gill box" means a machine used in the worsted system of manu- facturing yarns. 28 Bihar Factories Rules, 1950 [Rule 55 Note.—lts function is to arrange fibres in parallel order. Essentially, it consists of a pair of feed rolls and a series of follo- wers where the followers move at faster surface speed and per- form a combing action. (j) "ln running rolls" means any pair of rolls or drums between which there is a "Nip". (k) "Interlocking arrangement" means a device that prevents the sett- ing in motion of dangerous part of any machine or the machine itself while the guard, cover door or other measures provided to safeguard against danger is open or unlocked or not in position. Note.—Device which will also hold the guard, cover or door closed and locked while the machine or the dangerous part is in motion, otherwise, dangerous part or any machine or the machine itself will stop or will not be set in motion. (I) "Kier" means a large metal vat, usually a pressure type in which fabrics may be beiled out, ble ached, etc. (m) "Ribbon lapper" means a machine or a part of a machine used to prepare laps for feeding a cotton comb. Note.—lts purpose is to provide a uniform lap in which fibres have been straightened as much as possible. (n) "Sliver lapper" means a machine or part of machine in which a number of parallel card slivers are drafted slightly, laid side by side in a compact sheet, and wound into a cylindrical package. (o) "Loom" means a machine for effecting the interlocking of two series of yarns crossing one another at right angles. The warp yarns are wound on a warp beam and pass through sleys and reeds. The filling is shot across in a shuttle and setted in place by reeds and sley and the fabric is wound on a cloth beam. (p) "Starch mangle" means a mangle that is used specifically for starching cotton goods. Note—It commonly consists of two large rolls and a shallow open vat with several immersion rolls. •The vat contains the starch solution. (q) "Water mangle" means a calender having two or more rolls used for squeezing water from fabrics before drying. Water mangles may also be used in other ways during the finishing of varions fabrics. (r) "Mule" means a type of spinning frame having a head stock and carriage as its two main sections. The head stock is stationary. The carriage is moveable and it carries the spindles which draft and spin the roving into) arn. The carriage extends over the whole width of the machine and moves slowly towards and away from the head stock the spinning operation. (s) "Nip" is the danger zone between the rolls or drums which by virtue of their positioning and movement create a nipping hazard. Rlue 55] (t) (u) (v) (w) (x) (Y) (z) (aa) Bihar Factories Rules, 1950 [29 "Openers and pickers" means a general classification of manhine- ry which includes breaker pickers, intermediate pickers, finisher pickers, single process pickers, multiple process pickers, willow machines, card and picker waste cleaners, thread extractors. shreeding machines, roving waste openers, shoddy pickers, bale breaker feeders, vertical openers, lattice cleaners, horizontal cleaners, and any similar machinery equipped with either cylin- ders, screen section, calender section, rolls, or beaters used for the preparation of stock for further processing. "Paddler" means a trough for a solutioa and two or more squeeze rolls between which cloth passes after being passed thro ugh a mordant or dye bath. "Plaiting Machine" means a machine used to pay cloth into folds of regular length for convenience of subsequent process or use. "Roller Printing Machine" means a machine used for printing fabrics consisting of a large central cylinder, or pressure bowl, around the lower part of the perimeter of which is having a colour trough, a furnisher roller, doctor blades, etc. "Continuous bleaching ranges" means a machine for

bleaching of cloth in rope or open width form with the following arrangement. The cloth, after wetting out, pass through a squeeze roll into a saturator containing a solution of caustic soda and then to an enclosed I-box. A V-shaped arrangement is attached to the front part of the J-box for 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" and up the second. Steam is injected into the 'c v" at the upper end of the second arm so that cloth is rapidly satur- ated with the steam at this point. The J-box capacity is such that cloth will remain hot for a sumcient time to complete the scour- ing action. It then passes •a series of washers with a squeeze roll in bet- ween. The cloth then passes through a second set of saturator, J-box, and washer, where it is treated with the peroxide solution. By slight modification of the form of the unit, the same process can be applied to open-width cloth. 'Mercerizing range" means a 3-bowl mangle, a tenter frame, and a number of boxes for washing and scouring. The whole set up is in a straight line and all parts operate continuously. The com- bination is used to saturate the cloth with sodium hydroxide, stretch it while saturated, and washing out most of the caustic soda before releasing tension. "Sanforizing machine" means a machine consisting of a large steamheated cylinder, and endless, thick woolen felt blanket which is in close contact with the cylinder for most of its perime- ter, and an electrically heated show which processes the cloth against the blanket while the latter is in a stretched condition as it curves around feed in roll. "Shearing machine" means a machine used for shearing cloth. Cutting action is provided by a number of steel blades spirally 30] Bihar Factories Rules, 1950 Rule 55 (ab) (ad) (ae) mounted on a roller. The roller relates in close contact with a fixed ledger blade. There may be from one to six such rollers, on a machine. 'Singling machine" means a machine which comprises heated roller, plate, or an open gas flame. The cloth or yarn is rapidly passed over the roller or the plate or through the open gas flame to remove fuzz or hairiness on yarn or cloth by burning. " Slasher" means a machine used for applying a size misture to warp yarn. Essentially, it consists ofa stand for holding section beams, a size box, one or more cylindrical dryers or an enclosed hot air dryer, and a beaming and for winding the yarn on the loom beams. "Tenter frame" means a machine for drying cloth under tension. Note.—lt essentially consists of a pair of endless travelling chains fitted with clips of the fine pins and carried on tracks. The cloth is firmly held at the selvages DY the two chains which dive- rge, as they move forward so that the cloth is brought to the desired width. "Warper" means a machine for preparing and arranging the yarns intended for the warp of a fabric, specifically a beam warper. (3) General Safety Requirements.—(a) Every textile machine shall be provided with individual mechancial or electrical means for starting and stopp- ing all such machines. Belt shifter on machines driven by belts and shafting should be provided with a belt shifter lock or an equivalent suitable positive locking device. (b) 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. (c) All belts, pulleys, gears, chains, sproket wheels, and other dangerous moving parts of machinery which either form part of the machinery or are in association with it shall be securely fenced by safe guards of substantial construction which shall be constantly maintained and kept in position while the parts of the machinery they are fencing are in motion. (4) Openers and Pickers —(a) In all openers or pickers machinery, bea- ters and other dangerous parts be securely fenced by suitable guards so as to prevent contact with them. Such guards* and doors or covers of openings giving access to any dangerous part of the machinery shall be provided with interlocking arrangement : Provided that in the case of doors of opening giving access to any dange- rous part, other than heater covers, instead of the interlocking 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 be removed without the use of hand tools. (b) The feed rolls on all openers and pickers machinery shall be covered with a guard designed to prevent the operator from reaching the nip while the machinery is in operation. (c) The lap forming rollers shell be fitted with a guard or cover which shall prevent access to the nip at the intake of the lap roller and fluted roller Rule 55 | Bihar Factories Rules, 1950 [31 as long as the weighted rack is down. The guard or cover shall be so locked that it cannot be raised until the machine is stopped, and the machine cannot be started until the cover or 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 an automatic lap forming device shall not be used unless the automatic lap forming device is in emcient working order. (5) Cotton Cards.—(a) All cylinder doors shall be secured by an inter- locking 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 automat•c bcking 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 prescribed in this behalf as required in sub-section I) of section 22 of Factories Act, 1948. (b) The licker-in shall be guarded so as to prevent access to the dange- rous parts. (c) 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 to dismantle the interlocking mechanism. Such an arrangement shall be used only for stripping or grinding operations. (6) Garnett Machine.—(a) Garnett Maker-in shall be enclosed. (b) Garnett fancy rolls shall be enclosed by guards. These shall be ins- talled in way that keeps worker's rolls reasonably accessib!e for removal or adjustment. (c) The underside of the garnett shall be guarded by a screen mesh or other form of enclosures to prevent access. (7) Gill Boxes.—(a) The feed and worker's rolls shall be guarded so as to prevent fingers being caught in the pins of the intersecting fallers. (b) All nips of in-running rolls shall be guarded by suitable - nip guards conforming to the following specifications: Note. —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 that the fingers of any person shall not reach that point through that opening and in any circumstances, the maximum width of the opening shall not exceed the following : Distance of opening from nip point. O to 38 mm. 39 to 63 mm. 64 to 88 mm. Maximum width of opening. 6 mm. 10 mm. 13 mm. 32] Bihar Factories Rules, 89 to 140 mm. 141 to 165 mm. 166 to 190 mm, 191 to 215 mm. 1950 Rule 55 15 mm. 19 mm. 22 mm. 32 mm. (8) Sliver and Ribbon Lappers'—The calender drums and the lap spool shall be provided with a guard to prevent access to the nip between the in- running rolls. (9) Speed Frames. —Jack box wheels at the head stock shall be guarded and the guard shall have interlocking arrangement. (10) Spinning Mules. —Wheels on spinning mule carriages shall be pro- vided with substantial. wheel guards, extending to within 6 mm. of the rails. (11) Warpers. —Swiveled double-bar gates shall be installed on all war- pers operating in excess of 410 metres/min. These gates shall have interlocking arrangement, except for the purpose of inching or jogging Provided that the top and bottom bars of the gate shall be at least 1.05 and 0.53 metres high from the floor or working platforms and the gate shall be located 38 mm. from the vertical tangement to the beam head. (12) Slashers.—(a) Cylinder dryers.—(i) All open nips of in running rolls shall be guarded by nip guards conforming to the requirements in cla- use 7 (b). (ii) When slashers are operated by control levers, these levers shall be connected to horizontal bar or treadle located not more than 100 cm. above the floor to control the operation from any point. (iii) Slashers operated by push 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. If calender rolls are used, additional buttons shall be provided at both sides of the machine at points near the nips, except when slashers are with an enclosed dryer. (b) Enclosed hot air dryer. All open nips of the top squeezing rollers shall be guarded by nip guard conforming to the requirements in cla• use 7 (b). (ii) When slashers are operated by control lever, 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. (iii) 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 machines at intervals spaced not more than 1.83 metres on centres. (13) Looms.—Each Loom shall be equipped with suitable guards desig- ned to minimise the danger from flying shuttles. (14) Valves of Kiers, Tanks and other Containers. Each valve con- trolling the flow of steam, injurious gases or liquids into a kier or any other Rule 55] Bihar Factories Rules, 1950 [33 tank or container into which a person is Ii kely to enter in connection with a process, operation, maintenance or for any other purpose, shall be provißed with suitable locking arrangement to enab!e the said person to lock the valve securely in the closed position and retain the key with him before entering the kier, tank or container. (b) Wherever boilinr tanks, caustic tanks and any other containers from which liquids which are hot corresive or toxic may overflow or spiash. are so located that the operator cannot see the contents from thc floor or working area emergency shut off va}ves which can be controlled from a point not sub- ject to danger of splash shall be provided to prevent danger. (15) Shearing Machine. -All revolving blades on shearing machines shall be guarded so that the opening between the cloth surface and the button of the

guard will not exceed IO mm. (16) Continuous Bleaching Range (Cotton and Rayon). —-The nip of all in-running rolls on open width bleaching machinery rolls shall be protected with a guard to prevent the worker from being caught at the nip. The guard shall extend across the entire length of the nip. (17) Merceizing Range (Piece Goods).—(a) A stopping device shall be provided at each end of the machine. (b) A guard shall be provided at each end of the machine frame 8t the in-running chain and the clip opener. (c) A nip guard shall be provided for the in-running rolls of the mang Ie and washers and the guard shall conform to the requirements in clause 7 (b). (18) Tenter Frames. A stopping device shall be provided at each end of the machine. (b) A guard shall be provided at each end of the machine frame at the in-running chain and the clip opener. (19) Paddlers.—Suitable nip guards conforming to the requirement in clause 7 (b) shall be provided to all dangerous in-running rolls. (20) Centrifugal Each extractor shall be provided with guard for the basket, and the guard shall have interlocking arrangement. (b) 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 decating machines.—AII in-run- ning rolls shall be guarded with nip guards conforming to the requirements in clause 7 (b). (22) Sanforizing and palmer Nip guard shall be provided on all accessible in-running rolls and these shall conform to the requirements in cJause 7 (b). (b) Access from the sides to the nips of in-running rolls should be fen- ced by suitable side guards. (c) A safety trip rod, cable or wire centre cord shall be provided across the front and back of all palmer cylinders extending the length of the face of 34 Bihar Factories Rules, 1950 [Rule 55 the cylinder. It shall operate readily whether pushed or pulled. The safety trip shall not be more than 170 cm. above the level at which the operator stands and shall be readily accessible. (23) Rope Splash guards shall be installed on 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. (b) A safety trip rod, cable or wire centre cord shall be provided across the front and back of all rope washers extending the length of, the face•of the washer. It shall operate readily whether pushed or pulled. This safety trip shall be not more than 1 70 cm. above the level on which the operation stands and shall be readily accessible. (24) Laundry Washer, Tumbler or 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 sheel is open, and which will also prevent the outer door on the case or sheel from being opened without shutting of the power and the cylinder coming to a stop. This should not prevent the movement of the inner cylinder by means of a hand operated mechanism or an inching device, (b) Each closed barrel shall also be equipped with adequate means for holding open the doors on or covers of the inner and outer cylinder or shell while it is being loaded or unloaded. (25) Printing Machine (Roller Type).—(a) All in-running •rolls shall be guarded by nip guards conforming to the requirement in clause 7 (b). (b) The engraved roller gears and the large crown wheel shall be guarded. (26) Calenders.—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 arra- nged to prevent the fingers of the workers from being pulled in between the rolls or between the guard and the rolls, and so constructed 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) Plainting Machines.—Access to the trap between the knife and card bar shall be prevented by a suitable 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 shall be so designed and so located that it will prevent the handle from travelling be- yond the vertical position should the handle slip from the operators hand when the pawl has been released from the teeth of the take-up gear. (30) Flat-work Ironer.—Each flat-work or collar ironer shall be equipped with a safety bar or other guard across the entire front of the feed oc first pressure rolls. So arranged that the striking of the bar or guard bythe 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 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 be not less than 1.83 meters.] Rule 55 Bihar Factories Rules, 1950 Schedule 11 Cotton Ginning. [35 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 unclimbable 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 Wood-Working Machinery. I. Definitions.—For the purposes of this Schedule (a) (b) (c) (d) Wood-working machine means a circular saw, band saw, pla ning machine, chain mortising machine or vertical spindle moulding ma- chine operating on wood or cork or any other article except metal. Circular saw means a circular saw working in a bench (including a rack bench) but does not include a pendulum or similar saw hich is moved towards the wood for the purpose of cutting operation. Band saw means a band saw. the cutting portion of which runs in a vertical direction but does not include a long saw or band re- sawing machine. Planing machine means a machine for over hand planing or for thicknessing or for both operations

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

3. Space around machines—The space surrounding every wood-working machine in mc tion shall be kept free from obstructions

4. Floors'—The floor surrounding every wood-working 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 materials

5. Training and supervision.—(l) No person shall be employed at a wood-working machine unless he has beem sufficiently trained to work that class of machine, or unless he works 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 on a wood-working machine shall be fully and carefully instructed as to the dangers of the machine 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:— 36] Bihar Factories Rules, 1950 [Rule 55 (i) (ii) The edge of the knife nearer the saw shall from an arc of a circle having a radius not exceeding the radius of the largest saw used on lhe bench. The knife shall be maintained as close as practicable to the saw, having regard to the nature of the work being done at the time, and at the level of the bench table, the distance bet- ween the front edge of the knife and the teeth of the saw shall not exceed half an inch. (iii) For a saw ofa diameter of less than 24 inches, the knife shall extend upwards from the bench table to within one inch of the top of the saw, and for a saw ofa diameter of 24 inches or over shall extend upwards from the bench table to a height of at least 9 inches. (b) The top of the saw sh811 be covered by a strong and easily adjus• table 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 tqo plates of metal or other suitable material one on each side of the saw; such plates shall not be more than 6 inches apart, and shall extend from the axis ot the saw outwards to a distance of not less than two inches beyond the teeth of the saw. Metal plates, if not beaded, shall be of a thickness of at least 1/10 inch, or if beaded be of a thickness of at least 1/20 inch

7. Push sticks.—A push stick or other suitable appliance shall be pro- vided for use at every circular saw and at every vertical spindle moulding ma- chine to enable the work to be done Without unnecessary risk 8. Band Saws.—mery band saw shall be guarded as follows:— (a) Both sides of the botton pulley shall be completely encased by sheet or expanded metal or other suitable material. (b) The front of the top pulley shall be covered With sheet or expan- ded metal or other suitable material. (c) Ali portions of the blade sha 71 be enclosed or otherwise securely guarded except the portion of the biade between the bench table and the top guide

9. Planing Machines.—(l) A planing machine (other than a planing machine which is mechanically fed) shall not be used for overhand planing unless it is fitted with a cylindrical cutter block. (2) Every planing machine used for overhaul planing shall be provided with a "bridge" 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 direction. (3) The feed roller every planing machine used for thicknessing, ex- cept the combined machine for overhand pi ll be provided with an emcient guard.

Rule 55 J Bihar Factories Rules, 1950 [37 IO. Vertical spindle motdding The cutter of every vertical spindle mou;ding machine shall be guarded by the most emcient guard having regard to the nature of the work being performed. (2) The wood being moulded at a vertical spindle moulding machine shall, Jf practicable, be held in a jig or holder of such construction as to reduce as far as possible the risk of accident to the w.orker

11. Chain mortising blachines.—The chain of every 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 app- liances required. under this Schedule shall be— (a) maintained in an emcient state . (b) constantly kept in position while the machinery is in motion; and (c) so adjusted as to enable the work to be done without unnece- ssary risk

13. Exemptions.—Paragraphs 6, 8, 9 and IO shall not apply to any wood-working machine in respect of which it can be proved that other safe- guards are provided, maintained and used which render the machine as safe as it would be if guarded in the manner prescribed in the Schedule. Schedule Rubber Mills

1. Installation of machines.—Mills for b: eaking down, craking, granting, mixing, refining and warming rubber or rubber compounds shall be so insta- Iled that the top of the front roll is not less than 46 inches above the floor or working level. Provided that in existing inst allations where the top of the front roll is below this height a strong rigid distance bar guards shall be fitted across the front of the machine in such position that the operator cannot reach the nio of the rolls

2. Safety devices.—(l) Rubber mills shall be equipped with— (a) hoppers so constructed or guarded that it is impossible for the operators to come into contact in any manner with the nip of the rolls; and (b) horizontal safety-trip rods or tight wire cables across both front and rear, which will, whvn 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 sixty-nine inches 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 presence of the Manager or other responsible persons 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 Jute Textiles

1. Fencing of Machinery.—The occupier shall provide and maintain in good order fencings guards or safety devices in respect of each individual machine as prescribed. 38] Bihar Factories Rules, 1950 [Rule 55 2. Softening machines. —(a) A safety stopping device comprising a breast plate in front of the feed table to operate the belt striking gear by releasing an unbalanced weight. No device departing from the unbalanced weight principle will be deemed to conform to this rule unless it has been approved in writing by the Inspe- ctor. In the case of machines provided with an individual electric drive the device shall be arranged to act on a switch inserted in the no-volt release circuit. (b) Thc feed table shall not be less than 6' in length, measured from the centre of the first cloth to the center of the first pair of cast iron rollers. The table shall be provided with side guards reaching a height of not less than 4' 6" from the floor, and extending at that height, not less than 3' 6" from the centre of 'ehe first pair of rollers; the height of the rest of the side guards shall not be less than 4' from the floor. (c) The starting and stopping gear shall be arranged to comply with the following : — (i) Provision for stopping the machine at both the feed and delivery (ii) (iii) (iv) ends. Provision for starting the machine at the feed end only, the design shall be such that an operator at the feed end cannot start the machine without the co-operation of an operator at the delivery end. When a machine is stopped for clearing a jam or attention other- wise the starting gear shall be secured in the "off" position at least by a lock operated by a removable key in possession of the person attending the machine. The lever operating the unbalanced weight shall be securely fenced. (d) Sheet steel casings completely enclosing the side shafts, i. e. , the shafts and gears shali not be exposed on the underside. The casings shall be locked or secured by a device which will ensure (i) that they cannot be opened '*hile the machine is in motion and (ii) that it will not be possible .to start the machine unless they are closed

3. Carding machines.—(a) The underframe shall be guarded in such a manner that it will not be possible for operatives to obtain access underneath the machine until the cylinder has ceased to revolve. The lowest cross member of the frame shall come down •to a point not more than IO" from the floor and all openings above this, large enough to permit of a illed in with sheet steel or fitted with

bars or rods spaced not more than 6" apart. Any part of this protection may be in the form of a door but all such doors shall be controlled by a device which will ensure that they can- not be opened until the cylinder has come to rest and that the machine cannot be restarted until the doors,are closed Provided that in the case of machines installed before the commence- ment of this rule rigidly secured panels filling the underframe will -be deemed to comply with it. (b) A guard wlth panels and sliding doors of sheet steel or closely spaced bars or rnclosing the side gears: there shall be no opening at the Rule 55 J Bihar Factories Rules, 1950 [39 t underside of this protection for accßs to the gears. The sliding doors shall be controlled by a device which will ensure that they cannot be opened until t he cylinder has come to rest, and that the machine cannot be started up until the doors are closed. (c) A sheet steel guard extending up to the centre line of the cylinder, enclosing the stripper belts and pulleys shall be provided on all machines inst- alled after the commencement of this rule. (d) An adequately strong and rigid set of bars or rods over the doffer roller securely bolted in position. This guard must follow the radius of the roller; the space between the rods not to exceed 2": the distance from the the space between the doffer pin point to the underside of the rods to be 4" • Drawrng pressing roller and the first rod not to exceed 2"; and the width of the guard from the first to the last rod to be not less than 12" (e) A hand or guard rail extending lhe full width of the Drawing press- ing roller, fitted in a convenient position m front of and higher than the roller. (f) Effective side guards to prevent operative's fingers being caught bet- ween the delivery roller and the pressing ball. (g) When a machine is stopped for clearing a jam or attention otherwise the starting gear shall be secured in the "0ff" position at least by a lock oper- ated by a removable key in possession of the person attending the machine

4. Drawing A sheet steel guard completely closing the space between the bend rail and the bottom of the retaining roller, the opening and clcsing of which shall be controlled by the starting gear, and the design such that the guard cannot be opened while the machine is running. The guard plate shall swivel more or less about the centre of its height, and the top edge shall swing inwards towards the gill bars as the guard opens, and outwards as the guard closes : Provided that in the case of machines Installed before the commencement of this rule, a fixed guard will be suffcient if the clearance between the top of the guard and the underside of the retaining roller does not exceed 3/8" Provided further, that in the case of machines with individual electric drive it will be sumcient if the guard is of the swivelling type and inter- linked with the driving mechanism so that silver cannot be fed into the gills, or the guard opened, before the machine is stopped, and that the machine cannot be started up unless the guard is closed. (b) Sheet steel or cast iron guards completely enclosing the end gears, the design to be such that access to the gears is possible only by removing the guard in its entirety. If doors or movable panels are provided they shall be controlled by a locking device, operated by the stating gear, which will ensure that the machine cannot be started unless the guard is completely closed and that no movable part can be opened whilst the machine is in motion : Provided that in the case of machines installed before the commencement of this rule a guard securely held in position by automatic catches to prevent opening by vibration but without the inter- locking arrangement will be deemed to comply with it. (c) An effcient guard which will prevent operative's fingers or hands being caught between the delivery roller and the pressing ball. 40] Bihar Factories Rules, 1950 [Rule 55 .1 (d) Starting and stopping gear so designed that the machine can be sto- pped by operatil es on the feed and delivery sides; can be started only by an operatives cn the leed side but with the co-operation of the operative on the delivery side and canr.ct be started by an operative on the delivery side. The device necessitating co-operation shall be en gaged before the machine stops. (e) Shear pins driving the individul carriages shall be fitted to the pin- ion on the main back shaft and not to the pinion on the carriage back shaft

5. Roving machines.—(a) Starting and stopping gear designed to embody the following : (i) Provision for stopping the machine on both the feed and delivery sides. (ii) Provision for starting the machine on the delivery side only. (iii) A device on the delevery side which will automatically lock (he belt striking gear in the "Off" position. This device shall be such that the machine will not stop before the lock is engaged nor start before it is disengaged by a worker on the delivery side. (b) Sheet steel or cast iron guards, completely enclosing the end gears, the design to be such that access to the gears is possible only by removing the guard in its entirety. If doors or movable panels are provided they shall be contro Iled by a locking device operated by the starting gear, which will ensure that the machine cannot be started unless the guard is completely closed and that ened whilst the machine is in motion;

Provided that in the case of machines installed before the commencement of this rule a guar,d securely held in position by automatic catches to prevent opening by vibration, but without the inter-locking arrangement will be deemed to ccmply with it. (c) Shear pins driving individual carriages shall be fitted to the pinion on the main back shaft and not to the pinion on the carriage back shaft

6. Spinning frames.— (a) Access between the driving cylinders whilst in motion shall be prevented by providing a door at the pass end so inter-con- nected with the starting gear that neither side of the frame can be set in motion whilst the door is open and conversely, the door cannot be opened whilst either or both sides of the frame is/or are running : Provided that in the case of machines installed before the commencement of this rule hinged and well secured doors will be deemed to comply with it. (b) Sheet steel cr cast iron guards completely enclosing the end gears, the design to be such that access to the gears is possible only by removing the guard in its entirety. If doors or movable panels are providéd they shall be controlled by a locking device operated by the starting gear, which will ensure the machine cannot be started unless the guard is completely closed and that no movable part can be opened whilst the machine is in motion. P;ovided that in the case cf machines installed before the commencement of this rule a guard securely held in position by automatic catches to prevent opening by vibration, but without the interlocking arrangement, will be deemed to comply with it. Rule 55] Bihar Factories Rules, 1950 41 7. Cop Winding machines.—(a) Effective guard covering the driving end gears; Hinged doors or panels will not be deemed to comply with this rule unless securely held in the closed position by automatic catches to prevent opening by vibration. (b) Guards covering the spindle driving gears of such design that it will not be possible to remove them from position whilst the machme is in motion: Provided that in the case of machines installed before the commence- ment of this rule, guards rigidly secured by bolts or screws, will be deemed to comply with it

8. Roll winding machiues.—Effective guard for traverse or other gears and cams; Hinged doors or panels will not be deemed to comply with this rule unless securely held in the closed position by automatic catches to prevent opening by vibration

9. Beaming and dressing machines.—(a) The flywheel shall be of the disc type. (b) Cross and side shafts driving the starch rollers shall be enclosed in protecting tubes. (c) A guard securely anchored in position and protecting the nip bet- ween the top and bottom starch rollers. It shall have an aperture large enough to pass the yarn through but not the operative's hand. A hinged guard will not be deemed to be compliance with this rule. (d) A guard protecting the nip between the yarn beam pressing roller and the outer top weight roller, i.e., the top weight roller on the side at which the beam is inserted and removed. (e) Ihe space between any yarn guide roller and its adjacent steam cylinder must be not less than 3, IO. Looms.—(a) Sheet steel or cast iron guards protecting the crank and wyper shaft spur gears shall be provided. (b) The minimum clearance between the sley and theebreast beam shall not be less than 2. (c) Not later than six months after the commencement of this rule yarn beams shall be placed on loome by mechanical or other means. Lifting into position by hand alone will not be deemed to comply with this rule

11. Cropping machines.—Sheet steel guards protecting the spirals shall be provided

12. Calendering A strong and rigid guard, securely fixed in position, in front of the nip between the bottom cast iron roller and the paper roller on top of same. This guard shall be constructed in such a manner that it will be impossible for fingers of an operative to reach the nip through the aperture in the guard. (b) Safety rollers protecting the nip of the upper rollers.—These rollers must be made of steel or wrought iron tube, as light an possible, and not more than 2}' external diameter. The safety roller shall ride on the under-roller, and be free to lift. It shall be set in such a manner that the peripheral clearance between it and the upper-roller, and between it and the under-roller when the 42 Bihar Factories Rules, 1950 [Rule 55 safety roller is fully raised, will not permit of an operative's fingers reaching the nip. (c) Sheet steel panels shall be fitted on the machine gable to prevent access through same to the large spur wheel. (d) Lever weights shall be lowered into strong and rigid guards

13. Cloth cutting machines.—A guard preventing access to the knife from the front, top or side shall be provided. On the underside the knife shall be protected up to the maximum limit without interfering with the machine operation

14. Lapping machines.—(a) Provision for starting the machine at the feed end only.—The design shall be such that an operator at the feed end ca hout the co-operation of an operator at

the delivery end and that he cannot interfere with the device necessitating co-operation. (b) A "sight panel" fitted to the feed table in such position that oper- ators on either side of the machine can see through to the other side. (c) The hand wheel on the driving shaft shall be of the disc type and it shall be located at sumcient distance from the machine gable to permit of fen- cing being constructed between it and the lever mechanism operating the folder. (d) The treadle mechanism shall be such as to allow extraction of the maximum cloth lapped and no worker shall be required to go up on the mac- hine table to force it down

15. Sewing machines.—An apron plate shall be fitted in front of the feed chain and the plate shall be without holes or openings except for slots for the jockey pulleys

16. Press pits.—When the press table is levelled with the floor the clear- ance between it and the floor shall not be less than 4". Schedule VI. Power Presses. I. Definition.—For the purposes of this schedule power press means a machine used in metal or other industries for moulding, pressing, blanking, raising, drawing and similar processes

2. Starting and stopping mechanism.—The starting and stopping mecha- nism shall be provided with a safety stop so as to prevent over running of the press or descent of the ram during tool setting, etc

3. Protection of tool and die.—ta) Each press shall be provided with a fixed guard with a slip plate and the underside enclosing the front and sides of the tool. (b) 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. (c) The design, construction and mutual position of the guards referred to in (a) and (b) shall be such as to preclude the possibility of the worker's hand or fingers reaching the danger zone. (d) The machine shall be red through a small aperture at the bottom of the die guard, but a wider aperture may be permitted second or subsequent operations if feeding is done through a chute

4. Rule 55A-56A] Bihar Factories Rules, 1950 [43 (e) Notwithstanding anything contained in sub-clauses (a) and (b) an automatic or an inter-locked guard may be used in place of a fixed guard, but where such guards are used they shall be maintained in an efficient wor- king condition and if any guard develops a defect, the power press shall not be operated unless the defect of the guard is removed.55-A. General safety of buildings, structures, plants, machinery, etc.— (l) No building, wall, chimney, bridge, tunnel, drain, road, gallery, passage, walk-way or gang-way, ladder, stair-case, ramp floor, platform, staging, sca- ffolding or any other structure of bricks, masonry, cement, concrete, steel or any other material whether of a permanent Or temporary character shall be constructed, •situated, maintained or allowed to remain or be used in a factory and no machine, plant, equipment including electric lines, wiring, fitting and apparatus [apparatus as defined in clause (c) of rule 2 of the Indian Electricity Rules, 1956 made under the Indian Electricity Act, 1910], shall be constru- cted, provided, situated, maintained or allowed to be used or operated in a factory, in such manner as may, or is likel to cause any accident or an bodily injury. or work shall be carried on in any factory and no person shall be allowed to work on any process or any machinery, plant or equipment or in any part of a factory or in any other work in such manner as may, or is likely to, cause any accident or any bodily injury. (3) No materials, articles or equipments shall be kept stacked or stored in such manner as may or is likely to cause any accident or any bodily injur

56. Employment of young persons on dangerous machines.—The follow- ing machines shall be deemed to be of such dangerous character that young persons shall not work at them unless the provisions of section 23 (I) are complied with Power Presses other than hydraulic presses; Milling machines used in the metal trades; Guillotine machines; Circular saws; Platen printing machines. 56-A. Lifting machines, chains, ropes and lifting tackles.—No lifting machine and no ch ain, rope or lifting tackle, except fibre rope or fibre rope sling, shall be taken into use in any factory for the first time in that factory unless it has been tested and all parts have been thoroughly examined by a competent person and a certificate of such a test and examination specifying the safe working load or loads and signed by the person making the test and the examination, has been obtained and is kept available for inspection : Provided that where lifting machine, chains, ropes or lifting tackles are already in use of a factory such a certificate shall be obtained within one month of the date on which this rule comes into effect'. (2) (a) Every crane fitted with a derricking jib shall— (i) have plainly marked upon it the safe working load at various radii of the jib and the maximum radius at which the jib ma r Factories Rules, 1950 r Rule 56A (ii)

be fitted with an accurate indicator, clearly visible to the driver, showing the radius of the jib at any time and the safe working load corresponding to that radius. (b) No jib-crane I-aving either a fixed or a derricking jib shall be used after one year of the coming into effect of this rule uniess it is fitted with an accurate automatic indicator which— (i) indicates clearly to the driver or person operating the crane when the load being carried cr lifted apptoaches the safe working load of the crane for the radius of the jib at which the load is being carried or lifted; and (ii) gives an effcient sound signal when the load being carried or lifted is in excess of the safe working load of the crane at that radius : Provided that if a table showing the safe working loads at various radii of the jib is kept attached to the crane the requirements of clause (b) shall not apply to— (i) any guy derrick, crane, being a crane of which the mast is held upri- ght solely by means of ropes with the necessary fitting and tightening screws; (ii) any hand crane used solely for dismantling mother crane; (iii) any crane having a maximum safe working load of one ton or less. (3) 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 load at different angles of the legs shall be posted in the store in which the chains, ropes or lifting tackles are kept and in prominent positions on the premises and no rope, chain or lifting tackles not shown in the table shall be used. The foregoing provisions of this paragraph shall not apply in respect of any lifting tackle if the safe working load thereof, or in the case of a multiple sling, the safe working load at different angles of the legs, is plai- nly marked upon it. (4) Every travelling jib-crane on rails shall be provided with guards to remove any loose materials from the track. (5) (a) The register to be maintained under sub-clause (iii) of clause (a) of sub-section (I) of section 29 shall contain the following particulars, namely • (i) name of the occupier of the factory (iii address of the factory ; (iii) distinguishing number or mark, if any; and description suffcient to identify the lifting machine, chain, rope, or the lifting tackle ; (iv) date on which 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 exami- nation made under sub-rules (I) and (9) together with the name and address of the person who issued the certificate • (vi) date of each periodical thorough examination made under sub- clause (iii) of clause (a) of sub-section (l) of section 29 and sub- rule (8) and the name of the person by whom it was carried out; Rule 56A Bihar Factories Rules, 1950 [45 (vii) date of annealing or other heat treatment of the chain and other lifting tackle made under sub-rule (7) and the name of the person 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 of the steps taken to remedy such defects. The register shall be kept readily:available for inspection. (b) All certificates obtained under sub-rules (l) and (9) and reports of all examinations conducted under this rule shall be maintained in a register and shall be kept readily available for inspection. (6) 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 adeq- uate strength and have an even running surface and every such rail or track shall be properly laid, adequately supported and properly maintained and provided with effective stops at the end. (7) All chains and lifting tackles, except a rope sling, shall, unless they have been subjected to such other heat treatment as may be approved by the Chief Inspector of Factories, be effectively annealed under the direct supervi- Sion of a competent person at the following intervals, namely • (i) all chains, slings, rings, hooks, shackles and swivels used in con- nection 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 12 months Provided that chains and lifting tackles not in frequent use shall, subject to the Chief Inspector's approval, be annealed only when necessary and par- ticulars of such annealing shall be entered in a register prescribed under sub- rule (5). (8) Nothing in the. foregoing sub-rule (7) shall apply to following classes of chains and lifting tackles, namely : (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 wheel; (v) rings, hooks, shackles and swivels permanently attached to pitched chains, pulley blocks or weighing machines; (vi) hooks and swivels having screw threaded part or ball bearing or other case hardened parts; (vii) socket shackles secured to Mire ropes by white metal capping; (viii) Bordeaux connections. Such chains and lifting tackles shall be thoroughly examined by a com- petent person once at least in every twelve months, and particulars entered in the register kept in accordance with sub-rule (5). 46 Bihar Factories Rules, 1950 [Rule 56B (9) All lifting machines, chains, ropes and lifting tackles except a fibre rope or fibre rope sling, which have 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 examination be obtained and particulars entered in the register kept in accor- dance with sub-rule (5). (IO) 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. (11) Where there are more than one lifting machines, chains, ropes and lifting tackles in a factory, each one of them should be given a distinguishing mark or number for the purpose of identification. (12) Where in the opinion Of the State Government, compliance with any of the provisions of this rule is considered unnecessary or impracticable, the Chief Inspector may. subject to the approval of the State Government, by order in writing, exempt any lifting machine or lifting tackle therefrom, subject to such conditions as may be specified in the said order . Provided that the Chief inspector may subject to the approval of the State Government, rescind or modify any such order whenever he considers it necessary without assigning any reason. 56-B. Passage ways and clearance for over-head travelling (a) Passage- way shall be provided along and adjacent to every rail-track of every over-head travelling crane of such width that there is a clear space of not less than 50 c. m. between any part of any crane operating on the track and any column, fixture or fixed structure, so that no person working or walk- ing over the passage-way may be struck by any part of the crane. (b) There should be railings at a height of at least 90 c. m. from the floor of passage-way on both the sides, with at least two rails and with a toe board at a height of at least IO c. m. from the floor : Provided that if there is a wall or sheeting on one side of the walk-way the railings may be provided on only the other side. (c) Safe access Jadders with hand rails shall be provided at convenient places and at suitable frequent intervals so that the crane driver or any other person going up the crane or crane track may not have to walk long distances on the passage-way. (d) Where there are more than one cranes operating in the same way and on the same run-way, the number of access ladders shall be provided in consideration of the easy and safe accessibility to the different cranes. (2) For the repair of the track equipments of cranes and for greater convenience and safety in changing track wheels if there is no sumcient dist- ance between the end of the crane and the wall of the building, special rece- sses or platform with safe access ladders shall be built at different places in the building. (3) The vertical clearance between the floors or crane bridge or trolley foot-walks or platform on travelling cranes and over-head trusses, structural parts or any other permanent fixture shall not be less than two metres. Rules 56C-57] Bihar Factories Rules, 1950 [47 (4) The provision of sub-rule (I) shall apply only to factories constructed after the 1st January, 1975 and also to cra nes installed in existing factories after the said date and sub-rules (2) and (3) shall apply to the factories cons- tructed after the 4th February, 1963 and the cranes installed in existing facto- ries after said date" . Provided that the Chief Inspector may, with the approval of the State Government, exempt any such factory in respect of any particular over-head travelling crane from the operation of any provision of the said sub-rules sub- ject to such conditions as he may specify in writing. (5) In respect of any over-head travelling crane already in operation on the date of coming into force of this rule in any factory, the Chief Inspector may, by an order in writing, direct such measures to be taken within a speci- fied time as he may consider practicable and necessary to prevent accidents due to the movement of the cranes. (6) These rules are without any prejudice to, and in addition to and not in derogation to the provisions of section 32 of the Factories Act, 1948; and (7) The Chief Inspector may, with the approval of the State Govern- ment, exempt any over-head travelling crane in any factory from the operation of any of the provisions of this rule subject to such conditions as he may spe- cify in writing. 56-C. Fragile roofs—Provision of crawling boards, In any factory no person shall be allowed to stand, walk or do any work or go for any purpose whatsoever, on a roof or ceiling covered with or constructed of sheets, plain, corrugated ot otherwise, made of cement, cement mixed with asbestos or with any other material or any other similar materials in respect of which there may be danger of the sheet-breaking due to the weight of a man, and no person shall be allowed to work or go for any purpose what- soever, on a sloping roof, unless :— (a) (b) (c) (d) suitable and sufficient safety devices like ladders, duck ladders, access boards and crawling boards securely supported and fixed are provided and used; suitable and sumcient parapet wall or railing or any other equally effective device to prevent the person from falling from the slo- ping roof is provided; a notice in bold letters warning that the roof was of fragile mate- rial and was dangerous and that no person should go on the roof unless full protective measures have been taken is displayed at such a prominent place and in such a manner as to attract imme- diate attention ; and

a permit to work on the roof has been issued to the person by a responsible person duly authorised for this purpose by the Manager. (2) All preparatory work like cutting, trimming, piercing, etc. of the sheets or of any other material or article to be used on a roof shall be carried out on the ground and carrying out of any such work on the roof shall be totally prohibited and shall not be allowed

57. Pressure Plant. Every plant or machinery used in a factory operated at a pressure greater than atmospheric pressure shall be— 48 J Bihar Factories Rules, 1950 [Rule 57 (a) (b) (c) (d) of good constructicn, sound material, adequate strength and free from any patent defect ; properly maintained in a safe condition ; fitted with— (i) a suitable safety valve or other effective device to ensure that a maximum permissible working pressure of the vessel shall not be exceeded; (ii) a suitable pressure gauge easily visible and designed to show at all times the correct internal pressure in lbs. per square inch, or 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 valves at the lowest part of the ves- sel for the discharge of collected liquid. thoroughly examined by a competent person :— (i) externally once in every period of six months; (ii) internally, once in every period of twelve months: Provided that if by reason of design, construction and use of the vessel a 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 in case of vessels not in continuous processes and once in every four years in case of vessels in continuous processes; and (iii) Hydraulically tested at intervals of not more than four 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 on condition that the requirements laid down in sub-rule (5) are fulfilled: Provided further that it shall he sufficient for the purposes of clause (c) of this rule if the safety valve, pressure gauge and stop valve are mounted on a pipe line immediately adjacent to the vessel and where there is a range of two or more similar vessels in a plant served by the same pressure lead, only one set of such mountings need be fitted in case they cannot be isolated. (2) The requirements of this rule shall be in addition to and not in derogation of the requirements of any other Act, rules or regulations in force. (3) Nothing in this rule shall apply to— (a) any vessel which comes within the scope Of the Indian Boiler Act, 1923 (V of 1923), (b) metal bottles or cylinders used for the storage or transport of com- pressed gases or liquified or dissolved gases under pressure covered by the Gas Cylinder Rules, 1940 framed under the Indian Explosives Act, 1884 (IV of 1884), (c) feed pumps, steam traps, turbine, casings, compressor cylinders, cylinders Of prime-movers, steam separators or dryers, steam strainers, steam Rule 57] Bihar Factories Rules, 1950 [49 s de-superheater, oil separators, air receivers for fire sprinklers installations, aic receivers of monotype machines, provided the maximum working pressure of the air receiver does not exceed 20 lbs. per square inch and capacity does not exceed 3 cubic feet, air receivers of electrical circuit breakers, air receivers of electrical relays, air vessels on pumps, pipe coils, accessories Of instruments and appliances, such as cylinders and piston assemblies used for operatlng relays and interlocking type of guards, vessels with liquids subject to static head only and hydraulically operating cylinders other than any communicat- ing with an air loaded accumulator, and (d) Water sealed gas-holders mentioned in rule 57-A. Notc.—For the purposes of this rule, the "thin walled vessels," means vessel incapable of holding weight of water; competent person" means a person holding any of qualifications exempting him from passing Parts A and B of the Associate Membership Exa- mination of the Institution of Engineers (India) or any other person whom the Chief Inspector considers competent for any specified purpose by virtue of his experience; and (c) C' Vessel" means an enclosed vessel of any capacity and includes any other plant or machinery working at a pressure higher than the atmospheric pressure. (4) (a) In respect of pressure vessels of thin walls such as sizing cylinders made of copper or any other non-ferrous metal the safe working pressure shall be reduced at the rate of five per cent of the original working pressure for every year 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 from any other particulars available with the manager. (c) Every new and second hand cylinder of thin walls to which repairs which may effect its safety, have been carried out, shall be tested before use to, at least one and a half times its working pressure. (5) Every vessel operated at a pressure greater than atmospheric press- ure, and not so constructed as to withstand With safety the maximum permissi- ble 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 shall be fitted v ith a suitable reducing valve or other suitable automa- tic device to prevent the safe working pressure of the vessel being exceeded. (6) In a plant in which owing to the nature of the process or the action of the contents of the

vessel, a pressure gauge or safety valve or both cannot 'Aork reliably, a tested and reliable working thermometer with a sumciently large scale, on which shall be clearly marked the maximam permissible temper- ature in the vessel, or barometers or rupture discs in addition to the pressure gauge and safety valve shall be fitted. (7) If during thorough examination any doubt arises as to the capacity of a vessel to work safely until the next examination, provided for in these rules, the competent person shall enter in the prescribed register his observa- tion and remark with reasons and may authorise the vessel to work further, 50] Bihar Factories Rules, 1950 [Rule 57A subject to a lowering of pressure or to more frequent inspection or subject to both these conditions. (8) No vessel which has undergone alterations or repair shall be put to use unless it is thoroughly examined by competent person. (9) A report of the result of every examination made shall be completed in

Form 8 and Signed by the person making the examination, and shall be kept available for perusal by an Inspector at any time-whi\e the vessel is in service. (IO) No vessel which has previously been used shall be taken into use in any factory for the first time in a factory until it has been examined and reported in accordance with these 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 premissible working pressure thereof, and stating the nature of the tests to which the vessel and its fittings (if any) have been subjected and certificate is kept avaiable for peru- sal by an Inspector and vessel is so marked as to enable it to be identified with the certificate relating to the same. (11) Where the report of any examination under these rules specified conditions for securing the safe working ef a vessel, the vessel shall not be used except in accordance with those conditions, (12) The competent person making the report of any examination under this ru\e shall within seven days of the completion of the examination scnd to the Inspector a copy of the report in every case where the maximum permissi- ble working pressure is reduced, or where. the examination shows that the plant cannot continue to be used with safety unless certain repairs are carried out immediately or within a specified time. (13) Where there are more than one pressure plants or vessels in a fac- tory cach such plant or vessel should be given a distinctive number. (14) The Chief Inspector may, by an order in writing, exempt, subject to such conditions as he may specify, from any of the provisions of this rule any pressure vessel or pressure plant if he is satisfied that such provision need not be applied in consideration of the special nature of its construction or use of any other matter. Such orders may at any time be revoked by the Chief Inspector without assigning any reason. 57 - A (l) (a) The expression "gas-holder" for the purpose of the rule, means "water sealed gas-holder. (b) This rule shall apply to only such gas-holders as ha_ve a storage capacity of not less than 141.6 cubic meters (5,000 c. ft.). (2) Every gas-holder shall be of good and sound construction and mate- rial, and of adequate strength, shall be free from defects patent or otherwise and shall be properly maintained. (3) Where there are more than one gas410Jder in a factory every gas-hol- der shall be given a distinguishing number and the numbers shall be marked on the respective gas-holders in bold letters and in a conspicuous position. (4) Every gas-holder shall be thoroughly examined externally by a com- petent person at least once in every period of twelve months. (5) No gas-holder, any lift of which has been in use for ten years, shall be used unless the internal condition of the sheeting is thoroughly examined Rule 58] Bihar Factories Rules, 1950 [51 by a competent person, hy means of an electronic device or by a similar accurate device approved by the Chief Inspector and in case of any gas-holder any lift of which has alreadv been in use for ten years or more on the date on which this rule comes into force, such examination shall be carried out with- in the period of one year from the said date but, in exceptional cases such a period may be extended up to two years by tlre Chief Inspector. This exami- nation shall be repeated once in every four years after the above mentioned first examination: Provided that if the Chief Inspector is satisfied that the devices men- tioned in this sub-rule are not available, he may permit the examination to be carried out by cutting out samples from the crown and the sides of the gas holder or other method approved by him: Provided further that if the above inspection raises any doubt, an inte- rnal visua' examination shall be made. (6) (a) After every examination conducted in accordance with sub-rules (4) and (5), the manager OT the cccupier shall obtain a report from the person carrying out the examination in Form No. 31 and shall take immediate steps to rectify the defects if any, pointed out in the report and carry cut such repairs or take such steps as may be recommended or suggested in the report. Entries in resoect of such steps shall be made in the form of the report as well as in the register in Form No. 30. (b) All reports in Form No. 31 shall be kept and mentioned in a bound register or in such other manner as may be convenient and shall be produced before an Inspector whenever required to do so. (7) All possible steps shall be taken and device applied to prevent in- gress of any impurity in gas-holders. (8) No gas-holder shall be repaired or demolished except under the direct supervision of a person who by his training and experience and by his knowledge of the necessary precautions against risk of explosions and gassing, is competent to supervise such work. (9) All samples cut under sub-rule (5) shall be kept readily available for inspection by the Inspector. (IO) A permanent bound register in Form No. 30 duly signed by the occupier or manager shall be maintained and shall be produced before the Inspector whenever required to do so. Explanation.—A competent person for the purposes of this rule means a person having a Degree or Diploma in Mecl,anical or Chemical Engineering with at least three years' practical experience of operation, maintenance or repairs of such gas-

plants, or any other person with at least ten years' expe- rience thereof If he does not possess any such degree

58. Excessive weights.—(l) No person shall without the aid of any other person or mechanical appliances, be allowed to lift, carry or move manu- ally or otherwise any material or article which exceeds the weight specified for each class of persons in the following schedule : Schedule I. Persons. (a) Adult male Subs. by S. O. 686 dated 13.7.1988: Maximum weight of material article, tool or appliances 1[55 kgs.l 52] (b) (c) (d) (e) (f) Bihar Factories Adult female Adolescent Male Adolescent Female Male child Female child Rules, 1950 [Rule 59 30 kgs. 30 kgs. 20 kgs. 16 kgs. 13 kgs. (2) No person shall engage, in conjunction with others in lifting, car- rying or moving by hand or on head, any materia!, article, tool or appliance, if the weight thereof exceeds the lowest weight fixed by the Schedule to sub- rule (l) for any of the persons engaged; multiplied by the number of persons engaged. (3) A S40man, who is pregnant, may be employed in any factory to lift, carry, or move by hand oron head, any load not exceeding 18.5 kgs. in weight till the end of seven months of pregnancy but she shall not be employed in any factory to lift, carry or move by hand or on head any load after the end of seventh month. (4) The State Government or the Chief Inspector subject to the control of the State Government may by an order in writing relax the maximum weight specified in the schedule to sub-rule (1) in respcct of any factory or class Of factory for a period not exceeding three raonths at a time and liable to be r.esciaded or Vithdrawn at any time without assigning any reason and subject to such conditions as may be specified in the said order

59. Protection of Eyes.—Effective screens or suitable goggles shall be provided for the protection of persons employed in or in the vicinity or the processes specified in the schedule annexed hereto being processes which involve risk or injury to the eyes from particles or fragments thrown in the course of the process and also by reason of exposure to light. Schedule I. Breaking, cutting, pressing or curving of bricks, stone, concrete, slag or similar material by means of hammer chisel pick, or any other hand tool, or by means of a portable tool driven by power, and dry grinding of surfaces of any such material by means of a wheel or disc driven by power

2. Dry grinding of surface of metal or any articles of metal by applying the same by band to a wheel disc or band driven by power, or by means of a portable tool driven by power

3. Dividing into separate parts of metal, or any article of metal brick, stone concrete or similar materials by means of a saw driven by power or by means of an abrasive cutting wheel or disc driven by power

4. Turning of metal or any article metal

5. Drilling by means of portable tool 6. Welding and cutting of metal or any article of metal by means of an electric, oxy-acetylene or similar process

7. Hot fettling of steel casting by means or a flux injected burner or air torch and de-seaming of metal. Rules 59A-59B] Bihar Factories Rules, 1950 [53 8. Fettling of metal casting; involving removal of metal, including run- ners, gates and risers and removal of any other material during the course of such fettling

9. Chipping of metal or any article of metal, and chipping, knocking out cutting out or cutting off of cold rivet, bolt, nut, lug, pin, collar or similar articles from any structure of plant or from part of any structure of plant by means of a hammer.chisel, punch, or similar hand tool, or by means of a portable tool driven by power. IO. Chipping or scurfing of paint, scale, slag, rust or other corrosion from the surface of metal or other hard material by means of a hand tool or by a portable tool driven by power

11. Breaking of scrap metal by means of a hammer or by means of a tool driven by power

12. Routing of metal

13. Work on drop hammer and power hammer and work by any person not working on such hammer but whose working is carried on in such •circu- mstances and in such a position that particles or fragments are liable to be thrown off towards him

14. Work at furnace where there is risk to eyes from molten metal

15. Pouring or skimming of molten metal

16. Work involving risk to the eyes from heat being thrown off

17. Truing or dressing of abrasive wheel

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

19. Any other process wherein there is any risk of injury to eyes from particles or fragment thrown off during the course of the process.59-A. In every factory a register shall be maintained in

Form no. 32 in which the name of every worker (along with such other particulars as are required to be furnished in the said register) shall be recorded, who may be employed or may be required to perform the work specified in sub-section (l) of section 21, and no worker shall be allowed to_ carry out any such duty unless his name with füll particulars. has been recorded in the said register. This register shall be produced forthwith before an Inspector whenever dem- anded by him. 59-B. (t) No young person shall be allowed to work at or near any machine specified in sections 21, 28. 29, 30, 31 or on any machine plant, or process specified in the schedules attached to rule 95, or on any other plant, machine or process in which there may be any hazard of fire, explosion or of injury to health unless (a) he has been fully instructed as to the dangers arising therefrom and the precautions to be observed, and (b) has received suffcient training in work at-the-machine, plant or process, or is under the direct and 54] Bihar Factories Rules, 1950 Rule 59C-61 adcquate supervision of a person who has thorough knowledge and experi- ence thereof. (2) Before any young person is allowed to work on any machine, plant or process specified in sub-rule (2) the Manager or any other responsible per- son duly authorised by the Manager, shall give a certificate in Form no. 33 and every such certificate shall be kept and maintained in the form ofa bound book and the said register shall be produced before an Inspector forthwith whenever demanded b;.him. (3) This rule is without any prejudice to and in addition to and rot in derogation to any provision of any Other rule or of the Act. 1 [59-C. Examination of eye sight of certain No person shall be employed to operate a crane, locomotive fork-lift truck, pay loaders, dumpers or other automobiles or to give signals to a Crane or Locomotive Operator unless his eye-sight and colour vision have been examined by a quali- fied ophthalmologist, approved by the Inspector and declared fit 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 (I) shall be examined at least once in every period of 12 months up to the age of 45 years and once in every six months beyond that age. (3) Any fee payable for an examination or any cost involved for correc- tive glasses under sub-rules (l) and (2) shall be paid by the occupier and shall not be recoverable from the person. (4) The rector of examination and re-examination carried out as requi- red in subrules (i) and (2) above shall be maintained in Form no, 35 appen- ded to this and a copy thereof be sent to the Inspector within fifteen days from date of examination.] 60. Minimum dimensionsof 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 a rectangular or oval shape, be not less than 16 inches long and 12 inches wide. (b) in the case of a circular shape, be not less than 16 inches in diameter. 61 . Exemptions.—The requirements of sub-section (4) of section 37 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 : 1. Ins. by s. O. 686 dated 13 7 1988. Rules 62] Bihar Factories Rules, 1950 55 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 process and shall be carried out by experienced operatives under the constant supervision of a competent person. (b) The operations of cutting or v elding steel or wrought iron gas mains and services by the application of heat, subject to the following con- ditions (i) The main or services shall be situated in the open air, and it shall contain only the following gases, separately or mixed at a perssure greater than atmospheric pressure, namely, gas, coke oven gas, producer gas, blast furnance gas or gases other than air, used in their manufacture ; (ii) The main or service shall not contain acetylene or any gas or mix- ture of gases to vhich acetylene has been added intentionally ; (iii) The operation shall be carried out by an experienced person or persons and at least two persons (including those carrying out the operations) experienced in work on gas mains and over 18 years of age shall be present during the operetion ; (iv) The site of the operation shall be free from any inflammable or explosive gas or vapour ; .(v) Where acetylene gas is used as a 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 oe repairing an oil tank on any ship by the electric welding proccss shall be

subject to the following conditions : (i) The only oil contained in the tank shall have a flash point of not less than, 15001-7 (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 an 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 from oil or oil leakage in inflammable quantities and (b) which is not less than one foot below the nea- rest 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 supervison of a competent person. General 1 62. (1) Processes, equipment, plant, etc. involving serious fire hazard.— (a) All processes involving serious explosing and flash fire hazard shall be located in segregated building where the equipment shall be so arranged that only a minimum number of employees are exposed to such hazards at any one time. 1. ins bys O. 686 dated 13.7.1988 56] Bihar Factories Rules, 1950 [Rule 62 tiq. (b) All industrial processes im Olving serious fire hazard should be Ioca- ted in building or work place separated from one another by wells of fire resistent construction. (c) Equipment and plant involving serious fire or flash fire hazard shall wherever possible, be so constructed and installed that in case of fire, they can be easily isolated. (d) Ventilation ducts, pneumatic conveyors and similar equipment, involving a serious fire risk should be provided with flame arresting or auto- matic fire extinguishing appliances. (e) In all work places having serious fire or flash-fire hazards, passages between machines, installations or piles of meterial should be at least 90 cm. wide. Fire Prevention (2) Protection against lighting.—Protection from lighting shall be pro- (a) buildlngs in which explosive or highly flammable substances vided for :— are manufactured, used, handled or stored ; (b) storage tanks containing oils, paints or other flammable liquids; (c) grain elevators; and (d) buildings, tall chimneys or stacks where flammable gases ; fumes, dust or lint are likely to be present. (3) Explosives.—AII explosives shall be handled, transported, stored and used in accordance with the provisions in the Indian Explosives Act, 1884. (4) Precautions against ignition.—Wherever there is danger of fire or 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 or any other exposed; (d) smoking, lighting or carrying of matches, lighters or smoking mate- rials, ferrous materials which is likely to cause sparks by frictior; shall be prohibited; (e) ansmission 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 plants, chemi- cal or physical chemical reaction and radiant heat. (d) In every room Of a factory exits sumcient to permit safe escape of the occupants in case cf fire or other emergency shall be provided which shall be free of any obstruction. Rule 62] Bihar Factories Rules, 1950 [57 (5) Spontaneous ignition.—Where materials are likely to induce spon- taneous ignition, care shall be taken to avoid formation of air pocket and to ensure adequate ventilation. (6) Cylinders containing compressed gas.—CyIinders containing compre- ssed 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 substances, furnaces or hot proces.ses. The room where such cylinders are stored shall have adequate ventilation (7) Storage of flammable The quantity of flammable liquids in any work room shall be the minimum requiredTor the process or processes carried on in such room. Flammable liquids shall be stored in suitable con- tainers with close fitting covers : Provided that not more than 20 litres of flammable liquids having a flash point of 210 C or less shall be kept or stored in any work room. (b) Flammable liquids shall be stored in closed containers and in limit- ed quantities in well-ventilated rooms of fire resistent construction which are isolated frorn the remainder of the building by fire walls and self closing arc doors. (c) Large quantities of such liquids shall be stored in isolated adequa- tely ventilated building or fire resisting construction or in storage tanks, pre- ferably under-ground and at a distance from any building as required in the Petroleum Rules, 1976. (d) Effective steps shall be taken to prevent leakage of such liquids into basements, sumps or drains and to confine any capacing liquids within safe limits. (8) Accumulation of flammable dust, gas, fume or vapour in air or fla- mmable waste material on the 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. Emergent Fire Exits (9) Fire In this rule— (i) "horizontal exit" means an arrangement which allows alternative egress from a floor area to another floor at or near the same level in an adjoining part .of the same building with adequate separation ; and "!rave IS ance" means the distance an occupant has to travel to reach an exit. (b) An exit may be door-way, corridor, passageway to an internal or external stairway or to a verandah. An exit may also include a horizontal exist leading to an adjoining building at the same level. (c) Lifts, escalators and revolving-doors shall not be considered as exits for the purpose of this sub-rule. (d) In every room of a factory exits sumcient to permit safe escape of the occupants in case of fire or other emergency shall be provided which shall be free of any obstruction. 58] Bihar Factories Rules, 1950 [Rule 62 (e) The exits shall be clearly visible and suitably illuminated with sui- table arrangement, whatever artificial lighting is to be adopted for this pur- pose to maintain the required illumination in case of failure of the normal source of electric supply. (f) The exits shall be marked ina language understood by the majori- ty of the workers. (g) Fire resisti; g doors or roller shutters shall be provided at appro- priate places along the escape routes to prevent spread of fire and smoke par- ticular;y at the entrance of lifts or stairs were funnel of flunel of flue effect may be created inducing an upward spread of fire. (h) All exits shall provide continuous means of egress to the exterior of a building or to an exterior open space leading to a street (i) Exits shall be so located that the travel distance on the floor shall not exceed 30 meters. (j) In case of these factories where high hazard materials are stored or used, the travel distance to the exit shall not exceed 22.5 meters 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 area of high hazard. (k) Wherever more than one exit is required for any room, space or floor, exits shall be placed as remote from each other as possible and shall be arranged to provide direct access in separate directions from any point in the area served. (l) The unit of exit width used to measure capacity of any exit shall be 50 cm. A clear width of 25 cm. shall be counted as an additional half unit. Clear width of less than 25 cm. shall not be counted for exit width. (m) Occupants per unit width shall be 50 for stairs and 75 for doors. (n) For determining the exits required the occupant load shall be rec- koned on the basis of actual number of occupants within any floor area or IO square meters per person, whichever is more. (o) 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. (p) For every build ing or 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 a suitable means of escape for any person employed therein, and in any such room wherein more than IO persons may be normglly present at least two separate means of exit shall be available, as remote from each other as practicable. (q) Every storage area shall have access to at least one means of exit •which can be readily opened. (r) Every exit doorway shall open into an enclosed stairway, a hori- zontal exit, on a corridor or passageway providing continuous and protected means of egress. (s) No exit doorway shall be less than 100 cm. in width. Doorways shall be not less than 200 cm. in height. Rule 62] Bihar Factories Rules, 1950 [59 (t) Exit doorways shall open outwards, that is, away from the room but shall not obstruct the travel along any elict. No door when opened, shall reduce the required width of stairway or landing to less than 90 cm. over head or sliding doors shall not be installed for this purpose. (u) An exit door shall not open immediately upon a flight of stairs. A landing equal to at least the width of the doorway shall be provided in the stairway at each doorway. The level of landing shall be the same as that of the floor which it serves. (v) The exit doorways shall be openable from the side which they. serve Without the use of a key. (w) Exit corridors and passageways shall be of a width not less than the aggregate required width of exit doorways leading from there in the direc- tion of travel to the exterior. (x) Where stairways discharge through corridors and passageways the height of the corridors and passageways shall EOt be less than 2.4 meters. (y) Internal stairs shall be constructed of non-cumbustible materials throughout. (z) Internal stairs shall be constructed as a self contained with at least one side adjacent to an external wall and shall be completely enclosed. (aa) A?staircase shall not be arranged round a lift shaft unless the latter is totally enclosed by a meterial having a fire resistance rating not lower than that of the type of construction of the former. (ab) Hollow combustible construction shall not be permitted. (ac) The minimum width of an internal staircase shall be 100 cm. (ad) The minimum width of treads without nosing shall be 25 cm. for an internal staircase. The treads shall be constructed and

maintained in a man- ner to prevent slipping. (ae) The maximum height of a riser shall be 19 cm. and the number of risers shall be limited to 12 per flight. (af) Hand rails shall be provided with a minimum height of 100 cm. and shall be firmly supported. (ag) The use of spiral stair case shall be limited to low occupant lead to a building of height of 9 meters, unless they are connected to platforms such as balconies and terraces to allow escapes to pause. A spiral staircase shall be not less than 300 cm. diameter and have adequate head room. (ah) The width of a horizontal exit shall be same as for the exit doorway. (ai) The horizontal exit shall be equipped with at least one fire door of self closing type. (aj) The floor area on the opposite or refuge side of a horizontal exit shall be sumcient to accomodate occupants of the floor area served, allowing not less than 0.3 square meter 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. (ak) Where there is difference in level between connected areas for hori- zontal exit, ramps not more than I in 8 slope shall be provided. For this pure pose steps shall not be used. 60] Bihar Factories Rules, 1950 [Rule 62 (al) Doors in horizontal exits shall be operatable at all times. (am) Ramps with a slope of not more than I in IO may be substituted for the requirements of staircase, For all slopes exceeding I in IO and where- ver the use is such as to involve danger of slipping the ramp shall be surfaced with non-slipping material. (an) 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 500 persons, or if more than 25 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. Fire Fighting (10) First-aid fire fighting arrangements.—ln every factory there shall be provided and maintained adequate and suitable fire fighting equip ment for fighting fires in the early stages, those being referred to as first-aid fire fighting equipment in this rule. (11) The types of first-aid fire figh ting equipment to be provided shall be determined by considering the different types of fire risk which are classi- fied as follows (a) "Class A Fire due to combustible materials such as wood, textiles, paper, rubbish and the like— (i) "Light hazard."— Occupancies like offces, assembly halls, can- teens, restrooms, ambulance room and the like; (ii) 'Ordinary hazard."—Occupancies like saw mills, carpentary shop, small timber yards, book binding shops, engineering workshop a the like; (iii "Extra Hazard".—Occupancies like large timber yards, godowns storing fibrous materials, flour mills, cotton mills, jute mills; large wood working factories and the like; Class Bfire.—Fire in flammable liquids like oil, petroleum pro- (b) ducts, solvents grease, paint, etc. Class C fire—Fire arising out of gaseous substances. (c) Class D fire.—Fire from reactive chemicals, active materials and (d) the like; Class Efire.—-Fire involving electrical equipment and delicate machinery and the like. (12) The number and types of first-aid fire fighting equipment to be provided shall be as per the following scale (a) Class A fire— (i) Light hazard.—One 9 litre water bucket for every 100 square metres of floor area or part thereof and 9 litre water type (soda, acid or gas pressure or bucket pump extinguisher shall be provided for each 6 buckets or part thereof with a minimum of the extinguisher and two buckets per compartment of thc building. These equipments shall be as distributed over the Rule 62] (b) (c) (d) (e) Bihar Factories Rules, 1950 [61 (ii) (iii) entire floor areas that a person have to travel not more than 25 metres from any point to reach the nearest equipment. Ordinary hazard.—One 9 litre water bucket for every 100 saqu- are metres of floor area or part thereof and one 9 litre water type (soda, acid, gas pressure or bucket pump) extinguisher shall be provided for each six buckets or part thereof, with a minimum Of 2 extinguishers and 4 buckets per compartment of the building. The equipment shall be so distributed over the entire floor area that a person shall have to travel not more than 15 metre from any point to reach the nearest equipment. Extra hazard.—The scale of equipment would be what is prescribed for ordinary hazard and in addition such extra equipments as in the opinion of the Inspector are necessary, having regard to the special nature or occupancy : Provided that in special case, the Inspector, after taking into consideration the circumstances, authorise that the buckets prescribed in this clause may be dispensed with, provided the number of the extinguishers provided is double than that is prescribed. Class D fire.—There shall be at least one fire extinguisher either foam type or carbon dioxide or dry powder type per 50 square metres of floor area and shall be so distributed that no person is required to travel more than 15 metres from any point to reach the nearest equipment. In addition to the requirement of extingui- shers specified here, requirements as laid down in clause (a) shall also be provided. Class Cfire.—Carbon dioxide or dry chemical power extinguishers shall be provided near each plant or group of plants. Class D fire.—SpeciaI dry powder

(chloride based) type of extin- guishers or sand buckets shall be provided on a scale as laid down for class B fire. The Inspector may require a higher scale of por- table equipment to be provided depending upon the risk involved. Class Efire.—Carbon dioxide or dry powder type extinguishers shall be provided near each plant or group of plants depending upon the risk involved. (13) The first aid fighting equipment shall conform to the relevant Indian Standards. (14) 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. (15) All first-aid fire fighting equipment shall be placed in a conspicuous position and shall be readily and easily accessible for immediate use. Gene- rally, these equipments shall be placed as near as possible to the exits or stair landing, or normal routes of escape. (16) All water buckets and bucket pump type extinguishers shall be filled with clean water. All sand buckets shall be filled with clean, dry and fine sand. (17) All other extinguishers shall be charged appropriatel ina ordance with the instruction of the manufacturer. 62] Bihar Factories Rules, 1950 [Rule 62 (18) Each first-aid fire fighting equipment shall be allotted a serial num- ber by '*hich it shall be referred to in the records. The following details shall be painted with white paint on the body of each equipment (i) Serial number; (ii) Date of last refilling; and (iii) Date of last inspection. (19) First-aid fire fighting equipment shell be placed on platform or in Cabinets in•such a way that their bottom is 750 mm. above the floor level. Fire buckets shall be placed on hooks attached to a suitable stand or wall in such a way that their bottom is 750mm. above the floor level. Such equipment if placed outside the building, shall be under sheds or covers. (20) All extinguishers shall be thoroughly c'eaned and re- charged imme- diately after discharge. Sufficient refill material shall be kept readily available for this purpose at all times. (21) All first-aid fire fighting cquipment shall be subject 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. Records in respect of ins ection, maintenance and testing of all first-aid fire fighting equipmen s all be main- tained in a bound register and shall be produced for inspection on demand. (22) Other fire-fighting arrangement.—(a) In every factory, adequate provision of water supply for fire-fighting shall be made and where the amount of water required in liter 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 requirement Of water as calculated above shall be provi- ded and maintained, In the above formula : 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 are handled or stored ; C=The total area in square metres of all floors over 15 metres above ground level; and D = The total area in square metres of allfloors of all buildings other than those of fire resisting construction : Provided that in areas where the fire risk involved does not require 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 installations approved by any fire associa- tion or fire insurance company such areas may, for the purpose of calculation, be halved : Provided also that where the factory is situated at not more than 3 kilo- meters from an establishment of city or town fire senice, the pumping .capacity Rule 62] Bihar Factories Rules, 1950 [63 .1 .n 'e n, .ity based on the amount of water arrived at by the formula above may be reduced by 25 per cent, but no account shall be taken of this reduction in calculating water supply required under clause (a). (b) (i) Each trailer pump shall be provided with equipment as per sche- dule appended to this rule. (ii) Tn addition to the equipments specified in the said schedule each trailer pump shall be provided with adequate breathing apparatus. (iii) The Chief Inspector may by an order in writing direct the occupier and/or Manager ofa factory to provide such additional equipments and breathing apparatus and of such type as he may consider nece- ssary in consideration of the nature and degree of hazards. (iv) The equipment specified in this sub-rule shall conform to such Indian Standards specification as may be in existence. (c) Trailer pumps shall be housed in a separate shed or sheds which shall be sited close to a principle 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 menhauling 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 100 minutes. At least 50 per cent of this water- supply for litres whichever is less, shall be in the form of static tanks of adequate capacities (not less than litres each) distributed round the factory with due regard to the potential fire risk in the factory

(where piped supply is provided, the size of the main shall not be less than 15 centi- meters diameter and it shall be supplying a minimum of 4,500 litres per minute at a pressure of not less than 7 kilograms per square centimeter). (f) All trailer pumps including the equipment provided with them and vehicles for towing them shall be maintained in good condition and subjected to periodical inspection and testing as required. (23) 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 shall be in charge of a trained responsible person : Provided that in factories where power driven trailer pumps, fire engine or similar devices are provided or are required to be provided under these rules adequate number of wholetime suitable and adequately trained persons shall be employed throughout the day and night and on all days whether working day or a holiday, who shall be responsiblefor the maintenance, upkeep and operation of these machines and vehicles. In such factories there shall be a senior Fire Offcer who shall be in overall charge of fire-fighting, arrange- ment and operations and who shall be responsible for training the workers in the use of fire extinguishers and other fire-fighting equipments. (b) Sufficient number of persons shall be trained in the proper handling of fire-fighting equipments and their use against the types of fire for which they are intended, to ensure that adequate number of persons are available for fire-fight ing both by means of first-aid fire-fik hting equipment and others. Wherever- 'ehicles with towing attachment are to be provided as required in clause (d) of 64] Bihar Factories Rules, 1950 [Rule 62 sub-rule 22 sumcient number of persons shall be trained in driving where the need arises, those vehicles to ensure that trained persons are available for driving them. (c) Fire fighting drills shall be held at least once in every 3 months, and records in respect of such periodical drills shall be maintained in a bound register and shall be produced for inspection on demand. (24) Automatic sprinklers and fire hydrants shall be in addition and not in substitution of the requirement in sub-rules (10) and (22). (25) Access for fire-fighting-buildings and plants shaJl be so laid out and. roads, passageways etc, so maintained as to permit unobstructed access for fire-fighting. (26) If the Chief Inspector is satisfied in respect of any factory or any part of tbe factory that owing to the exceptional circumstances such as inade- quacy 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 by order in writing (which he may at his discretion revoke) exempt such factory qr part of the factory from all or any of the provisions o f the rules subject to conditions as he may by such order prescribe. Schedule [See Rule 62 (22) (25) Equipment to be Provided With Trailer pump. For light trailer pump of a capacity of 680 litres/minute.— 1 Armoured suction hose of 9 metres length, with wrenches. 1 Metal suction strainer. 1 Basket strainer. I Two-way suction collecting-head. 1 Suction adapter. 10 Unlined or rubber lined 70 mm. delivery hoses of 25 metres length complete with quick-release couplings. I Dividing breaching-piece. 2 Branch-piece with 15 mm. nozzles. 1 Difluser nozzle. I Standpipe with blank cap. I Hydrant key. 4 Collapsible canvas bucket. 1 Fire hock (preventor) with cutting edge. I 1 J 1 25 mm. manila rope of 30 metres length. Extension ladder of 9 meters length (where necessary). Heavy axe. Spade. Pick axe. Crowbar. Rules 62A.62B] I Saw. I Hurricane lamp. I Electric torch. Bihar Factories Rules, 195m [65 1 Pair rubber gloves. For large trailer pump of a capacity of 1,800 litres/minute. 1 Armoured suction hose of 9 meters length, with wrenches. 1 Metal strainer. t Basket strainer. I Three-way suction collecting-head. 1 Suction adapter. 14 Unlined or rubber lined 70 mm. delivery hose of 25 meters length complete with quick-release couplings. 1 Dividing breaching piece. Collective breaching piece. I 4 Branch pipes with one 25 mm. , two 20 mm. and one diffuser nozzles. Stand pipes with blank caps. 2 2 Hydrant keys. Collapsible convas buckets. 6 Celing hook (preventor) with cutting edge. I I 50 mm, manila rope of 30 meter length. Extention ladder of 9 meters length (where necessary). 1 1 Heave Z axe. 1 Spade. Pick axe. 1 Crowber. I I Saw 1 Hurricane lamp. Electric torch, I I Pair rubber glo ves. Note.—lf it appears to the Chief Inspector of Factories that in any fac- tory the provision 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 as the case may be. 62-A. x] x x 2[62-B. Safety Definitions.—ln these Rules unless there is anything repugnant in the subject or context "Safety Offcer" means any omcer by whatever designation known, possessing the qualifications prescribed in this Rule and employed by the occupier ofa factory to look after the duties of a safety omcer prescribed in this Rule." l. Omitted by S. O. 686 dated 13.7.1988

2. Subs.by ibid. 66 Bihar Fac!ories Rules, 1950 [Rule 62B (2) A person shall not be eligible for appointment as a Safety officer unless he— (i) Possesses a recognised degree in any branch of engineering or technology and has had practical experience of working in a fac- tory in a supervisory capacity for a period of not less than 2 years; or a recognised degree in physics or chemistry and has a practical experience of working in a factory in a supervisory capacity for a period of not less than 6 years or a recognised diploma in any branch of engineering or technology and has had practical expe- rience of working in a factory in a supervisory capacity for a period of not less than 4 years. (ii) Possesses a degree or diploma in industrial safety recognised by the State Government in this behalf; or has qualified at a written and viva-voce examination conducted by the Chief Inspector : Provided that such examinations shall be conducted only till adequate number of persons possessing degree or diploma in safety recognised by the State Government are not available. (b) Notwithstanding the provisions in clause (a) any person who posse- sses a recognised degree in engineering or technology and has had experience of not less than 2 years, in a department of the Central or State Government which deals with the administration of the Factories Act, 1948. Possesses 2 recognised degree or diploma in engineering or technology and has had experience of not less than 5 years, full time, on training, educa- tion, consultancy, or research in the field of accident prevention in industry or in any recognised institution, shall also be eligible for appointment as a safety omcer • Provided that the Chief Inspector may, subject to such conditions as it may specify, grant exemption from the requirements of whole or part of sub- rule (2); if in his opinion a suitable person possessing the necessary qualifica- tions and experience is not available for appointment • Provided further thc. in the case of a person who has been working as a safety offcer for a period not less than 3 years on the date of commencement of this rule, the Chief Inspector may; subject to such conditions as he may specify in writing relax all or any of the above said qualifications. (3) Conditions of Where the number of safety offcers, to be appointed in a factory exceeds one, one of them shall be designated as the Chief Safety Offcer and shall have a status higher than that of the others. The Chief Safety Offcer shall be in overall charge of the safety functions as envi- saged in sub-rule (4), the other safety omcer working under his control. (b) The Chief Safety Offcer shall be given the status of Departmental Head and shall work directly under the control of the Chief Executive of the factory. All other Safety Offcers shall be given appropriate status to enable them to discharge their functions effectively. (c) The scale of pay and the allowance to be granted to the Safety Off- cers including the Chief Safety Offcer, and the other conditions at their ser- vice shall be the same as those of the other offcers of corresponding status in the factory. (d) In the case of dismissal or discharge, a Safety Officer shall have a right to appeal to the Chief Inspector Provided that all disputes against the orders of the Chief Inspector shall be settled by an appeal to the State Government, whose decision thereon shall be final ; Rule 62B) Bihar Factories Rules, 1950 [67 Provided further that no punishment of any kind shall be inflicted unless the offcer has first been informed in writing of the grounds on which it is pro- posed to take action and has been offered an adequate opportunity of defending himself. (4) Duties of Sq/&ty The duties of a Safety Offcer shall be to advise and assist the factory mane gement in the fulfilment of its obligations, statutory or otherwise, corcerning prevention of personal injuries and mainta in- ing a safe and healthy working environment. These duties shall include the following, namely • (i) to advise the concerned departments in planning and organising meas- ures necessary fcr the effective control of personal injuries; (ii) to advise on safety aspects in all job studies, and to carry out detailed job safety studies on selected jobs; (iii) to check and evaluate the effectiveness of the action taken or pro- posed to be taken to prevent personal injuries; (iV) to advise the purchasing and stores departments in ensuring availabi- Iity of high quality personal protective equipment; (v) to render advice on matters relating to carrying out of plant safety inspections; (vi) to carry out plant safety inspections in order to observe the physical conditions of work and the work practices and procedures followed by workers and to render advice on measures to be adopted for removing the unsafe phy- sical conditions and preventing unsafe actions by workers; (vii) to render advice on matters related to reporting and investigations of industrial accidents and diseases ; (viii) to investigate accidents, locate causes and render advice on measures to be adopted for removing the causes of accidents. Accident shall include all major or minor injury cases; (ix) to investigate the cases of industrial diseases contracted and dange- rous occurrences reportable under rule 96; (x) to advise on the maintenance of such records relating to accidents, dangerous occurrences and industrial diseases as are necessary; (xi) to promote setting up of safety committees according to the provis- ion of rule 62-A; (xii) to organise in association with the

concerned departments, awards, campaigns, competitions and other activities which will develop and sustain 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 departments, suitable training and educational programme related to and required for the prevention of personal injuries. (5) Employment of Safety Offcers.—The minimum number Of Safety Off _ cers to be employed by the occupier of any factory shall be as follows 68] Bihar Factories Rules, 1950 [Rule 62C (a) For all factories wehrein 1,000 or more workers are ordinarily employed (i) Where the number of workers ordinarily employed in a factory is not less than 1,000 and not more than Safety Offcer; (ii) Where the number of workers ordinarily employéd in a factory is more than 1,500, but does not exceed 10.000—0ne additional Safety Officer for every 1,500 workers in excess of 1,500: Provided that in calculating the number of Safety Offcers under this clause any odd number of workers less than 1,500 shall be reckoned as 1,500; (iii) Where the numher of workers-ordinarily employed exceeds 10,000— One Safety Officer for every 2,000 workers above 10,000 : Provided that for calculating the number of additional Safety Offcers under this clause any odd number of workers less than 2,000 shall be reckoned as 2,000 Provided further that, where the number of workers exceeds 10,000 there shall be one Chief Safety Offcer in addition to the Safety Officers required to be employed under this rule in the rank of at least a Chief Engineer. (b) For all factories wherein manufacturing processes or operations declared to be dangerous under section 87 of Factories Act, 1948, by Rule 95 of Bihar Factories Rules, 1950 are carried on (i) Where the number of workers ordinarily employed in a factory is more than 500—one Safety Offcer. (ii) Where the member Of workers ordinarily employed in a factory is more than 1,000 the number of Safety Offcers to be employed shall be as specified in sub-rule 5 (a). (c) For all factories wherein apart from normal manufacturing operations, construction, demolition, modification or similar works are carried on and wherein more than 500 workers are ordinarily employed for such work one additional Safety Officer shall be employed. If the number of workers ordinarily employed in such jobs exceeds 1,000 additional Safety Offcer shall be employed in accordance with the provision of sub-rule 5 (a). (6) Exemption.—The State Government may by notification in the omcial gazette exempt any factory or class or description of factories from all or any of the provisions of these Rules subject to compliance with such alternative arrangements as may be approved. (7) Facilities to be provided. —An occupier of the factory shall provide equipments, office staff, library, books, safety journals and periodicalsland such other feci!ities as are necessary to enable him to discharge his duties effectively. (8) Prohibition of performance of other duties. —No Safety Offcer, 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). 1 [62C Safety Committee.—ln every factory in which 250 cr more workers are ordinarily employed, there shall be constituted a safety committee 1. Ins. bys O. 686 dated 13.7.1988. Rule 63] Bihar Factories Rules, 1950 [69 within one month from the date of this rule for the purpose of keeping under constant periodic review the measures being taken to ensure the health and safety of workers and to undertake such co-ordinative functions as under the direction of the management are assigned to it for promoting health and safety of the workers. (2)The Safety Committee shall consist of equal number of representatives of the management and the employees, and the minimum number of represen- tatives shall be six. The Chief Safety Officer or Safety Officer as the case may be, if any, shall be additional permanent ex-offcio member. (3) The represematives of the management shall include the manager Of the factory who shall head the safety committee. A senior official nominated by the occupier, who by his position and authority in the organisation can contribute effectively to the functions of the committee shall function as Secre- tary of the Committee : Provi d that if in any factory safety officer or officers are appointed the Chief Saf y Offcer or Safety Omcer as the case may be shall also be a member of the S ety Committee. 4) The Safety Committee shall meet as often as necessary but at least once a month, and minutes of the meeting be maintained and inspection on demand by the Inspector. (5) Where due to the size of the factory, or any other reason, the func- tions referred to in subrule (l) cannot be effectively carried out by one Safety Committee, the occupier shall establish further sub-committees as may be required and such sub-committees shall function under the control and guidance, of the aforesaid safety committee : that the provisions of sub-rules (2) and (4) shall also apply to the sub-committees wherever such sub-committees are set up.] C hapter V 63. Washing There shall be provided and maintained in every factory for the use of employed persons adequate and suitable facilities for washing which shall include soap and nail brushes or other suitable means of cleanipg and the facilities shall be conveniently accessible

and shall be kept in a clean and orderly condition. (2) Without prejudice to the generality of the foregoing provisions the washing facilities shall include— (a) a trough with taps or jets at intervals of not less than two feet, or (b) wash-basins with taps attached thereto, or (c) taps on stand-pipes, or (d) showers controlled by taps, or (e) circular trough of fountain type: Provided that the Inspector may, having regard to the needs and habits of the workers, fix the proportion in which the aforementioned types of facilities shall be installed. 0 70 J Bihar Factories Rules, 1950 [Rule 63A (3) (a) Every trough and basin shall have a smooth impervious surface and shall be fitted with a waste-pipe and plug. (b) The floor or ground under and in the immediate vicinity of every trough, tap jet, wash-basin, stand-pipe and shower shall be so laid or finished as to provide a smooth impervious surface and shall be adequately drained. (4) For person whose work involves contact with any injurious or noxious subtance there shall be at least one tap for every fifteen persons working at any time in the factory and for persons whose work does not involve such contact, the number of taps shall be as follows:— No. of orkers—workir.g at any one time Up to 20 21 to 35 36 to 50 51 to 150 151 to 200 Exceeding 200 but not exceeding 500 Exceeding 500 No. of taps. 1 2 3 4 5 5 plus one tap for every 50 or fraction of 50 11 plus one tap for every 100 or fraction of 100 (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 persom 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 shall be capable of yielding at least six gallons a day for each person employed in the factory and shall be from a source approved in writing by the Health Offcer: Provided that where the Chief Inspector is satisfied that such an yield is not practicable he may by 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. 63-A. Facilities for storing and drying of clothmgs. • In such parts of every factory in which any of the operations or processes specified in the Schedule hereto annexed is carried on, adequate number of pegs, racks and similar facilities, for hanging and keeping of clothings shall be provided for the use of the workers. (2) The Inspector may direct the manager or the occupier of any factory to provide such additional pegs. racks and similar facilities and at such places, as he may consider necessary and convenient and he may specify the time within which the direction shall be carried out. (3) (a) The Chief Inspector may direct the manager or the occupier of any factory to provide such cloak-rooms, lockers, pegs and such other facilities for the use of the workers for drying and storing ofclothings, as he may con- sider necessary and may specify the time within which the direction shall be carried out. Rule 64] Bihar Factories Rules, 1950 [71 (b) Where a direction under clause (a) has been given the manager or the occupier, as the case may be, shall submit the details in respect of the site and plans elevations and necessary cross-section of the cloa k-room and full details of other facilities to be provided to the Chief Inspector for approval within the time specified. (c) The Chief Inspector may approve the details and the plans, subject to such conditions as he may specify, and the cloak-room and other facilities be provided in accordance with the plans and details as approved by the Chief inspector, and within the time specified. (4) These rules shall be without any prejudice to any rules framed under section 87. I. 2. 3. 4. 5. 6. 7. 8. 9. IO. 11. 12

13. Schedule. Manufacture of glass articles. Manufacture of rubber or rubber goods or any other process in which rubber is used. Repairs, servicing and painting of Automobiles. Processes carried out in foundries. Processes Of and connected with dressing, packing and tanning of hides and skins. Processes using lead compounds. Manufacture of Iron and Steel. Manufacture of Potteries. Manufacture of Refractory materials. Electro-plating. Operation of Boilers, Operation of Coal Handling plants. Manufacture of chemicals

64. First-aid appliance.—The first aid boxes or cupboards shall be dis- tinctivley marked with a red cross on a white ground and shall contain the following equipments, namely : (A) for factories in which the number of persons employed does not exceed ten (or in case of factories in which mechanical power is not used does not exceed fifty persons. Each first- aid box or cup-board shall contain the following equipments : (i) Six small size sterilized dressing; (ii) Three medium size sterilized dressings; (iii) Three large size sterilized dressings; (iv) (v) (vii) Three large size sterilized burn dressings; One (60 ml.) bottle of cetrimide solution (l per cent) or a suitable antiseptic solution; One (60 ml.) bottleof mercurochrome solution (2 per cent) in water; One (30 ml.) bottle containing sulvolatile having the dose and mode of administration indicated in the label; [Rule 64 72] Bi viii) A snake-bite lancet; (ix) One (30

ml.) bottle containing potassium permanganate crystals; (x) One pair of scissors; (xi) One roll of adhesive plaster (2 cm. X1 meter); (xii) Six pieces of sterilized eye pads in separate sealed packets; (xiii) A bottle containing 100 tablets (each of 5 grains) of aspirin or any other analgesic; (xiv) One polythene wash bottle (i litre i. e. 500 c. c.) for washing eyes; (xv) One copy of first-aid leaflet issued by the Chief Inspector of Fac- tories, Bihar; and (xvi) A foolscap size bound register for maintaining the record of first- aid cases. (B) For factories in which mechanical power is used and in which the number of persons employed exceeds ten but does not exceed fifty— Each first-aid box or cup-board shall contain the following equipments:— (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 cetrimide solution (l per cent) ora suitable antiseptic solution; (vii) One (60 ml.) bottle of mercurochrome solution (2 per cent) in water; (viii) One (60 mi) bottle containing salvelatile having the dose and mode of administration indicated on the label; (ix) (x) (xi) (xii) (xiii) (xiv) (xv) (xvi) (xvii) (xviii) (xix) Snake bite lancet; One (30 ml.) bottle containing potassium permanganate crystals; One pair of scissors; Two rolls of adhesive plaster (2 cm.xl meter); Eight pieces of sterilized eye pads in separate sealed packets; One tourniquet; One dozen safety pins; A bottle containing 100 tablets (each of 5 grains) of aspirin or any other analgesic; One polythene wash bottle (+ litre i. e. 500 c.c.) for washing eyes; One copy of first-aid leaflet issued by the Chief Inspector of Fac- tories, Bihar; and A foolscap size bound register for maintaining the record of first- aid cases. (C) For factories employing more than fifty persons each first-aid box or cup-board shall contain the equipments : Rule 64] Bihar Factories Rules, 1950 [73 (i) Twenty-four small size 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 cetrimide solution (I per cent) or a suita- ble antiseptic solution; (vii) One (200 ml.) bottle Of merecurochrome (2 per cent) solution in water; (viii) One (120 ml.) bottle of salvelatile having the dose and mode of administration indicated on the label; (ix) One pair of scissors; (x) One roll of adhesive plaster (6 cms. X1 meter); (xi) Two rolls of adhesive plaster (2 cms. XI meter); (xii) Twelve pieces cf sterilized eye pads in separate sealed packets; (xiii) A bottle containing 100 tablets (each of 5 grains) of aspirin or (Xiv) (xvi) (xvii) (xviii) (xix) (XX) (xxi) (xxii) other analgesic; One polythene wash bottle (500 c. c.) for washing eyes; Twelve roller bandages 10 cms. wide; Twelve roller bandages 5 cms; wide; Six triangular bandages; One tourniquet; A supply of suitable splints; Two packets of safety pins; Kidney tray; A snake bite lancet; (xxiii) One (30 ml.) bottle containing potassium permanganate crystals; (xxiv) First-aid leaflet issued by the Chief Inspector of Factories, Bihar; and (xxv) A foolscap size bound register for maintaining the record of first- aid cases: Provided that items (xiv) to (xxi) inclusive need not be included in the standard first-aid box or cupboard— (a) Where there is a properly equipped ambulance room or, (b) If at least one box containing such items and placed and maintai- ned in accordance with the requirements of section 45 is separe- tely provided. (D) In lieu of the dressings required under items (i) and (ii) there may be substituted adhesive wound dressings approved by the Chief Inspector of Factories, Bihar and other equipments or medicines that may be considered essential and recommended byt the Chief Inspector of Factories, Bihar from time to time. 74] Bihar Factories Rules, 1950 (E) Notice regarding first-aid— [Rule 64A A notice containing the names of the persons working within the precin- cts of the factory who are trained in first-aid treatment and who are incharge of the first-aid boxes or cupboards shall be pasted in every factory at a con- spicuous place and near each such box or cupboard. The notice shall also indicate workroom where the said person shall be available. The names of the nearest hospital and its telephone number shall also be mentioned prominently in the notice. (F) Without pi-ejudice to the generality of the provision of sub-section (3) of section 45, every first-aid box or cupboard shall be kept under the charge of a person who is trained in first-aid treatment and has a certificate of proficiency in the said treatment granted by any of the following authorities or persons, namely : (a) St. John's Ambulance Association; (b) Civil Surgeon; (c) Certifying Surgeon appointed under sub-section (1) of section IO of the Act; (d) Medical officer incharge of the Ambulance room of the factory in which the said person is for the time being employed; or (e) Medical Inspector of Factories appointed under section 8 of the Act : Provided that the Chief Inspector may, by an order in writing, authorise any other registered Medical Practitioner to grant the said cetificate in respect of persons employed in any particular factory : Provided further that the Chief Inspector may at any time withdraw and revoke the said order : Provided also that the Medical Inspector of Factories, may

as and when he may so desire or consider necessary, or as directed by the Chief Inspector, carry out such tests or examinations of any person under whose charge any first-aid box or cupboard has been kept, as he may deem necessary to assess his proficiency in first-aid treatment and may by a written order cancel and nullify the certificate already granted to him by any other authority in which case the said person shall be deemed not to have any certificate of training in first-aid treatment. (G) If there is an ambulance room in a factory according to rule 65, the Chief Inspector of Factories may grant exemption from certain requirements of rule 64 to that factory by a written order subject to the condition that in place of necessary facilities as required under rule 64, such other facilities may be given or such other arrangement may be made which he thinks fit. This exemption may be granted for a prescribed period and may be revoked or cancelled at any time by written order by the Chief Inspector of Factories served on the occupier of the factory. 64-A. In every factory, wherein the maximum number of workers "(taking all the shifts and relays into account) employed on any one day in the preceding twelve months is 50 or more, the following equipments and articles (in addition to the medicines, equipments and articles prescribed in rule 164) shall be provided and maintained in such a manner and condition and at such Rule 65 J Bihar Factories Rules, 1950 [75 .34 a place, as to be readily available at any moment for removing workers injured in any accident or who may be sick to an ambulance room, dispensary or a hospital namely Strecher—2; Blanket—2: provided that this rule shall not apply to the factories to which rule 65 is applicable." 65. Ambulance Every ambulance room or dispensary shall be under the charge of at least one whole-time qualified medical practitioner (hereinafter referred to as Medical Offcer) assisted by at least one qualified nurse or dresser cum•compounder and one nursing attendant in each shift: 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 the factory, nature of hazards or frequency of accidents, it is not necessary to employ a whole-time medical omcer for each shift separately may, with the previous approval of the State Government, relax the rule and permit only one whole-time medical officer to be employed for more than one or all shifts, subject to the condi- tions that— (a) there shall be no relaxation in respect of nursing and other sub- ordinate staff; (b) the medical officer shall be available in all shifts and shall attend to all injuries and sickness except in very minor ones; (c) the medical officer shall be provided with a residence close to the factory and shall be provided with a telephone and where there is no telephone an alternative arrangement shall be made for infor- ming and calling the medical officer quickly; and (d) the medical officer shall not be employed for any other purpose. (2) 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 sq. meters and smooth, hard and impervious walls and floors and shall be adequately ventilated and lighted by both natural and artificial means. An adequate supply of whole-some drinking water shall be laid on and the room shall contain at least— (i) A glazed sink with hot and cold water always available; (ii) A table with smooth top at least 180 cms. X 105 cms; (iii) Means for sterilizing instruments; (iv) A couch; (v) Two strechers; (vi) Two buckets or containers with close fitting lids. (vii) Two rubber hot water bags; (viii) Akettle and spirit stove or other suitable means of boiling water; (ix) Twelve plain wooden splints 900 mm. X 100 mm. X 6 mm. (x) Twelve plain wooden splints 350 mm. X 75 mm. X 12 mm; (xi) Six plain wooden splints 250 mm. X 50 mm. X 12 mm. (Xii) Six woollen blankets; r Rule 65 76] Bihar Factories Rules, 1950 (xiii) Three pairs artery forceps; (xiv) One bottle of spiritus Ammoniac Armatics (120 mi.); (xv) Smelling salt (60 gms.); (xvi) Two medium size sponages: (xvii) Six hand towels; (xviii) Four kidney trays; (Xix) Four cakes of antiseptic soap; (xx) Two glass tumblers and two wine glasses; (xxi) Two clinical thermometers; (xxii) Tea spoons—two; (xxiii) Graduated (120 ml.) measuring glass—two; (xxiv) Mini measuring glass—two; (xxv) One wash bottle (1000 c. c.) for washing eye. (xxvi) One bottle (one litre) corbolic lotion I in 20; (xxvii) Three chairs; (xxviii) One screen; (xxix) One electric hand torch; (xxx) Four first-aid boxes or cupboards, stocked to the standards prescribed under (C) of rule 64; (xxxi) An adequate supply of antiteianus texoid; (xxxii) Injections—Morphia, Pathidrine, Atropine, Adrenaline Coramine Novecam—6 ampoules each; (xxxiii) Coramioe liquid (60 ml.); (xxxiv) Tablets antihistaminic, antispasmodic (25 each); (xxxv) Syringes with needles 2 c. c. , 5 c. c. , IO c. c. , 50 c. c ; (xxxvi) Surgical scissors—three; (xxxvii) Needle holders; (xxxviii) Suturing needles and materials; (xxxix) Dissecting forceps—three; (XI) Dressing forceps—three; (xli) Scalpels— three; (xlii) Stethescope—one; (xliii) Rubber bandage-pressure bandage; and (xliv) Oxygen Cylinder with necessry attachments : Provided that— (I) In case of any factory wherein the number of workers generally emp- loyed exceeds one

thousand the Chief Inspector of Factories may require that the size of the ambulance room and the equipment to be provided shall be such as he may, by order in writing, specify. (2) where there is a hospital or a dispensary belonging to the occupier of the factory situated in close proximity to the boundary of the factory, the Rule 66] Bihar Factories Rules, 1950 [77 '181 Chief Inspector may, by an order in writing, declare that, subject to the conditions mentioned below. the said hospital or dispensary shall be deemed to be an ambulance room for the purpose of this rule— (a) (b) (c) (d) the said hospital or dispensary shall have all such medicines, equipments and other articles and all such facilities as prescribed in this rule, there shall be at least one whole-time Medical Offcer in the hospital or dispensary in each shift unless relaxation in respect thereof has been allowed under the proviso of sub-rule (I), there shall be adequate nursing and other subordinate staff in each shift as prescribed in sub-rule (I) or as ciirected by the Chief Inspector, efiicient transport facilities shall be provided to remove serious cases of injury and sickness to the hospital or to the dispensary most speedily. (3) In every factory to which these rules apply an ambulance van shall be provided and maintained in a perfect working condition and shall always be made available during working hours of the factory for the purposes of removing serious cases of accidents or sickness : Provided that where arrangements have been made for obtaining such ambulance van from any neighbouring hospital and the Chief Inspector is satisfied that the ambulance van wili always be available for removing cases of accidents or sickness, he may, by an order in writing and subject to such con- ditions as he may specify, exempt the factory from maintaining such a van . Provided further that the Chief Inspector, if he is satisfied that on account of the proximity of a Hospital or Dispensary, the financial position of the Factory, the employment or frequency ot' accidents or any other reasonable case, it is not necessary or practicable to provide an ambulance van in any factory, and if he is satisfied that alternative arrangements for quick transfer of any injured person to the nearest Hospital or Dispensary are available during all working hours of the factory, may, by an order in writing, relax the sub-rule in respect of that factory to such extent, subject to such conditions and for such period as may be specified in the said order. (4) There shall be displayed in the ambulance room or dispensary a notice giving the name, address and telephone number of the Medical Offcer incharge and the hours during which he is on duty at the time in the amb- ulance reom. The name of the nearest hospital and its telephone number shall also be mentioned prominently in the said notice. (5) A record of all cases of accident and sickness treated at the room shall be kept and produced to the Inspector or Certifying Sugoen when req uired

66. Canteen.—The State Government may, by a notification in the Offcial Gazette, specify the names of factories in which more than 250 workers are ordinarily employed. Within six months of such notification, the occupiers of said factories shall provide an adequate canteen in or near the factory according to the standard prescribed in these rules : Provided that the Chief Inspector may, by a written order, relax this time limit and may direct the occupier to provide a canteen within such period as he may specify 78] Bihar Factories Rules, 1950 [Rule 66 Provided further that where more factories than one belonging to the same occupier are situated in close vicinity of one another, the State Govern• ment may, by a order, permit the canteen centrally situated to be used for some or all of the factories subject to such conditions as the State Government may speeify. (2) (i) The following plans of the canteen buildings in duplicate shall be submitted to the Chief Inspector for approval • (a) site plan; (b) the .plan, elevation and necessary cross-sections of the buildings, indicating all relevant details including those of natural lighting, ventilation, rain, etc. (ii) The Chief Inspector may require such other details and particu.tars to be furnished as he considers necessary and may approve the plan with such conditions or modifications as may be specified by him. (3) The canteen building shall be situated not less than fifty feet away from any latrine, urinal, boiler house, coal stack, ash dump and any other source of dust, smoke or obnoxious fumes . Provided that the Chief Inspector may for reasons to be recorded in res- pect of any particular factory, relax the provisions of this sub-rule to such extent as may be necessary and reasonable in the circumstances and may require measure to be taken to secure the essential purpose of this sub-rule; and (4) The centeen 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, a cloak-room for the staff and washing places separately for workers and for utensils (5) In canteen the floor and inside wall upto a height of 4 feet from the floor shall be made of smooth and impervious material; the remaining portion of the inside walls shall be made smooth by cement plaster or in any other manner approved by the Chief Inspector. (6) The doors and windows of a canteen building shall be of flyproof construction and shall allow adequate ventilation. (7) The canteen shall be sufficiently lighted at all times when any persons have access to it. (8) (i) (if) (iii) (a) Jn every canteen— all inside walls of rooms and all ceilings and passages and staircases shall be lime-washed or colour-washed at least once in each year or -painted once in three years, dating from the period when last limes washed, or painted as the case may be; all wood work shall be varnished or painted once in three years dating from the period when last varnished or painted; all internal structural iron or steel work shall be varnished or pain- ted once in three years dating from the period when last varnished .21 Rules 67-69] Bihar Factories Rules, 1950 [79 or painted : provided that inside walls of the kitchen shall be lime-washed once every four months. (b) Records of dates on which lime-washing, colour-washing varnishing or painting is carried out shall be maintained in register in

Form no. 7. (9) The precincts of the canteen shall be maintained in a clean and sani- tary condition, Waste water shall be carried away in suitable covered drains and shall not be allowed to accumulate so as to cause a nuisance. Suitable arrangement shall be made for the collection and disposal cf garbage

67. Dining The floor space Of each dining room shall not be less than 8 square feet for every dinner to be accommodated. For calculating the minimum floor area to be provided in a proposed canteen it will be assumed that 25 per cent of the maximum number of workers employed in the factory at any one time shall make use of the canteen and the floor area in canteen shall not be less than the figure worked out on this basis : Provided that in case of factories employing more than one thousand workers at a time the Chief Inspector may at his discretion reduce the assump- tion of 25 per cent to 15 per cent. (2) A portion of the dining hall and service counter shall be partitioned off and reserved for women workers in proportion to their number. WashiG•g places for women shall be separate and screened to secure privacy. (3) Sufficient tables, chairs or benches shall be provided for the number of dinners to be accommodated as prescribed in sub-rule (i), 68. Equipment. (I) There shall be provided and maintained sum- cient utensils, crockery, cutlery, furniture and any other equipment necessary for the emcient running of the canteen. Suitable clean clothes for the employees serving on the canteen shall also be provided and maintained. (2) The furniture, utensils and other equipment shall be maintained in a clean and hygienic condition and shall be replaced whenever required. A service counter it' 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

69. Prices to be charged.—(l) 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 ihe Canteen Managing Committee: Provided that where the canteen is managed by a Co-operative Society registered under any law for the time being in force in respect of Co-operative Societies, such society may he allowed to include in the charges to be made for the food.stuffs served, a profit up to 5 per cent on its working capital applied in running the canteen. (2) The charge per portion of food-stuff, beverages and any other item served in the canteen shall be conspicuously displayed in the canteen, (3) 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 : the rent for land and building, (b) the depreciation and maintenance charge of the building and equipment provided for the canteen, 80] (c) (d) (e) (f) 70. documents Bihar Factories Rules, 1950 [Rules 70-71 the cost of purchase, repair and replacement for equipment inclu- ding furniture, crockery, cutlery and utensils, the water charges and expenses for providing lighting and venti- laticn, the interest of the amount spent on the provisioh and maintenance of the building, furniture and equipment provided forthe canteen, the cost of fuel required for cooking or heating food-stuffs or water, and the wages of employees serving in the canteen and the cost of uni- forms, if any, provided to them. —(1) All books of accounts, registers and any other Accounts. 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. The balance sheet pre- pared, by the said auditors, shali 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 depart- ment : provided further that where the canteen is managed by a Co-operative Society registered under any law for the time being in force in respect of the Co-operative Societies, the accounts pertaining to such canteen may be audited in accordance with the provisions of the said law

71. Canteen Managing Committee.—The Manager shall within one month from the date on which the canteen starts functioning, or in cases where a Canteen Managing Committee already exists, within one month from the date this rule comes into force constitute or reconstitute; as the case may be, a Canteen Managing Committee (hereinafter to be called the Committee) for the running and supervision of the canteen, and a list containing the names of the members and Chairman of the Committee shall be sent to the Inspector and the Chief Inspector uithin seven days of the constitution of the committee. and a copy thereof shall also be displayed on a notice board in the canteen which shall be maintained in a clear and legible copditlon. (2) The Canteen Managing Committee shall— (a) (b) (c) exercise general supervision over the running and management of the canteen and advise the Manager for such improvement and changes as may be necessary; bring to t ny malpractice or any defect that may

be observed; advise the Manager on matters relating to— (i) the quality and quantity of food, the, snacks and other items served or to be served in the canteen; Rule 71] Bihar Factories Rules, 1950 (ii) the arrangement of menu and times of meals, C 81 (iii) the method and means of serving and distributing articles served in the canteen, and (iv) make such other suggestions and recommendaticn as in the opinion of the Committee may be necessary for proper func- tioning of or for improvement in the Canteen. (3) The Manager shall normally take steps to give effect to the recom- mendations of the Committee but when any advice or recommendation is not accepted, the reason therefor shall be communicated to the Committee in writing within a fortnight and a copy thereof shall be sent to the Inspector and the Chief Inspector. (4) The Manager shall decide the number of members in the Canteen Managing Committee which shall not be less than four excluding the Chairman. (5) The Canteen Managing Committee shall include representatives of workers whose number shall be equal to the number of members representing the employer, exéludiog the Chairman who shall be a nominee of the Manager. (6) Where there is a Welfare Offcer in the Factory, he shall be nomin- ated by the Manager to be a member of the Canteen Managing Committee and he shall be the Secretary to the Committee, unless he is nominated to be the Chairman of the Committee : Provided that where there is no Welfare Offcer, or where there is only one Welfare Officer and he is the Chairman of the Committee any other member of the Committee may be nominated by the Manager to be the Secretary. (7) The members representing the employer shall be nominated by the Manager and the members representing the workers shall be nominated by the recognised union. In case where there is no recognised union or there is dis- pute about the omce-bearer of the recognised union then the representatives of the workers shall be elected by the workers themselves in such manner as may be decided by the Manager in consultation with the Chief Inspector subject to revision of the same by the State Government on appeal : Provided that in case where the representatives of workers are elected by the workers in the manner indicated above these representatives of workers will be replaced by the nominees of the recognised union as soon as there is a recognised union in that particular establishment or the dispute of the omce bearers of the recognised union has been decided : Provided further that where there is Works Committee constituted under the Industrial Dispute Act, 1947 the Manager shall ask the said Committee to nominate members representing the workers. If no communication is received from the Works Committee within the time specified by the Manager and the Inspector of Factories and-the Chief Inspector of Factories are satisfied that the Works Committee is deliberately not submitting the names of the represen- tatives of the workers, then the Manager may elect members representing the workers in such manner as may be decided by him in consultation with the Chief Inspector subject to a revision by the State Government on appeal. (8) (i) The Manager shall in consultation with and on the recommenda- tion of the Committee prepare the rules of business of the Committee, within 82 | Bihar Factories Rules, 1950 [Rule 71A one month of the constitution of the Committee in which the duties of the Secretary shall also be specified and a copy of these rules shall be sent to the Inspector and the Chief Inspector. (ii) Where there is any difference between the Manager and the Commi- ttee with regard to the preparations of the rules of business of the Committee, the matter shall be referred to the Chief Inspector whose decision thereon shall, subject to a revision by the State Government on app:al, be fina'. (9) (i) The Chairman shall conduct the business of and preside over the meeting of the Committee and shall cast his vote only in the case of equality of votes. (ii) The Chairman shall prepare a panel of names of the members of the Committee arranged in order of priority who shall preside over and conduct the meetings of the Committee, during his absence. (IO) The Canteen Managing Commitee shall function for one year where after the Manager shall dissolve the Committee and shall form a new Committee within one month of the dissolution of the Committee : Provided that so long as a new Canteen Managing Committee is not constituted the old committee shall continue to function. (11) (i) The proceedings of the meeting or the Canteen Managing Committee shall be kept in a register and shall be produced for inspection whenever demanded by an Inspector. (ii) A copy of the proceedings of the meeting of the Canteen Managing Committee shall be forwarded to the Inspector and the Chief Inspector. 71 -A. The State Government may exempt any factory from compliance with the provisions of rules 66 to 71 provided the factory makes provisions for the following matters, namely • (a) (b) (c) (d) (e) (f) (g) (h) an adequate dining hall with a kitchen; adequate washing facilities in the dining hall; arrangements for supply of snacks and tea and such other articles of food as may be required by the workers; or in keeping with the general food habits of the workers; the plan of the dining hall shall be submitted to the Chief Inspec- tor and prior approval thereof shall be obtained

from him. Such modifications, addition or improvement shall be made therein as may be directed by the Chie? Inspector. the articles of food shall be sold on non-profit basis, shall be pre- pared and sold by the occupier departmentally and not through a contractor or any other agency; the building, furniture, utensils, crockeries as well as other equip- ments shall be supplied by the occupier direct; the occupier shall bear the cost of fuel, light, water and staff, and no charge in respect thereof shall be added to the price of articles sold in the canteen; and the dining hall and kitchen shall be kept clean at all times, shall have adequate staff and the staff shall be provided with clean dresses and uniforms. Rules 71B-72 Bihar Factories Rules, 1950 [83 71 -B. Medical Examination.—(l) Annual Medical examination for fitness for each member of the canteen staff who handles foodstuffs shall be carried out by the Factory Medical Officer or the Certifying Surgeon, which should include the following (i) Chest X-Ray, (ii) Routine blood examination, (iii) Routine and bacteriological testing of faeces and urine for germs of dysentry and typhoid fever. (2) Workers ho have any skin sores must not be allowed to work in the canteen. (3) A certificate cf fitness to work in a canteen shall be issued to all the staff which be produced on demand before an Inspector

72. Shelters, rest rooms and lunch All factories shall conform to this rule within three months from the date of enforcement of these rules.(2) The Manager of a factory shall submit for the approval of the Chief Inspector a site plan in duplicate of the building to be constructed or adapted for the shelters, or rest rooms and lunch rooms which shall conform to the following standards (a) (b) (c) (d) (e) All the walls and roof of the building shall be of suitable heat resisting materials and shall be waterproof. The floors and walls to a height of 3 feet shall be so laid or finished as to provide a smooth, hard and impervious surface. The heightof every room in the building shall be not less than 12 feet from floor level to the lowest part of the roof and there shall be at least 12 square feet of floor area for every person and the accommodation shall not be less than ten per cent of the number of workers employed at any one time : Provided that (i) workers who habitually go home for their meals during the rest periods may be excluded with the approval of the Chief Inspector in calculating the number of workers to be accommodated, and (ii) in the case of factories in existence at the date of commencement of the Act, where it is impractica ble; owing to lack of space to provide 12 square feet of floor area for each peason, such reduced floor area per person shall be provided as may be approved in writing by the Chief Inspector. 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 sum- cient and suitable natural or artificial lighting. Every room shall be adequately furnished with chairs or benches with back-rests. Sweepers shall be employed whose primary duty is to keep the rooms, buildings and precincts thereof in a clean and tidy condi- tion. 84] Bihar Factories Rules, 1950 [Rules 73-74 t ifi' suitable provisions shall be made in every room for supply and/or cool drinking ater and adequate facilities for washing.] 73. All factories shall conform to rules 73 to 76 within six months from the date of enforcement of these rules. (2) The creche shall be conveniently accessible to the mothers of the children accommodated therein and so far as is reasonably practicable it 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. (3) The building in which the creche is situated shall be soundly cons- tructed 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 cement p!astered or so laid or finished as to provide a smooth impervious surface. (4) The height of the rooms in the builßing shall be not less than 12 ft. from the floor to the lowest part of the roof and there shall be not less than 12 Square feet of floor area for each child to be accommodated: (5) Effective and suitable provision shall be made in every part of the creche for securing and maintaining adequte ventilation by the circulation of fresh air. (6) The creche shall be adequately furnished and equipped and in par- ticular there shall be one suitable cot or cradle with the necessary bedding for each child, at least one chair € r equivalent seating accommodation for the use of each mother whil e she is feeding or attending to her child, and a suff- cient supply of suitable toys for the older children : Provided that for children over two years of age it will be sufficient if suitable bedding is made available. (7) A suitable fenced and shady open air playground 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 playground. (8) The manager shall appoint necessary staff in the creche to Jook after the child eir mothers

74. Wash There shall be in or adjoining the creche a suitable wash-room for the washing of the children and their clothings. The wash-room shall conform to the following standards, namely :— (a) (b) l. The floor and internal walls of the room to a heightof 3 feet shall be so laid or finished 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. 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 a source approved by the Health Offcer, such source shall be by S. O. 686 dated 13.7A988. Rules 75-77 (c) Bihar Factories Rules, 1950 [85 capable of yielding for each child a supply of at least five gallons of water a day. An adequate supply of clean cloths, soap and clean towels shall be made available for each child while it is in the creche. (2) Adjoining the washing-room referred to above, a latrine shall be provided for the sole use of the children in the creche. The design of latrine and the scale of accommodation to be provided shall either be approved by the Public Health Authorities or where there is no such Public Health Authority, by the Chief Inspector: 75. Supply of milk and refreshment. —At least halfa pint of clean pure milk Shal! 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, intervals of at least 15 minutes each to feed the child. For children above two years of age there shall be provided ia addition an addequate supply of wholesome refreshment

76. Clothes for creche staff.—The creche staff shall be provided with suitable clean cloths for use while on duty in the creche. Chapter VI. Working Hours oj Adults

77. Compensatory Exept in the case of workers engaged in any work which for technical reasons must be carried on continuously throughout the day, the compensatory holidays to be allowed under sub- section (l) of section 5 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 is displayed. Any subsequent change in the notice in respect of any com- pensatory holidays 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 entiled 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. (4) The manager shall maintain a register in

Form no. 9 : Provided that, if the Chief Inspector is of the opinion that any muster- roll or register maintained as part of the 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 corres- ponding extent, be maintained in place of and be treated as the register or return required under this rule for the factory. (5) 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. 86 Bihar F'actories Rules, 1950 [Rules 78-80A 78. Muster-roll exempted factories.—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 piecework rate of pay, or the rate of pay per hour; of all exempted employees. In this muster-roll shall be correctly entered the overtime hours of work and payments therefor of all exempted workers. The muster-roll in Form no. IO shall always be available for inspection. 78-A. Computation of cash equivalent -of concessional sale of food- grains, etc.—The cash equivalent of the advantage accruing through the concessional sale to a worker of foodgrains and other articles shall be com- puted at the end of every wage period fixed under the provisions of the Payment of Wages Act, 1936 (IV of 1936). 78-B. Cash equivalent of concessional sale of foodgrains allowed for overtime work.—For the purposes of computing cash equivalent to the advan- tage accruing through the concessional sale to a worker of foodgrains and other articles, the difference between the value of the foodgrains and other articles et the average rates prevailing during the wage period in the nearest market, in which such worker worked overtime and value of foodgrains and articles supplied at concessional rates shall be calculated and allowed for the number of overtime hours during which he worked overtime. Note.—This rule shall not apply to any Railway Factory, whose altern- ative method of computation has been approved by the State Government

Form no. 11 and it shall be maintained in the manner prescribed in sub-section (2) of section 108 of the Act

Form no. 12 and shall be maintained in accordance with the following provisions (I) Where a worker is transferred from one group to another, or from one relay to another, the following particulars of his transfer shall be entered against his name (a) under the group from which he has been transferred— (i) the date and actual time of finishing work in the group or relay, and (ii) the group or relay to which he has been transferred, and— (b) under the group to which he has been transferred— (i) the date and actual time of commencing work in the group or •relay, and (ii) the group or relay from which he •has been transferred. (2) Where a worker is discharged from or leaves his employment, the date of his leaving or discharge, as the case may be, shall be entered against his name in the "remarks" column. (3) All [entries in the registers shall be made Lin ink and shall be legible. 1[80-A. Issue of Identity Cards to workers.—(l) The State Govern- ment may by notification in the Official Gazette, specify the type of indus- tries/factories which are required to issue identity cards to its workers. l. Ins by S. O. 764 dated 18.6 1986. Rule 81] Bihar FactDries Rules. 1950 [87 (2) The identity card shall be in Form No. 12-A and shall be prepared in duplicate and one copy shall be given to the worker and another shall be retained by the Occupier/Manager of the factory. (3) A passport size photograph of the worker, duly attested by the Occu- pier/Manager, shall be affixed on the identity card in the placeprovided for it. (4) The cost of photograph shall be borne by the Occupier/Manager. (5) If the identity card is lost or damaged by the worker, a duplicate may be issued to him on payment of Rs 5. (6) The occupier/Manager of the Factory shall also maintain a register showing the names, designation, address and the number of the identity card of the workers to whom identity card have been issued and a copy of the attested photograph mentioned in sub- rule (3) shall also be affixed in it against the name of the workmen. (7) The identity card shall be shown to the Inspector, if demanded in course of Inspection.] The 26th July 1988 S. O. 841, dated the 12th August 1988.—Jn exercise of the powers conferred by sub-rule (1) of Rule 80-A of the Bihar Factories Rules, 1950, the Governor of Bihar is pleased to notify the following types of factories as defined under section 2 (m) of the Factories Act, 1948 and all such factories as have been notified under section 85 of the Factories Act, 1948 to be the factories (but employinwmowtharv;fivet issue identity cards to their workers : Schedule Brick-Kilhe 3. 'Mica factory

4. Rice. Dal, Oil and Flour Mills

5. Saw Mllls

8. Glass factories.9 Hand Coke and Coal briquetting factories. IO. Shellac Industries

11. Stone Crushing factories 6. Automobiles repairs and maintenance 12. Card Board and Paper Industries. workshops

13. Power!ooms

7. Refractories.81 . Persons defined to hold position of supervision and management.— The following persons shall be deemed to hold positions of supervision and management . (a) All persons specified in the Schedule annexed hereto; (b) Any other person, who, in the opinion of the Chief Inspector, holds a position of supervision or management and has been dec- lared by him as such in writing. Schedule List of persons deemed to hold positions of supervision and management in Factories. (l) All Managers, General Managers, Deputy General Managers, Assistant Managers and Works Managers. 88] Bihar Factories Rules, 1950 [Rules 82-84 (2) (3) (4) Chief Engineers, Chief Chemists and Chief Mettalurgists, Deputy Chief Chemists and Deputy Chief Mettalurgists. Deputy Chief Engineers, Deputy Chief Chemists and Deputy Chief Mettalurgists. Heads of Departments

82. Persons defined to hold confidential position.—The following per- sons employed in a factory shall be deemed to be employed in confidential positions (a) (b) (c) (d) (e) (f) (h) (i) (j) Time-keepers. Personal Assistants and Stenographers attached to persons speci- fied in the Schedule annexed to rule 81 and declared to be persons holding positions of supervision or management under c ause (b) of the said Rule. Head Store-keeper. Head Clerk and Office Superintendents. Cashier. Clerk dealing with accounts. Labour Officers, Labour Welfare Officers, Personnel Officer and Welfare Officers. Administrative and Assistant Administrative Officer. Watch and Ward and Security Staff. Any other person declared in writing by the Chief Inspector to be holding a confidential position

83. List to be maintained of persons holding confidential position or position of supervision and management.—A list showing the names and desi- gnations of all persons specified in rule 81 and 82 shall be maintained in every factory and e Inspector whenever required

84. Exemption of certain adult Adult male workers enga- ged in factories or in plants attached to factories, specified in column 2 of the schedule hereto annexed, on any work specified in column 3 of the satd sche- dule shall be exempted from the provisions of the sections specified in column 4 subject to the conditons, if any, specified in column 5 of the said Schedule : Provided that except in case of workers exempted under clause (a) of sub-section (2) of section 62 :—(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 fifty in any one quarter; (iii) the spread over, inclusive of intervals for rest, shall not exceed twelve hours in any one day. (2) Adult male workers engaged in any work which for technical reasons must be carried on continuously and who have been exempted from sections 52 and 55 under section 64 (2) (d) in sub-rule (I) shall be further exempted from the provisions of sections 51, 54, 56 and 61 of the Factories Act, 1948 and the restrictions imposed in clause (i) and (ii) of sub-section (4) Rule 84 J Bihar Factories Rules, 1950 [89 of section 64 shall not apply in case of such workers subject to the following conditions, namely: (a) that this exemption shall apply only when the worker is not relieved at the end Of the period of his work owing to failure of the reliever to report for duty at the appointed hours; (b) that the total hours of overtime shall not exceed fifty in any one quarter. Explanation —'Quarter' means a period of three consecutive months beginning on the 1st of January, the 1st o; April, the 1st of July and the 1st of October, respectively. Section of Class of no. 1 1. the Act empower- ing grant of exemp- tion. 2 64 (2) (a) and 64 (3). Factory. 3 All factories. Schedule Nature of exem- pted work. 4 Urgent repairs The following shall be co- nsidered to be urgent repairs (a) Repairs to any part of the machinery plant or structure of a factory which is of such a nature that delay in the execu- tion may involve da- nger to human life or safety or stoppage of and manufacturing process. (b) Break-down re- pair to motive power, transmission or other essential plants or machinery or other factories, collieries, railways, dockyards and harbours, tram- ways, motor trans- port and steam navi- gation services, gas Extent Remarks, of exemption. 5 Sections 51, 52. 54, 55, 56 and 61. 6 Within 24 hours of the commencem- ent of work, a notice shall be sent to the Inspector des- cribing the na- ture of the urgent repairs and the period likely to be required for its completion. A copy of the notice same shall be displa- yed on the Notice Board prior to the commencement of the urgent repair. 90] 1 2 3 Bihar Factories Rules, 4 1950 5 [Rule 84 6 generating stations, electric generating station and transmis- Sion systems, pumping stations, or similar essential or public utility services, carried out in any general engineering workshop or foundJY which may be essential to enable such concerns and se- rvices to maintain their normal manufa- cturing processes, pr- oduction opera tion or service. (c) Repairs to ships and aircrafts done in a factory which are essential to enable su- ch ships or aircrafts to leave port at pro- per time or to conti- nue their normal ope- rations in a sea or air worthy conditions as the case may be. (d) Repairs in con- nection with a change of motive power, for example, from steam to electricity or •vice- versa, when such work cannot be done with- out stoppage of the normal manufacturing process. (e) Urgent repairs to earth moving or other vital machinery or pl- ants used in the cons- truction of dams and other works of engin- eering construction carried out in an engi- neering workshop or provided foundry, Rule 84] Bihar Factories Rules, 4 1950 1 2 2. 64 and 64 (3). 64 (2) (b) 3. and 64 (3). 3 the work is of such a nature that if the rep- air is not carried out, the main work of co- nstruction is liable to be held up. (f) Break down re- pairs of Automobiles carried out in an Au- tomobile or Enginee- ring Workshop. All factories (i) Work in foundry other than on operation of a those which cupola and steel fur- work throu- naces and pouring of ghout the day metals and any other 5 Sections 51, 54, 56, 55, and 61. Sections 51, 54, 55, 56, and 61. 91 6 As above se- rial no. 1. in a system of relays. Factories manufactur- ing explo- sives. work connected or incidental thereto. (ii) Work in connec- tion with the mainten- ance of mill gearing, electric drives, mecha- nical or electrical lifts steam on water pipes and pumps. (iii) Work of examin- ing or repairing of any machinery or other plant which is necess- ary for carrying on the work in the factory. (iv) Work of light- ing fire in Boiler Ho- and Engine uses Rooms, in order to raise steam, or gene- rate gas; preparatory to the commence- ment of regular work in the factory. (i) Cartridging of ex- plosives. (ii) Cleaning of pla- nt in the packing. mi- xing and ingredient preparation sections. 92] 1 4. 5. 6. 7

8. Bihar Factories Rules, 1950 [Rule 84 6 2 Ditto 64 (2) (c) and 64 (3) 64 (2) (c) and 64 Ditto Ditto 3 Factories manufactur- ing bevera- ges. All factories other than those which work throu- the ghout day in a system relays. of Cold storage and refrige- ration facto- ries or for Cold-storage and refrige- ration plaNtS attached with other factories All fa cking of ex- plosives. Preparation and

han- dling of syrup and other ingredients and same materials, filling and cleaning of bot- tles and other work incidental thereto. (i) Work of drivers and attendant upon lighting. ventilating and humidifying plants. tii) Work of Fire Pump Men. Work of loading and unloading and trans- port of articles, Explanation. — The work of loading and unloading includes work of and in con- nection with stocking of articles for preser- vation in the storage rooms and removal therefrom besides Io- ading and unloading on transport vehicles. Operation of locomo- tives and rolling sto- cks, loading and un- loading of goods tra- nsported by trucks and motoc vehicles, operation of motor vehicles for transport of materials within the factory and any other work connected or incidental thereto. Drying, lifting and storing of paddy or 5 Ditto Sections 51, 54, 55, and 61. Sections 51, 54 55 and 61 Ditto Ditto Rule 1 9. 84 Bihar Factories Rules, 1950 2 64 (2) (d) 3 Iron and st- eel smelting and rolling and wire dr- awing and wire- - rope making face tories and similar pla- nts attached to other fac- tories. 4 any other work inci- dental thereto. Operation of blast furnaces, steel smelt- ing furnaces rolling mills and wire dra- wing machines and making of wireropes. 5 Sections 51, 54, 55 and 61. [93 6 (1) Every su- ch wo rkers shall be allo- wed adequate time to take light refreshments or mea- Is at the place of his employ- ment in a ro- om or a place specially pro- vided for the purpose, arra- nged in such a manner that it may not cause inconvenience • to the workers and •at the same time may require not stopping of any plant, ma. chinery or process or the normal func- tioning of the factory. (2) Every wor- ker shall be allowed at least one wee- kly holiday in every week on the average and whenever in any week the permitted hours of work daily or week- ly is exceeded, extra wages for overtime on any parti- cular week shall be paid 94 J 1 10. 11

12. Bihar Factories Rules, 4 1950 2 64 (3) (d) Ditoo Ditto 3 Foundries and Forge plants and General En- gineering factories. Copper sme- Iting and Copper and brass rolling factories. Coke manu- facturing works and such plants attached to Operation of Cupola, and other Iron or Steel melting furna- ces, and Heat treat • ment furnances and plants, ovens and other furnaces, mak- ing of patterns and moulds and forging operations. O peration of rope« ways, handling Of raw materials, concentra- tion, smelting, refining, man ufacture of alloys and rolling. (i) Operation of co- ke ovens (ii) Recovery and treatment of bye-pro- 5 Ditto Ditto Ditto [Rule 84 6 in accordance with the pro- visions of sec- tion 59. (3) A notice describing the of system work, change of shifts, and, grant of week- Iy holidays shall be sent to the Inspector and the Chief Inspec- tor in advance and no change shall be made therein with- out prior inti- mation to the Inspector and Chief Inspector and subject fu- rther to the provisions of sections 61 and 63. Ditto Ditto Ditto Rule 84] 2 Ditto 13. 14. 64 (3) (d) 15. Ditto Ditto 16. 64 (2) (b) 17. Bihar Factories Rules, 1950 3 other facto- ries Coke-bye- products re- covery and treatment factories. Electric po- wer genera- and ting transform- ing factories and Boiler houses or such plants attached to other facto- ries Water pum- ping and filteration factories or such Pla- nts attached to other fac- tories. Ice factories cold and storage/ pla- nts or such plants atta- ched to ot- her facto- ries. Factories manufactu- ring gas or any gas pla- nts in any other fac- tory. 4 ducts. Recovery and treat- ment of bye-products. (i) Operation of or attending upon boi- lers and its accesso- ries. (ii) Operation of or attending upon prime generators, movers, motor generators, rotary convertors boos- ters, transformers or similar other plants. (iii) Attending upon storage batteries. (iv) Operation of or attending upon switch boards. Driving or attending upon engines, motors, pumps and other ac- cessories. Operation of or att- ending upon compres- sors, pumps and ot- her plants and equip- ments. Production of oxy- carbondioxide, gen, acetelene or any other gas. 5 Ditto Ditto Ditto Ditto Ditto [95 6 Ditto As above se- rial no.9. Ditto Ditto Ditto 96] 1 18. 19. 20

21. Bihar Factories Rules, 1950 2 Ditto Ditto Ditto Ditto 3 Cement fac- tories Refractories and potte ries. Glass facto- ries. Paper Facu tories 4 Work on— (i) Handling, prepa- raticn, grinding and treatment of raw ma• terials. (ii) Kilns ; (iii) Cement grind- ing, packing and sto- ring (iv) Testing and sa• mples in laborato- ries ; (v) Ropeways. (i) Operation of and attending upon disi- ntegrators, grinding mills and pug mills. (ii) Moulding. (iii) Firing and atte- nding upcn kilns. (i) Mixing, grinding and handling of raw materials. of (ii) Operation and attending upon furnaces and chang- ing of and attending upon pots. Work on— (i) Preparation of raw materials ; (ii) Digesters ; (iii) Diffusers, was. hing and sorting ; (iv) Soda recovery plant ; (v) Bleaching and breach-making plant ; (vi) Breaking and beating plant ; (vii) Paper-making, cutting and finishing. 5 Ditto Ditto Ditto Ditto [Rule 84 6 Ditto Ditto Ditto Ditto Rule 84 Bihar Factories Rules, 1950 1 22 23. 24. 25. 26, 27. 2 64 (2) (d) Ditto Ditto Ditto I)itto Ditto 3 Vegetable Oil Hydro genation Factories. Chemical and Fertili- zer Facto- ries and su- ch plants at- tached to other facto ries. Oil Refine- ries. Lead Facto- ries. - res, and Ax- Ies, Loco- motive, Au.

tomobiles or Railway wa- gons or car- riages are manufactu- red or such plants atta- ched to ot- her factories. Roller Flour Mills. 4 (i) Refining , (ii) Hydrogenation , (iii) Deodorising , (iv) Production and compression of Hy- drogen and Oxygen. Manufacture of sul- phuric, hydrochloric and nitric acids, sulphates, sulphides, nit- rates, superphospha- tes, alum, oxides of iron and explosives. Handling of crude oil and all the pro- cess of and connected with manufacture of petroleum and pet- roleum products. Work on sintering plant and reducing and refining furnace and operation of and attending upon any plant for recovery of any other metals. Manufacture of wh- eel Tyres and Axles, Locomotive Auto- mobiles or Railway carriages and wagons. 5 ...55 and 61. Ditto Ditto Ditto Ditto Ditto r 97 6 As above se- rial no

9. Ditto Ditto Ditto Ditto Ditto Milling of flour and bagging 98 1 28.29. 30. 31

32. Bihar Factories Rules, 1950 2 Ditto Ditto Ditto Ditto Ditto Sugar ries.3 facto- Plywood Factories. Oil Mills Aluminium Factories, including manufacture of Alumini- um. Distilleries and Brewa- ries. 4 Work on— (I) Handling and cr- ushing of cane aud handling of 'Gur' ; (ii) Fiitration, Cla- rification and crysta- Ilization of cane juice and "gur" liquor ; (iii) Curing of mo- ther liquor ; (iv) Drying, crush- ing, bagging and ha- ndling of sugar. (v) Burning of lime- stone and sulpher. Preparation of glue, combining, gluing, pressing and drying. Operation of Ghanies and Oil expellers. Work on— (i) Handling, preparation of raw ma- terials. (ii) •iii) (iv) (vi) (vii) Digesters. Filters. Settling tanks. Precipitators. Kilns. Refining, Roll- ing and pressing. Work on— 5 .. Ditto Ditto Ditto Ditto ..Ditto [Rules 84 6 Ditto Ditto Ditto Ditto Ditto (ii) (iii) (iv) (v) Diffuston of Ma- hua ; Dilution of mo- lasses ; Fermentation ; Yeast propaga- tion Distillation; Rule 84 1 33. 34. 35. 36. 2 Ditto Ditto Ditto 64 (2) (i) 64 (3). 3 Bihar Factories Rules, 1950 4 (vi) Handling and preparation of raw materials for fermentation. Coal Washe—Handling, Crushing, ries. Washing, flotation grading and convey- ing of coal. Jute, Cotton Handling and prepa- and other ration of raw mate- Textiles rial, Carding, spinn- Mills. ing and weaving yarns and textiles. All factories (i) Operation or exempted at tending upon boilers under prime movers and sec- tion 64 (2) plants for lighting (d) and me- ventilating or humi- ntioned in difying. serials 9 to 33 of this (ii) Such other work Schedule. and process which are incidental to or connected with and which must proceed concurrently with the exempted work and processes, and which for technical must reasons be carried on continuously. Factories wh- Printing of newspap- erein printing ers including such of newspap- other work which may ers is carried be incidental or conn- 61 ected thereto. on. 5 Ditto Ditto Ditto Sections 51, 54, 56 and [99 6 Ditto Ditto Ditto (i) This exe- mption shall be applicable only to the workers eng- aged in the printing of newspapers who are held up on accou- nt of break- down of ma- chinery. (ii) Within 24 hours ot breakdown a notice shall be sent to the Inspector de- 100 J 1 37. Bihar Factories Rules, 1 950 2 64 (2) and (3). 85. (j) 64 3 All factories. 4 Loading and unloa- ding of railway wag- ons. Chapter VII. 5 Sections 51, 52, 55, 56 and 61. [Rule 85 6 scribing the nature of the break down and giving a list of the workers alo- ng with ho- urs of over- time worked by each. I. When any worker is al- lowed to work over time un- der this exe- mption, notice thereof shall be sent to the Inspector

2. Whenever any worker is allowed to wo- rk on a weekly holiday and substitute ho- 'Iiday is not granted as per section 52 co- mpensatory holiday shall be granted as provided in section 53

3. The wor- kers shall be allowed sum.cient time to light take refreshment during any period excee- fo ur ding hours. Employment Of Young Persons Notice of periods of work for children.—The notice of periods work for child workers shall be in

Form no. 13, and it shall be maintained the manner prescribed in sub-section (2) of section 108 of the Act. of in Rule 86-87 A] Bihar Factories Rules, 1950 [101 86. Register of child workers.—The register of child workers shall be in Form no. 14 and shall be maintained in accordance with the following pro- visions : (I) Where a child is transferred from one group to another, or from one relay to another the following particulars of his transfer shall be entered against his name . (a) Under the group from which he has been transferred— [i) the date and actual time of finishing work in the group or relay, and (ii). the group or relay to which he has been transferred, and (b) Under the group to which he has been transferred— (i) the date and actual time of commencing work in the group or relay, and (ii) the group or relay from which he has been transferred. (2) Where a ehild is discharged from or leaves his employment the date of his leaving or discharge, as the case may be, shall be entered against his name in the 'remarks' column. (2) All entries in the register shall be made in ink and shall be legible. Chapter VIII. Leave with wages

Form no. 15, hereinafter called the Leave with Wages Register : Provided that F the Chief Inspector is of the opinion that any muster- roll or register maintained as part of the 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 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, be maintained in place of and be treated as the register or return required under this Rule in respect of that 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. 87 -A. Calculation of cash equivalent of the advantages accruing through concessional sale of foodgrains in respect of worker proceeding on leave—The cash equivalent of the advantage accruing through the concessi- onal 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 of -the concessional rates allowed of foodgrains and other articles he is entitled to. Explanation.—For the purpose of calculating the cash equivalent monthly average market rate of foodgrains and other articles shall be computed at the end of every month. 102 Bihar Factories Rules, 1950 r Rules 88-92 i-,i.t; 88. Leave The Manager shall provide every worker with a Leave Book in Form no. 15 not later than the 3 1st of January of the year following the year in which the worker is employed in the factory. The Leave Book shall be the property of the worker and the worker shall not be required to produce it except for the purpose of making necessary entries therein and a Leave Book so produced shall be returned to the worker within seven days . Provided that— when a worker is discharged or dismissed or when his service is (a) otherwise terminated during the course ofa year, the Manager shall give him an abstract of the Leave with Wages Register within a week of the date•ef dis- charge or dismissal or of termination of service, as the case may be; (b) the Leave with Wages Register shall always be kept complete and upto-date and whenever any entry is made in the said register, corresponding entry shall simultaneously be made in the Leave Book. (c) whenever any application for grant of leave is refused an entry to the effect shall be made in the Leave with Wages Register and in the Leave Book. Explanation.—The term 'year' means • 'calender year". (2) If a worker loses his Leave Book, the Manager shall provide him with another copy on the payment of fifty paise and shall complete it from his record

89. Medical Certificate.—lf any worker is absent from work due to ill- ness and he wants to avail himself of the leave with wages due to him to cover the whole or part of period of his illness under clause (7) of section 79 of Chapter VIII, he shall, if required by the Manager, produce a medical certifi- cate signed by a Registered Medical Practitioner 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, unable to attend to his work, or other reliable evidence to prove that he was actually sick during the period for which the leave to be availed of

90. 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 number 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

91. Notice by worker,—Before or at the end of every calendar year, a worker who may be required to avail of leave in accordance with subsection (8) of section 79, 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 with Wages Register and in the Leave Book of the worker concerned

92. Notice of Leave with Wages.—ln the case of a factory in which a scheme for regulating the leave allowable under section 79 of the Act has been drawn up under sub-section (4) of section 79— (1) As far as circumstances permit, members of the same family, com- prising him and, wife and children shall be allowed leave on the same date, Rules 93-95] Bihar Factories Rules, 1950 [103 (2) A worker may exchange the period of his leave With another worker, subject to the approval of the Manager

93. Payment of wages if the worker dies —Ifa 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 death of the worker. For this purpose each worker shall submit a nomina- tion in

Form no. 25 duly signed by himself and attested by two witnesses. The nomination shil remain in force until it is cancelled or revised by another nomination

94. Register to be maintained in case of exemption under section 84.(l) Where an exemption is granted under Section 84, the Manager shall main- tain a register showing the position of each worker as regards leave due, leave taken and wages granted. (2) He shall display at the main entrance of the factory, a 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 alteration shall be made in the leave rule approved by the State Government at the time of granting exemption under section 84 without its previous sanction. Chapter [X. Special Provisions 95. Dangerous 1) The following operations when carried on in any factory are declared to be dangerous operations under section 87 :— (1) (2) (3) (4) (5) (6) (7) (8) (9) (10) (11) (12) (13) Manufacture of aerated water and processes incidental thereto. Electrolytic plating or oxidation of metal articles by use of an electrolyte containing cromic acid or other chromium compounds. 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. 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. Liming and tanning of raw hides and skins and processes inciden- tal thereto. Certain lead processes carried on in printing presses and Type Foundries. Manufacture of Pottery and Processes incidental thereto. Manufacture of articles from refractory materials including manu- facture of refractory bricks. All operations, in which any chemical is manufactured, recovered, handled, used or processed and any other work or process conne- cted or incidental thereto, carried on in any factory. 104 Bihar Factories Rules, 1950 Compression of oxygen and hydrogen. [Rule 95 (14) (15) (16) (17) (18) 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. Manufacture or manipulation of manganese ånd its compounds. Manufacture and manipulation of dangerous pesticides. Manufacture, use, storing, handling or manipulating of benzene or any substance containing benzene. For this purpose Benzene includes all aromatic hydro carbons having the chemical formula of CG HG. process of extraction of oil or other substances from oil-cakes, rice bran or from any other material or substance by the use of any solvent.] Operation inv Iving High Noise levels.] Schedule I Manufacture of Aerated Waters and processes fncidental thereof. I. Fencing of machines.—A 11 machines for filling bottles, or syphons shall be so constructed. placed or fenced, as to prevent, as far as may be pra- cticable, a fragment of a bursting bottle or syphon from 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 syphons— (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 (l) shall not apply where bottles are filled by means of an automatic machine so constructed that no frag- ment of a bursting bottle can escape, and (ii) where a machine is so constructed that only one arm of the bottle at work upon it is exposed to danger, 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, cap- suling, 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 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 shall,while at work in such processes wear the face-guards and gauntlets provided under the provisions of the said paragraph l. Ins. bys. O. 686 dated 13.7.1988 Rule 95 Bihar Factories Rules, 1950 Schedule 11 [105 Electrolytic plating or Oxidation of Metal Articles by use of an Electrolyte containing Chromic Acid or other. Chromium Compounds. I. Definitions.—For the purposes of this schedule I (a) (b) (c) (d) " Electrolytic chromium process" means the electrolytic plating or oxidation of metal articles by the use of an electrolyte cont- aining chromic acid or Other chromium compounds. "Bath" means any vessel used for an electrolytic chromium process or for any subsequent process. "Employed" means in paragraphs 5, 7, 8 and 9 of this Schedule, employed in any process involving contact with liquid from abath "Suspension" means suspension from employment in any pro- cess involving contact with liquid from any bath by written certi- ficate in the Health Register, signed by the Certifying Surgeon, who shall have power of suspension as regards all persons e ess. e d p- ISt of ses aid 2. Exhaust

draught.—An effcient exhaust draught shall be applied to every vessel in which an electrolytic chromium process is carried on. Such 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. 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 woman, adoles- cent or child shall be employed or permitted to work at a bath

4. Floor of floor of every room 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 The occupier of the factory shall provide and maintain in good and clean condition the following articles of protective clothing for the use of all persons employed on any process at which they are liable to come in contract with liquid from a bath and such clothing 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 foot-wear. (2) The occupier shall provide and maintain for the use of all persons employed suitable accommodation for the storage and adequate arrangements for the drying of the protective clothing

6. Medical requisites.—The occupier shall provide and maintain a suff- cient supply of suitable ointment and impermeable water-proof plaster in a 106] Bihar Factories Rules, 1950 Rule 95 separate box readily accessible to the workers and used solely for the purpose of keeping the ointment and plaster

7. Medical Examinations.-— (a) Every person employed in the process shall be examined by a Medical Officer of the Factory at least twice in every week, and by the Cetifying Surgeon at least once in every three months (b) (c) (d) In a factory in vviiich whole time Medical Officer is not employed, the weekly examinations may be carried out hy any qualified medi- cal practitioner, or by a responsible person especially trained for this purpose and certified by the Certifying Surgeon or by the Medical Inspector of Foctories, to be competent to carry out this examination. A register containing the names of all persons employed in the process shfilj be kept in

Form no 16 and the result of all examin- ations, whether weekly or otherwise, shall be duly entered in the said register by the person carrying out the examination and shall be duly signed by him. The said register shall be produced before and examined by the Certifying Surgeons at every visit or at least once in everv three months. It shall be the duty of the Manager and the occupier to arrange for the medical and other examinations as precribed in this clause and to produce all persons required to be examined at the place and time appointed for the said purpose and every person employ- ed in the process shall whenever required present himself at the appointed time and place. No person after suspension shall be employed in the process with- out the written permission of the Certifying Surgeon duly entered in the register in Form no

16. The •suspended person may be employed during the period of suspension on such other job as may be advised or recommended by theCertifying;Surgeon

8. Cautionary placard.—A cautionary placard in the form specified by; the Chief Inspector and printed in the language of the majority of the workers employed shall be affxed in a prominent place in the factory V. here it can be easily and conveniently read by the workers

9. Weekly examination —A responsible person appointed in writing by occupier of the factory shall twice in every week inspect the hands and fore- arms of all persons employed and shall keep a record of such inspections in the Health Register. Schedule Manufacture and Repuir of Electric Accumulators

1. Saving —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

2. Definitions.—For the purposes of this Schedule;— (a) "Lead process" means the melting of lead or any material conta- ining lead, casting, pasting, lead burning, or any other work, inc- Rule 95 3. Bihar Factories Rules, 1950 [107 luding trimming, or any 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 o? lead" means any lead process in- vol'. ing any manipulati0i-t ot movement of raw oxides of lead other than its conveyance a receptacle or by means of an imp- lement from one operation to another. (c) "Suspension" met,ns suspension from employment in any lead process by written certificates in the Heath Register (

Form no. 16) signed by the Certifying Surgeon, who shali have power of sus- pension as regards all persons employed in any such process. Prohibition relating to women and young persons.—No woman or young person shall be employed or permitted to work in any lead process or Jn any room in which the manipulation of raw oxide of lead or pasting is car- ried on

4. Separation of certain processes. Each of the followirg processes shall be carried on in such a manner and under sucl' conditions as to secure effectual separation from one another, and from any other process (a) Manipulation of raw oxide of lead ; (b) Pasting ; (c) Drying of pasted plates ; (d) Formation with lead burning ("tacking") necessarily carried on in connection therewith ; (e) Melting down of pasted plates

5. Air space.—ln every room in which a lead process is carried on, the- re shall be at least 500 cubic feet of air space for each person employed the- rein, and in computing this air space no height over 12 feet shall be taken into account. 6, Ventilation.—Every work-room 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 rooms.—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 five feet

8. Floor of work-rooms.— 1) The floor of every room in which a 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 ; (c) kept free from materials, plant, or other obstruction not required for, or produced in the process carried on in the room. (2) Tn 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. Without prejudice to the requirements or sub-paragraphs (I), (2) and (3), where manipulation of raw oxide of lead or pasting is carried on, the floor shall also be— 108] Bihar Factories Rules, 1950 (a) kept constantly moist while work is being done ; [Rule 95 (b) provided with suitable and adequate arrangements for drainage ; (c) thoroughly washed daily by means of a hose pipe

9. Work benches.-- The work-benches at which any lead process is car- ried 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 pro- duced in, the process carried on thereat; and all such work-benches other than those in grid casting shop shall— (c) be 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, and all such work benches in grid casting shops, shall— (d) be cleansed daily ; and every work-bench used for pasting shall— (e) be covered throughout with sheet lead or other impervious material ; (f) be provided with raised edges ; (g) be kept constantly mist while pasting is being carried on. IO. Exhaust draught.— r he following processes shall not be carried on without the use of an emcient exhaust draught • (a) Melting of lead or materials containing lead ; (b) Manipulation of raw oxide of lead, unless done in an enclosed apparatus so as to prevent the escape of dust into the work-room; (c) pasting ; (d) Trimming, brushing, filing or any other abrading or cutting of pasted plates giving rise to dust ; (e) Lead burning, other than— "tacking" in the formation room ; (ii) chemical burning for the making of lead linings for cell cases necessari'y carried on in such a manner that the application of emcient exhaust is impracticable. Such exhaust draught shall be effected by mechanical means and shall operate on the dust or fume given off as nearly as may be at its point of orig- in, so as to prevent it entering the air of any room in which persons work

11. Fumes and gases from melting pots.—The products of cumbustion produced in the heating of any melting pot shall not be allowed to escape into a room in which persons work

12. Cantainerfor dross.—A suitable receptacle with tightly fitting cover shall be provided and used for dross as it is removed from every melting pot. Rule 95 J Bihar Factories Rules, 1950 [109 1 n e Such receptacle shall be kept covered while in the work-room, except 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 dust shall be deposited

14. Racks and shelves in drying room.—The racks or shelves provided in any drying room shall not be more than 8 feet from the floor nor more than 2 feet in width, provided that as regards racks or shelves set

or drawn from both sides the total width shall not exceed 4 feet. Such racks or shelves shall be cleansed only after being thoroughly dam- ped unless an eflicient suction cleaning apparatus is used for'this purpose

15. Medical examination.—(a) Every person employed in a lead process shall be examined by the Certifying Surgeon within the seven days preceding or following the date of his first employment in such process and thereafter shall be examined by the Certifying Surgeon once in every calendar month, or at such other intervals as may be specified in writing by the Chief Inspector, on a day of which due notice shall be given to all concerned. "First employment" means first emplyment in a lead process in the factory or workshop and also re-employment therein in a lead process following any cessation of employment in such process for a period exceeding three calendar months. (b) A Health Registers in

Form no. 16 containing the names of all per- sons employed in lead process shall be kept; (c) No person after suspension shall be employed in lead process without written sanction from the Certifying Surgeon entered in or attached to the Health Register

16. Protective clothing.— Protective clothing shall be provided and maintained in good repair for all persons employed in:— (a) manipulation of raw oxide of lead; (b) pasting; (c) the formation room; and such clothing shall be worn by the persons concerned. The protective clothing shall consist of a waterproof apron and waterproof foot-wear; and, also, as regards persons employed in the manipulation of raw oxide of lead or in pasting, head coverings. The head coverings 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 (a) sumcient tables and benches and (b) adequate means for warming food. The mess room shall be 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 cloqk-room for clothing put off during working hours with ade- quate arrangements for drying the clothing if wet. Such accommo- dation shall be separate from any mess-room. 110] Bihar Factories Rules, 1950 [Rule 95 (b) separate and suitable arrangements for the storage of protectiv clothing provided under paragraph 16. 19 Washing facilities.—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 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 east 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 two feet; or (ii) at least one wash basin for every five such persons employed at anv one time, fitted with a waste pipe and plug and having a constant supply of water laid on; (iii) a suffcient supply of clean towels made of suitable materials renewed daily; which supply, in the case of pasters and persons employed in the manipulation of raw oxide of lead, shall include a separate marked towel for each such worker; and (iv) a suffclent supply of soap or other suitable cleansing material and of nail brushes. (b) There shall In addition be proviåed means ot 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 to be allowed jor 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 who has been employed in the manipulation of raw oxide of lead or in pasting : Provided that if there be one basin or two feet of trough for each such person this Rule shall not apply

21. Facilities for bathing.—Suffcient bath accommodation to the satisfaction of the Chief Inspector shall be provided for all persons engaged in the manipulation of raw oxide of lead or in pasting, and a sufficient supply of soap and clean towels

22. Food, drinks etc., prohibited in work-rooms.—No food, drink, 'pans 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 lv. Glass Manufacture 1. Exemption.—lf the Chief Inspector is satisfied in respect of any factory or any class of process, that, owing to the special!method 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, Rule 95 J Bihar Factories Rules, 1950 [111 or that the application of this Schedule or any part thereof is for any reason impracticable, he may by certificate in writing authorise 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 practi- cable 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 originates. (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 of soluble lead compound exceeding, when calculated as lead monoxide, five per cent of the dry weight of the portion taken for analysis. The method of treatment shall be as follows:— A weighed quantity of the material % hich has been dried at 1000 and thoroughly mixed shall be continuously shaken for onc 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. "Suspension" means suspension from employment in •any process (c) specified in paragraph 3 by written certificate in the Health Register

Form no. 16 signed by the Certifying Surgeon who shall have power of suspension as regards all persons employed in any such process

3. Exhaust draught.—The following processes shall not be carried on except under an emcient exhaust draught or under such other conditions as may be approved by the Chief Inspector :— (a) The mixing of raw materials to form a "batch". (b) The dry grinding, glazing and polishing of glass or any article of glass. (c) All processes in which hydrofluoric acid, fumes or ammoniacal vapours are given off. (d) A!! processes in making or furnace moulds or "pots" including the grinding or crushing of used "pots". (e) All processes involving the use ofa dry lead compound

4. Prohibition relating to women and young persons..No woman or young person shall be employed or permitted to workin any of the operations specified in pragraph 3 or at any place where such operations are carried on

5. Floors and work-benches.—The floor and work benches of every room in which a dry compound of lead is manipulated or in which any Bihar Factories Rules, 1950 112] [Rule 95 process is carried on giving off silica dust shall be kept moist and shall comply with the following requirements • The floors shall be— (a) of cement or similar material so as to be smooth and impervious to water; (b) maintained in sound condition; and (c) cleansed daily after being thoroughly sprayed with water at time when no other work is being carried on in the room. The work-benches shall— (a) have a smooth surface and be maintained in sound condition, and (b) be 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 effcient ventilation jn all parts oi 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 bringing in the objects to be treated shall be as small as practicable; and (d) The eflicient 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-pipe.—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 ster- ilising his blow-pipe

9. Food, drinks, etc., prohibited in food; drink, 'pan and supari, or tobacco shall be brought into or consumed by any worker in any room oi work-place wherein any process specified In paragraph 3 is carried on. IO. Protective clothing.—The occupier shall provide, maintain in good repair and keep m a clean condition for the use of all persons employed in the processes specified in paragraph 3 suitable protectives clothing, foot-wear and goggles according to the nature of the work and such clothing, foot-wear, 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 3 : (a) a wash place with either— (i) a trough with a smooth impervious surface fitted with a waste pipe, without plug and of sumcient length to allow of 4 Rule 95 J (b) (c) Bihar Factories Rules, 1950 [113 at least two feet for e .ery five such persons employed at any one time and having a constant supply of water from taps or jets above the trough at intervals o? not more than 2 feet ; 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 availa- ble ; and a suffcient supply of clean towels made of suitable material renewed daily with a sumcient supply of soap or other suita- ble cleansing material and of nail brushes ; and a suffcient number of stand pipes with taps—the number and location of such stand pipes shall be to the satisfaction of the Chief Inspector

12. Medical Every person employed in any process specified in paragraph 3 shall be examined by the Certifying Surgeon within seven days preceding or following the date of his first employment in such process and thereafter shall be examined by the Certifying Surgeon once in every calendar month or at such other intervals as may be specified in writ- ing by the Chief Inspector on a day of which due notice shall be given to all concerned.(b) A Health Register in

form no. 16 containing thc names of all pers- ons employed in any process specified in paragraph 3 shall be kept. (c) No person after suspension shall be employed in and process speci- fied in paragraph 3 without written sanction from the Certifying Surgeon entered in or attached to the Health Register. Schedule V Grindlng or Glazing of Metals and Processes incidental thereto 1. Definitions.—For the purposes Of this Schedule— "Grindstone" means a grindstone composed of natural or manu- factured sandstone but does not include a metal wheel or cylinder into which blocks of natural or manufactured sandstones are fitted. (b) "Abrasive wheel" weans a wheel manufactured of bonded emery or similar abrasive. (c) "Grinding" means the abrasion, by aid of mechanical power, cf metal, by means of a grindstone or abrasive wheel. (d) "Glazing" means the abrading, polishing or finishing, by aid of lil' (e) (f) mechanical power, of metal, by means of any wheel, buff, mop or similar appliance to which aDY abrading or polishing substance is attached or applied. "Racing" means the turning up, cutting or dressing of a revolving grindstone before it is brought into use for the first time. "Hacking means the chipping of the surface of a grindstone by hack or similar tool. 114 Bihar Factories Rules, 1950 [Rule 95 (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

6. 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 perso•n is employed for more than 12 hours in any week. (3) The Chief Inspector may, by certificate in writing, subject to such conditions as he may specify therein, relax or suspend any o < 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

3. Equipment for removel 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 ; and (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 con- nection at the end remote from the fan to enable the Inspector, to attach thereto any instrument necessary for ascertaining the pre- ssure of air in the said duct ; and (c) a fan or other emcient means of producing a draught suffcient 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

4. Restriction on employment on grinding operations.—Not more than one person shall at any time perform the actual processes 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 apphance

5. Glazing.—GIazing or other processes, except process incidental to wet grinding upon a grindstone shall not be carried on in any room in which wet grinding upon a grindstone is done

6. Hacking and rodding.—Hacking or rodding shall not be done unless during the process either (a) an adequate supply of water is laid on at the upper surface of the grindstone or (b) adequate appliances for the intercep- tion of dust are provided in accordance with the requirements of paragraph 3. Rule 95 Bihar Factories Rules, 1950 1115 7. Examination of dust equipment All equipments for the extra- ction or suppression of dust shall at least once in every six months be exami- ned and tested by a competent person, and any defect disclosed by such exam- ination and test shall be rectified as soon as practicable. (b) A register containing particulars of such examination arid test shall be kept in a form approved by the Chief Irspector. Schedule VI. Manufacture and treatment of Lead and certain compounds of Lead. I; Exemption.—Where the Chief Inspector is satisfied that all or any of the provisions of this Schedule are •not necessary for the protection of the persons employed, he may by certificate in writing exempt any factory from all or any of such provisions, subject to such conditions as he may specify therein

2. Definitions.—For the purposes of this Schedule :— (a) "Lead Compound" means any compound of lead other than galena which when treated in the manner described below, yield 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 portio ase 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 1000C and thoroughly mixed shall be continuously shaken for one hour, at the common temperature with 1,000 times its weight of an aque- ous 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 weighted as lead sulphate. (b) "Efficient Exhaust Draught" means localised ventilation effected by heat or mechanical means, for the removal of gas, vapour, dust or fumes so as to prevent them (as far as practicable under the atmo- spheric 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, fumes or dust 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 desilverising of lead or the melting of scrap lead or zinc. 1161 (c) (d) (e) (g) Bihar Factories Rules, 1950 [Rule 95 The manufacture of solder or alloys containing more than ten per cent of lead. The manufacture of any oxide, carbonate, sulphate, chromate, acetate, nitrate or silicate of lead. Handling or mixing of lead tetra-ethyl. Any other operation involving the use ofa lead compound. The cleaning of work-rooms where any of the operations aforesaid are carried on

4. Prohibition relatine 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 3

5. Requirements to be observed.—No person shall be employed or per- mitted to work in any process involving the use of lead compound if the pro- cess 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 com- pound in the course of their employment unless the provisions of paragraphs 6 to 14 are complied with

6. Exhaust draught.—Where dust, fume, gas or vapour is produced in the process, provison shall be made for removing them by means of an effci- ent exhaust draught to contrived as to operate on the dust, fume, gas or vapour as closely as possible to the point of origin

7. Certificate of fitness.—A person medically examined under paragraph 8 and found fit for employment shall be granted by a Certifying Surgeon a certificate of fitness in Form no. 24 and such certificate shall be in the custo- dy of the Manager of the Factory. The certificate shall be kept readily avail- able for inspection by any Inspector. and the person granted such a certificate shall carry with him, while at work, a token giving reference to such certificate

8. Medical Examination—(l) The person so employed shall be medi- cally examined by a Certifying Surgeon within 14 days of his first employ- ment in such process and thereafter shall be examined by the Certifying Surgeon at intervals of not more than three months, and a record of such examination shall be entered by the Certifying Surgeon on the special certifi- cate of fitness granted under paragraph 7. (2) If at any time the Certifying Surgeon is of opinion that any person is no longer fit for employment on the grounds that continuance therein would involve special danger to health, he shall cancel the special certificate of fitness of that person. (3) NO person whose special certificate of fitness has been cancelled shall be employed unless the Certifying Surgeon, after re-examination, again certifies him to be fit for employment

9. Food, drinks, etc, prohibited in work-rooms.—No food, drink, span' and •supari' or tobacco shall be brought into or consumed by any worker in any work-room in which the process is carried on and no person shall remain in any such room during intervals for meals or rest. IO. Protective clothing.—SuitabIe protective overalls and head coverings shall be provided, maintained and kept clean by the factory occupier and such overalls and head coverings shall be worn by the persons employed. Rule 95] Bihar Factories Rules, 1950 [117 1 1 n n h 11. Cleanliness of work-rooms, tools, etc.—The rooms in which the per- sons are employed and all tools and apparatus used by them shall be kept in a clean state

12. Washing The occupier shall provide and maintain for the use of all persons employed suitable washing facilities consisting of—(a) a rvious surface fitted with a waste pipe

without plug and of sumcient length to allow at least two feet for every ten persons employed at any one time, and having a constant supply of clean water from taps or jets above the tro- ugh at intervals of not more than two feet; 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 sumcient 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 res- ponsible 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 consist of the use of a room sepa- rate from any work-room which shall be furnished with sufficient tables and benches, and unless a canteen serving hot meals is provided, adequate means of warming food. The room shall be adequately ventilated by the circulation of fresh air, shall be placed under the charge ofa responsible person and shall be kept clean

14. Cloak-room.—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 Vil. Generating Petrol Gas from Petrol. l. 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 generating of petrol gas from petrol is carried on

2. Flame traps.—The plant for generating petrol gas from petrol and associated piping and fittings shall be fitted with at least two emcient flame traps so destgned 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 possi- ble. The plant and all pipes and valves shall be installed and maintained free from leaks

3. Generating building or room.—AlI plants for generating petrol gas from petrol erected after the coming into force of the provisions specified in this Schedule, shall be erected outside the factory building proper in a sepa- rate well-ventilated building (hereinafter referred to as the "generating buil- ding"). In the case of such plant evected before the coming into force of the provisions specified in this Schedule there shall be no direct communication [Rule 95 1181 Bihar Factories Rules, 1950 f. 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, alt such generating rooms shall be constructed of the resisting materials

4. Fire extinguishers.—An efficient means of extinguishing petrol fires shall be maintained in an easily accessible position near the plant for genera- ting petrol gas from petrol

5. Plant to be approved by Chief Inspectors.—PetroI gas shall not be manufactured except in a plant for generating petrol gas the design and con- struction of which has been approved by the Chief Inspector

6. Escape of petrol.—Effective steps shall be taken to prevent petrol 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 generating room or building or in the vicinity thereof and a war- ning 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 petrol or container.—No una uthorised person shall have access to any petrol or to a vessel containing or having actually contained petrol

9. Electric fittings.—AII electric fittings shall be of fame-proof cons- truction and all electrical conductors shall either be enclosed in metal con- durts 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 such a manner that it cannot be easily and imme- diately 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 petrol 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 petrol or inflamma- ble vapour

12. Unless there be anything repugnant in the subject or context, the word 'petrol' wherever used in this Schedule includes 'dangerous petroleum' as defined in the Petroleum Act, 1934

13. The Chief Inspeétor may, with the previous approval of the State Government, exempt any factory or plant from any of the provisions of this Schedule subject to such conditions as may be specified in writing by the Chief Inspector. The exemption granted may, with the like approval, be revoked at any time. Schedule VIKI. Cleaning or smoothing, roujhening, 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) I. Definitions.—For the purposes of this schedule "Blasting" means clea- ning, smoothing, roughening or femovmg of any part of the surface of any Rule 95] Bihar Factories Rules, 1950 [119 article by the use as an abrasive ofa jet of sand, metal shot, or grit or other material, propelled by a blast of compressed air or steam. 'SBIasting enclosure" means a chamber, barrel, cabinet or any other enclosure designed for the performance of blasting therein. "Blasting chamber" means a blasting enclbsure in which any person may enter at any time in connection with any work or otherwise. ' 'Cleaning of castings" where done as an incidental or supplemental pro- cess in connection with the marking of metal castings, means the freeing of the casting from adherent sand or other substance and include the removal of cores and the general smoothing of a casting, but does not include the freeing of castings from scales formed during annealing or heat-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 coming into operation of this schedule

3. Prohibition of employment of women and young persons.—No woman or young person shall be employed or permitted to work at any operation of sand blasting

4. Precautions in connection with blasting operations.(I) masting to be done in blasting enclosure.—BIasting 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 plants and appliances situated therein, shall be performed in a blasting encloure. Every door, aperture and joint of blasting enclosure shall be kept closed and air-tight while blasting is being done therein. (2) Maintenance of blasting enclosure.—Blasting enclosure shall always be maintained in good condition and effective measures shall be taken to pre- vent dust escaping from such enclosures, and from apparatus connected there- with, into the air of any room. (3) Provision of separating apparatus. —There shall be provided and maintained for and in connection with every blasting enclosure efficient appa- ratus for separating so far as practicable, abrasive which has been used for blas- ting 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. (4) Provision of pentilating plant. —There shall be provided and mainta- ined 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 met- [Rule 95 120] Bihar Factories Rules, 1950 hod and in such manner that it shall not escape into the air of any room and every bag used for the settling of dust 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. (5) Operation of ventilating plant.—The ventilating plant provided for the purpose of sub-paragraph (4) shall be kept in continuous operation when- ever 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 Cha nber for the purpose of cleaning or repairs

5. Inspection and examination.—(l) 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 and test shall forthwith be entered in a register and shall be available for inspec- tion 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, examina- tion or test to the occupier, manager or other appropriate person and without prejudice to the foregoing requirements of this schedule, Shal! be removed without avoidable delay

6. Provision of protective helmets, gauntlets and 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 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 hy 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 than six cubic feet per unit. (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 v. ear the gauntlet and overall provided

7. Precaution in connection with cleaning and other work. Where person is engaged upon cleaning of any blasting apparatus or blasting enclosure or of any apparatus or ventilating plant connected therewith or the surrounding thereof or upon any other work in connection with any blasiing Rule 95] Bihar Factories Rules, 1950 [121 apparatus or blasting enclosure or with any apparatus or ventilating plant connected therewith so that he is exposed to the risk or inhaling dust which has arisen from blasting. All practicable measures shall be taken to prev ent such inhalation. (2) In connection with any cleaning operation referred to in clause 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 sucli cleaning operations

8. Storage accommodation for protective wear.—Adequate and suita ble storage accommodation for the helmets, gauntlets and overalls requxed to be provided by clause 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

9. Maintenance and cleaning of protective wear.—-AIl helmets, gauntiets, overalls and other protective devices 07 clothings provided and worn for the purposes of this schedule shall be kept irr good condition and so far as is reasonably practicable shall be cleaned on every week day in which they are used. Where dust arising from the cleaning of such protective clothing or devices is likely to be inhaled, a!! practicable measures shall be taken to prevent such inhalation. Vacuum cleaners shall, whenever practicable, be used for removing dust from such clothing and compressed air shall not be used for removing dust from any clothing. IO. Maintenance of vacuum cleaning plant.— Vacuum cleaning plant used for the purpose of this schedule shall be properly maintained

11. Restrictions in employment of young 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 in work regularly within twenty feet of any blasting enclosures 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

12. Power to exempt or If the Chief Inspector is satisfied that in any factory or any class of factory, the use of sand or other substance containing fiee 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 cond- ition or special method of work or otherwise any requirement of this schedule can be suspended either temporarily or permanently, or can be relaxed with- out endangering the health of the persons employed or that application of any of such requirements is for any reason impra 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 end subject to such conditions and for such eriod as may be specified in the said order.122] Bihar Factories Rules, 1950 [Rule 95 (2) Where an exemption has been granted under sub-clause (I), 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. Schedule IX Liming and tanning of raw Hides and Skins and Processes incidental thereto. I. Cautionary Cautionary notices as to anthrax in the form specified by the Chief Inspector shall be affixed in prominent position in the factory where they may easily and conveniently be read by 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 (jay of each calendar year. (3) Cautionary notices as to lhe effect 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 easiiy and conveniently read by the persons employed. (4) Notices shall be amxed in prominent places in the factory stating the position of "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 Shail be taken to explain carefully to such illiterate person the contents of the notices specified in paragraphs 1.2 and 4 and if chrome solutions are used in the factory, the contents of the notice specified in 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 rubber gloves for persons employed in processes invol 'ing contact with chrome solutions including the preparation of such solutions; (b) protective footwear, aprons and gloves for persons employed in the handling of hides or skins other than in processes specified in clause (a): Provided that gloves shall not be required for persons fleshing by hand or where there is no risk of contact with lime, sodium sulphide or other caustic liquor

3. Washing facilities, mess-room and cloak-room.—There shall be provided and maintained in a cleanly state and in good repair for the use of all persons (a) (b) employed— a trotl\h with a smooth impervious surface fitted with a waste-pipe without plug, and of sumcient length to allow at least two feet for ery ten 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 two feet; or at least one wash basin for every ten such persons employed at any one time, fitted with a waste pipe and plug and having a constant Rule 95 Bihar Factories Rules, 1950 C 123 supply cf water; together with, in either case, a sufficient supply of nail brushes, soap or other suitable cleansing mcerial and clean towels; (c) a suitable mess-room adequate for the number remaining on the premises during the meal intervals, which shall be furnished with (l) suflicient tables and benches and (2) adequate means for warming food and for boiling water. The mess•room shall (1) be separate from any room or shed in which hides or skins are stored, treated or mani •ulated, (2) be separate from the cloak-room and (3) be placed under the charge ofa res- ponsible person; (d) suitable accommodation for clothing not worn during working hours with adequate arrangements for drying the clothing if wet. The accommodation so provided shali be placcd under the charge of a responsible person

4. Food, drink, etc., prohibited in work-rooms.— No food, drink, •pan' and 'supari' or tobacco shall be brougyt into or consumed by any worker in any woyk-room or shed in which hides or skins are stored, treated or manipulated

5. First aid arrangements.—The occupier shall— (a) arrange for an inspection of the hands of all persons coming into contact with chrome solutions to be made twice a week by a res- ponsible person; (b) provide and maintain a sumcient supply of suitable ointment and impermeable waterproof plaster in a box readily accessible to the worker and used solely for the purpose of keeping the ointment and plaster. Schedule X Printing Presses and Type Foundries—Certain Lead Process carried therein I. Exemption.—Where the Chief Inspector is satisfied that allor any of the provisions of this schedule are not necessary for the protection of persons employed, he may by a certificate in writing exempt any 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

2. Definition.—ln these regulatiohs— (a) (b) (c) "Lead Material" means matejial containing not less than 5 per cent of lead. "Lead process" means— the melting of lead or any lead material for casting and mecha- nical composing; and the re-charging of machines with used lead material, or any other work including

removal of dross from melting pots, cleaning of plungers; and 124] Bihar Factories Rules, 1950 [Rule 95 (d) manipulation, movement or other treatment of lead material; "Effcient exhaust draught" means localised ventilation effected by heat or mechanical means for the removal of gas, vapour, fume or dust at the point where they originate. 3. 'C.Exhaust draught. "—None of the following processes shall be carried on except with the effcient exhaust draught : (a). melting lead material, or slugs; (b) heating Jemi material, so that vapour containing lead is given off; un;ess carried on in such a manner as to free escape of gas, vapour, fume or dust into any place in which the work is carried on, or unless carried on in electri :ally heated and thermostatic controlled melting pots, such exhaust draught shall be effected by mechanical means and as 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 woman or young persons shall be e nployed 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 effe- ctual separation from one another and from any other process • (a) me!ting of lead or any lead material; (b) casting of lead ingots: (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 work-room near the machine except when the dross is being deposited therein

7. Floor of work-room.—The floor of every work-room where lead process is carried on shall be, (a) of cement or of similar material so as to be smooth and imper- vious to water; (b) maintained in sound condition, and (c) cleaned throughout daily after being thoroughly damped with water at a time no other work is being carried on at the place

8. Mess-room.—There shall be provided and maintained for the employ- ees 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

9. Washing facilities.—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) (i)a trough with a smooth impervious surface, fitted with a water-pipe without plug, and of suffcrent length to allow 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 2 feet; or Rule 95 J I Bihar Factories Rules, 1950 [125 (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 Jaid on or always readily available; or (b) a sumcient supply of clean towels made of suitable material, rene- wed daily with a sumcient supply (f soap or other suitable clean- sing material. IO. Medical Examination.—(a) Every person employed in a lead process shall be examined by a Certifying Surgeon within j4 days on his first employ- ment in such processes and at intervals of nct more than 3 months, and a record of such examination shall be entered by the Certifying Surgeon in the form of special certificate of fitness in

Form no. 24. (b) A health register containing names of all persons employed in a lead process shall be kept in Form no. 16. (c) No person after suspension shall be employed in a lead process without the written sanction from the Certifying Surgeon, entered in the health register

11. Food, drinks, etc., prohibited in 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 M. Manufacture of Pottery l. Application.—This Schedule shall apply to all factories wherein manufacture and decoration of pottery as hereinafter defined, and the manu- factures and processes, named below are carried on (a) Calcining, crushing, grinding, sieving of flint or quartz; (b) Mixing of flint or quartz with clay or other materials in prepara- tion of a pottery body. (c) Manufacture of lithographic transfers, frits or glazes fog- use in the manufacture or decoration of pottery, and (d) Processes incidental to the manufactures and processes mentioned above : Provided that these rules shall not apply to factories in which any of the following articles, but no other potteries are made (i) Unglazed or salt glazed bricks and tiles, or (ii) Architectural terra-cotta made from plastic clay, either unglazed or glazed with leadless glaze only : Provided further that these rules shall be in addition to and not in der- ogation of any of tbe provisions of the Factories Act, 1948 or any other rules made thereunder or any other Act or Rules

2. Definitions.—Por the purposes of this Schedule— (i) "Pottery" includes earthen ware, stone ware, porcelain, china tiles and any other articles made from clay or from a mixture contain. ing clay and other materials; 126 Bihar Factories Rules; 1950 [Rule 95 (ii) Potter's Shop" includes all places where pottery is formed by pressing 0? by any other process and all places where fettling, sha ping or other treatment of pottery articles prior to placing for the biscuit fire is carried on; (iii) "Fetlimg" includes scailoping, towing, sand-papering, sand-stick- ing and any other procesg of fettling and cleaning of pottery; (iv) "Moist method" when this expression is used in relation to clean, ing means a method of cleaning in which damp saw-dust or other suitable damp waterial is used and which prevents dust from ris- ing into the air duriug the cleaning process; (v) "Stopping of biscuit ware" means the filling up of cracks in ware which has been fired but to which glaze has not been applied; (vi) "Thimble picking" means the picking over, sorting or rc•arrang- ing for further use of thimbles, stilts, spurs, strips, saddles or any similar articles which has been used for the support of pottery articles during the process of glost firing; (vii) "Wedging of clay" means the treatment of clay which has not been pugged or rolled, by raising one piece of clay by hand and bringing It down upon another piece; but does not include the process, frequently known as "slapping of clay" in which two pieces of clay each small enough 10 oe held in one hand are slapped together; "Leadless glaze" means a glaze which does not contain more than (vii i) one per cent of its dry weight of a lead compound calculated as lead monoxide, when determined in the manner as specified in the definition of "Iow solubility glaze"; "Low solubility glaze" means a glaze which does not yield to (ix) 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 1000C 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 filtered. The lead salt contained in the clear filtrate shall then be precipi- tated as lead sulphide and weighed as lead sulphate. "Ware cleaning" means the removal of surplus glaze from ware (x) after the application of the glaze bat before glost firing and inclu- des panel-cutting; (xi) "Lithographic transfer making" includes the wiping of colour and subsequent brushing of transfer sheet; (xii) "Flint or quartz milling" includes the calcining of flint and the sieving, crushing, grinding or any other manipulatior; of flint and quartz in, or incidental to the manufacture of ground flint or quartz ; Rule 95 J Bihar Factories Rules, 1950 [127 t 5 11 .e i- u- he nd or (xiii) 'Ground or powdered flint or quartz" does not include natural sands; (xiv) "Effcient Exhaust draught" means localised ventilation effec{ed by mechanical or other means, for the removal Of gas. vapour, dust or fumes so as to prevent it from escaping into the air of any place in which work is carried on. No arrangement or device shall be deemed emcient which fails to remove effectively the gas, vapour, dust or fumes generated at the point where it originates, and which permits the yubstance removed to escape into or re- enter the same or any other work place either directly or indirectly. (xv) 'GDamp fettling" means fettling done either— (a) wholly with a wet sponge or. any other suitable wet material, or (b) while they were being fettled is still so damp that no dust is given off, (xvi) "Slip house" includes any place where plunging is carried on; (x ware the body of which cons- ists of

natural clay to which no flint or quartz or other form of free silica has been added; (xviii) "Flow material" means any material which contains a lead com- pound and which is placed in saggars with a view to its entire or partial volatilisation during the glost firing Of the ware; (xix) "Galena" means the native sulphide of lead containing not more than five per cent of soluble lead compound calculated as lead monoxide when determined in the manner described in the defini- tion of 'Slow solubility glaze"; (xx) "Glost placing" includes— (i) the placing of ware coated with unfired glaze on to cranks or similar articles prior to their transference to saggars, trucks, ovens or kilns for glost firing, (ii) the placing of such ware into saggars or on to trucks or on to oven-conveyors, (iii) the placing of saggars containing such ware into ovens or kilns or on to trucks, and (iv) the removal and carrying of saggars or cranks from the oven, kiln or truck after glost firing except in the case of tunel ovens

3. Exhaust The following processes shall not be carried on without the use of an emcient exhaust draught .(i) all processes involving the manipulation or use of a dry and unfri- tted lead compound, (ii) fettling operation of any kind, whether on green ware or biscuit, provided that this shall not apply to the wet fettling, and to the 128 Bihar Factories Rules, 1950 [Rule 95 (iii) (iv) (v) (vii) (viii) (ix) (x) (xi) (xii) (xiii) (xiv) (xv) occasional finishing of pottery articles without the aid of mech- anieal power, Sifting of clay dust or any other material for making tiles.or other articles by pressure, except uhere— (a) this is done in a machine so enclosed as to effecti',ély prevent the escape of dust, or (b) the material to be sifted is so damp that no dust can be given off, Pressing of tiles from clay dust, an exhaust opening being conn- ected with each ss; this clause shall also apply to the pressing from clay dust of articles cther than tiles, unless the material is so damp that no dust is given off, fettling of tiles made from clay dust by pressure, except where the fettling is done wholly on, or with, damp mater;al, this clause shall apply to the fettling or other articles made from clay dust, unless the material IS so damp that no dust is given off, process of loading and unloading of saggars where handling and manipulation of ground and powdered flint, quartz, alumina or other materials are involved, brushing of earthen ware 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 Factor- ies as adequate, having regard to all the circumstances of tho case, fettling of biscuit ware which has been fired in powdered flint or quartz except where this is done in machines so enclosed as to effectively prevent the escape of dust, ware cleaning after the application of glaze by dipping or other pro cess, 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, 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, grinding offtiles on a power driven wheel unless an efficient water spray is used on the wheel, iifting and conveying materials by elevators and conveyors unless they are effectively enclosed and so arranged as to prevent escape of dust into the air or near to any place in which persons are employed, preparation or weighing out of flow material, lawning of dry col- ours, colour dusting and colour blowing ; mould making unless the bins of similar receptacles used for hol- ding plaster of paris are provided with suitable covers ; Rule 95] Bihar Factories Rules, 1950 [129 (xvi) manipulation of calcined material unless the material has heen made and remains so wet that no dust is given off : (xvii) fettling Oiher -than damp fettling (xviii) placing of china for the biscuit fire if alumina or other powdered material is used ; (xix) emptying of china biscuit flatware from saggars after firing in alumina or other powdered materials ; (xx) sieving of alumina or other powdered placing material (xxi) processes using alumina or other powdered substance as placing materials (xxii) polishing of ware ; (xxiii) grinding of ware on a dry sand-stone wheel ; (xxiv) sorting of glost ware with a power-driven tool ; (xxv) ground laying or colour dusting , or the wiping off of colour after either of those processes. (2) Every process for which an exhaust draught is required shall be carried on inside a suitable hood. (3) Air discharged from exhaust ventilating plant used in connection with any of the processes specified in clause 3 (I) shall, whether or not it has been passed through dust collecting apparatus, be discharged directly into the open air from where it is not liable to be drawn into the air of any work- room

4. Each of following processes shall be carried on in such a manner and under such condition as to secure effectual separation from one another, and from other wet processes (a) Crushing and dry grinding or sieving of materials, fettling, pres- sing of tiles, drying o? clay and greenware, loading and un-loadinrr saggars ; (b) all processes involving the use of a dry lead compound.5a Every slip house shall for the purpose of exclu ling ted from— (a) any place in which clay

is dried ; (b) any place in which clay is taken from a drier; and (c) any place in which the dry grinding or sieving of materials for pottery bodies is carried on

6. Any glaze which is not a leadless glaze or Jow solubility glaze shall not be used in a factory in which pottery is manufactured.7, No woman or young person shall be employed allowed to work in any of the operations specified in clause 3 (I) or at any place where such operations are carried on in the following processes (i) the wedging of clay • (ii) wheel turning for a thrower or wheel turning for pressing tiles ; 130] Bihar Factories Rules, 1950 [Rule 95 8. The potter's wheel (Jolly and Jigger) shall be provided with screens or so constructed as to prevent clay scraping being thrown off beyond the wheel. 9. (I) All possible mea;ures shall be taken by damping or otherwise to prevent dust arising during cleaning of floors and walls. (2) Damp saw dust or other suitable material shall be used to render to moist method effective in preventing dust arising into the air during the process which shall be carried oat after work has ceased. (3) All materials for thimble picking which is collected from floors or work-benches Shal! be riddled in an enclosed receptacle before it is taken to the place where thimble picking is to be done. (4) The following requirements shall apply to potter's shops and to any other place where clay iS dried or clay dust is prepared All parts of beams, ledges and fixtures, more than six feet six inches above the floor shall be cleaned at least once in every period of six months with an efficient vacuum cleaning apparatus or by some other effective and suitable method, and not by sweeping. IO. (I) The floors or potters shops, slip houses, dipping houses ware cleaning rooms, such drying stoves as are entered by work people and the floors ot all places where sieving, crushing or grinding of flint and quartz is carried on shall : (i) be smooth and impervious ; (ii) be kept in good repair so that they can be properly cleaned by a moist method and so that no dust can fall through into any room below ; (iii) be capable of being swilled or washed. (2) All the floors shall be cleaned either : (i) daily by a moist or wet method after work has ceased for the day and two hours before the hour of starting of the work the following day, or (ii) daily with an efficient vacuum cleaner. 11. (I) All persons employed in any process included under clauses 3 shall be examined by the Certifying Surgeon within seven days preceding or following the date of their first employment in the factory in such process; thereafter all persons employed in any process included in sub-clauses (i) and (xiv) of clause 3 shall be examined by the Certifying Surgeon once in every three calender months and those employed in any process inc!uded in sub- clause (ii) to (xiii) and (xv) and (xvi) of clause 3 once in every 12 months by the Certifying Surgeon. Records of such examinations shall be entered by the Certifying Surgeon in the Health Register. (IA) X 'ray examination of the chest of every worker employed in any process specified in sub-clause (ii) to (xiii) and (xv) and (xvi) of clause 3 shall be carried out : (i) if he is already in employment on the date on which this rule comes into force, within six months of the said date, and at an interval of every three years thereafter : and Rule 95] Bihar Factories Rules, 1950 [131 (ii) if he is employed after the date on which this rules comes into force, within six months of the said date, and at an interval of every three years thereafter. The result of every X' ray examination along with the X'ray plate shall be produced before the Certifying Surgeon within a month of the said examination. (1B) Without any prejudice to the provision of sub-clause (IA), if the Certifying Surgeon during the course of the medical examination of any worker has any reason to suspect that the said worker had been Effected or was being affected by any chest diseases he may direct the manager or the occupier in writing to get the said X'rayed and to produce the result of the X'ray examin- ation along with X'ray plate within a specified time. (IC) If as a result of the general medical examination or of the X'ray examination, the Certifying Surgeon is of the opinion that any special or expert clinical or pathological or any other special examination or test is necessary to diagnose or to determine whether or not the worker had been affected or was being affe- ected by any diseases arising out of his occupation or to protect the health of the worker, he may direct the manager or the occupier in writing to get any such examination or test carried out and to produce the report and the result thereof within a specified time. It shall be the duty of the manager or the occupier as the case may be to carry out the direction given by the certifying surgeon under sub-clause (1B) and (IC). (2) If at any time the Certifying Surgeon is of opinion that any person employed in any process specified in clause 3 is no longer fit for employment nn the ground that continuance would involve damage to his health, he shall make an entry to that effect in the Health Register. (3) Any person who has been declared unfit by the Certifying Surgeon at any time shall not be re-employed without written sanction from the Certifying Surgeon and entered in the Health Register. (4) A worker declared unfit by the Certifying Surgeon may be employ ss or work as may be specified by the

Certifying Sur- geon. 12. (I) The occupier shall provide and maintain suitable overalls and head coverings for all persons employed in processes included under clause 3. (2) The occupier shall provide and maintain suitable aprons of water- proof or similar materials which can be sponged daily, for the use of the dipper, dipper's assistants, throwers, jolly workers, casters, mould makers . and filter press and pug mill workers. (3) No person shall be allowed to work in emptying sacks of dusty materials, weighing out and mixing of dusty materials and charging of ball mills and blungers without wearing a suitable and emcient dust respira• or which shall be supplied by the occupier

13. Before each meal and before the end of the day's work at least ten minutes, in addition to the regular rest interval for meals, shall be allowed for 132] Bihar Factories Rules, 1950 [Rule 95 washing to each person employed in any of the processes included under clause 3

14. No food, drink, 'pan' and 'supari', or tobacco shall be brought into, or consumed by any worker in any work-place in which any of the processes included 'I,nder cla•jse 3 are carried on and no person shall remain in any such work-place during intervals for meals or rest

15. There shall be provided and maintained for the use of 811 persons employed in any o? the processes included under clause 3—(a) a cloak-room for clothings put off during working hours, it shall be outside any room in which is carried on any of the processes included under clause 3, and shall be enclosed from the general air of any such room. (b) separate and suitable arrangements for accommodation of protec- tive clothing and equipment provided under clause 12

16. Every drying stove, drier and mangle shall be so ventilated that there is no flow of hot air from the stove, dryer or mangle into any place where any person works. The drying of pottery articles shall be carried out in rooms set apart for that purpose

17. In all potter's shops and in all drying stoves which are entered by work people.boxes shall be provided for the reception of clay scraps and broken ware

18. Washiag facilities.—Theoccupier shall provide and maintain, in a cleanly state and in good repair, for the use of all persons employed in any of the processes specified in clause 3 a wash place under cover; with either,— (a) (i) a trough with smooth impervious surface fitted with a waste pipe, without plug, and of suflicient length to allow at least two feet 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 two feet; 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 4 feet apart, and (b) a sufficient supply of clean towels made of suitable material changed daily, with sufficient supply of nailbrush arid soap. 19 Mess-room. There shall be provided and maintained for use of all persons remaining within the premises during the rest intervals, a suitable mess room providing accommodation of IO square feet per head furnished with (i) a sufficient number af tables and chairs or benches with back rest, (ii) arrangements for washing utensils, (iii) adequate means for warming food, and (iv) adequate quantity of drinking water. (2) The room shall be adequately ventilated by the circulation Of fresh air, placed under the charge of a responsible person and shall be kept clean. Rule 95] Bihar Factories Rules, 1950 133 20. If in respect of any factory the Chief Inspector of Factories is sat- isfied 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 an order in writing exempt such factory from all or any of such provisions, subject to such conditions as he may specify therein. Such order may at any time be revoked by the Chief Inspector of Factories without assigning any reason. Schedule XII. Manufacture of Articles from Refractory Materials I. Application.—This Scheule shall apply to the following processes :— (I) handling, moving, breaking, crushing, grinding or sieving of any refractory materials, containing not less than 25 per cent total silica for the purpose of manufacture— (a) of articles used in the construction of furnaces and flues, (b) of crucibles, and (c) of compositions or other materials used in the preparation of moulds in which metals are cast; or (2) any process in the manufacture of refractory bricks as hereinaft€r defined : Provided that nothing in this Schedule shall apply— (a) to handling, moving, mixing or sieving of natural sand; or (b) to the manipulation of rotten rock in the preparation of moulds used in metal foundries Provided further that if the Chief Inspector of Factories is satisfied in respect of any factory or part thereof that owing to the special conditions of work or otherwise, any of the requirements of this Schedule can be suspended or relaxed without any danger to the healt therein, he may by an order in writing

grant such suspension or relaxation for such period and on such conditions as he may think fit. Any such order may be revoked at any time

2. Definitions.—(a) "Refractory material" means any refractory material containing not less than 25 per cent total silica. (b) "Refractory brick" means any brick or article composed o? refrac- tory material and containing not less than 25 per cent tota I silica. (c) "Efficient Exhaust draught" means localised ventilation by mechan- ical means for the removal of dust so as to prevent dust from escaping into the air of any place in which work is carried on. No draught shall be deemed to be emcient which fails to remove the dust produced at the point where such dust originates

3. No refractory material shall be broken in pieces by manual labour unless the process is carried out in the open air : Provided that where it is not practicable to carry out this process in open air, the process shall be carried out under an efficient exhaust draught

4. No refractory material, unless it is so wet that dust will not be pro- duced, shall be crushed or ground in a stone crushing or a grinding machine unless such machine is provided with—134 Bihar Factories Rules, 1950 [Rule 95 (a) an efficient exhaust draught and efficient dust co llecting applia- nces; or (b) an efficient water or steam spray . Provided that every grinding machine wherein any refractory material is ground in dry state, shall be, totally enclosed and connected to a mechanical exhaust system so as to prevent effectively any escape of dust outside the casing of the machine by maintaininga pressure below the atmospheric pressure within the casting of the machine : Provided further that all processes of crushing and grinding shall be effe- ctively isolated from other processes: 5. All chutes, conveyors, elevators, screens, sieves and mixers used for manipulating refractory material shall, unless the materill is so wet that dust will not be produced, be enclosed and be pro•, ided with efficient exhaust draught

6. No refractory material so dry as to produce dust shall—(a) be loaded into any wagon or other receptacle for transport unless it has been placed in a suitable dust proof container so dumped as to preclude dust; or (b) be unloaded from any wagon or other receptacle for transport unless it has been so damped as to preclude dust or unless the work is done under an efficient exhaust draught • (c) be shovelled or raked or otherwise manipulated by means of hand tools in any manufacturing process unless it has been so damped as to preclude dust or unless the work is done under an efficient exhaust draught Provided that paragraph (b) of this rule shall not apply to refractory material in the form of rock or pebbles before it is manipulated in any man- ufacturing process. 7. (a) The floors of ail places where refractory bricks are dried, other than the floors of tunnel ovens or chamber driers not normally entered by persons employed shall, after each lot of refractory bricks has been removed, be carefully cleaned of all debris and the part being cleaned shall be kept damp while the cleaning is being done (b) There shall be provided in every such place a constant supply of water laid on under adequate pressure with sufficient connections and a flexible branch pipe and sprinkler to enable water to be supplied directly on part of the floor

8. No drying stoves in which refractory bricks are baked by fires before being placed in the kilns shall be used

9. The surface of every floor or place where persons are liable to pass shall be cleaned of debris of refractory material once at least during each daily period of employment or where shifts are worked, one during each shift such debris unless it is immediately required for use in the process shall be effecti- vely damped and either be placed in covered receptacles, or be otherwise stored in such manner as to prevent the escape of dust into the air in or near to any place where any person is employed. Rule 95] Bihar Factories Rules, 1950 [135 t •e i- ar 10. Where plates are used, whether portable or

forming part of the floor, on which refractory bricks are dried, such plates shall be freed from adherent material only by a wet method or by such other method as will prevent the escape of dust into the air

11. The dust or powder of refractory materials shali not be used for sprinkling the moulds in refractory brick making . Provided that nothing in this paragraph shall be deemed to prevent the use of natural sand for the purpose ot sprinkling the moulds

12. NO worker shall be allowed to work on any dusty process or at any place where dust of any refractory materials is present in the atmosphere : Provided that in an emergency, a worker be allowed to work at such process or place if he wears a suitable and emcient dust mask or breathing apparatus

13. Medical examination.—(a) Every worker employed on any of the processes specified in sub-paragraphs (I) and (2) of paragraph I shall be medical!y examined in such manner and at such intervals as may be specified by any rules made under the Workmen's Compensation Act, 1923 (VIII of 1923) or if no such rules have been framed under the said Act, every such worker shall be medically examined by the Certifying Surgeon before employ- ment on any of the aforesaid processes and at intervals not exceeding six months thereafter. (b) Subject. to sub-paragraph (c), an X'ray examination of the chest of every worker referred to in sub-paragraph (a) shall be carried out— (i) if he is already in employment on the date of coming into force of the sub-paragraph, within six months of such date and at an interval of every three years thereafter • (ii) if he is employed after such date within one month of the date of his employment and at an interval of. every three years the- reafter ; and the result of every such X'ray examination shall be produced before the Certifying Surgeon within a month of the examination. (c) If the Certifying Surgeon, during the course of medical examination of any worker under sub-paragraph (a), has reason to suspect onset of any chest disease, he may direct the manager or the occupier to get an X'ray examination of the worker done and to produce the X'ray plate before him within a specified .time and on receipt of such direction the manager or the occupier, as the case may be, shall carry out the direction. (d) The Certifying Surgeon shall grant to each worker examined a -certificate specifying therein whether or not the worker was considered fit to be employed on any Of the aforesaid processes. (e) The manager shall maintain a register in which the findings and recommendations of the Certifying Surgeon in respect of every worker and in respect of every medical examination shall be maintained duly signed by the Certifying Surgeon. (f) A worker not declared fit Shal! not be employed on any of the processes and he shall be employed on only such other process or he 136] Bihar Factories Rules, 1950 [Rule 95 shall be subjected to such other examination or treatment as may be directed by the Certifyi%g Surgeon. (g) No fees shall be charged from any worker for the medical examina- tion and it shali be the of the occupier and the manager to com- ply with the pro.visions of this Schedule

14. In case any existing plant or machinery needs alteration, modifica- lion or replacement or in case any new plant is required to be installed, to comply with the-requirements of this Schedule, sucn alteration, modification, replacement or Installation of the ptant or mechinery shall be carried on with- in a period not exceeding one year frocn the date of publication of this rule: Provided that the Chief Inspector of Factories in consideration of special and exceptional circumstances by an order in writing may extend this period for such reasonable length of time as he may think fit. Schedule XIII. Chenaical Works PART 1 l. Application.—This Schedule shall apply to all factories wherein the operations spceif:ed in clause (13) of sub-rule (l) Of rule 95 are carried on. These rules shall be in addition to and not in derogation of any provisions of the Factories Act, 1948 or any other rules made thereunder, or any other Act, or Rules

2. Definitions.-—ln this Schedule, unless there is anything repugnant in the subject or context (i) "Chemical works" means any factory or part of any factory in which any chemical process is carried on ; (ii) "Chemical process" means manufacture, recovery, handling or storing of chemicals or any other process in which any chemical is used ; (iii) "Breathing apparatus" means a helmet of face-piece with neces- sary connections by means of which, a person using it in poiso- nous, asphyxiating or irritant atmosphere breathes ordinary air, or any other suitable apparatus approved in writing by the Chief Inspector ; (iv) "Life belt" means a belt made of leather or other suitable materi- als which can be securely fastend 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, and the stresses caused due to the impact caused by the fall o? a man ; (v) "Efficient exhaust draught" means localised ventilation effected by mechanical or other means, for the

removal of gas, vapour, dust or fumes so as to prevent it from escaping into the air of any place in which work is carried on. No arrangement or device shall be deemed efficient which fails to remove effectively the gas, vapour, dust or fumes generated at the point where it originates, and which permits the substance removed to escape into or re-enter the same or any other work place either directly or indirectly • (vi) "Surgeon" means a Cert ifying Surgeon appointed under section IO or the Factories Act, 1948. Rule 95] (vii) (viii) (ix) (x) (xii) (xii) (xiii) Bihar Factories Rules, 1950 [137 "Suspension" means suspension by written certificate in the Health Register, signed by the Surgeon, from employment in any process mentioncd in the certificate; "Bleaching powder" means the bleaching powder commonly called chloride of lime ; "Chlorate" means chlorate or perchlorate; "Caustic" means hydroxide of potassium or sodium; "Caustic p Dt" means a metal pot fixed over a furnace or flue used for concentrating or boiling caustic liquor or any other liquor; "Chrome process" means manufacture o? chromate or bichromate of potassium, or sodium, or, the manipulation, movement or other treatment of these substances in connection with their manufacture and use ; "Nitro cr Amino process" means the manufacture of nitro or amino derivatives of phenol and of benzene or its homologues, and the making of explosive with the use of any of these substances

3. Exemption.—lf the Chief Inspector is satisfied in respect of any factory or any process that, owing to the special conditions or special methods of work, or for any other reason all or any of the requirements of this Schedule are not necessary for the protection of persons employed in any factory or process, he may by an order in writing exempt such factory or process from all or any of the provisions of this Schedule, subject to such conditions as he may by such order specify. He may in his discretion at any time revoke whole or part of such order

4. Register and records.—All registers and records required to be main- tained under this Schedule shall be maintained in the factory in a suitable form or in such form as may be prescribed or directed by the Chief Inspector and shall be produced before an Inspector, whenever required to do so

PART 11. GENERAL 5. The provisions of Part 11 of this Schedule shall apply to all chemical works specified in Appendix I attached to this Schedule

6. House Every part of the ways, works, machinery and plant shall be maintained in a clean and tidy condition.(b) Anyispiilage of materials shall be •cleaned up without delay. (c) Floors, platforms, stairways, passages and gangways shall be kept free of any obstruction whether permanent or temporary. (d) There shall be provided easy means of access to all parts of the plant and adequate and proper implements to facilitate cleaning, maintenance and repair

7. Improper use of No chemical or solvent shall be used by any worker for any purpose other than the process for which it is supplied.138] Bihar Factories Rules, 1950 [Rule 95 (b) Workers shall be instruCteÆ on the possible dangers arising from such misuse. These instructions shall further be displayed in bold letters in prominent places in the different sections of the the works

8. Storage and use of food and testing of materials used in any chemical process.—-(a) No food, drink, tobacco, "pan" •or "Supari" or similar article shall be stored or consumed on or near any place where any chemical process is carried on. (b) Workers shall be Instructed on the possible dangers arising from testing of any material used in any chemical process or of the for drinkitp purpose of any vessel or container used In, or in connection with any chemical proccss. These instructions shall further be displayed in bold letters in pro- minent places in the different sections of the work

9. Process Before commencing any experimental work pilot project, or any new chemical process, adequate steps shall be taken to ascertain definitely all the hazards involved, both in actual operation and in the chemical reactions. The properties ef the raw materials used, the final products to be made, the muddle products and any bye-products arising shall be carefully studied and adequate precautions Shail be taken for dealing with any hazards including effects thereof on the workers. In the design and layout of the building and plants, adequate provisions shall be made to guard against any hazards. (b) The Chief Inspector shall be informed in writing about the commen- cement of the operation of any pilot or experimental plant or process, and safety of persons exposed to the hazards likely to arise therefrom mentioned in sub-clause (a)shall be ensured, and where necessary, advice shall be obtained from the Chief Inspector on measures to be taken in this regard

10. Unauthorised personnel.—(a) Unauthorised persons shall not be per- mitted to enter any section of a chemical works where there is any special danger. (b) Visitors shall be provided, where necessary, with suitable safety equipments and shall be accompanied round dangerous plants by a responsible person of the factory

11. Instrume nts.—AII instruments, such as pressure gauges, thermo- meters, flow-meters, weighing machines, etc. shall be tested at regular intervals by a competent person and records of these tests shall be kept in a register

12. Cocks and valves.—SuitabIe and easily accessible valves shall be provided in all service lines at sumciently short intervals for convenience in blanking off etc. All cocks and valves shall be operated at least once in a month and tested periodically by a competent person, and records of these tests shall be kept in a register. A plan of all service installations shall be kept readily available

13. Man-holes.—No man-holes shall be opened for entry until effective fencing has been erected round it

14. Emergency instructions.—SpeciaI instructions in simple language shall be framed to ensure that effective measures may be carried out in cases of emer- gency, to deal with escape of inflammable, poisonous or deleterious gases, vap- ours, liquids or dusts. These instructions shall be further displayed in bold Rule 95 J Bihar Factories Rules, 1950 [139 letters at prominent places in the different section of the works. All workers shall be trained and instructed in the action to be taken in such emergencies

15. Protection of reaction mixtures.—SuitabIe arrangements shall be made to ensure that no foreign matter of any short can fall into reaction mixtures

16. Electrical apparatus.—Electrical plants, fittings and conductors shall, if éxposed to a damp or corrosive atmosphere be adequately protected. Perio- dic tests shall be carried out on all electrical circuits to detect any defect or fault and any defect or fault detected shall be removed immediately

17. Place of Workers shall be allowed only in those places in which they have been given orders to work.(b) In dangerous sections of a factory the number of workers shall be kept to a minimum compatible with the process

18. Packing, storage and transport of Chemicals shall be packed and stored in containers suitable for the purpose and of adequate stren- gth for storage or transport. All such containers shall be stored and transpor- ted in such a manner as to ensure that, In the event ofa spillage they will neither produce a reacting mixture, nor cause the development of toxic or fire risk in contact with other Lnaterials in its vicinity, or with walls, floors or dust thereon. (b) No corrosive chemical or substance shall be stored or transported except in containers of a suitable material upon which the corrosive substance may have no chemical action, of adequate strength and of suitable design and construction and no such container shall be transported, carried or moved from one place to other except in crates or receptacles of adequate strength and suitable design and construction. (c) Crates or receptacles for containers with a capacity of 11.5 litres (2.5 gallons) or more and containing any corrosive substance shall be transported or moved from one place to other on suitable rubber wheeled-trucks or trolleys or any other device approved by the Inspector Provided that such containers, crates and receptacles may be carried manually by not less than two persons, at a height below the waist-line of the persons carrying and by means ofa suitable and adequate device designed and constructed for the purpose. (d) On every container containing any chemical substance, a label shall be securely amxed and attached mentioning clearly and legibly in bold letters the name of chemical • Provided that if there is any Indian standard of labelling of such contai- ners the same shall be adopted. (e) If in the opinion of an Inspector the system of storage and transport of any chemical is not safe, he may direct such system and devices to be used as he may consider safe and desirable. FIRE AND EXPLOSION RISK

19. Isolation of building and site and fire resistance.—(a) Buildings and plants shall be sited with due regard to the dangers which may arise from the processes involved and in particular shall be spaced at distances which are deemed safe for the fire and explosion risks connected with the processes in 140] Bihar Factories Rules, 1950 [Rule 95 91. adjacent buildings. Consideration shall be given to the effect of any process carried out in adjacent factories or plants. (b) Where special dangers exist separate buildings shall be used for the different parts of a process. They shall be spaced at sufficient distances apart and shielded to prevent damage to each other on the event of fire or explosion and shall be sa fe-guarded by the

provision of suitable blow-out panel or röofs. Where the risk of fire or explosion is considerable, the building shall be devi- ded by blast or protectjve screen walls. (c) No combustible materials shall be used in the erection of working buildings, unless there are special reasons recessitating their use, in which case they shall be of light fire resistant con struct:on, and floors shall be Of imper- vious fire-resistant material and shall be regularly maintained in such condition. (a) No internal 20. Dangers of ignition (including lighting installation).— combustion engine, and no electric motor or other electric equipment, capable of generating sparks or otherwise causing combustion shall be installed or used in a building or danger zone. Electric conductor shall be encased in screwed steel conduit. (b) All hot exhaust pipes shall be installed outsideÆ1 building and other hot pipes inside the plant be suitably protected (c) Portable electric lamps shall not be used, unless of an intrinsically safe type, and portable electric tools connected by flexible wires shall not be used unless of the flame proof type. (d) Where an inflammable atmosphere may occur, the soles of foot-wear worn b)' workers shall have no metal on them, and the wheels of trucks, or •conveyors shall be of a mateiial which shall be a good conductor and non sparking. Adequate precautions shall be taken to prevent the ignition of explosive or inflammable substance by sparks emitted from locomotives or other vehicles operatcd in the factory or on public lines. (e) No electric arc lamp or naked light, fixed or portable, shall be used and no person shall have in his possession any match or any apparatus of any kind for producing a naked light or spark in, oc on, or about any part of the factory, where there is any likelihood of fire or explosion from inflammable gas, vapour or dust, and all incandescent electric lights in such parts shall be in double air tight glass covers. (f) Prominent notice in the language understood by the majority of the workers and legible by day and by night, prohibiting smoking, the use of naked lights, and the carrying of matches or any apparatus for producing a naked light or spark, shall be affixed at the entrance of every room or place where there is any risk of fire or explosion from inflammble gas, vapour or dust. In the case of illiterate workers the contents of the notices shall be fully and carefully explained to them when they commence work in the factory for the first time and again when they have completed one week at the factory. (g) A sufficient supply of spades, scrapers and pails made from non-sparking materials shall be provided for the use Of persons employed in clean- ing out or removing residues from any chamber, still, tank or any other vessel wherein there may be risk of ignition or explosion, or in cleaning or remov- ing any substance which may cause evolution of arseniuretted hydrogen or any other substance which may be inflammable or likely to cause explosion, and in no case any tool other than non-sparking tool shall be used on any such Rule 95] Bihar Factories Rules, 1950 [141 work or, while undertaking any repair or maintenance work at any such place or plant. Note.—The risk is not always obvious and may arise, for example thro- ugh the production of hydrogen or other explosive substances in acid tanks

21. Static electricity and lightning protection.—(a) All pipe line and belts and other machinery and plants on which static electricity is likely to accumulate, shall be effectively earthed. Receptacles for inflammable liquids shall have metallic connections jo the earthed supply tanks to prevent sparking of static electricity. Where necessary humidity shall be controlled. (b) Mobile tank wagons shall be earthed during filling and discharge, and precautions shall be taken to ensure that earthing is effective before such filling or discharge takes place. (c) Lightning protection apparatus shall be fitted where necessary, and shall be maintained in good condition

22. Process heating.—The method of providing heat for a process shall be as safe as possible and where the use of naked flame is unavoidable the plant shall be so constructed as to prevent any escaping inflammable gas- vapour, or dust coming into contact with the flame, or exhaust gases, or other hot agency likely to cause ignition and, unless impracticable, the heating medium shali be automatically controlled at a pre-determined temperature below the danger temperature

23. Escape of Provision shall be made in all plants, sewers, drains, flues, ducts, culverts and burried pipes to prevent the escape and spread of any liquid, gas, vapour, fume or dust likely to give rise to fice or explosion, during normal working, cleaning or overhauling or in the event of accident or emergency.(b) If escape occurs, such substances shall be removed expeditiously and efficiently at the point of liberation. The effluent shall be trapped and rendered safe outside the danger area

24. Leakage of inflammable or dangerous liquids.—Provision shall be made to confine by means of bund, walls, sumps, etc., possible leakages from vessels containing inflammable or dangerous liquids. Adequate and suitable fixed fire fighting appliances shall be installed in the vicinty of such vessels

25. Cleaning of empty containers and storage of combustible materials.— (a) All empty containers which have held any inflammable or poisonous material and metal containers which have heid sulphuric acid shall be rende- red permanently and completely safe and shall not be repaired, or destroyed, until their cleaning in such manner as to make them completely and perma- nently safe has been completed. (b) Combustible and inflammable materials shall not be stored in close proximity to chemicals which are liable to cause ignition. (c) Rubbish shall be removed from buildings without delay and placed in special metal containers provided with close fitting lids. The contents shall be removed daily and suitably dealt with. Waste products containing inflam- mable or explosive materials shall not be placed on rubbish heaps bui shall be destroyed in an appropriate manner. 142 Bihar Factories Rules, 1950 [Rule 95 26. Installing of pipe lines for inflammable liquids.—AIl pipe lines for the transport of inflammable liquids shall be protected agaist damage or brea- kage, shall be arranged so that there is no risk of mechanical damage from vehicles and shall be so laid that, they drain throughout v,ithout the collection of deposits at any part. All flanged joints, bends and other connections shall be regularly inspected. Cocks and valves shall be so constructed that explosive residues cannot collect therein. The open and closed positions of all cocks and valves shall be clearly indicated on the outside

27. Packing of reaction vessels.—Packing and jointing materials for reaction vessels (including covers, man-hole covers, and exhaust pipes) and in pipe lines and high or Iow temperature materials shall not con- tain materials which are combustible or which react with the products of the plant

28. Safety valves.—Every still and every closed vessel in which gas is evolved or in!0 which gas is passed, and in which the pressure is likely to rise to a dangerous degree, shall have attached to it a pressure gauge and a proper safety valve or other equally efficient means to relieve the pressure maintained in gocd condition. But this will not apply to metal bottles or cyiinders used for the transport of compressed gases

29. Vigorous or delayed reactions.— Suitable provision, such as, auto- matic and distant control shall be made for controlling the effects of unduly vigorous or delayed reactions. Automatic flooding or blanketing shall be pro- vided for in [he event of an accident

30. Examination, testing and repair of plant.—Examination, testing and repair of plant parts which have been in contact with explosive and inflamma- ble material or which is under pressure; shall be carried out only under proper supervision

31. Alarm systems.—(a) Gravity or pressure-feed systems for supplying inflammable materials to the various parts of the buildings or plant shall be fitted with alarm systems automatic cut-offs of other devices to pre•v ent over- charging or otherwise endangering the plant. (b) The amount of inflammable material taken into a building in bulk containers shall be kept as Iow as ptacticable at any one time. (c) Adequate steps shall be taken to prevent the escape of inflammable and explosive vapours from any container into the atmosphere of any buil- ding. Gas, Vapour, Fume or Dust Risks

32. Escape of gases, etc.—(a) Effective steps shall be taken to prevent the escape of dangerous gases, vapours, fumes or dust from any part of the plant, by total enclosure of the process involved or by provision of emcient exhaust draught. Effective arrangements shall be made to ensure that in the event of failure of the control measure provided in compliance of the tore- going, the process shall stop immediately. (b) In the event of any such escape, provision shall be made to trap the materials and rend er tham safe

33. Danger doe to Adequate precautions shall be taken to prevent the mixing of effluents which may cause dangerous or poisonous gases to be evolved. Rule 95] Bihar Factories Rules, 1950 [143 (b) Effluents which may contain cr give rise to such gases in the pre- sence of other effluents shall be provided with independent drainage system to ensure that they may be trapped and rendered safe

34. Staging.—(a) Staging shall not be erected over any open vessel unless the vessel is so constructed and ventilated as to prevent the emission of vapour of fumes about such staging. (b) Where such staging is provided to give access tp higher level in large plants, effective means shall be provided at all levels with direct means of access to the outside of the room or building and thence to ground level. (c) Such staging

shall be fitted with suitable hand-rails and toe-boards, and the floors and staging shall be impervious and easily cleanable: 35, Instruction as regards risk.—Before commencing work, every worker shall be fully instructed on the properties of the materials they have to handle and of the dangers arising from any gas, fumes, vapour or dust which may be evolved during the process. Workers shall also be instructed in the measures to be taken to deal with the escape of such gas, fumes or vapours in the event of emergency. 36 Breathing apparatus.—(a) There shall be provided in every factory •where dangerous gas or fume is liable to escape a sumceint supply of— (i) Breathing apparatus of an approved make for the hazards involved. (ii) Oxygen and suitable means of its administration, and (iii) Life- belts. The breathing apparatus and other appliances required by this clause shall be maintained in good order and kept in an ambulance-room or in some other suitable place; which shall be within easy approach, and inspected once in every month by a competent person, appointed in writing by the occupier and a record of their condition shall be entered in a register provided for that purpose : Provided that the Inspector of Factories may direct to keep the breath- ing apparatus and other appliances at such convenient place as he may con- sider suitable. (b) Workers shall be trained, and given a periodic refresher course, at least once in every five months in the use of breathing apparatus and respirators. Respirators shall be kept properly labelled in clean, dry, light-proof cabi- nets, and if liable to be affected by fumes, shall be protected by suitable ccontainers. Respirators shall be dried and cleaned after use and shall be periodically disinfected

37. Treatment of persons.—ln every room or plee where there is any danger of gassing and burns, there shall be a fixed offcial cautionary notice regarding gassing and burns. Such notices shall be legible by day and by night and shall be printed in the language understood by the majority of the workers

38. Personnel protection Suitable protective clothing shall be provided for the use of operatives :— 144] (i) • (iii) Bihar Factories Rules, 1950 [Rule 95 when operating valves or cocks controlling fluids which by their nature, pressure or temperature would be dangerous if a blow-out occurred or when cleaning chokes in systems containing such fluids if pressure is likely to exist behind the chokes, when there is danger of injury by absorption through the skin during the performance of normal duties or the ; event of emer- gency, when there is any risk of injury while handling corrosive subst ances, hot or cold articles, or sharp or rough object, and (iv) when there is any risk of poisonous materials being carried on their clothes. (b) There shall be provided for the use of persons employed in the processes specified in Appendix 11 to this Schedule an adequate supply of such suitable protective equipments as indicated in the said appendix. Respirators shall be of a type suitable for the process for which they are to be used, provided that the Inspector may, by an order in wricing, direct that a particular type of respirator or any other equipment shall be used for a particular process. (c) Protective equipments shall be provided and stored in an appropri- ate place and in a manner so that they may be easily accessible and readily available without any unnecessary delay, whether for normal use or for use during abnormal conditions and emergencies. (d) Arrangements shall be made for the proper and emcient cleaning of all such protective equipments

39. Cloak-rooms.—There shall be provided and maintained for the use of all persons employed in the processes specified in Appendix 11 to this Schedule a suitable cloak-room, for clothing put off during working hours and a suitable place, separate from the cloak-room, for the storage of overalls or working clothes. The rooms provided shall be placed in the charge of an attendant and shall be kept clean

40. Special bathing accommodation.—Without prejudice to the require- ments cf rule 63 of the Bihar Factories Rules, 1950 there shall be prcvided and maintained by the occupier for the use of persons employed in the pro- cesses specified in Appendix Ill to this Schedule, specifically allocated wash- ing and bathing facilities. The washing and bathing facilities shall satisfy the following requirements (a) (b) Basins and troughs shall have smooth impervious upper surface and be fitted with waste pipe and plug and shall have supply of running water laid on and available at all times. Every trough shall have a supply of running water laid on at points above the trough at intervals of not less than tvo feet and available at all times. Basins and troughs shall be sumcient in number to provide at least one unit for every ten workers. For calculating the number Of units required the remainder left after dividing the number of wor- kers by ten shall be counted as ten. For the purposes of this clause a unit means one basin or two feet Of length of a trough or Rule 95] (C) Bihar Factories Rules, 1950 [145 in the case of circular or oval troughs two feet of the circumfere- nce of a trough. There shali be at least one enclosed bath room with a tap on a stand

pipe or shower with soap anci towel for every ten persons and the running water supply Shail bc capable of yielding at least ten gallons a day for each person, which shall be available at all times

41. Entry into vessels.—before any person enters, for any purpose except that of rescue, any absorber, boiler, culvert, drain, flue, gas purifier, sewer, still, tank, tower, vitriol chamber or any other place where there is reason to apprehend the presence of dangerous gas or fume, a responsible person, appointed in writing by the occupier or the manager for the purpose, shall personally examine such place and shall certify in writing in a book kept for the purpose either that such place is isolated and sealed from every source of such gas or fume and is free from danger or that it is net so isolated and sealed and is free from danger. No person shall enter any such place which is not certified to be so isolated and sealed and free from danger unless he is wearing .a breathing apparatus, and (where there are no cross stays or obstructions likely to cause entanglement) a life-belt, the free end of the rope attac- hed to which shall be left with a man outside, whose sole duty shall be to keep wetch and to draw out, the worker, if he appears to be affected by gas or fume. The belt and rope shall be so adjusted and worn that the wearer can be drawn up head foremost through any mar-hole or opening. Similar precautions shall be taken in case of a person entering for the purpose of rescue any such place for which a clearance certificate has not been issued

42. Examination and repair of plant.—Where poisonous materials are likely to be present the examination and repair of plant and piping shall only be done under the supervision of a competent person and after the plant and piping has been thoroughly cleaned and ventilated. When opening vessels and breaking joints in pipe lines, respirators, goggles and protective clothing shall be worn to the extent required by the competent pecson

43. Storage of acid carboys.—Carboys containing nitric acid or "Mixed" acid shall be stored in open-sided sheds detached from other buildings, and placed on a flooring of sand-stone, brick, or other suitable inorganic material. A passage-way shall be provided and kept free from obstruction between every four rows of such carboys. An ample supply of water shall be available for washing away spilt acid and all necessary precautions shall be taken to prevent worker being exposed to fumes. Corrosive or Deleterious Substances Risks. 44. buildings and plants shall be sited with due regard to possible dangers from accidental liberation or splashing of corrosive and deleterious liquids, and shall be so designed as to facilitate thorough washing and cleaning. The construction of staging and other parts of buildings shall be carried out with materials impervious and resistant to corrosion so far as practicable

45. Leakage.—(a) All plants shall be so designed and constructed as to obviate the escape of corrosive liquid, where necessary, separate buildings, rooms or protective structures shall be used for the dangerous stages of the process and the buildings shall be so designed as to localise any escape Of liquids. 146] Bihar Factories Rules, 1950 [Rule 95 til , (b) Catch pits and bund walls shall be provided or other suitable precautions shall be taken to restrict the serious effects of su:h leakages. Cat- chpits shall be placed below joints in pipe-lines where there is danger invol- ved to maintenance and other workers from such leakage. (c) Passages and work-stations shali not be situated directly below any part of plant where there is risk of escape of dangerous liquid. Access to such parts shall so far as practicable, be prohibited, and danger notices shall be affixed at suitable points

46. Precatuions against escape.—Adequate precautions shall be taken to prevent the escape of corrosive or deleterious substances and means shall be provided for rendering safe any such escape

47. Drainage.—Adequace drainage shall be provided and Shail lead to special treatment tanks deleterious material shall be neutralised or other wise rendered safe, before it is discharged into ordinary drains or sewers

48. Covering of No worker shall be allowed to climb over any fixed vessel or structure containing any dangerous material, which is not so covered as to eliminate any risk of accidental immersion in it of any portion of the body of a worker. Such vessels and structures shall be so constructed that there is no foothold on the top or the sides. (b) Such vessel, shall, unless its edge is at least three feet above the adjoining ground or platform, be securely fenced to a height of at least three feet above such adjoining ground or platform. (c) No plank or gangway shall be placed across or inside any such vessel, unless such plank or gangway is at least 18 inches wide and is securely fenced on both sides by rails spaced 9 inches apart to a height of at least three feet, or by other equally efficient means. (d' Where such vessels adjoin and the space between them clear of an wo rk, is not securely fenced on both

sides to a height of at least three feet, secure barriers shall be so placed as to prevent passage betu een them : Provided that sub-clause (b) of this clause shall not apply to— (i) saturators used in the manufacture of sulphate of ammonia, and (ii) that part of the sides of brine evaporating pans which require raking, drawing or filling

49. Ventilation.—Adequate ventilation shall be provided and maintained at all Omes in rooms or buildings where dangerous gas, vapour, fume or dust may be evolved

50. Means of escape.—Adequate means of escape from rooms or build- ings in the event of leakage of corrosive liquid shall be provided and main- tained

51. Treatment of personnel.—ln all places where strong acids or other corrosive liquids are used— (a) there shalt be provided ror use in an emergency— (i) adeq uate and readily accessible means of drenching with cold water persons, and the clothing of persons, who may get splashed with such liquid ; Rule 95] (ii) (iii) Bihar Factories Rules, 1950 [147 adequate and special arrangements to deal with any person who has been splashed with poisonous material that can be absorbed through the skin ; sumcient number of eye-wash bottles, filled with distilled water or c,ther suitable liquid, kept in boxes or cupboards conveniendy situated and clearly marked by a distinctive sign which shall be visible at all times. (b) Except where the manipulation of such corrosive liquids is so car- ried on as to prevent risk of personal injury from splashing or otherwise, there shall be provided for those who have to manipulate such liquids suffcient and suitable goggles and gloves or other suitable protection for the eyes and hands. If gloves are provided they shall be collected, examined, and cleansed at the close of the day's work and shall be repaired or renewed whenever necessary

52. Maintenance.—(a) Before any examination or repair is carried out on plant or a pipe-line a competent person shall issue a clearance certificate permitting such examination or repair. (b) Adequate precautions shall be taken to liberate any pockets of gas or liquid which may have been formed in pipe-lines, and which may cause spray of the gas or the liquid at the point where dismantling takes place. 1 [52A. Permissible levels in work environment. —'Permissible levels of certain chemical substances (in environment'. With out prejudice to the requirements in any other provisions in the Act or the rules, the following requirements with respect to permissible levels of certain chemical substances in work environment shall apply to all chemical works Definitions.—For the purpose of this clause— (a) (b) (c) (d) '€mg/m3" means milligrams of a substance per cubic meter of air; "mppcm" means million particles of a substance per cubic meter of air; "ppm" means parts of a substance per million parts of air volume at 250C and 770 mm of mercury pressure; "time weighted average concentration" means the average con- centration of a substance in the air at any work location in a fac- tory 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 f_or which each such sample is collected and the concentration prevailing at the time of taking the sample. The weighted average concentration Where C/I represents the concentration T/l (in hours)

1. Ins.bys O. 689 dated 13-7-1988. 1 22 2 Of the substance for nn n duration Bihar Factories Rules, 1950 148] [Rule 95 C/2 represents the concentration of the substance for duration T/ 2 (in hours); and Clin represents the concentration of the substance for duration T In (in hours). (e) 6' 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. (ii} Limits of concentrations of substances at work locations. —The time weighted average concentration of any substance listed in 'Table 1 or 2 of the clause, at any work vacation in a factory during any shift on any day shall not exceed the limit of the permissible time weighted average concentration speci- fied in respect of that substance; (iii) In the case of substance mentioned in Table I in respect of which a limit in form of short term maximum concentration is indicated, the concen- tration of such a substance may exceed the permissible limit of the time weigh- ted average concentration for the substance for short pei iods not exceeding 15 minutes at time, subject to the condition that— (a) such periods during which the concentration exceeds the prescri- bed 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. (iv) In the case, of any substance given in Table 3, the concentration of the substance at any work location in factory at any time during any day shall

not exceed the limit of exposure for substance specified in the table. (v) In the cases where the word "skin" has been indicated against certain substances mentioned in Tables 1 and 3 appropriate measures shall be taken to prevent absorption through cutaneous routes particularly skin, mu- cous, memberances, and eyes as the limits specified in these Tables are for conditions where the exposure is only through respiratory tract. (Vi) In case; the air at any work tocation contains a mixture of such substances mentioned in tables 1, 2 and 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, are added together, the total shall not exceed unity. ..Cn shall not exceed unity when Cl, C2. Cl+C2... ...L2 Cn are the time weighted concentration of toxic .substances 1, 2, and respectively determined after measurement at work location; ...Ln- are the permissible time weighted average and LI, L2— ...and n respectively. concentration of the toxic substances 1. 2 (vii) Tn the case the air at any work location contains a mixture of sub- stances, mentioned in Tables l, 2 and 3 and these do not have similar toxic Rule 95] Bihar Factories Rules, 1950 [149 properties, then the time weighted concentration of each of these substance shall not exceed the permissible time weighted average concentration specified in the above mentioned tables, for that particular substances : Provided that the requirements in sub-clauses (vi) and (vii) shall be in addition to the requirements in sub-clauses (ii), (iii) and (iv). (viii) Sampling and evaluation procedures.—(a) Notwithstanding provi- sions in any other paragraphs, the sampling and evaluation procedures to be adopted for checking compliance with the provisions in the clause shall be as per standard procedures in vogue from time to time or as approved by the Chief Inspector. (b) Notwithstanding any other provisions the following conditions re- garding the sampling and evaluation procedures relevant to checking compli- gnce with the provisions in the clause are specified • (A) For determination of the number cf particles per cubic meter samples are to be collected by standard or midget impinger and the counts made by light-field technique. (B) The percemage of quartz in the 3 formula 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 •tem 2 (a) of Table 2, the memberances filter method at 430 x phase contrast should be used. (D) Both for determination of concentration and percentage of quartz for use of the formula given in item I (a) (i) (2) of Table 2, the fraction passing through a size selector with the following chara- cteristic should only be considered. Aerodynamic diameter (Unit density sphere). 2.0 2.5 3.5 5.0 10.0 Percentage allowed by Size-selector. 90 75 50 25 (ix) Power to require assessment of concentration of substance —(a) An Inspector may by an order in writing direct the occupiers or manager of fact- ory to get before any specified date, the assessment of the time weighted aver- age concentration at any work location at any of thc substanges mentioned in Tables 1, 2 or 3 carried out. (b) 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 re- cord of the same maintained in the bound register and kept readily available for inspection by an Inspector. (x) Exemption.—lf in respect of any factory or a part of factory, the Chief Inspector is satisfied that by virtue of the pattern of working time of 150] Bihar Factories Rules, 1950 [Rule 95 the workers at different work locations or on account of other circumstances no worker is exposed, in the air at the work locations, to a substance o: substances specified in Tables I, 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 part of the factory from such requirements, subject to such conditions, if any, as he may specify therein.. Table x. Permissible limits of exposure Substance Acetic Acid Azcrlein Aldrin (Skin) Ammonia Anilink (Skin) Anilidine (Opisomers Skin) Arsenic & Compounds (as As) Benzene Bromine 2 Butanone (Mothylethy Ketone MEK) n-Butyle acetate Sectert. Butyle acetate Cadmium dust and salts (as CD) Calcium Oxide Carbaryl (Sevin) Carbofuran (Furadan) Carbon disulfied (Skin) Carbon monoxide Carbon tetrachloride (Skin) Carbonyl chloride (phosgene) Chlordance (Skin) Chlorobenzene (monochlors-bezene) Chlorine bis-chloromethyl ether Chromic acid and chromites (as Cr) Chromium, Sel. Chromic Chromous Salts (as Cr.) Copper Fume Time-weighted average concentration. ppm mg/m3 Short-term maximum concentration. ppm mg/m3 10 0.1 25 0.1 10 0.1 200 150 200 20 50 10 75 0.001 25 0.25 0.25 18 10 0.5 0.2 30 0.7 590 710 0.05 0.1 60 55 65 0.4 0.5 350 0.05 0.5 0.2 15 0.3 35 0.5 300 200 250 30 400 20 0.8 0.75 27 20 885 950 1190 0.2 10 90 440 Rule 95] Cotton dust raw Bihar Factories Rules, 1950 Cresol, all isomers (Skin) Cyanides (as Ch)- (Skin) Cyanogen DDT (bichloridiphenyl trichloroethane) Demeton skin Diazinon-skin Dibutyle Phthalate

Dichlorves (DD VP)-skin Dield-rin-skin Dinitre benzene (all isomers-skin) Dinitootoluene.skin Diphenyl Endrin-skin Ethyl acetate Ethyl amine Ethyl alcohol Flourides (as F) Flourine Hydrogen cyanide-skin Hydrogen sulfide Iron oxide from (Fe O as Fe) Isommyl acetate Isobutyl alcohol Isoamyl alcohol Lead, inorg, fumes and dust (as Pb) Linda-he-skin Malathoion-skin Manganese fume (as Mn) Mercury (as Hg) Mercury (aidyl compounds skin (as Hg) Methyl alcohol (methenol) skin Methyl collosove-skin (2-methoxy ethanol) Methyl isobutyl Keto ne-skin Napthalene Nickel corbony (as Ni) Nitric acid Nitric Oxide 10 0.1 0.15 0.2 400 10 1 ooo 10 10 100 50 100 0.001 200 25 100 10 0.05 25 0.2 22 20 0.1 0.1 0.25 1.5 1.5 0.1 1000 1900 2.5 11 15 525 150 360 0.15 0.5 10 0.05 0.01 260 80 410 50 0.35 30 0.02 0.3 0.5 0.6 15 15 125 75 125 0.003 250 35 125 15 35 [15t 0.6 0.3 0.3 10 0.75 0.3 16 27 10 655 225 450 0.15 1.5 0.15 0.03 120 510 75 10 45 152] Nitrobenzine-skin Oi mist-mineral Parathion-skin Phenel-skin Bihar Factories Rules, 1950 0.1 0.5 0.5 100 100 100 100 [Rule 95 Phroate Phosgene Carbonyl chloride) Phosphine Phosphorous (Yellow) Posphorus pentachloride Posphorous trichloride Picric acid-skin Peyridine Sila-ne (Sillicon tetrahydrine) Styrene, monomer (pheny. othylene) Sulfer dioxide Sulfuric acid Toluene skin O-T01udine Trichloroethylene Vinyl chloride Welding Fumes (NOC) Xylene (o-m-isomers) skin Table 2 Substance Silica— (a) Crystalline— (i) Quartz (1) In terms of dust court (2) In terms of respirable dust (3) In terms of total dust (ii) Cristobalite 0.1 19 0.65 0.4 0.4 0.1 0.1 15 0.7 420 15 375 22 535 10 435 10 10 125 150 10 150 10 10 38 0.3 0.3 30 1.5 525 560 44 800 655 Permissible time-weighted average concentration. 1000 rnppcm % Quartz-I-10 10 Mg/ms %respirable quartz-I-2 30 Mg/ms 0/0 quartz—3 Half the limits given against quartz. Rule 95] Bihar Factories Rules, 1950 [153 (iii) (v) 1 Tridymite Silica fused Tripoli (b) Amorphos 2 Half the limits given against quartz. Same limit as for quartz. Same limit as in formula in item 2 given against quartz. 750 mppcm. 2

3. Silicate having less than 1 0/0 free silica by weight—(a) (b) (c) (d) (e) (h) (i) Asbestos-fibres longer than 5 mucrons— (i) Amosite (ii) Chrysoltile (iii) Crocidolite (iv) Other form Mica Mineral wool fibre Porlite Portland cement Soap stone Talc (non•abosti form) Talc (fibrous) Tromolite 0.5 fibre/cubic centimeter, 2 fibres/cubic centimeter. 0.2 fibre/cubic centimeter. 2 fibres/cubic centimeter. 705 mppcm. IO mg/m3 1060 mppcm. 1060 mppcm. 705 mppcm 705 mppcm. Same limit as for asbestos. Same limit as for asbestos. Coal dust— (I) For air born dust having less 5% silicon dioxide by weight. than—2 mg/m3. (2) For air-borne dust having overs Same limit as prescribed by for- 5% silicon dioxide. mula item (2) against quartz. Table 3. Substa nce Acetic an• hydride O-Dichlorobenzene Formaldehyde Hydrogen Chloride Manganese 1 Compounds (as Mn) .. Nitrogen-dioxide Nitroglycerin-skin Potassium hydroxide Sodium hydroxide 2, 4, 6—Trinitrot01uent (TNT) Welfare PPM 2 5 50 2 5 5 0.2 limit of exposure. mg/m3 3 20 300 3 7 5 9 2 2 2 0.5 53. Washing f here shall be provided and maintained in every chemical works for the use of employed persons adequate and suitable 154] Bihar Factories Rules, 1950 [Rule 95 facilities for washing which shall include soap and nail brushes or other suita- ble means of cleaning and the facilities shall be conveniently accessible and shall be kept in a clean and orderly condition. (b) If female workers ace 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 faciliti, s shali bear conspicuous notice in the language understood by the majority of Lhe workers "FO? woman only" and shall also be indicated picto- rially

54. Lunch room facilities.—-in every chemical works there shall be pro- vided and maintained for the use of those remain;ng on the premises during the rest intervals, suitable and adequate lunch room which shall be adequately furnished and shall have sufficient drinking water supply

55. Medical Examination.—(a) The provisions of sub-clauses (b), (c), (d) anci (e) Shail apply in respect of the following processes . (i) Manufacture, processing, handling, or use of hexa ethyl tetra phosphate, Tetra ethyl pyro phosphate, Mercury derivatives, 0.0 Diethyl o. p-nitrophenyl, Thiophosphate (parathion), Nico- tine, Nicotine sulphate, Methyl bromide, Cyanides Arsenical derivatives. (li) Chrome processes, (iii) Nitro or Amino processes. (b) Every person employed in any process specified in sub-clause (a) of this clause shall be examined by the Certifying Surgeon once in every three month on a date or dates of which due notice shall be given to all concerned and records of such examinations shall be maintained in the Health Register. (c) No person shall be allowed to work unless a certificate of fitness has been granted after examination by; lhe Certifying Surgeon and a signed entry made in the Health Register. (d) Every person so employed shall present himself at the appointed time for examination by the Certifying Surgeon as provided in clause (b) of this rule. (e) inds 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 pro- cess, for such time as he may think fit and no person after suspension shall be employed in that process withouc the written sanction of the Certifying Sur- geon in the Health Register. Duties of Workers

56. Duties of Every person employed shall—(a) report to his Foreman any defect in any fencing, breathing appa- ratus, appliances or other requisite provided in pursuance of this Schedule, as soon as he becomes aware of such defect ; (bi use the articles, appliances or accommodation required by this Schedule for the purpose for which they are provided ; (c) Wear the breathing apparatus and life-belt where required under this Schedule. Ru!e 95 Bihar Factories Rules, 1950 [155 (ii) No person shall.— (a) (c) (d) (e) (f) remove any fe-!cing provided, unless duly authorised, stand on the edge or on the side of any vessel Io which clause 48 applies; pass or attempt (o pass any barrier erected in pursuanc9 of clause 48; place across or inside any vessel to which clause 48 applies any plank of gangway v.'bich does not comply with the schedule or make use of any such plank or gangway while in such position; take a naked light or any lamp or matches or any apparatus for producing a naked light or spark into, or smoke in any part of lhe works where there is likelihood of explos\on or fire from inflam- mable gas vapour or dust; use a metal spade scrtper or pail which is not non-sparking when cleaning out or removing the residues from any chamber, still tank or other vessel whvch has containrd sulphuric acid or hydrochloric acid or other substance which may cause evolution or arseniurated hydrogen; or in which there is risk of ignition or explosion; remove from a First-Aid box or cupbord or from the Ambulance room any First-Aid appliance or dressing, except for the treatment of injuries in the works, PART 111 57. The provisions of Part Ill shall apply to all chemical works and parts thereof in which— (i) (ii) (iii) (v) (vi) (vii) (viii) (ix) caustic pots are used; or chlorate or bleaching powder is manufactured; or (a) gas tar or coal-tar is distilled, handled or used in any process of chemical manufacture; or (b) nitro or amino process is carried on; or (c) a chrome process is carried on; or crude shale-oil is refined or processess incidental thereto are carried on; or nitric acid is used in the manufacture of nitro compounds or evaporation of brine in open pans and the stoving of salt are carried on; or manufacture or recovery of hydro-chloric acid or any of its salts is carried on; or work at a furnace is carried on where the treatment of zinc ores is done; or insecticides mentioned in Appendix I are manufactured, mixed, blended or packed

58. Entry in gas tar or coal-tar still.—Before any person enters a gas tar coal-tar still for any purpose, except that of rescue it shall be completely olated from adjoining tar stills, either by disconnecting— 156] (a) (b) Bihar Factories Rules, 1950 [Rule 95 the pipe leading from the swan-neck to the condenser worm, or the waste gas pipe fixed to the worm and/or receiver. In addition. blank flanges shall be inserted between the disconnected parts, and the pitch discharge pipe or cock at the bottom of the still shall be disconnected

59. Entry into bleaching power chamber.—No person shall enter a cham- ber for the purpose of withdrawing the charge of bleaching powder unless and until— (i) the chamber is emciently ventilated ; and (ii) air in the chamber has been tested and found to contain not more than 2.5 grains of free chlorine gas per cubic foot of air. A register containing details of all such tests shall be kept in a suitable form or in a form approved by the Chief Inspector

60. Special precautions for nitro processes.—in a nitro or amino process (a) if crystallised substances are broken or any liquor agitated by hand, means shall be taken to prevent as far as practicable, the escape of dust or fume into the air of any place in which any person is employed. The handles of all implements used in the operations shall be cleaned daily; (b) cartridges shall not be filled by hand, except by means of a suitable scoope; (c) every drying stove shall be eficiently ventilated to the outside air in such a manner that hot air from the stove shall not be drawn into any work- room. (d) no person shall enter a stove to remove the contents, until a free current of air has been passed through it; (e) every vessel containing nitro or amino derivatives of phenol or of benzene or its homologues shall, if steam is passed into or around it. or if the temperature of the contents be at or above the temperature of boiling water, be covered in such a way that steam or vapour shall be discharged into the open air at a height of not less than 25 feet from the ground or the working plat- form, and at a point from where it cannot be blown back again into the work-room

61. Precautions during caustic grinding, etc.—Every machine used for grinding or crushing caustic shall be enclosed; and an effcient exhaust draught shall be provided where any of the following processes are carried on or (i) Grinding or crushing of caustic; (ii) packing of ground caustic; (iii) grinding, sieving, evaporating or packing in chrome processes; (iv) crushing, grinding or mixing of material or cartridge filling in a nitro or amino process

62. Chlorate Chlorate shall not be crystallised, grounded packed, except in a room or place not used for any other purpose, the Rule 95] Bihar Factories Rules, 1950 [157 floor of which room or place shall be of cement or other smooth, impervious and incombustible material, and shall be thoroughly cleaned daily.(b) Wooden vessels shall not be used for the crystallisation chlorate, or to contain crystallised or ground chlorate; provided that this shall not prohi- bit the packing of chlorate for sale into ooden casks or other wooden vessels

63. Restrictions on the employment of young persons and women.*a) Persons under 18 years of age and women shall not be employed in any pro- cess in which hydrofloric acid fumes or ammonical vapours are given off or in any of the following operations (i) evaporation of brine in open pans; (ii) stoving of salt; (iii) v,ork at a furnance where the treatment of zinc ores is carried on ; and (iv) cleaning of work-room where the process mentioned in (iii) is carried on. (b) No person under 18 years of age shall be employed in a chrome process or in a nitro or amino process or in a process in wbich the carbon bi- sulphide, chlorides of sulphur, benzene, carbon chlorine compound or any mixture containing any of such materials are used or where the vapour of such materials is given off

64. Duties of Every worker shall use and wear the protective clothing, foot-wear, respirators, gc ggles, gloves or other protective appliances provided under this Schedule and shall deposit the overalls or suits or working clothings so provided, as well as clothings put off during working hours, at the place provided under clause 39.(b) Every worker employed in any process to which clause 40 applies shall carefully wash his hands and face before partaking of any food or leav- ing the premises. Appendix I. All chemical works in which 1. Chemical processes relating to the following are carried on (a) Carbonates, chromates, chlorates, oxides or hydroxides of potas- Sium, sodium, iron, alminium, cobalt, nickel, arsenic, antimony, zinc or magnesium, 1. Iftia) Cadmium and salts, carbon disulphide, chlorides and chlorine and compounds, copper, cyanides, flourine and compounds, lead, Manganese, Mercury, Phosphorous and compounds. (ib) Oxides of calcium, Iron, Nitrogen, Sulphur and Carbon and Silica, Asbestos, Mica Mineral Wool Prolite, Portland Cement, Soap Stone, Talcum, Tromolite, Coal. (b) Ammonia and the hydroxide and salts of ammonium, (c) Sulphurous, sulphuric, nitric, hydrochloric, hydrofluoric, hydro- iodic, hydrosulphuric, boric, phosphoric, oxalic, arsenious, arsenic Ins. by SO. 686 dated 13-7-1988. 158 Bihar Factories Rules, 1950 [Rule 95 9, lactic, acetic, tartaric or citiic acids and their metallic or organic salts, and (d) Cynogen compounds

2. A wet plocess for t}je extraction of metal from ore or from any bV pr.oduct or residual materia} is carried on

3. Electical energy is used in any process of chemical manufacture

4. Alkali yastc or effluents therefrom is subjected to any chemical process for the recovery of su!phur, or for the utilisation of any constituent of such waste o,- effluent

5. Corbon bi sulphide is made or hydrogen sulphide is evolved by the decomposition of metallic sulphides or hydrogen sulphide is used in the pro- duction of such sulphides

6. Bleaching powder is manufactured or chlorine gas is made or is used in any process of chemical manufacture.7. (a) Gas tar or coal-tar or any compound product or residue of such tars is distilled or is used in any process of chemical manufacture. (b) Synthetic colouring matters or their intermediates are made

8. Refining of crude shale oil or any process incidental thereto is carri- ed out

9. Nitric acid is used in the manufacture of nitro compounds

10. Explosives are made with the use of nitro compounds

11. Insecticides, which may be phosphorus, nicotine, mercury, naphtha- lene, cyanogen, arsenic fluorine, copper, benzene and ethane compounds or derivatives and methyl bromide, are

manufactured, mixed, blended, and packed.12 Viscose rayon is manufactured or processes incidental thereto are carried out

13. Phosgene (carbonyle chloride) is manufactured, stored, handled, processed or used

14. Aliphatic or aromatic compounds including petroleum and petro- leum products and their derivatives or substituted derivatives are manufact.ured, processed or recovered. Appendix 11. l. A nitro or amino process (overall suits or working clothes and prow tective footwear)

2. Grinding raw materials in a chrome process (overall suits)

3. The crystal department and in packing in a chrome process (protec• tive coverings)

4. Packing in a chrome process (respirators)

5. Any room or piace in which chlorate is crystallised, ground, parked (clothing of woollen material and boots or over shoes, the soles of which have no metal on them). Rule 95] Bihar Factories Rules, 1950 [159 6. Any room in which caustic is ground or crushed by machine (goggles and gloves or other suitable protection for the eyes and hands)

7. Bleaching powder chambers, or in packing charges dcawn from such chambers (suitable respirators)

8. Drawing off of molten sulphur from sulphur pots in the process of carbon disulphide manufacture (overalls, face shields, gloves and footwear of fire-proof materials).9. (i) Manufacture, mixing, blending and packing of insecticides which are phosphorus, nicotine, naphthalene, cyanogen, arsenic, fluorine, mercury and copper compounds or derivatives and methyl cromide (rubber approns, chemicals type goggles and suitable respirators, and in addition rubber gloves and boots for phosphorus and nicotine derivatives, synthetic rubber aprons, gloves and boots when working with oil solutions, and washable working clothes laundered daily). (ii) Manufacture, mixing, blending and packing of insecticides which are derivatives of benzene or ethane (rubber approns, and suitable respirators, sepa- rate work clothes laundered fre quent'y). Appendix 111

1. A nitre or amino process

2. The crystal department and the packing room in a chrome process.3- The process of distilling gas or coal-tar (other than blast furnace tar) and any process of chemical manufacture in which such tar is used

4. The manufacture, mixing, blending and packing of insecticides men- tioned in Appendix I. Schedule XIV. Compression of Oxygen and Hydrogen. I. The room in which electrolyser plant is installed shall be separate from the plant for storing and compressing ot' oxygen and Hydrogen and also from the electric generator room

2. The purity of Oxygen and Hydrogen shall be tested by a compe:ent person at hourly intervals at the following points (i) In the electrolyser room.(ii) At the gas-holder in let, and (iii) At the suction end of the compressor. The figures relating to the degree of purity as obtained from the test car- Tied out shall be recorded systematically in a register or a log book maintained only for this purpose and shall be signed by the pexson carrying out the test. Provided, however, that if the electrolyser plant is fitted with an autom- atic device for recording the purity of the gases along with visual warning signals, it shall be suffcient if the purity of the gases is tested at houriv intervals at the suction end of the compressor only, 160 | Bihar Factories Rules, 1950 [Rule 95 3. The Oxygen and Hydrogen gases shall not be compressed if their purity determined by the test carried out under clause 2 falls below 98 per cent at any time

4. Effective negative pressure switch shall be provided adjacent to the suction main close to the gås•holder and between the gas-holder and the hyd- rogen compressor in such manner that the compressor is automatically stopped at a predetermined safe pressure in the gasholder. The negative pressure switch provided shall be tested and examined for its effective working ones every shift by a competent person and records of all such examinations shall be maintained in a register signed by the Manager of the factory

5. The bell of any gas-holder shall be permitted to go within 30 cms (12 inches) of its lowest position when empty and a limit switch shall be provided for this purpose in the gas-holder with adequate alarm indicators both visible and audible to indicate that the gas-holder has reached the limit, 6. The water and caustic soda used for making lye shall be chemically pure within pharmaceutical limits

7. Electrical connections at the electrolyser cells and at the electric gene- rator terminals shall be so constructed as to preclude any possibility of any wrong connection, leading to reversal of polarity, and in addition an automatic device shall be provided to cut off pow'er in the event of reversal of polarity owing to wrong connection either at the switch board or at the electric generator terminal

8. Oxygen and Hydrogen gas pipes shall be painted with distinct colours so that they may be clearly and easily distinguished and in the event of any leakage at any joint of the Hydrogen gas pipe, the pipe after reconnection shall be completely purged of air before drawing in Hydrogen gas

9. All electrical apparatus, equipments and appliances including wirings, machines, switch-gears, light points, switches, plugs, sockets, etc,.in the elec- trolyser room shall be of flame proof construction or enclosed in flame-proof fittings and no naked light or-flame shall be allowed to be taken in or near the electrolyser room or where compression and filling of any gas is carried on, and warning notices to such effect shall be displayed at prominent places. IO. No part of the electrolyser plant and the gas holder and compressor shall be subjected to welding, brazing, soldering or cutting until all explosive substances have been completely removed from that part so as to render the part safe for such operat ion, and after the completion of such operation no explosive substance shall be allowed to enter that part until the metal has cooled sufficiently to eliminate any risk of explosion. 11. (a) All sources of starting an ignition or of producing a spark whether electrical or otherwise shall be eliminated from such parts of the plant or factory where there may be any risk of explosion. (b) In all such parts of the factory or plant, shoes with nails, belts or synthetic clothes, likely to generate a spark due to friction ordischarge of static electricity (unstatic clectricity to earth continuously) or use of tools likely to produce a spark shali not be allowed, and all such plants, parts or machines, whereon static electricity may build up shall be solidly and effectively earthed Rule 95 | Bihar Factories Rules, 1950 161 12. No person shall be permitted to enter any place or area where there is risk of exp;osion, while carrying a match box or a lighter, and arrangement shall be made to collect all such articles outside before the person enters any such place or area

13. No work of operation, repair or maintenance shall be undertaken except under the direct supervision of a person who by his training and expe- rience possesses the knowledge of the necessary precautions against risk of explosion and is competent to supervise such work. An electric generator connected to an electrolY9er after erection or repairs shall not be switched on unless the same is certified by the competent person under whose direct super- vision erection or repairs are carried on, to be safe, and the terminals have been checked fcr the polarity as required under clause 7

14. Every part cf an electrolyser plant, gass holder and compressor shall be checked and overhanded at suitable intervals regularly and every de- fect noticed shall be rectified forthwith

15. Detailed instructions with regard to the operation of the plant, precautions to be taken.and the steps to be taken in case of an emergency, shall be prepared and displayed at prominent places close to the plant

16. A register or a log book in convenient form shall be maintained in which all operations carried out in such factories and plants shall be regularly recorded and signed by the person incharge of the plant carrying out the oper- ation as well as by the person. Schedule XV 1. Application.—This schedule shall apply to factories in which any of the following processes is carried on 1 (i) (ii) (iii) (iv) (v) (vi) (vii) (viii) (ix) Breaking, crushing, disintegrating, opening, grinding, mixing or sieving of asbestos and any other processes involving handling and manipulation of asbestos incidental thereto ; All processes in the manufacture of asbestos textiles including preparatory and finishing processes ; making of insulation slabs or section, composed wholly or partly of asbestos, and processes incidental thereto ; making or repairing or insulating mattresses, composed wholly or partly of asbestos, and processes incidental thereto ; manufacture of asbestös card-board and paper ; manufacture of asbestos cement products ; application of asbestos by spray methods ; sawing, grinding, turning, abrading and polishing, in the dry state of articles composed wholly or partly of asbestos ; cleaning of any room, vessel, chambers, fixture or appliances for the collection or removal of asbestos dust: Provided that if the Chief Inspector is satisfied that in respect of any factory or workshop or part thereof, by reason of the restricted use of asbestos or the method of working, of occasional oature of work, or otherwise, all or any of the provisions of this schedule/can be suspended or relaxed without 162] Bihar Factories Rules, 1950 [Rule 95 danger to the health of the

perpons employed therein, he may by an order in writing gant suspension or relaxation subject to such conditions or for such period as he may think fit Any such order may be revoked at any time

2. Definition—For the purpose of this Schedule : 'gasbestos" means any fibrous silicate mineral, and any admixture containing any such mineral, whether crude, crushed or opened; (ii) "asbestos textiles" means yarn or cloth compoöed of asbestos or asbestos mixed with any other material. (iii) "preparing" means crushing, disintegrating, and any other process in or incidental to tne opening of asbestos , (iv) "approved" means approved for the time being in writing by the Chief Inspector • (v) "breathing apparatus" means a helmet or face piece with necess- ary connection by means of which a person using it breathes air free from dust, or any other approved apparatus

3. An exhaust draught effected by mechanical mean which prevents the escape of asbestos dust into the air of any room in which persons work, shall be provided and maintained for - (a) man ufacturing and conveying machinery, namely .(j) preparing, grinding or dry mixing machines ; (ii) carding, card waste-end, ring spinning, machines, and looms ; (iii) machines or other plant fed with asbestos ; (iv) machines used for the sawing, grinding, turning, abrading or polishing, in the dry state, of articles composed wholly or partly of asbestos. (b) cleaning, and grinding of the cylinders or other part of a carding machine. (c) chambers, hopers or other structures into which loose asbestos is delivered or passes. (d) work benches for abestos waste sorting or for other manipulation of asbestos by hand. (e) work places 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: Provided that this clause shall not apply—(i) to a machine or other plant which does not give rise to asbestos dust, or is so enclosed as to prevent escape of asbestos dust into the air of any room in which perons work, or (ii) where the asbestos is so. wet or so treated with grease or other material a; to prevent the evaluation of dust, or (iii)fto the making orxepairing of insulat ing mattresses, or (iV) •to mixing or blending by hand of asbestos. 4. (I) Mixing or blending by hand of asbestos shall not be carried on except with an exhaust draught effected by m3chanicaI means so designed and Rule 95] Bihar Factories Rules, 1950 [163 maintained as to ensure as far as practicable the suppression of dust during the processes. (2) In premises which are constructed or reconstructed after this schedule comes into force, the mixing or blending by hand of asbestos shall not be done except in a special room or place in which no other work is ordinarily carried on. (3) (a) The 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, (b) In every room in which the making or repairing of insulating mattre- sses is carried on (i) adequate exhaust and in lost ventilation in accordance with arrangements to be approved in each case shall be provided and maintained: (ii) no person other than those engaged in filling, beating or levelling shall be present whilst such processes are being carried on and work shall not he resumed in the room after filling, beating or levelling for at least ten minutes: (iii) the floors and benches shall be kept damped so as to effectively prevent dust arising therefrom; (iv) the covers shall be effectively damped immediately after being cut out and in the case of fibre filled matresses, shall be kept damp whilst filling, beating or levelling is being carried on. (4) (a) Storage chambers or bins for loose asbestos shall in the case of premi ses constructed or reconstructed after this schedule comes into force, be effective'y separated from any work room and in the case of other premises be effectively separated from any work room in which the asbestos is not required for the purposes carried on in the roo m. (b) Chambers or apparatus for dust setting and filtering shall not be allowed in any work-room. (c) Effective arrangements shall made to prevent asbestos dust discharged from exhaust apparatus being drawn into the air in any work room. (5) All machinery used in preparing, grinding of asbestos carding, card roller cleaning and grinding, and sack cleaning and all carb waste and machines, latrines, elevators, chutes, and conveyers shall be so constructed and maintained that dust or debris containing asbestos cannot escape from any part thereof other than dust removed by air exhaust draught provided in accordance with clause 3 of the Schedule. (6) (a) Cleaning by hand of the cylinders (including the deffer cylinders) of a carding machine shall not be done whilst any person other than those performing or assisting at the cleaning is present. (b) After six months from the date on which this sched ule comes into force such cleaning as aforesaid shall not be done by means of hand strickless or other hand tools: Provided that the Inspector or the Chief Inspector may direct such other measures and precautjon to be taken, as may be considered necessary for [Rule 95 164 J Bihar Factories Rules, 1950 securing the health of the work ers, employed on p d in clause 4. 5. (l) In every room in

which any of the requirements of this Schedule apply :— (a) The floors, work benches and plant shall be kept in a cleaning 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 obstruct the proper cleaning of the floor. (2) Every room as aforesaid shall be adequately lighted. 6. (a) A sack which has contained asbestos sball not be cleaned by hand beating but by a machine, complying with clause 3 and sub-clause (5) of clause 4. (b) All sacks used as containers for the purpose of transport of asbestos within the factory shall be constructed of impermeable material and shall be kept in good repair. 7. (a) All ventilating plant used for the purpose of extracting or suppre- ssing dust as required by this Schedule shall at least once in every six months be thoroughly examined and tested by a competent person and defect disc- losed by such examination and test shall be rectified forthwith. (b) A register containing particulars of such examination and the state of the plant and the repairs or alterations (if any) found to he necessary shall be kept, and shall be available for inspection by an Inspector

8. A breathing apparatus shall be provided for every employee.(a) In chamber containing loose asbestos; (b) In cleaning dust setting or filtering chambers or apparatus; (c) In cleaning the cylinders, including the demer cylinders, or other part of the carding machine by means of hand-strickless; and (d) in filling, beating or levelling in the manufacture or repair of insula- ting mattresses

9. There shall be provided and maintained for the use of all persons employed in the cleaning of dust setting and filtering chambers, tunnels and dusts, suitable overalls and head coverings.IO. No youn-g person shall be employed in or in connection with the manufacture of insulating mattresses, in mixing or blending of asbestos by hand, in sack cleaning, in chambers, or apparatus for dust setting or filtering; in chambers containing loose asbestos. or in stripping or grinding the cylinders including the deffer cyli nders or other part of a carding machine

11. Medical examination.—-(a) No worker shalt be employed in any fac- tory on any of the processes specified in clause I, unless he has been medically and radiologically examined and has been declared fit and has been granted a certificate of fitness in

Form no. 25. (b) Every worker employed on any of the aforesaid processes on the date on which the schedule comes into force shall be medically and radiologi- Æally examined within three months of the said date. Rule 95] Bihar Factories Rules, 1950 [165 (c) Every worker employed on any of the aforesaid processes shall be medically examined at intervals of six months after the first medical examina- tion conducted under sub-clause (a) and (b) and radiologically at intervals of 3 years after the first radiological examination conducted under sub-clause (a) and (b). (d) A worker already in employment and declared unfit by the cectifying surgeon shall not be allowed to work on any of the processes specified in c la- use I, unless he has been examined again and has been certified to be cur ed and fit to work on the said process again. (e) A worker declared to be unfit to work on any of the aforesaid proce- sses, may be employed on such other work or process as may be considered safe and as may be advised by the certifying surgeon: Provided that if the certifying surgeon declares that a worker has been completely incapacitated and he was not fit to be employed on any process, such worker shall not be allowed to continue to work on any work or process. (f) The Certifying Surgeon may direct that a worker may be X-rayed or he may be subjected to further examination by a specialist or to any other examination, clinical, pathological or otherwise cr that he should undergo a specified treatment, and it shall be responsibility of the employer (Occupier and the Manager), to arrange for the specified examination and/or treatment and to bear all expenses thereof or in connection therewith: Provided that in factories in which the Employees State Insurance Sche- mes is in operation, the certifying Surgeon shall refer the case of insured wor- kers to the Medical Offcer Incharge of the Employees State Insurance Dis- pensary with his findings and recommendation. (g) The certifying Surgeon shall after such examination grant a certifi- cate in Form no. 26. (h) The Manager shall maintain all the certificates in a proper register or file and shall produce all the certificates before an Inspector whenever demanded. (i) The Manager shall maintain the details of every medical examination in Form no. 17 and the register shall be produced before an Inspector whene- ver demanded. (j) The term "medical examination" whenever used in this clause means "Medical examination carried out by the Certifying Surgeon." (k) It shall be the responsibility of the Employer (Manager and Occu- pier) to get the workers medically and radiologically examined and to bear the cost of such examinations. (l) Reports of radiological (X-ray) examination along with the X-ray plate shall be produced befor the Certifying Surgeon within 15 days of the examination, for his examination, advice and such action as he may consider necessary. Schedule XVI. Manufacture or Manipulation of Manganese and its Compounds. I. Definitions.—For the purpose of this Schedule— 166 Bihar Factories Rules, 1950 [Rule 95 (a) (b) (c) "Manganese process means processing, manufacture or manipu- tetion of manganese or any compound of manganese or any ore or any mixture containing manganese ; "First emp!oymen: " means first employment in any manganese process and includes also re-employment in any manganese pro- cess following any cessation of employment for a continuous period exceeding three calendar months ; "Manipulation" means mixing, blending, filling, emptying, grin- ding, sieving, drying, packing, sweeping or otherwise handling of manganese, or a compound of manganese, or an ore or mixture containing manganese; and (d) "Effcient exhaust ventilation" means localized ventilation effec- ted by mechanical means for the removal of dust or fume or mist as its source of origin so as to prevent it from escaping into the atmosphere of any place where any work is carried on. No drau- ght shall be deemed to be emcient 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 satis- fied that owing to any exceptional circumstances, or infrequency of the pro- cess, or for any Other reason, application of all or any of the provision 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 or 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 process and other parts of the factory and persons on other work or process 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 effici- ent exhaust ventilation Which shall be applied as near to the point of genera- tion as practicable

6. Medical examination.—(l) Every person employed in a manganese process shall be medically examined by a Certifying Surgeon within 14 days of his first employment and thereafter at intervals of not more than three months. (2) If a perton on medical examlnation is found fit for employment on a manganese process, the Certifying Surgeon shall grant a certificate of fitness in

Form no. 27 which shall be kept in the custody of the manager of the fac- ory. The certincate shall be readily produced by the Manager whenever req- Rule 95] Bihar Factories Rules, 1950 [167 uired by any Inspector, and the certified person shall be provided with a token made of metal with the number of the certificate inscribed thereon and th said person shall always carry the said token on his person while at work. (3) If a person is found unfit to work on any manganese process the Certifying Surgeon shall grant a certificate to that effect and such person shall not be allowed to work in any manganese process. (4) If the Certifying Surgeon finds that any worker who had been grant- ed a certificate of fitness at a previous medical examination is no longer fit to be employed on any manganese process he may revoke the previous certificate and no person whose certificate of fitness has been revoked shall be allowed to work on any manganese process. The Certifying Surgeon may require such person to be produced before him for fresh medical examination after such p:riod as be may specify in wri- ting on the revoked certificate and the Health Register. (5) If the Certifying Surgeon is of the opinion that a person had become permanently unfit for employment of any manganese process, he shall make an entry to that effect in the certificate and in the Health Register and no such person shall be allowed to work in any manganese process. (6) If the Certifying Surgeon is of the opinion that a person had become permanently unfit for any work in any factory or any process he shall grant a certificate to that effect. (7) If the Certifying Surgeon is of the opinion that any special expert examination or test is necessary for a proper diagnosis in a doubtful case, he may direct the Manager and/or the occupier, to get the worker examined by such expert, or to get such tests carried out as may be specified by him and the Manager and/or the occupier, as the case may be, shall comply with direction given within the specified time and produce the report of examina- tion or test as the case may be before the Certifying Surgeon. (8) Ifthe Certifying Surgeon is of the opinion that any person is not fit for employment in any manganese process but is fit to be employed on any other work he may advise accordingly and shall grant a certificate to that effect in which case the Manager and/or the occupier may employ the said person on such other job as may be safe for him. (9) If any person has any doubt regarding the diagnosis of the Certify- ing Surgeon he may make an appeal to the Chief Inspector of Factories and Chief Inspector may refer the case to the Medical Inspector of Factories or to a Medical Committee constituted by him for this purpose of which the Medical Inspeetor of Factories shall be a member. The decision of the Medical Inspe- ctor or the Committee as the case may be shall be final in the matter

7. Personal Protective 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 overall and head covering shall be worn by the person while working on a manganese process.(2) The occupier of the factory shall provide suitable respiratory protec. tive equipment for use by workers 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 be properly •naintained nd kept always in a condition to be used readily. 168 J Bihar Factories Rules, 1950 [Rule 95 (3) The occupier shall provide and maintain for the use of all persons employed suitable accommodation for the storage and make adequate arrange- ment for cleaning and maintenance of personal protective equipment

8. Prohibition relating to women and young persons.— No woman or a young person shall be employed or permitted to work in any manganese process

9. Food, drinks prohibited in the work rooms.—No food, drink, Pan, Supari or tobacco shall be allowed to be brought into or consumed by any worker in any work room in which any manganese process is carried om 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 respo- nsible 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 manga- nese process, a wash place under cover, with either— (l) a trough with a smooth impervious surface fitted with a waste pipe without plug. The trough shall be of sufficient length 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 or at least one wash basin for every five such persons employed at any time, fitted with a waste pipe and plug

and having a constant supply of water ; or (2) sumcient supply of soap or other suitable cleaning material and nail brushes and clean towels

12. Cloak room.— If the Chief Inspector so requires there shall be pro- vided and maintained for the use of persons emoloyed in manganese process a cloa k-room for clothing put off during working hours with adequate arrange- ment for drying the clothing

13. Cautionary play card and instructions.—Cautionary notices in the following form and printed in the language of the majority of the workers employed, shall be affxed at 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 man- ganese 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. toxic, (2) (3) Cautionary Notice. Manganese and Manganese Compounds. Dusts, fumes and mists of Manganese and compounds are when inhaled or when ingested. Do not consume food or drink near the work place. Take good wash before taking meals. Rule 95 | (4) (5) (6) (7) Bihar Factories Rules, 1950 Keep the working area clean. Use the protective clothing and equipment provided. [169 When required to work in situations where dusts, fumes, or mists are likely to be inhaled, use resp:ratory protective equipment provided for the purpose. If you get severe headaches, prolonged sleeplessness or any abno- rmal sensations on the body, report to the Manager who would make arrangements for your evamination and treatment. Schedule Manufacture and manipulation of dangerous Pesticides Definitions.—For the purpose of this schedule the follow-ng definitions shall apply (i) "Dangerous pesticides' means any chemical or substance used for controlling, destroying or repelling anv pest or for preventing growth thereof or for mitigating effect 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 thereunder, and any other substance, which may be notified from time to time by the State Government to be a dangerous pesticides. (ii) 'Manipulation' includes mixing, blending, formulating, filling, emp- tying, packing or otherwise handling. (iii) 'Effcient exhaust draught' means localized mechanical ventilation for removal of smoke, gas, vapour. dust, fume or mist. so as to nrevent the same from escaping in the air of any work Dlace where anv work is carried on. No arrangement or device shall be deemed efficient if it fails to remove the smoke fume or mist generated at the point where it originates. and which permits the substance removed to escape into or re-enter the same or any other place of work either directly or indirectly. (iv) 'First Employment' shall mean first employment in anv manufactu- ring process to which this schedule applied and shall also include re-emplov- ment in said manufacturing process following any cessation of employment for a continuous period exceeding three calender months. (v) 'Suspension' means suspension from employment in gnv process wherein a dangerous pesticides is - manipulated by a written certificate in the Health Register in

Form no. 16 signed by the certifving surgeon who shall be competent to suspend any person employed in such process

2. This schedule shall apply in respect of all factories or any plant of any factory in which the process or manufacture or maniAu1- ation of any dangerous pesticide hereinafter referred to as the said "Manu- facturing process" is carried on.(2) These Rules shall be in addition and not in derogation to any other provision of the Act or the Rules or to the provisions ofany other Act in force

3. Instruction of workers.—Every worker on his first employment shall be fully instructed on the properties including dangerous property of the cheo 170] Bihar Factories Rules, 1950 C Rule 95 mical used or handled in the said m.tnuracturing process and the hazards in- volved. The worker shall a'so be instrected in the measures to be taken to dea I with t. ny cr,'.ergency. Such insiructicrs shall be repeated periodically

4. Cautionary Notice ond placards.— Cautionary notices and placard< in the form specified in Arrendix r of' this Schedele and printed in the language of the majority of t'•e workers shall be (ficpyayed in all werk places in which the said manufacturing process is carried on so that they can be easily and conveniently read by the workers

5. Prohibitation relating to employment "f or young persons.—No women or voung person shall br employed or peymitted to work in any room in which the qaid manufacturirg process is carried c 11 or in any rccm in which any dangcrous pesticide is stored

6. Food.drinkc and smoking No food, drink, tobacco, pan or supari shall "e brought in cr (X)nsumed by any worker in any work room in which the said manufacturing process is carried out. (2) Smoking be nrohihitet! in any work room in which the said manufacturing process is carried out

7. Medicat Every worker proposed to be employe I in the proces• he by a certifying surgeon before his first and shall b" employed on the said manufacturing process only, if declared fit for such emr toyment and a certificate to this effect is granted in

Form No.24. (2) Every worker already employed on the said manufacturing process on the date on which these rules come into force. shall be examined by a cer- tifving surgeon Wi'hin one month of the said date and shall be al!owed to continue on eid mnnufrcfvrirg processrs only, if declared fit f07 such employment and a certificate to this effect is grnnted in Form No. 24. (3) Everv worker emp101Td in thc said manvracturing processes shall be re-examined bv certifvinp surgeon at 'cast once in three calender months and a record thereof shall be kept in From no. 25. (4) No worker after suspen€ion shall be-employed without written san- ction from the certifying surgeon ente;cd in or attached to the Health Register 8. Medical facilities —A medical practiti:nec Shail bc employed in every factory in which the said manufactur:ng processes is carried on who shall examine every worker emplojx:cl on the said manufacturing process at least once in every week and when necessary treat for •the effects of excessive absorption of the dangerous pesticides. (2) Effective arrangements sha!l be made to ensure quick availability of a qualified medical pracititi01icr in emereency. (3) Necessary and adequate medicines and Qntedotes and other equip- mentsxequired for treatment of exet ssixe absojptjon of dange ous pesticides shall be provided and maintained at ell times. (4) Record of examination and treatment tests shall be maintained in Form No. 16 and shall be made available to Inspector for inspection. (5) The Chief Inspector may direct by an Order in writing any suitable clinical tests to carried out at J specified intervals. in respect of Ruic 95 Bihar Factories Rules, 1950 [171 employed in any factory in which the said manuracttl\ing process is carried 9 Protective clothing and equipment. Piot ective ciothing consisting of long pants End shirts or ov.æralls with long sleeves, and head • over Ing shall be provided fir ail workers employed in the said manufacturing process. (2, (a) Protective equipments consisting cf rubber gloves, gum, boots, rubber approns, chermcal safety goggles and respirators shall be provided for a I workers employed in the said manufactaring process. (b) Gloves: boots, approras shali be made from synthetic rubber where a pesticide contains oil. (3) Protective clothing and shall be worn by thc worker suppheo q ith such clothing and cquijome!il whenever hc works on the said manufacturing process. (4) Protective clothing and equipment shall be washed daily from inside and outside if the workers handle pesticides containing nicotine or phosphorous and sh2!I be washed as as necessary, if handling other pesticides, depending upon the nature theceof. (5) Protective clothing and equipment shall be maintained in good repair. Floors and work benches,— (I) Floors in every work room where Io. dangerous pesticides are mampulated shall be of cement or other impervious material gn mg a smooth surface. (2) Floors shall be maintained in good repair, provided with adequate slop leading to a dram and thoroughly washed once a day with hose pipe. (3) Work benches where dangerous pesticides are manipulated shall be made or smooth, non-absorbing material preferably stainless steel and shall be cleaned at least once daily

11. Spillage and H aste.— (j) If a dangerous pesticides during its manipulation splashes cr spiii1S on work benches floor or on the protective clothing V. orn by a worker, immediate acuon shall be taken for thorough decontanimauon of the work-bench, floor or protective clothing as the case may be. (2) Cloth, rag, paper or other material soaked or solid with any danger- ous pesticides 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 ina re- adily accessible place jor use in attend ing to a spillage. (4) Easty means of access shall be provided to all parts of the plant for cleaning, maintenance and repairs

12. Empty containers used for dangerous pesticides.—Containers used for dangerous pesticides shall be thoroughly cleaned of their contents and treated with an Inactivating agent betore being discarded, destroyed or disposed of

13. Manual A dangerous pesticides shall not be required or allowed to be manipulated by hand except by means of a long handled scope.(2) Direct contact of any part of the body with a dangerous pesticides shall be avoided, 172] Bihar Factories Rules, 1950 [Rule 95 i t

14. In every work room or area where any dangerous pesticides is mampulated, adequate ventilation shall be provided at all times by the circulation of fresh air.(2) Unless the plant and the process is completely enclosed the following operations in connection with the manipulation of a dangerous pesticides shall not be allowed to be carried out or .undertaken without an efficient draught :— (a) employing a container holding a dangerous pesticides. (b) blending a dangerous pesticides, (c) preparing a liquid or power formulation containing a dangerous pesticides. (d) Changing or filling a dangerous

pesticides into any container inclu- ding small size, container, tank hopper or machine. (3) In the extent of a failure of the exhaust draught provide.! the operations mentioned in sub-rule (2) shall be stopped forthwittli 15. Time allowed for Before each meal and before end o t the days work, at least ten minutes in addition to the regular rest interval shall be allowed for washmg to each worker engaged in the manipulation of any dangerous pesticide. (2) Every worker engaged in the manipulation of dangerous pesticides shall have thorough wash before consuming any food and also at the end of the day's work

16. Washing and bathing There shall be provided and maintamed jn clean state and In good repair for the use of the workers emp- Joyed on the said manufacturing process adequate washing and bathing places having a constant supply of water under cover at the rate of one place for every such 5 workers employed at any one time : Provided that the provision of sub-rule (4) of rule 63 relating to persons, whose work involves contact with an injurious or noxious substance shall not apply in respect of workers employed on the said manufacturing process : Provided further that for computation of the number of workers, maxi- mum number of workers employed at any one time on any day shall be the basis : (2) The washing places shall have stand pipes placed at interval of not less than one meter.(3) Not less than one-half of the total number of washing place shall be provided with bath.room. (4) Sumcient 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) Suffcient supply of soap and nail brushes shall be provided. .17. Cloak-rooms.—There shall be provided and maintained for the use of the workers employed in the said manufacturing process Rule 95 J Bihar Factories Rules, 1950 [173 I (1) a cloak-room for clothings put off during working hours with ade- quate arrangements for drying of the clothings, if wet. (2) Separate cupboards or some other suitable arrangement for the storage of protective clothings provided under paragraph 9

18. Mess-room.—l here shall be provided and maintained for the use of the workers employed in the factory in which the said manufacturing process is carried on a suitable mess-room which shall be furnished with (l) Sufficient tables and benches with back-rest ; (2) adequate number of •wash-basins; and (3) adequate means for warming food. The mess-room shall be placed under the charge of wholetime attendance and shall be kept clean

19. Exemption.—lf in respect of any factory the Chief Inspector is sati- slied that 0M ing to the exceptional circumstances or infrequency of the said manufacturing proc ess or for any other reason which he shall record in writing all or any cf the •provisions of this schedule are not necessary for the protec- tion of the vorkers employed in the factory, he may by an order in writing, exempt, such factory, from all or any of the provisions of this schedule on such condition as he may specify therein, such order may at any time be revo- ked by the Chie! Inspector after recording his reasons therefor

20. Manipulation not to be undertaken.—Manufacture or manipulation ofa pesticide shall not be started in any factory unless a certificate regarding its dangerous nature or otherwise is obtained from the Chief Inspector. 2. hibited

3. Appendix I. Cautionary Notice. Insecticides and pesticides. Chemicals handled in this plant are poisonous. Smoking, taking food or drink, chewing tobacco in this area is pro• No food or drink shall be brought in this area. Some of these chemicals may be absorbed through skin and may cause poisoning

4. A good wash shall be taken before every meal

5. A good bath shall be taken at the end of the shifts

6. Protective clothing and equipment supplied shall be used while wor• king in this area

7. Containers of pesticides shall not be used for keeping any food stuff or drink

8. Spillage of any chemical on any part of the body or on the floor Of work bench shall be immediately washed away with water

9. Clothing contained due 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.174 Bihar Factories Rules, 1930 [Rule 95 the supe•• 12. case of any si*ness like nausea, vonfttiat-', riot officer, the manager, the Plant Medical Officer if : here at y, should be who will make necessary arrangements for treatment

13. All workers shall report for the pr:sc'ibed medical exa •nil; a' ion and test regulary and when required to protect their own health. Schedule XVi1T. Process involving Manufacture, Use, Storing, Handling or Manipulating of Benzene or any substance containi Benzene. l. Application.—This schedule shall apply in respect of all ract0iies or to any part of any factory in which benzene is nianufaetured, sto:ed, handled, or otherwise used or manipulated

2. This schedule shall be without any prejudice to and in addit'on to and not in derogation to any provision of the Act or other rule or ot' any pro- vision of any other Act, rule or regulation

3. Definitions.—For the purpose of this Schedule (a) 'CBenzenc" means an aromatic hydrorarbonC H and benzene or all substances containing benzene shall be treated as "'benzene" for the pur- poses of this Schedule. (b) "Effective •substitute" means a chemical or any other substance which can be used as a substitute to benzene and which is not toxic or the toxicity of which is so J 'w as •not to be dangerous and unsafe for the health of any human being. (c) 'Enclosed apparatus" means an appal atus or system fully enclosed such that it will not allow any escape of benzene vapour or fume from the apparatus into the atmosphere at any state. (d) "Efficient exhaust draught" means localised ventilation effected by mechanical or other means for the removal of vapour or fumes so as 10 prevent the vapour or fume from escaping into the air or any place in which work IS carried on. No arrangement or device shall be deemed to be efficient wh ch fails to remove effectively vapour or fume generated at the point where it ori- ginates, and which permits the said vapour or fume removed to escape into or re•enter the same or any other work place either directly or indirectly. (e) "Air-line respirator" means an apparatus for supp'.y of air of requi- red purity at required temperature and pressure in prop:rly laid out pipe •line with facilities to draw the breathing air from those pipe lines through a hose line to the face mask for the purposes of breathing fresh and.pure air. (i) Air-line respirator shall comprise containing breathable air With facilities for necessary nose connection and shall have' suitable brea*hing mask provided so that a person working in poisonous or irritable atmosphere is able to breath pure and fresh air from the pipe line during the period of work, without any harm or injury to health or discomfort to him. (ii) Air-line respirator shall also include any other suitab'e apparatus for the purpose of breathing pure and fresh air approved in writing by the Chief Inspector, Rule 95] Bihar Factories Rules, 1950 [175 4. Cat. tionary Placards —Cautionary notice in the form specified in Appendix A attached to this schedule and in the language of the majority of workers employed shall be displayed at prominent places in the area, where there may be likelihood or presence or escape of benzene, either accidently or under normal condition

5. Substitution.—l r(ä) Use of Benzene and substances containing ben- zene is prohibited in the following processes (i) manufa&' ure of varnishes, paints and thinners, and (ii) ctenningÆnd degreasing operations. (b) Wherever any effective substitute is available benzene shall not be used, (c) The Chief Inspector, by an order in writing, may allow the use of benzene. if he is satisfied in respect of any factory or any process that owing to the special condition or special method or work or for any other reason it is not n•cessary •to subs•itute benzene.. subject to such condi'ions as he may specify. He may in his discretion at •any time revoke the whole or part of such order

6. Prohibition relating to employment of women and young persons.— No women or youngx persons shall be employed or permitted to work in any room or place in which is used

7. Tmproper use of Workers shall be prohibited to .use benzene for any purpose other than the process for which the benzene is silpplied or provided. (b) Workers shall be instructed r€garding the possib'e dhngers arising from such misuse and a cautionary notice in respect thereof shall be displayed. 8 Instructions as regards risks. —Every worker in his first employment shall be fu l!y introduced on the properties of benzene he may . lave to handle, of the dangers involved and the prec autions that should be taken. Workers shall also be instructed on the mvasures to be tawn to deal with any emergency : Provided further that such instructions shall be imparted by duly quali- fied medical or industrial h) giene officer or by duly qualified safety offcer or in smal ler factories where such cflicers are not aiailable, by a duly qualified person and a record tl• ereof shall be maintained in a jegister which shall be signed by the instructor as well as the manager and which shall be produced for inspection on demand 9. Prohibition on consuming food etc in work places. —No worker shall store or consume food, drink, tobbaco pan, or any similar article on or near any part of,the work place where benzene isnanufactured, handle, stored or used IO. Enclosure of All processes invo Iving use of benzene shall be carried out in enclosed apparatus or

plant. (b) The Chief Inspector, if he is satisfied -in, respect of any factory or any process that owing to special conditions or special method or work cr.any i. Existing CIS. (a) & (b) re-numbered as (b) & (g) thereof cl. by $. O. $6 da!ed 13.7 1988. 176] Bihar Factories Rules, 1950 [Rule 9S other reason the work or process involving the use of benzene may be carried out in an apparatus Bhich is not fully enclosed he may by an order in writing per-mit such a proces to be carried out otherwise subject to such conditions as he may in his order specify. He may in his discretion at any time revoke whole or part of such order

11. Efficient exhaust draught.—Where a process using benzene cannot be carried out in an apparatus or plant totally enclosed, the Inspector may permit the factory to carry out such process under efficient exhaust dcaught with such condition that he may specify

12. Floor of work room.—The floor of every work room in which ben- zene is manufactured, used, stored, or handled Shail be :— (a) made of such material which may not absorb benzene; (b) Smooth and impervious to water; (c) maintained in sound condition; (d) with adequate slop and provided with efficient drains; and (e) thoroughly washed daily by means of hose pipe and the drain water shall be led into a sewer through a closed channel

13. Collection of waste.—(a) A suitable receptacle made of metal with a tightly fitting cover, shall be provided and used in each york room by de- positing wastes, like cloth, paper or other material soiled with benzene. (b) All such contaminated waste material shall be destroyed by burning at a safe place either when the receptacle is full or once in a day whichever is earlier

14. Empty containers.—Empty containers used for holding benzene shall be thoroughly cleaned of their contents ard treated with an inactivating agent before being discarded or disposed of

15. Decontamination of pit tank etc.—(a) No part of any plant which has contained benzene shall be repaired or opened for repair, unless it has been emptied of benzene, thoroughly cleaned and decontaminated and pro- perly tested that it does not contain any trace of benzene. (b) Before a worker enters a tank, pit, kettle or any other confined space which has contained benzene it shall be thoroughly washed and decontamin- ated and tested and certified by competent person that the tank, pit, kettle, or the confined space, as the case may be, is free of benzenc and safe for any person to enter. (c) Record of such test shall be maintained in a register which shall be signed by the competent person and the register shall be made available for inspection whenever required by an Inspector provided that the Chief Inspec- tor may direct that the said resister shall be maintained in a form specified by him

16. Proper labelling.—Every container containing benzene shall have a proper label which shall include the following information (a) Benzene-Poisonous, (b) Benzene content—Percentage. (c) Warning about the toxigity. Rule 95] Bihar Factories Rules, 1950 [177 (d) Warning about inflammability (e) Appropriate symbols 17. Washing At the place wherein benzene is man ufac- tured or used, stored or handled there shall be provided and maintained in clean state and in good repair washing facilities as specified below for the use of all persons employed in the said process : (i) An enclosed washing place under cov.er, with soap and towel and with at least one tap for ery IO persons working at any one time at the place and having a constant supply of water. (ii) The washing facilities shall be located in a place easily accessible to workers. (iii) A clean towel shall be provided individually to each worker if so directed by the Inspector. (b) All workers employed in any process in which benzene is used, before taking food or leaving the factory shall have a thorough wash. Proper and adequate supervision shall be maintained over the workers so that they have thorough wash before meals and before leaving the factory at the end of the day's work. An Inspector may by ara order in writing direct that suffcient quantity of hot water for washing during winter season shall be provided

18. Appropriate work clothes.—Every worker exposed to. benzene shall be provided with suitable work clothes : Provided that the Inspector may specify the type of work clothes to be provided to the workers •exposed to benzene

19. Cloak rooms—There shall be provided and maintained in a clean state and in good repair for the use of the workers employed in processes in which benzene is manufactured, used, handled or manipulated— (a) a cloak room with a locker for each worker having two compart- ments one for street clothes and the other for work clothes, and (b) a place separate from the labour room and from the mess room for the storage of protective equipments. The accommodation so provided shall be under the care of responsible

person : Provided that the Inspector may direct the factory in writing to provide suitable drying or other facilities in the cloak room

20. Lunch room.—There shall be provided and maintained for the use of the workers employed in the factory and remaining on the premises during the rest or lunch intervals, a lunch room which shall be properly ventilated and furnished with tables and benches and means for warming food. The lunch room shall be placed under •the charge of a responsible person and shall be kept clean and well maintained at all times

21. Non-sparking tools—No tools which is likely to produce any spark due to impact or friction shall be allowed to be used and only non-sparking 178 J Bihar Factories Rules, 1950 [Rule 95 tools shall be used in any areas where benzene vapour is likely to be present whether normally or accidentally

22. Safe limits for benzene The concentration of benzene shall not be allowed to exceed 25 parts of vapour or gas per million parts of air by volume or 60 miligram per cubic meter of air, in any part of the factory . Provided tbat the Chief Inspector by an order in writing may change this limit at any time as and where he considers the same necessary. (2) Concentration of benzene in the work environment shall bc deter- mined at least once a day by adopting suitable tests. The result of such tests shall be entered in a register approved by the Chief Inspector and shall be produced whenever required by the Inspector. Immediate steps shall be taken to reduce the concentration if found in exc ess of the specified safe limit. Where for special reasons workers may be exposed for short periods to concentration which exceeds the maximum limit referred to in sub-clause (I), they shall be provided with adequate means of personal protection against the risk of inhaling benzene vapour or of absorbing benzene through the skin

23. Protective wear and Sufficient quantity of the foll- owing protective wear and equipment of appropriate and good quality shall be provided for the use of workers employed on any process of manufacture, storing, using, handling or manipulating benzene and they shall be properly maintained so as to be always in a condition to be used (1) Gloves, (2) Aprons.(3) Boots, (4) Goggles, (5) Respirators, and (6) Self-contained breathing apparatus. (b) The above equipment shall be inspected regularly and maintained in proper conditions : Provided that the Inspector may direct that such additional protective wear as he may specify in writing shall be provided for the use of any parti- cular category of workers : Provided further that in case there is any controversy or dispute regard- ing supply of any protective wear or equipment the matter shall be referred to the Chief Inspector whose decision would be final. 24 Medical With the prior approval of the Chief Ins- pector a qualified medical practitioner shall be appointed in every factory in which benzene is manufactured, used, stored, handled Or manipulated to be here-in-after called the Plant Medical Offcer : Provided that— (I) This rule shall not apply to a factory to which sub-rules (l) and (2) of rule 65 are applicable; and (2) in a small factory or in a factory in which workers employed on pgocesses of manufacturing, storing, using, handling or manipula- ting of benzene the Chicf Inspector may permit the employment of a part-time Plant Medical Officer or may permit the Certifying Surgeon to perform the duties of the Plant Medical Officer, sub' ject to such conditions as he may specify. Rule 95] Bihar Factories Rules, 1950 [179 (b) Every worker exposed to benzene shall be medically examined and necessary tests to determine the condition of his health shall be carried out by the Plant Medical Officer once in every three months : Provided that if such a worker suffers from cough or breathlessness, his condition of health shall be immediately examined by the Plant Medical Offl- • cer and necessary steps will be taken for his treatment. (c) The result of such examination and test shall be entered in a suita- ble register which shall be produced before the Inspector, whenever required. (d) Adequate supply of suitable antidotes shall be maintained for treat. ment of acute case of poisoning. (e) For the purpose of medical examination which the Plant Medical Officer may conduct at the factory premises shall be provided for his exclusive use along with one adequately ventilated, lighted and furnished room with a screen and instruments for examination

25. Medical examination.—(a) Every worker employed in any process of manufacturing, using, storing, handling or manipulating benzene shall be thoroughly examined by the Certifying Surgeon within seven days following the date of his first employment in any of the said processes and thereafter shall be thoroughly examined by the Certifying Surgeon onc e in a year or at such shorter intervals as may be specified in writing by the Chief Inspector. The examination shall also include X'-Ray of lungs and a blood test. 'First Employment' includes re-employment in the said process following cessation of employment in such process for a period exceeding three months. (b) A health register in

Form no. 16 containing the names of all wor- kers employed in the said processes snall be maintained. (c) If the plant physician after examination, at any time, as per clauses 23 (a), (b) and (c) is of opinion that a person has developed signs and symp- toms of benzene exposure he shall make a record of his findings in the said register and inform the manager in writing regarding the same. (d) A worker so found exposed, shall be sent to the Certifying surgeon with a report of the Plant Physician. The Certifying Surgeon after satisfying himself with the findings of the Plant Physician and conducting further exami- nation if he considers the same necessary, may issue an order for temporary suspension of the person from work in the said process or may advice the worker to bg employed on some other work which may be safe for him, or may declare him to be permanently unfit as the case may be. (e) The medical examination of workers shall be arranged by the occu- pier and manager and the person so examined shall not bear any expense for it

26. Isolation of building and site and fire resistance.—(a) Building and plant shall be sited with due regards to the dangers which may arise from the processes involved and in particular shall be spaced at distances which are deemed safe for the fire and explosion risk. Consideration shall be given to the effect of any process carried out in adjacent factories or plants. (b) Where special dangers exist, separate building shall be used for the different parts of a process. They shall be spaced at sumcient distances apart [Rule 95 180] Bihar Factories Rules, 1950 and shielded to prevent damage to each other in the event of fire or explosion, and shall be safe guarded by the provision of suitable blow-out panels for roofs. Where the risk of fire or explosion is considerable, the buildings shall be divided by blast or protective screen walls. (c) No combustibie material shali be used in the erection of working buildings, unless there are special reasons necessitating their use, in which case they shall be used only after being rendered fire .resistant. The roof shall be of light fire resistant construction, and floors shall be impervious fire- resistant materials and shall be regularly maintained in such condition

27. Dangers of ignition including lighting No internal combustion engine, and no electric motor or other electric equipment capable of generating sparks or otherwise causing combustion shall be installed or used in a building or danger zone. Electric conductor shall be encased in scre- wed steel conduct. (b) All hot exhaust pipes shall be Installed outside a building and other hot pipe inside the plant be suitably protected. (c) Portable electric lamps shall not be used, unless of an intrinsically safe type and portable electric tools connected by flexible wires shall not be used unless of the flame proof type. (d) Where an ic;flammable atmosphere may occur, the soles of foot- wear worn by workers shall have no metal on them, and the wheels of trucks, or conveyors shall be of a material which shall be a good conductor and non- sparking. Adequate precautions shall be taken to prevent ignition by sparks emitted from locomotives or other vehicles operated in the factory or on public lines. (e) No electric arc lamp, or naked light, fixed or portable shall be used, and no person shall have in his possession any match or any apparatus of any kind for producing a uaked light or spark in, or on or about any part of the factory, where there is any likelihood of fire or explosion from inflammable vapour or fume, and all incandescent electric lights in such parts shall be in double air tight glass covers. (f) Prominent notice in the language understood by the majority of the workers and legible by day and night prohibiting smoking, the use of naked lights, and the carrying of matches or any apparatus for producing a naked light or spark shall be affixed at the entrance of every room or place where there is any risk of fire or explosion from inflammable vapour or fume. In the case of illiterate workers, the contents of the notices shall be fully and care- fülly explained to them when they commence work in the factory for the first time and again when they have completed one week at the factory (g) A sumcient supply of spades, scrappers and pails made from non- sparking materials shall be provided for the use of persons employed in clea- ning out or removing residues from any chamber, still, tank or any other vessel wherein there may be risk of ignition or explosion, and in no case any tool other than non-sparking tool shall be used on any such work or, while other than non-sparking tool shall be used on any such work or, while under- taking any repair or maintenace work at any such place or plant

28. Static electricity and lightening protection.—(a) All pipe lines and belts and other machinery and plants on which static electricity is likely to accumulate shall be effectively earthed. Receptacles for inflammable liquids shall have metallic connections to the earthed supply tanks-to prevent sparking of static electricity, where necessary humidity shall be controlled. Rule 95] Bihar Factories Rules, 1950 [181 e e e er le to ds ng (b) Mobile tank wagons shall be earthed during filling and discharge, and precautions

shall be taken to ensure that earthing is effective before such filling or discharge takes place. (c) Lightening protection apparatus shall be fitted where necessary, and shall be maintained in good condition

29. Process heating.—The method of providing heat for a process shall be safe as possible, the heating medium shall be automatically controlled at a pre-determined temperature below the danger temperature

30. Escape oj Provision shall be made in all plants sewers, drains, flues, ducts, culverts and burried pipes to prevent the escape and spread of any liquid, vapour or fume likely to give rise to fire or explo- Sion, during normal working, cleaning or overhauling or in the event of accid- ent or emergency.(b) If escape occurs, such substances shall be removed expeditiously and efficiently at the point of liberation. The effluent shall be trapped and rendered safe outside the danger area

31. Leakage of inflammable or dangerous liquids.—Provision shall be made to confine by means of bund, walls, sumps, etc., possible leakages from vessels containing inflammable or dangerous liquids. Adequate and suitable fixed fire fighting appliances shall be installed in the vicinity of such vessels

32. Cleaning of empty containers—(a) AI! empty containers which have held inflammable or poisonous material shall be rendered permanently and completely safe and shall not be repaired or destroyed, until their cleaning in such manner as to make them completely and permanently safe has been completed. (b) Combustible and inflammable materials shall not be stored in close proximity to chemicals which are liable to cause ignition. (c) Rubbish shall be removed from buildings delay and placed in special metal containers provided with close fit(ing lids. The contents shall be removed daily and suitably dealt with. Waste products containing inflam- mable or explosive materials shall not be placed on rubbish heaps but shall be destroyed in an appropriate manner

33. Installing of pipe lines for inflammable liquids.—All pipe lines for the transport of inflammable liquids shall be protected against damage or breakage, shall be arranged so that there is no risk or mechanical damage from vehicles and shall be so laid that, they drain throughout without the collection of deposits at any part. All flanged joints, bends and other connec- tions shall be regularly inspected. Cocks and valves shall be so constructed that explosive residues cannot collect therein, The open and closed positions of all cocks and valves shall be clearly indicated on the outside, 34. Packing of reaction vessels.—Packing and joining materials for reac- tion vessels (including covers, man-hole covers and ventilation pipes) and in pipe lines and high or Iow temperature insulating materials shall not contain materials which are combustible or which react with the products of the plant. 182] Bihar Factories Rules, 1950 [Rule 95 i 35, Safety valves.—Every still and every closed vessel in which vapour is evolved, and in .which the pressure is likely to rise to a dangerous degree, shall have attached to it a pressure gauge and a proper safety valve or other equally efficient means to relieve the pressure maintained in goodcondition

36. Vtgorous or delayed reaction.—SuitabIe provisions, such as, auto- matic and distant control shall be made for controlling the effects of unduly vigorous or delayed reactions. Automatic flooding or blanketing shall be pro- vided for in the event of an accident

37. Examination, testing and repair oJplant.—Examination, testing and repair of plant parts which have been in contact with explosives and inflamm- able material or which is under pressure shall be carried out only by proper supervisions. 38, Alarm system —(a) Gravity of pressure, feed system of supplying inflammable materials to the various parts of the buildings or plant shall be fitted with alarm systems, automatic cut-offs or other devices to prevent over- charging or otherwise endangering the plant. (b) The amount of inflammable material taken into a building in bulk containers shall be kept as Iow as practicable at any one time. (c) Adequate steps shall be taken to prevent the escape of inflamma ble and explosive vapour from any container into the atmosphere of any building •i (1) (2) (3) (4) (6) (7) (8) (9) Appendix A Cautionary Notice (Clause 4) Benzene and substances containing benzene are poisonous and inflammable substance. Handle, use and process such substances care. In case of spills and splashes remove contaminated clothing at once and take a wash. Wear protective equipment provided and keep yourself safe. For better safety from the chemicals, maintain good personal cleanliness. In case of symptoms like nausea, vomiting, giddiness, nervous depression during work, report immediately to the Factory Mana- ger, who would arrange for treatment. Keep your work place clean. Benzene can be absorbed through skin, hence avoid direct contact Avoid inhalation of the toxic vapours. Smoking and taking food, drink, tobacco are prohibited in this area. (IO) Report for clinical tests to protect your health. 1[Schedu1e XIX Solvent Extractionpla Plant" means any plant in which the

process of extracting of oil or any other substance from oil-cake, rice bran 1. ins. by S. O. 637 dat 15-4-1982 and re-numbercd by S. O. 347 dated 13-3-1986. Rule 95 .1 Bihar Factories Rules, 1950 [183 or any other articles or substances by the use of any solvent is carried on and the word 'Plant' wheresoever used in these rules, unless otherwise specified shall be deemed to mean solvent extraction plant. (b) "Solvent" means an inflammable liquid having flash point below 120 degree F. (c) "Flame-proof" enclosure as applied to electrical machinery or appa- ratus means an enclosure that will withstand, when covers or other access doors are properly secured, the pressure of any internal explosion of any inflammable gas or vapour which may enter or which may originate inside the enclosure without suffering any damage and without any allowing internal inflammable or prodact of explosion to the external atmosphere. (d) "Competent Person" means a person having a degree or equivalent diploma in Mechanical or Chemical Engineering or in Chemistry with at least 5 years experience in a chemical plant or any other person who by virtue of his other qualification and experience is considered by the Chief Inspector to be a competent person for this purpose; Provided that no person would be deemed to be a competent person who has not obtained a certificate of competency from the Chief Inspector

2. Location and Lay-out.— (a) No solvent extraction plant shall be per- mitted to be constructed or extended to within a distance of 30 metres from the nearest residential or oflice building. (b) An adequate and continuous wire fencing at a height of at least 15 metres from the ground shall be provided around the solvent extraction plant at a minimum distance of 15 metres from any point of the buildings of the plant. (c) No person shall be allowed to carry any match, cigarette lighter or any other similar device or any device whereby flame or fire can be generated, any open flame or fire inside the area bound by the fencing. (d) Boiler houses and other buildings where any process involving open flame or fire is carried on shall be located at least 30 metres away from the plant. (e) If any godown or any preparatory process is at a distance of less than 30 metres from the plant, the same shall be at a distance of not less than 15 metres from the plant, and a continuous barrier wall of non-combustible material, at least 1.5 metres high shall be erected at a distance of not less than 15 metres from the plant

3. Electrical An electrical motors, wirings, fittings, switches, switch gears and other electrical apparatus, installed or housed in or clcse to any solvent extraction plant, shall be of flame proof constructions, approved and certified by the Central Research Mining Station, Dhanbad, or by any other competent authority approved in writing by the Chief Inspector. Note.—These rules shall be in addition to Schedule V Ill—Chemical Works—rule 95 of the Bihar Factories Rules, 1950 or any other relevant pro- Bihar Factories Rules, 1950 [Rule 95 vision of the Factories Act, 1948 and the said rules and shall be not in derog- ation of any them (F) All metal parts of the plant and building, including pipes, tanks and containers where solvent is stored or IS present and all parts of electrical equip- ment not required to be energised shall be properly bounded together and connected to effectively earth as to avoid accidental rise in the electrical potential of such parts above the earths potential and the earth connection shall at all times be maintained in an effective condition

4. Restriction on Smoking.—Smoking shall be strictly prohibited within 15 metres distance from the plant. For this purpose "No Smoking" signs shali be boldly and permaneatly displayed and maintained in the area in such mat- ter that it is clearly visible by day and by night

5. Precautions against friction.—-(a) All tools and equipment including ladders, chains and other lifting tack!e required to be used in a solvent extrac- tion plant shall be of non-sparking type. (b) No machinery or equipment in solvent extraction plant shall be beltdriven. (c) No person shall be allowed to enter and work in the solvent extraction plant if wearing clothes made of Nylon or such other synthetic fibre that can generate static electrical charge, or wearing foot-wear which is likely to cause sparks by friction . Devices shall be provided wherever necessary in every room of the plant for effectively discharging of body static electricity of static electricity likely to generated for wearing apparel and equipment

6. Fire Fighting Adequate number of portable fire extinguishers suitable for use against flammable liquid fire shall be provided in the solvent extraction plant.(b) An automatic water spray sprinkler system or a wetpipe or open head deluge system with sufficient supply of water shall be provided throu- ghout the solvent extraction plant and throughout the building housing such plnnt

7. Precaution against Power Failure.—Provision shall be made for the autamatic cutting off of steam in the event of power failure and also for emer- gency overhead water supply for feeding water by gravity to condensors which shall come into play automatically with the power failure

8. Magnetic separators.—Raw materials for use in a Solvent Extraction Plant shall be fed to the extractor by a conveyer through a hopper, and an emcient magnetic separator shall be provided to rcmove any place of iron from the raw materjals and interlocking device shall be provided which shall stop feeding of raw materials if magnetic separator is not working

9. Venting—(a) Tanks containing solvent shall be provided with emer- gencey vent to relieve excessive internal pressure in the event of fire. (b) All emergency relief vents shall terminate at least 6 metres above the ground and be so located that vapours or substances vented out may not under any circumstances so re-enter the building in which solvent extraction Piant is located or in any other building. IO. Ventilation.—The building or shed housing the solvent extraction plant shall be well ventilated andif required the building shall be provided with mechanical ventilated with provision for at least six air changes per hour, Rule 95 Bihar Factories Rules, 1950 [185 11. Waste H'ater. -Process waste water shall be passed through flash evaporate to remove last traces of solvent before it is discharged into a sump. 12. (a) Solvent shall not be stored in an area covered by solvent extra- ction plant except in small quantities which shall be stored in labelled safety cans approved by the Inspector. (b) Waste materials such as oily rags, other wastes and absorbants used to wipe off solvent and paints and oils shall be deposited in containers appro- ved by the Inspector and removed from the premises at least once a day. (C) Space within the solvent extraction plant and within 15 metres from the plant shall be kept free From any combustible material, and any spill of oil or solvent shall be cleaned up immediately 13. Examination and The solvent extraction plant shall be examined by a competent person to determine any weakness or corrosion or wear, once in every 12 months. Report of such examination shall be sent to the Inspector with his observation as to whether or not the plant is in safe condition to work. (b) No repairs shall be carried out to the machinery of plant except under the direct supervision of the competent person. (c) Suitable facility shall be provided for l[purgingl the plant with inertgas 2[or steam] before opening for cleaning or repairs and before intro- ducing 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 only 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 machi- nery

15. Employment for women and young persons.—No women or young person shall be employed in any solvent extraction plant

16. Vapour A suitable type Of combustible gas indica- tor shall be provided and maintained in good working order and a schedule of routine sampling of atmosphere at various locations as approved by the Chie/ Inspector shall be drawn out and entered in a register maintained for the purpose.(b) When any solvent is removed from any batch extractor by vacuum, gauges shall be provided and tests shall be carried out to ensure that a mini- mum vacuum of 650 mm. (26" —O) mercury is obtained and maintained stea- dily for a minimum period of 30 minutes before the extraction is allowed to be opened for discharge of coke or for persons to enter or for any other pur- pose 17. (a) When on opening the door of a batch extractor the extracted meal cannot be dislodged from the extractor freely, the door shall be closed and the material reheated adequately before the door is reopened : Provided that if even after adequate reheating, tools must be used for the removal of the extracted meal, only non-sparking tools shall be used

1. Subs.bvS. O. 686 dated 13.7.1988. Ins. by ibid, Rule 95 186] Bihar Factories Rules, 1950 (b) Where solvent is removed by stcam heating, the presence of the sol- vent shall be tested at the vent provided on the top of the vessel before opemng the vessel. (c) A log hook of operations giving the following details and •informa- tions shall be maintained and made available on demand to the Inspector — (i) Vacuum gauge reading for each charge. (ii) Testing of continuity of electrical bonding and earning system. (iii) Loss of solvent every 24 hours or loss per tonne of-materials used : Provided further that the Chief Inspector may require such further in- formation to be maintained in the log book as he may consider necessary. 18. (a) An emergency action plan shall be prepared and all personnels shall be properly trained. Training should be followed by periodic emergency action drills. (b) Emergency instructions shall be boldly displayed at suitable places in y the majority of 19. (a) All persons

employed in the plant shall be made fully aware of the toxic properties of the solvent being used, stored and handled. (b) All persons exposed to any toxic solvent shall be medically exami- ned by the certifying surgeon once in six months find at more frequent inter- vals by the Medical Oflicer of the factory : Providcd that the Chief Inspector may reduce the period of six mcnths in case he considers that more frequent examination of the health of the kers is necessary to secure their health and safety.] 1[Schedu1e XX Operations involving High Noise Levels

1. Application.—This schedule shali apply to all operation in any manufacturing process having high noise level

2. Definitions.—(a) For the purpose of the schedule— (a) '"Noise" means any unwanted sound. (b) "High noise level" means any noise level measured on the a-wei- ghted scale is 90 dB or above. 1 107 110 115 No exposures in excess of 115 dBA is to be permitted. (2) For any period of exposure fallilig in between any figures and the next higher or lower figure as :ndicated in column l, the permissible noise level is to bc determined by extrapolation on a proportionate basis. 1 Ins bys 0 686 dated 13-7-1988. *In Hindi version of This n Jtificatioe in Bihar Gazette these figures are 106 and respectively. Rule 9S] Bihar Fa ;tocies Ru les, 1950 TABLE 2 Permissible Exposure Level of Impulsive or Impact Noise. Peak noise level in dB. 140 135 130 125 120 Permitted number or impulses or impacts per day. 100 315 1,000 3,160 10,000 Notes.— (l) No exposure in excess of 140 dB peak noise level is permitted. (2) For any peak noise level falling in between any figure and the next higher or lower figure as indicated in column I the permitted number of impulses or impacts per day is to be determined by extrapolation on a proportionate basis. (b) For the purposes of this schedule, if the variations in the noise level involve maxima at intervals of one second or less, the noise is to be considered as continuous one and the criteria given in Table I would apply. In other cases, the noise is to be considered as impulsive or impact and the criteria given in Table 2 would apply. (c) When the daily noise 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 consi- dered to exceed the limit value if the sum of the fraction Cl C2 Cn exceed unity : n Where the Cl, C2 etc. indicate the total time of actual exposure at a specified noise level and T 1, T 2 etc. denote the time of exposure permissible at that level. Noise exposure of levels less than 90 dBA may be ignored in the above calculation. (d) Where it is not possible to reduce the noise exposure to the levels specified in sub-rule 3(a) by rasonably practicable engineering control QC administrative measures, the noise exposure shall be reduced to the greatest extent feasible by such control measures, and each worker so exposed shall be further provided with suitable ear protectors so as to reduce the exposure to noise to the levels specified in sub-rule 3 (a). (e) Where the ear protectors provided in accordance with sub-rule 3 (d) and worn by a worker cannot still attenuate the noise reaching near his ear, as determined by substracting the attenuation value indBAof the ear protectors concerned from the measured noise level, to a level permissible under Table I or Table 2 as the case may be, the noise exposure period Shall be suitably reduced to correspnd to the permissible noise exposures time specified in sub-rule 3 (f) (i) In all cases where the prevailing noise levels exceed the permissible levels specified in sub-rule 3(a) there shall be administered ineffective hearing Bihar Factories Rules, 1950 [Rule 96 conservation programme which shall include among other hearing conserv- ation measures, pre-employment and periodical au ditory surveys conducted on workers exposed to noise exceeding the permissible levels, and rehabilit- ation 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. (ii) Every wotker employed in areas where the noise exceeds maximum permissible exposure levels specified in sub-rule 3(a) shall be subjected to an auditory examination by a Certifying Surgeon within 14 days of his first emplo- yment and thereafter, shall be re-examined at least once in every 12 months. Such initial and periodical examinations shall include tests which the Certif- ying Surgeon may consider appropriate and shall include determination of auditory thresholds for pure tr nes of 125, 250, 500, 1,000, 2,000, 4,000 and 8,000 cycles rer second : provided that the Certifying Surgeon may rcquire examination of such workers by an ear specialist and report of all such examinations shall be made available to the Certifying Surgeon : provided further that all costs of examination by ear specialists shall be borne by the occupier of the factory and the persons being examined shall not bear any expenditure.] 96. Notification of When any accident specified in the Schedule takes place in a factory, the manager of the factory, shall forthwith send notice thereof by telephone, special messenger or telegram to the Inspector and if the accident is fatal or of such a serious nature that it is likeiy to prove fatal notice as aforesaid shall also be sent to— ia) the District Magistrate or Subdivisional Officer, (b) the Officer-in-charge o!' the nearest police station, and (c) the nearest relative of the injured or deceased person. (2) The notice so given shall be confirmed by the manager of the factory to the above-mentioned authorities within 12 hours of the occurrence by sending to them a written report into the prescribed

Form no. 17-A: Provided that the Inspector, subject to the approval of the Chief Inspector may permit any factory or any class of factories installed for purposes connected with the Defence of India, to submit the notice of accident in any other form if he is satisfied that the said form furnished all the informations as required by Form 17-A. (3) In case of every accident which is not fatal and in which any person is injured a supplementary notice in Form no. 17-13 shall be sent to the Inspector and the Chief Inspeptor respectively within 7 days of the date on which the injured worker returns to work. Schedule 1. Accidents which cause— (a) déath to any person; (b) such bodily injury as prevents or will probably prevent the person injured from working for a period of 48 hours immediately follow- ing the accident. (c) such injury as may not prevent the injured person from working immediately after the accident, but as may develop subsequently Rules 91-98 j Bihar Factories Rules, 1950 [189 to an injury due to any infection or due to any other reason which may prevent the injured person from working for not less than 48 hours during any period after the accident

2. The following classes of accident, whether or not they are attended by personal injury of disablement—(a) (b) (c) (d, (e) (f) 97. Bursting of a plant (including any part or accessory thereof) for containing or supplying steam under pressure greater than atmos- pheric pressure. Collapse or failure ofa crane, derrick, winch, hoist or Other appli- ances used in raising or lowering persons or goods, or any part thereof, or the overturning of a crane. Explosion or fire causing or liable to cause damage to any building or property or liable to cause any personal injury. Explosion ofa receiver or container used for the storage at a pre- ssure greater than atmospheric pressure of any gas or gases (inclu- ding air) or any liquid or solid. Collapse or subsidence of any floor, gallery, roof, bridge, tunnel, chimney, wall or building

forming part of a factory or within the compound or curtilage of factory. Bursting of fly-wheels of grinding machinery, or any other part of a revolving machinery, or plant. Notice of poisoning or disease.—As soon as any worker in a 1 factory contacts any disease specified in the Schedule appended to the Act the manager of the factory shall send a notice thereof in Form no. 18 to the following authorities. (l) Chief Inspector, (2) Inspector, (3) Medical Inspector, (4) Certifying Surgeon. Chapter X Supplemental 98. Procedure in An appeal presented under section IO shall lie to the Chief Inspector, or in cases where the order appealed agains an order passed by th,it officer, to the State Government or to such authority as the State Government may appoint in this behalf and shall be in the form of a memorandum setting forth concisely the grounds of objection to the order and bearing court fees stamp in accordance with Article 11 of Schedule 11 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 appe- al the appellate authority shall, if it thinks fit or if the appellant has requested that the appeal should be heard with the aid of assessors, call upon the body declared under sub-rule (3) to be representatives of the industry concerned, to ot 14 days. if an assessocäS nominatecl by a oint such ody, the appe late 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 Rules 99-100 190] Bihar Factories Rules, 1950 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 in the hearing of the appeal. (3) The appellant shall state in the memorandum presented under sub- rule (I) whether he is a member of one or more ot' the following bodies— (l) The Bihar Chamber of Commerce. (2) The Bihar Sugar Mills Association. (3) The Bihar Industries Association. (4) lhe Engineering Association of India. The body empowered to appoint the assessor shall— (a) if the appellant is a member of one of such bodies, be that body ; (b) if he is a member of two such bodies, be the body which the apptllant desires should appoint such assessor; and (c) if the appellant is not a member of the aforesaid bodies, or if he does not state in the memorandum which of such bodies he desir- es should appoint the assessor, be the body which the appellate body 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, also to be fixed by the State Government, subject to a maximum of fifty rupees per diem. He shall also receive the actual travelling expenses. The fees and travelling 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 agamst him, the State Government may direct that the fees and travelling expemes of the assessor shall be paid in whole or in part by the appellant

99. Display of notices.—The abstract of the Act and of the Rules re- quired to be displayed in every factory shall be in

Form no. 19. 100. (1) Annual Returns.—The manager of ,every factory shall furnish to the Chief Inspector not later than the 15th January of the year subsequent to that to which it relates, a return in Form 20: Provided that— (i) The information regarding canteen shall be furnished only by the manager of every factory notified by the State Government where- in more than 250 workers are ordinarily employed. (ii) The informations regarding creche shall be furnished only by lhe manager of every factory wherein more than 50 women workers are ordinarily employed, and (iii) The informations regarding shelters, rest-rooms shall be furnished by the manager of every factory wherein m than 150 workers are ordinarily employed. (2) Ilalj Yearly —The manager of every factory shall furnish tc; fthe-ChietTiispector on or before in Form 21. Rules IOOA.103 J Bihar Factories Rules, 1950 191 (3) Annual Return of Hoeidays.—The manager of every factory shall before the end of each year furnish a return giving notice of all the days on which it is intended to close the factory during the next year. This return shall be submitted whether the factory is or not working during the year preceding the year to which it relates : Provided that the State Government may dispense with this return in the case of any specified factory or of any class of factories or of the factories in any particular area : Provided further that instead of specifying the actual dates or days of holidays only the system of grant of holidays may be mentioned in the return in case of the factories in which— (a) Sundays are observed as weekly holiday regularly, (b) a fixed day in the week is observed as a holiday regularly, or (c) holidays are observed according to a list approved by the Chief Inspector : Provided further that where the manager of any factory makes any dep- arture from such a holiday or a list Of holidays as aforesaid, prior intimation shall be given to the Inspector. 100-A. The occupier or manager of every factory shall report to the Slate Government and to the Inspector any intended closure of the factory or any section or department thereof immediately it is decided to do so or any abrupt closure of the factory or any section or department thereof immedia- tely it takes place intimating the reason for the closure, the number of workers on the register on the date of the report, the number of workers affected by the closure and the probable period of the closure. An intimation should also be sent to the State Government and to the Inspector as soon as the factory or the portion or the department of the factory, as the case may be, starts working again, provided that intended closure does not include closure due to holidays. (2) The occupier or manager of every factory shall furnish the informa- tion prescribed in sub-rule (l) in Form no

29. I OZ. Service of notices.—The despatch by post under registered cover of any notice or order shall be deemed suffcient service on the occupier, ow- ner or manager of a factory of such notice or order

102. Information required by the Inspector.—The occupier, owner or manager of a factory shall furnish any information that an Inspector may req- uire for the purpose of satisfying himself whether any provision of the Act or Rules thereunder has been complied with or whether any orderof an Inspector has been duly carried out. Any demand by an Inspector for •ny such infor- mation, 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

103. Muster roll.—The manager of every factory shall maintain a mus- .ter-roll of all the workers employed in the factory in

Form 22, showing (a) the name of each worker, (b) the nature of his work and (c) the daily attenda of the worker : 192 | Bihar Factories Rules, 1950 r Rules 103A-109 Provided that, if the daily attendance is noted in the Register of Adult Worker in Form no. 12 or the particulars required under this Rule arc noted in any other register, a separate muster-roll requiled under this rule need not be maintäined, 103-A. Overtime siips.—Ahy work done by a worker beyond the nor- mal period of work, shall be entered in a overtime slip in form no. IO-A in duplicate indicating therein the actual period of ovértime worked by him and a copy thereof, duly signed by the manager or by some other responsible per- son shall be given to the worker immediately after the compietion of the overtime work • Provided that if the Chief Inspector is satisfied for reasons to be recorded that it is not necessary to enforce this rule in any factory or in any class of factories or that any other record maintained in any factory fulfils the purpose of this rule, he may exempt the factory or the class of factories by an order in writing subject to such conditions and to such extent as he may specify, 104. Register of Accidents.—-ln every factory a register of accidents shall be maintained in Form no. 26 in which complete details as required to be furnished in the said form, in respect of every accident, as specified in section 88 of the Act and in the Schedule attached to rule 96, which may occur in the factory shall be clearly and-legibly entered within twelve hours of the occurrence of the accident : Provided that the information reqaired to be furnished in column 6 Of Form 23 may be entered within twelve hours of the return of the injured wor- ker to his duties; and provided further that in case of an accident as specified in Sub-Clause (c) of Clause (i) of the Schedule attached to rule 96, the details of the accident may be entered in the register within 12 hours of the time when the fact that the injury was likely to prevent the injured person from working for not less than 48 hours comes to the notice of the manager or of the person under whom the said person was employed

105. Maintenance of inspection book.—The manager of every factory shall maintain a bound inspection book and shall produce it when so required by the Inspector or Certifying Surgeon

106. The Manager shall be responsible for the supply and replace- ments of tight fitting clothings referred to in section 22

107. Raflwnys fn 108 to 122 shall apply to railwa)S in the precincts ofa factory whicharenot subject to thelndianRailwaysAct, 1890

108. 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

109. Barriers and Where buildings or walls contain doors or gates which open on to railway track.a barrier about 3 feet 6 inches high shall bo fixed parallel to and about 2 feet away from the building or wall outside the opening and extending several feet beyond it at either end, so that a person passing out may become aware of an approaching train when his pace is checked at the barrier. if the traflic on the nearest track is all in one direction, the barrier shall be in the form of an L with the end of the short leg abutting c n tc the wau and php other end opening towards an approaching train, Rules 110-115] Bihar Factories Rules, 1950 193 (2) If the distance between wall and track cannot be made to accommo- date such a barrier, the barrier or a turngate shall be placed at the inside of the openin& (3) Where a footway passes close to a building or other obstruction as it approaches a railway trach, a barrier shall be fixed at the corner of the building projecting several feet from it in a direction parallel to the track, so that person approaching the track is comoeTled to move away from the building and thus obtain timely sight o? a train approa±ing behind it Where the footway is too narrow to permit of this a turngage shall be installed

110. Workers pay-windows, first-Rid stations and other points where a crowd may collect shall not be placed near a railway track.(2) At those times of the day when the emolovees are starting or ending work, atl railway traffc shall cease for not Tess then five minutes : Provided that the Chief Inspector mav by an order in writing exemot a specified factory from the provision of sub-rule (2) if he is satisfied that in the special circumstances of such factory the enforcement of the rule is not nece- ssary to safeguard the employees

111. Every locomotives (and tender) shall be provi- ded with eficient brakes, all o? which sha 11 be maintained in good Törking order. Brake shoes shall be examined at suitably fixed intervals and those that are worn out reolaced at once. (2) Water-gauge glasses of every locomotive, whatever its boiler press. ure may be, shall be protected with substantial glass or metal screens. (3) Every locomotive shall be fitted with a "cow catcher" or if this is impract t each end. rt Shatt be clearlv indicated

on every locomotive crane in English and in the vernacular for what weight of load and at what radius the crane is safe

112. Wagons.—Every wagon (and passenger coach, if any) shall be provided either with continuous self-acting brakes or with emcient handbrakes in good workin" order and capable o? being-applied by R Derson on the gro- und and fitted with a device for retaining them in the applied posit:on

113. Rfdfng on No person shall be permitted to be upon '(whether inside or outside) any locomotive or vehicle except where secure foothold and holds are provided

114. Attentton to brakes and doorg No vehicle shall be left unatt- ended unless its brakes are firmly applied and, where the railway is on a gradient, without sufficient number Of properly constructed scotches plated armly in posit:on.(2) NO train shall be set in motion nntil the shunting jamadar has satisfied himself that all wagon doors tre securely fastened

115. Protecting Toads and cranes—CD Tf the load on a wagon proiects beyond its length, a guard or dummy-truck shalt be used beneath the projeg€ tion. (2) No loco-crane shall travel light unless the jib is completely lowered into the running position in line with the trackq 194 J Bihar Factories Rules, 1950 t Rule 116-121 (3) When it is necessary for a loco-crane to travel with a load, the jib shall not be swung until the crane has come to rest

116. Loose-shunting shall be permitted only When it cannot be avoided. Tf shall never be performed on a vehicle not accom- panied by a man capable of applying and pinning down the brakes. A vehicle not provided with brakes in good working order and capgble of being easily pinned down shall not be loose-shunt unless attached to it atleast one other vehicle q ith such brakes. Loose shunting shall not be performed yith, or against a vehicle containing passengers, live-stock or explosives. (2) For the purpose of this rule "loose-shunting" means the placing of vehicle by giving it such an impetus from the locomotive that it can run along to the desired position

117. Fly shunting.—(l) Fly-shunting shall not be permitted on any factory railway. (2) For 'he purposes of this rule "fly-shunting" means. giving -an impetus to vehicles as in loose-shunting but with the vehicles unattached (with or without some distance between them), and placing one vehicle (or setof vehicles) on one track and then smartly reversing the point so that .the following vehicle or locomotive take the other track

118. The shunting Every train in motion in a factory shall be in charge of properly trained jamadar.(2) Before authorising the driver to proceed the shunting jamadar shäll satisfy himself that no person is under or between the vehicles or on the track front of the train. He shall not call on the driver while any person . is going off the track but only when all persons have gone off it

119. Hand signals.—The hand signals used by the shunting jpmadar by day and night shall be those prescribed by the shunting rules of railways working under the Indian Railway Act (IX of 1890)

120. Night work and In factories where -employees- Work at night no movements of railway vehicles otherwise •than by •hand •shall: be perniitted by the manager between sunset and sunrise unless the ' tracks their vicinity are liohted on a scale of not less than one foot candle as measured at ground level out of doors by any recognised type Of .photometer or illumination meter at a time when atmosphere is free from dust or ring fumes. (2) In no circumstances shall any train be moved, otherwise ,tbqn by hand between sunset and sunrise or at any time wh_en there is. fog, unles -it cqryies.g white head light and a red rear light

121. Speed control. Train shall not be permitted by the. nanager to pyoceed at speeds greater than four miles per hour• (2) A train shall not be moved by mechanical or plecfrical poweryunles it is proceeded at a distance of not less than 30 yards during the whole Of •its- joiieney by the shunting jamadar. He shall be provided with the•signalling-fiags orJlamp neeessary for its control by day or bymight, and, With, m whistle-for calling the attention of the driver : providéd that the Chief Inspector:may by•an order inwriting gexempt a specified factory or specified part Ofit, or allor•any of the trains travßrsing it, from the operation of all or any of the provisions of this rule on such terms and conditiops as he considers necessary for safety. Rules 122-123] Bihar Factories Rules, 1950 [195 122. Railway Trains shall not be moved by power upon any railway track installed in a factory unless the railway, its equipments and vehicles conform with this rule. (2) The distances (a) between tracks and (b) between tracks and build- ings or blind

walls and (c) between tracks and materials deposited on the ground shall be respectively not less than :— (a) from centre •to centre of parallel tracks, the overall width Of the widest wagon of that gauge plus twice the width of.the door of such a wagon when opened directly outward, plus 3 feet ; (b) from a building or wall other than a loading platform to the pentre of the nearest track, half the overall width of widest wagon of that gauge, plus the- Width of the door of such wagon wnen opened directly outward, Pius 5 feet; (c) from material stacked or deposited alongside the track, on the ground or on a loading platform, to the centre of the track, half the width of the widest wagon of thac gauge, plus the Width of its door when opened directly outward, plus 3 feet : provided that the Cfnef Inspector may by an order in writing exempt a specified factory or specified part of it from ali or any of the provisions of this sub-rule 10 such extent and on sucU conditions as he deems necessary. (J) Within the factory precincts sleeper shall not be raised above ground level. (4) All track ends shall be equipped With buffer stops. of ample strength. (5) Barries of substantial construcuon Shail oe securely and permanently fixed across any doorway pr gateway a building or a wail wlucn conceals an approaching tram from new between khe building and Lhe track as prescri-. bed In sub-rule (I) of rule 109. (6) Where tracks are carried on a gantry or other elevation, a safe foot way Of iOotways With hand iaiis and the boards shall be piov.ded at all posi- nons where persons work or pass on foot; and where limere is an opening in the stage of an elevated track fol the dioppmg of material to a lower level, the positron shall be adequately fenced or tne opemng itself provided with a grill through which a person cannot fall. (7) All point levers shall have their movements parallel to, not across, the direction of the track. (8) All loading platforms which are more than 2 feet above the level of the ground on which tne track is laid and more than 50 feet in length shall be proVided with steps at intervals not greater that 50 feet apar' to enable the platform to be easily mounted from the track. (9) Omevery locomotive weighing 15 tons or more When empty the brakes shall be capab,e of being applied by steam or other power as well as by hand; or there are separate and distinct power and hand brakes

123. Motor vehicles.—Speed of cars.—No road motor vehicle shall be pellD1ttgd to De. driven at a speed exceeding IL 16 kilometers] per hour within the precincts ofa factory : PrOvided that. in the case of large factories witli department separated by considerable distances and having roads of ample width, the Inspector may I. Sub'. 'foil IO Bihar Factories Rules, 1950 [Form grant exemption by an order in writing from this rule to such extent and on such terms as he deems suitable

124. Carlights.—No motor vehicle shall be driven at night within the precincts of a factory unless it conforms in respect•of lights to the law in force on public roads in that locality, FORMS FORM No

1. Application for permission to construct, extend or take into use any Building as a Factory.1. 2

4. Applicant's name Applicant's calling Applicant's address Full name and Postal Address of factory. Situation of the factory— Province District Town:or Village Nearest Police Station Nearest Railway Station or Steamer Ghat Particulars of Plant Singnature of Appilvaat Date 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 scaley showing— (i) the site of the factory and immediate surroundings including adjacent buildznes and other structures, roads, drain, 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 way; and Such other particulars as the Chief Inspector may require.

Form 2] Bihar Factories kujes, 1950 FORM No. 2 t i9i Application for Registration and Grant or Renewal Of ticense for the .,and Notice of occupation specified in Sections 6 and 7 (to be sub• year .. mined in triplicate Ile 2. 3. 4. 5. 6. 7. 8

9. Full name of the factory With license number; if already registered from before.(a) Full postal and situation of the factbry. (b) Full address tf_-whlch communications relating to the factory should be sente Nature Of manufacturing process/processes— (a) cerried on in the factory during the last 12 months (in the case of factories alrggdy in existence); (b) to be carried on in the factory during the next 12 months (in the Case of all faetories); Names and values of principal products manüfactüred during the st 12 months, i) number Of workers proposed to. bé on Any one day during tbe year. (ii) Maximum number- of workers employed on Any during the last 12 months. (iii) Number bf workers ordinarily employéd during ibe last 12 months. (iv) Number of workers proposed to be ordinarily employed {during the year for which license is to be obtained. Nature and total amount of power (R. P.) installed ot propo• sed to be installed. (ii) Maximum power (H. P.) proposed to be used. Full name and residential address of the person who shall bc the manager of the factory for the purpose of the Acta Full name Ahd residential address Of tbe oceu@iéi— (i) The proprietor of the factory in case of private firm/proprieo tory concern. (ii) Directori in the case of a public limited liability Company/ (iii) Where a Managing Agent has been appointed the name of Managing Agents' and Directors {hereof. (iv) Shareholders in the case L of a private Company 'here no Managing Agents have been i#poihied. (v)' The Chief Administrative Head ih case of a Government, Ot local fund factory. Full name and address of the owner of the premises-ur building (including thi precincts thereOf) referred to in SectiOn 93. In case ofa factory constructed or extended after the dite Ot mencement of the Bihar Factories Rules, 1950— 198] Bihar Factories Rules, 1950 [Éorm (a) Reference number and date of approval of the plans fogsite whether for old or new building and for construction or extension of factory by the State Government/Chief Inspector. (b) Reference.number and date of approval of the agreements, if at' y, made for the disposal of trade W9Ste and effluents and the name of the authority granting such approval

11. Amount of fee Rs... (i) Paid in... (enclosed). _ (Rupees... ...Treasury on..- . , vide Challan no. ' .43 (ii) Transrpitted by Crossed Cheque/Postal Order no on the bank of the... .. [Post Office, drawn in favour of the Chief Inspector of Factories. Signature of occupier Date Sighature Of Manager Date Note I—This form should be completed in ink in block lettersor typed. Note 2.—If power is not used at the time of filling up this form, but is introduced •later, the .fact should •bé 'eommunicated to thé Chief Inspector immediately. NOtét3.=If any pf the persons named against item 8 iS minor, . the fact should be Cleary stated. Note 4.ærn:thC case of Ä factory, wherre under the to sub-sec tions Q) and (2) of Section 100, a person hadbeen nominated as the occu- bier, • spfdrmagiori •reqüired 'in atem 8, should be supplied only in respect of that perso-n. Note •5..ln the case of a factory where a anaging Agent or Agents appointed .as occupier(s) under the* Indian Companies Act, 1913 VI! of 1931) information required in item 8,' should be supplied only in res- Note 6.—The term. "Ordinarily employed" used in item 5 means thc number of workers 'whoseåames are ordinarily. borne on the Regtster of Attendance or Muster, Roll and: includes managerial, supervisory and such Other•stäffaS come within the definition of term "worker".

FORM No. 3 Notice ,öf'chånge Of Manager (See Rule 12-A) l. Name Of factory with licence number

2. Postal address.< 3. - Name of outgbing tnanaged. '04. -yith postal address of residence and tele- phone åpBOintmentOf tliénev manager, 6. Permanent and home address of the 'niew manjger. Date Seo Companies Act, 31056. Forms 4-5 Bihar Factories Rules, 1950 FORM No, 4 GOVERNMENT oÉ BlilAR. Factory Inspection Department. License to work a factory. t 199 Registration, No. Granted/Renewed for the calendar year. Name; of factory .... Address and location of factory Name(s) pf• Ogcupier(s) of the Factory Masimum number of workers t) be employed Fees Rs. TOTAL INSTALLED CAPACITY OF HORSÉ POWER. In case of Electric Generating and Trasforming stations total installed capacity in K. W's - Chief Inspector - of Fåctönes, Bihar. 2. 4. 5. 6. 7

FORM No 5. Certificate of Fitne,$s. have personauy and/or Serial no. Datq. icertify that I examined (name) son/@aughter of . residing at Date of birth if available certified age. Ph',sical fitness Descriptive marks Reasons for— (I) re •usal of certificate (2) certificate being revoked ThUmb. impression. injti4Js Of Certifring Surgeon. who is desirous of being emp in atactory, and - that - his/her' age', as pearly as can pe ascertamed from my examinatiop, is . years, and that he/Shé is employment in factory as an adylt'/ child. His/Her descriptive marks are Thumb. impression, NOTE.—Exact details of cause of physical swted. Certifying Surgeon, disability should be clearly 20m Department ... Hygrometer. Bibar Factories Rules, 1950 FORM Ng. f. Humidity Register Distincti+e mark or number Position in department Readings of Hygrometer. If no humide itv in. sett none. i, Date, Year, Month, DAY 1st 2nd 3rd 4th 5th 6th 7th 8th 9th 10th 131K 14th 15th 16th • 17th 20th 21st 22nd 23rd 24th 25th 26th 27th 28th 29th 30th 31st Between 7 and 9 a.m. Between 11 a.m and 2 p m. (but not in the rest period). Dry bulb. Wet bulb. Dry bulb. g€Fified Wet bulb. Between 4 and 5-30 p. m. Dry Wet bulb, bulb. (Signed tbag tbe @ove eptries are correct, (Signéd) Forms 7-8] Part of Facto- ry, e.g. name of room. Bihar Factories Rules, 1950 FORM No. 7 Record of Lime-washings, Paintings, etc. [20t Paint, lime-wa- shed, painted varnished or oiled, e. g. , walls, ceilings, wood work etc. 2 Treatment, whether lime« washed, pain- ted, varnished or oiled. 3 FORM. No 8 Date on which lime- washing, painting, va- rnishing or oiling was carried out (according to the English calendar) Day Month Year 1 1. 2. 3. 4. 5. 6. 7. 8. 4 5 Signature of Manager Report of Examination of Pressure Vessel Name of Occupier of factory Location and address of factory Name, description and distinctive number of pressure vessel. Name and address of manufacture Nature of process in which it is used Particulars of vessel— (a) (b) (c) (d) (e) (f) Year of manufacture Date on which the vessel was first taken into use. Thickness of walls Safe working pressure recommended by the manufacturer. History of the vessel in •brief Has the examiner seen the last examina- tion and test report ? Date of previous examination or test... Was the vessel subjected to hydrostatic test ? If yes, the pressure applied. Is the vessel open, or otherwise exposed to weather or to damp ? Details of a examination made and test cone ducted by the 202 9. IO. 11. 12. 13. 14. 15

16. Bihar Factories Rules, 1950 What pressure was applied it hydraulic test was conducted by the examiner ? What parts, if any, were inaccessible ? Condition of vessel (State any defects mate- rially affecting the safe working pressure or the safe working of the vessel)—External Internal Are fittings and appliances provided in acco- rdance with the Rules for Pressure Plants ? (Name fittings and appliances provided). Are all fittings and appliances properly main- tained and in good condition ? If not the de- fects should be recorded. Repairs, if any required, and the period within which they should be executed and any other condition which the person making the examination thinks it necessary to specify for securing safe working. Safe working pressure, calculate from dimen- sions and from the thickness and other data ascertained by the present examination, due allowance being made for conditions of wor- king if unusual or exceptionally severe. (State minimum thickness of walls measured during the examination Where repairs affecting the safe working pressure are required, state the working pressure— (a) Before the expiration of the period spe- cified in (15). (b) After the expiration of such period if the required repairs have not been come pleted. (c) After the completion the required repairs

Form 8 17. Other observations I certify that on the pressure vessel described above was thoroughly cleaned and (so far its construction permits) made accessible for thorough examination and that on the said date, I thorou- ghly examined this pressure vessel, including its fittings and that the above is a true report of my examination. Signature... Qualification... Address Date... If employed by a company or association Five and address of the Company or Associatiop form 9 j Bihar Factories Rules, 1950 Ixou etp 0) potngo sKep •nqtuooøa •nqtuo)das• 01 Ktnr •ounr 0) 1!Jdv •qoxvvq 01 Klenuer •nqtuoooq 0) Joqmoo •xaqtuoßes 0) Krnr •ounr 0) 1!Jdv •qoxevq Klenuvr •ou Kepu 10 dn010 poi FORM No. 10 Overtime Muster Roll For Exemßad Worker. Name Dates on which overtime has been worked. Month e, ding... Total over- time work- ed or prod- uction in cases of pi- ece workers. . 19 Cash equivalent of advantage ac- cruing through the concessional sale of foodgraie ns and other articl es. Total earnings. Date orr which overtime payment made. o Z Columns 11988 dated 15-7-1'58 'tween overtime earning an tota earmngs, added by Notification Nö 11/FI 1075/58— Form IOA J bihar Factories kujes, 1950 FORM No. ICA. Overtime Slip. 1. 2. 3. 4. 5. 6. 7

8. Name of the workers. Token no. or the no. in the register of adult workers. Designation, nature of employment. Department. Work for which overtime work wag done. Normal hours of q ork (as notified in the notice of period of work)— From Period of overtime.— From Such additional details as may be necessary for workers whose wages is piece rate or is a combination of time and piece rate (incentive wages.) Manager/Designation of the person if signed by a responsibie peniL if not signed by the Manager. FORM No

11. Notice of Periods of Workfor Adult Workers. Name of Factory— Period of work. Groups. Relays. On work— ing days From To From From To On partial working days From To From To Men Total number of men employed. 312 3112 3 1121311 2 Place— Women Total number of women employed. 3112 311213 1 12 3112 312 District— Description of groups. 3 12 Date on which this notice first exhibited 19 (Signed) on Manager. Forms 12-12A J Name and address. Bihar Factories Rules, 1950 FORM No

12. Register of Adult Workers.[207 No. and date ef certifi- cate if an adolescent. No. of certificate and date. IFORM No. 12A (See Rule 80—A Identity Card of Workers l. 2. 3. 4. 5. 6. 7

8. Name and address of the factory. Name (with Token no.) and address of the workers. Father's name. Date of joining the factory. Age (Date of birth) of workers. Mark of identification Designation or nature of work. Blood group of the worker. Sic, nature of the worker. Date PHOTO Signature of Occupier Manager Date (with seal) 1. S. Q. 704 13.0.1980. 208) Bihar Factories Rides, 1950 EORM No, 13 Notice of Periods of Work for Child Workers. (Forms 13-14 Name of Factory— — — —Place— — — — — District— Children Periods of work. Total number of children employed Groups. Relay. From To Date on which this not.co is first exhibited • Description of group: .19 (Signed) .. Manager FORM No

14. Register of Child Workers. Name and address. 10 i 11 Calendar year in which leave is to be availed Wage period from. . Wage earned during the wage period No. of days of work per- formed No. of days of lay off No. of days of maternity leave No.of days of leave under Section 79 enjoyed Total of Columns 5 to 7 Balance of leave carried forward from previous year Leave earned during the year preceding the year maintained in column 1 Total of columns 9 & IO Whe ther leave in accorda- nce with Scheme •under Section 79 (8) was refused Reference and date From— To .to. 1 o to 6071 Balance of leave to credit at the end of the year Normal rate of wages Cash equivalent of advan- tage accruing through con- cessional sale of foodgrains and other articles Rate of wages for the leave period. (Total of Cols. 15 & 16) Wages paid for the leave period with date Remarks OS61 's.mny sopopetl 210] O Bihar Factorics Rules, 1950 uooüns JO 'OJep 'onueui!s 01 ponss! uo!suodsns JO ssotnyun JO Jl •(uooüns JO umeu8!s uo ,qnp otunsu 0) pay!) Joo- au suoseu pouepp uopuodsns JO poyod OJUIS 'vom CIIOJJ popuodsns Jl pawueq spnp -0Jd-Åq .10 leymeul uo»ednooo qo! JO 0BJeqos!p 10 JOJ -sueJ1 'fitl!AV01 JO uoseoy JOJ -sueJJ JO JO Olea luosud uO JuotuK01dtuo JO (Kepqu!q »01) xos JO otueN Ou OU 00 [Form rn Q) 00

12. Notice of Accident or Dangerous Occurrence (To be sent forthwith to the Inspector of Factories) (See instructions on reverse) Name of Occupier (or Factory). Address of Works where accident or dangerous occurrence happened. Nature of Industry. Branch or Department and exact place where the accident or dangerous occurrence happened. Injured person's name and address. (a) Sex, (b) Age (last birthday and Occupation of (a) injured person. Date and hour of accident or dangerous occur- rence. Hour at which he started work on day of acci- dent. (a) Cause or nature of accident or dangerous (a) occurrence. (b) If caused by machinery— (i) Give name of the machine and part (b) (i) causing the accident, and (ii) State whether it was moved by mechani- (b) (ii) cal power at the time. (c) State exactly what injured person was doing (c) at the time. Nature and extent of injuries (e. g. , total loss of finger, fracture of leg, scalp, scatch followed by sepsis). If accident is not fatal, state whether injured person was disable for 48 hours or more. Name of Medical Offcer in attendance on in- jured person. I certify that to the best of my knowledge and belief the above parti- culars are correct in every respect. Signature of Occupier or Manager..... NOTE —To be completed in legible hand-writing or preferably type- witten. This space to be compeleted by Inspector of Factories District. Date of Receipt.... Accident no.. Industry no 212] Bihar Factories Rules, 1950 Causation no. Sex. W., Bor G.). Other particulars (e. g. fatal, leg injury, arm injury, etc.) Date of Investigation... Result of Investigation.... NOTIFICATION OF ACCIDENTS [

Form 17-A Extract from the Factories Act, 1948 (Section 88) Where in any factory an accident occurs which causes death or which causes any bodily injury by reason of which the person injured is prevented from working for a period of forty-eight hours or more immediately fol- lowing the accident, or which is of such nature as may be prescribed in this behalf, the manager of the factory shall send notice thereof to such authorities, and in such form and within such time, as may be prescribed. Extract from the Bihar Factories Rules, 1950 (Rule 96) When any accident or occurrence specified in the Schedule takes place in a factory the manager of lhe factory shall forthwith send notice thereof by telephone, special messenger or telegram to the Chief Inspector and if the accident is fatal, or of such a serious nature that it is likely to prove fatal, notice as aforesaid shall also be sent to, — (a) The District Magistrate or Sub-divisional Offcer, and (b) The Officer-in-charge of the nearest police-station. (2) The notice so given shall be confirmed by the Manager of the fac- tory to the above men tioned authorities within 12 hours of the occurrence by sending to them a written report in the prescribed Form no

18. SCHEDULE 1. Accident which cause— (a) death to any person ; (b) such bodily injury as prevents or will probably prevent the per- son injured from working for a period of 48 hours immediately following the accident

2. The following classes of occurrences, whether or not they are attended by personal injury or disablement ;—(a) Bursting ofa boiler or vessel used for containing steam un der pressure greater than atmospheric pressure ; (b) Collapse or failure of a crane, derrick, which, hoist or other appliance used in raising or lowering persons or goods, or any part thereof, or the overturning of a crane. (c) Explosion or fire causing damage to any room or place in which persons greater than atmospheric pressure of any gas or gases (including air) or any liquid or solid resulting from the compres- Sion of gas. (d) Collapse or subsidence of any floor, gallery, roof bridge, tunnel, chimney, wall or building

forming part ofa factory or within -Vhe compound or curtilage of factory. Forms 17B-18] Bihar Factories Rules, 1950 FORM No. 17-B Supplementary notice of accident [213 1. 2. 3. 4. 5. 6. l. 2. 3. 4. 5. 6. 7. 8. 9. 10

11. Name of the factory and location.. Name of the injured person..... Date of accident.. Reference of the first notice of acci- dent in

Form No. 17-A.. Date on which the worker returned to work... Man-days lost due to the accident.. Signature of the Manager Or Occupier FORM No. 18 (See Rule 97) Notice of poisoning or disease Name of factory.... .... Address and location of factory.... Name of work affected by poisoning or disease. Age.... Serial number of the worker in the register of adult/child workers. Permanent or home address of the worker. Department and process or operation on which the worker was normally employed. Department, process or operation on which the worker was employed at the time when the poisoning or dis- ease was detected or reported. Nature of poisoning/disease.... Date on which the poisoning/disease was detected/ reported. Was the poisoning/disease detected or reported by the Certifying Surgeon. Date.. Copy the Chief Inspector of Factories, the Inspector of the Medical Inspector of Factories, the Certifying Surgeon. To be filled in by the Chief Inspector/Inspector/MedicaI Inspector, 214] Remarks. .... Remarks.. Bihar Factories Rules, 1950 (Reverse) Notice of Poisoning oh Disease Extract from the Factories Act, 1948 (Form 19 Where any worker in a factory contracts any disease specified in the Schedule, the Manager of the factory shall send notice thereof to such au- thorities, and in such form and within such time, as may be prescribed. Extract from the Bihar Factories Rules, 1950 (Rule 97) A notice in Form No. 18 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 benezene poisoning ; or poisoning by nitrous fumes, or by halogens or halogen derivatives of the hydrocarbons of aliphatic senes ; or of chrome ulceration, anthrax, silicosis, toxic ansemia toxic jaundice, primary opitheliomatious cancer of skin, or pathological manifestations due to radium or other radio active substances or X-rays. FORM NO. 19 Abstract of the Factories Act, 1948, and the Bihar Factaries Rules, 1950 (To be affxed in a conspicuous and convenient place at or near the main entrance to the factory) INTERPRETATION "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, or in any other kind of work incidental to, or connected with, the manufactur- ing process, or the subject of the manufacturing process. WORKING HOURS, HOLIDAYS, INTERVALS FOR REST, ETC. I. 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

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 complemen- tary 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 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 dependant on the irregular action of natural forces : in engine rooms or boiler houses or in attending to power plant or transmission machinery in the printing of newspapers which are held up on account of the breakdown of machinery in the

Form 19] Bihar Factories Rules, 1950 [215 loading and unloading Of the railway wagons, and when a worker is not relieved at the end of the period of his work owing to the failure of reliever to come at the appointed hour. Except in the case of urgent repairs, the relaxation shall not exceed thc 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 any one quarter ; (iii) the spread-over inclusive of intervals for rest shall not exceed 12 hours in any one day. In the case of any or all adult workers in any factory, the ordinary limits on working hours or 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 with an exceptional pressure of work, subject to the above noted conditions, 3. Payment of Overtime—Section 57.—Where a worker works in a factory for more than 9 hours in any day or for more than 41 hours in any week he shall, in respect of overtime work, be entitled to wages at the rate of twice his ordinary rate of wages. Ordinary rate of wages means the basic wages plus such allowances including the cash equivalent of the advantage accruing through the concessional sale of foodgrains and other articles but does not include a bonus

4. Weekly Holidays (Adults)—Section 52—No adult worker shall be required, or allowed to work in a.factory on the first day of the week, un- less he has or will have, 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, deliver- ed a notice at the omce 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 ordi- nary provisions 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 to the holidays so lost

5. Ihtervalsfor 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 had an interval for rest of at test half an hour and that inclusive of his Intervals for rest they shall not spread- over more than IO} hours in any day or, with the permission of the Chief Inspector in writing, 12 hours. 216] Bihar Factories Rules, 1950 [

Form 19 6. Prohibition of Double Employment—Sections 60, 71 and 97—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. If a child works in a factory on any day on which he has already been woking in another factory the parent or guardian of the child or the per- son 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 with the consent or connivance of such parent, guardian or person

7. Prohibition of Employment of Children under section 14—Section 67— No child who has not completed his fourteenth year shall be required or allowed to work in any factory

8. Hours of Work 71—No child shall be employed or permitted to work in any factory for more than 4} hours in any day and between the hours of 7 P. M. and 6 A. M. The periods of work of all children employed in a factory shall be limited to two shift which shall not overlap or spread over more than 5 hours each and each child shall be employed in only one of the 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

9. Prohibition of Employment of Women —Section 66—No woman shall in, any circumstances be employed in any factory for more than 9 hours on any day or between the hours of 7 P. M. and 6 A. M. They may be allowed to work upto IO P. M. in special circumstances. The change shift of a woman worker shall take place only after a holi- day. LEAVE WITH WAGES IO. Leave with Wages—Sections 79, 80 and 83 and Rules.—Every worker who has worked for a period of 240 days or more in a factory in 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 : provided that a period of leave shall be exclusive of all holidays which may occur during such or at either end of the period of leave. (2) 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 clause (i) or, as the case may be, clause (ii) of sub-section (I) ; if he has worked for two-third of the total number of days in the remainder of the calendar year. (3) If a worker is discharged or dismissed from service during the course of the year he shall be entitled to wages in lieu of the leave earned till that date at the rates specified above even if he has not worked for 240 days in that year. Ifa worker entitled to leave with wages is discharged

Form 19] Bihar Factories Rules, 1950 [219 from the factory before he has taken the entire leave to which he is entitl- ed, or if having applied for and having not been granted such leave, he quits his employment before he has taken the leave, the occupier of the fac- tory 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 after the day on which his employment is terminated. The manager shall maintain a leave with wages register in the pres- cribed Form no. 15 and shall provide each worker with a book called the 'Leave Book' in the prescribed Form no

16. 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 six Paise and shall complete it from his record. HEALTH 11. Cleanliness—Section ll.—Except in cases specially exempted all inside walls and partitions, all ceilings or tops of rooms and walls sides and tops of passages and stair cases 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 wash- ing, using •disinfectant, where necessary, or some other method

12. Disposal of Wastes and Effluents—Section 12.—Effective arrange- ments shall be made in every factory for the disposal of wastes and eflluents due to the manufacturing process carried on therein

13. Ventilation and Tempearture—Section 13.—Efféctive and suitable provisions shall be made in every factory for securing and maintaining in every workroom adequate ventilation by the circulation of fresh air and such @ temperature as will secure to workers therein reasonable conditions of comfort and prevent injury to health

14. Overcrowding—Section 16.—Unless exemption has been granted there shall be in every workroom of a factory in existence on 1st April, 1949 at least 350 cubic feet and ofa 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 feet above the level of the floor of the room

15. Lighting—Section 17.—In every part ofa factory where workers are working or passing, there shall be provided and maintained suffcient and suitable lighting, natural or artificial or both 16. Drinking water—Section 18.—In every factory effective arrange- ments shall be made to provide and maintain at suitable points, conveni- ently situated for all workers employed therein, a sumcient supply of whole-some drinking water. In every factory wherein more than 250 workers are ordinarily employ- ed 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, lunchroom and rest room and also at conveniently accessi- ble points throughout the factory. 218] Bihar Factories Rules; 1950 [

Form 19 17. Latrines and urinals—Section 19 and Rules.—ln every factory suffcient latrine and urinal accommodation of the prescribed type (sepa- rate enclosed accommodation for male and female' workers) shall be, provided conveniently situated and accessible to workers at all times while they are at the factory. Every latrine shall be under cover and so parti- tioned off as to secure privacy and shall have proper door and fastenings. Sweepers shall be employed whose primary duty it would be to keep clean latrines, urinals and washing places. In every factory, wherein more than 250 workers are ordinarily em- ployed, all latrines and urinals accommodation shali be of prescribed sanitary type

18. Spittoons—Section 20.—In every factory, there shall be provided a suffcient number of spittoons of the type prescribed in convenient places and they shall be maintained In a clean and hygienic condition. No per- son shall spit within the premises of a factory except in the spittoons pro- vided for the purpose. Whoever spits in contravention of this provision shall be punishable with fine not exceeding five rupees. SAFETY 19. Fencing of Machinery—Section 21 .—ln every factory dangerous parts of machines, e. g. every moving part of a prime-mover and every flywheel connected to a prime-mover, etc., 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

20. Work on or near Machinery in motion—Section 22.—No woman or child shall be allowed in any factory to clean, lubricate or adjust any part of the machinery while that part is in motion, or to work between moving parts, or between fixed and moving parts by any machinery which is in motion

21. Employment of Young Persons on Dangerous Machinery—Section 23. — •No. young person shall work at any machine declared to be dangerous unless he has been fully instructed as to the dangers arising in connection with the machine and the precautions to be observed and has received sumclent training in work at the machine or is under adequate supervision by a person who has a thorough knowledge and experience of the machine

22. Prohibition to Employment of women and children near Cotton Openers—Section 27.—No woman or child shall be employed in any part of a factory for pressing cotton in which a cotton opener is at work

23. Excessive Weights—Section 34.—No woman or young person shall unaided by another person lift, carry or move by hand or on head, any material, article, tool or appliance exceeding the following limits Adolescent female. .. , .45 lbs

24. Protection of Eyes—Section 35.—Effective screens or suitable goggles shall be provided for the protection of person employed in or in the vicinity of processes which involve risk of injury to the eyes from par- ticles or fragment thrown off in the course Of the process which involve risk of injury to the eyes by reason of exposure to excessive light. Adolescent male.. Male child. Female child... ... . .65 lbs. .35 lbs. .30 lbs.

Form 191 Bihar Factories Rules, 1950 WELFARE [219 25. Washing Facilities—Section 42.—In every factory 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

26. First-Aid 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. All such boxes and cupboards shall be kept in the charge ofa responsible person who is trained in first aid treatment and who shall always be available during the working hours of the factory. The number of first aid boxes shall not be less than one for every 150 workers ordinari- ly employed. In every factory wherein more than 500 workers are employed there shall be provided and maintained an 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 atleast one qualifi- ed nurse and such other staff as may be prescribed

27. Canteen—Section 46 and Rules.—ln specified wherein more than 250 workers are ordinarily employed, a canteen or canteens shall be provided and maintained by the occupier for the use of the 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 pro- portion of I for every 100 workers employed in the factory provided that in no case shall there be more than 5 or less than 2 workers on the com- mittee. The Committee shall be consulted from time to time as to the quality and quantity of foodstuffs to be served in the Canteen, the arrange- ment of the menus, etc

28. 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 provi- Sion for drinking water, where workers can eat meals brought by them shall be provided and maintained for the use of the workers

29. Creches—Section 48 and Rules. —In every factory wherein more than 50 woman workers are ordinarily employed there shall be provided and maintained a sui table room or rooms for the use of children under the age of six years Of such women. The creches 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 a suffcient supply of suitable toys for older children. There shall be in or adjoining Che creche a suitable wash-room for the washing of the children and their clothing. An adequate supply of clean clothes, soap and clean towels shall be made available for each child while 220] Bihar Factories Rules, 1950 [

Form 20 it is in the creche. At least halfa pint of clean pure milk shall be avil- able for each child on every day it is accommodated in thc creche and the mother of such 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 re- freshment. A suitable, fenced and shady open air play-ground shall also be provided for the older children

30. No charge for facilities and conveniences—Section 114—No fee or charge shall be realised from any worker in respect of any arrangements or facilities to be provided or any equipments or appliances to be.supplied by the occupier under the provisions of the Act

31. Obligations of Workers—Sections 97 and Ill.—No worker in a fac- tory— (i) shall wilfully interfere with or misuse, any appliance, conveni- ence or other thing provided in a factory for the purposes of securing the health, safety or welfare of the workers therein ; (ii) shall wilfully and without any reasonable cause do any thing likely to endanger himself or others ; and (iii) shall wilfully neglect to make use of any appliance or other thing provided in the factory for the purpose of securing the health or safety of the workers therein. If any worker employed in a factory contravenes any provision of these provisions or any rule or order made thereunder he shall be punish- able with imprisonment for a term which may extend to three months, or with fine which may extend to Rs. 100 or with both. If any worker employed in a factory contravenes any provision of the Act or any rule or orders made thereunder imposing any duty or liability on workers he shall be punishable with fine which may extend to Rs. 20

32. A notice of periods of work for adults and a notice of periods of work for childern in the prescribed Form Nos.11 and 13 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 notices of periods of work displayed in the factory. The owners, occupiers or managers of factories shall submit the pres- cribed periodical returns to the Inspector regularly. I[

FORM No. 20 [Prescribed under Rule 100(1)] Annual Return for the year ending 31st December, 19 1. 2. 3. 4. 5. 6

7. Registration number of factory.. Name of factory. Name of Occupier. Name of the Manager. District. Full postal address of factory. Nature of Industry. subs. by S. O. 686 dated 13-7-1988,

Form 20] Bihar Factories Rules, 1950 [221 Number of workers and particulars of 8. 9. IO. 11. 12. 13. 14. employment No. of days worked in the year. No. of man-days worked during the year— (a) Men (b) Women (c) Children Average number of workers em- ployed daily (see explanatory note) t— (a) Adults— (i) Men (ii) Women (b) Adolescent— (i) Male (ii) Female (c) Children— (i) Male (ii) Female Total no. of man-hours worked including overtime (a) Men (b) Women (c) Children Average number of hours worked per week (see explanatory note)— (a) Men (b) Women (c) Children (a) Does the factory carry out any process or operation dec- lared as dangerous under Sec- tion 87. (see Rule 95) ? (b) If so give the following ln- formation— Name of the dangerous process or operations carried on— (i) (ii) (iii) etc, Total number of workers employ- ed during the year— Average no. of persons em- ployed daily in each of the processes or operations given in col. I. Leave with Wages. [Form 20 -9 2221 15. 16. 17. 18. 19

20. Bihar Factories Rules, 1950 (a) Men (b) Women (c) Children Number of workers who were entitled to annual leave with wages during the year—(a) Men (b) Women (c) Children Number of workers who were granted leave during the year— (a) Men (b) Women (c) Children (a) Number of workers who were discharged or dismissed from the service, or quit employment or were superannuated, or 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 (a) Number of Safety Offcers required to be appointed as per rule notified under Sec- tion 45-B. (b) Number of Safety Offcers al- ready appointed. Ambulance room Is there an ambulance room pro- vided in the factory as required under Section 45 ? Canteen (a) Is there a canteen provided in the factory as required under Section 46 ? (b) Is the canteen provided man- aned— (i) departmentally, or (ii) through a contractor ? Sheiters or Rest Room and Lunch Rooms 21. (a) Are there adequate and suit- able shelters or rest rooms provided in the factory as re- quired under Section 47 ?

24. Bihar Factories Rules, 1950 (b) Are there adequate and suit- able lunch rooms provided in the factory as required under Section 47 ? Creches Is there a creche provided in the .factory as required under Sec- tion 48 ? (a) Number of Welfare Offcers to be appointed as required by rule notified under Section 49. (b) Nümber of Welfare Offcers appointed. (a) Total number of accidents (see explanatory note)— (i) Fatal (ii) Non-fatal. (b) Accidents in which workers returned to work during the year to which this return re- lates— (i) Accidents (workers injur- ed) occurring during the year in which injured wcrker returned to work during the same year— (aa) Number of accidents (bb) Mandays lost due to accident. (ii) Accidents (worker injured) occurring in the previous wear in which injured workers returned to work during the year to which this return relates— (aa) Number of accidents. (bb) Mandays löst due to accidents. (c) Accidents (worker injured) occuring 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) Mandays lost due to accidents. P23 Certified that the information furnished knowledge and belief, correct. Date.... .. above is to the best of my Signature of the Manager. 2241 Bihar Factories Rules, 1950 [

Form 21 11 Explanation. The average number of workers employed daily should be calculated by dividing the aggregate number of attendance on working days (that is, mandays worked) by the number of working days in the year. In reckoning attendance, attendance by temporary as well as permanent employees 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 count- ed 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 fialf a shift on a working day should be ignored, while attendance for half a shift or more on such days 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 inter- vals 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 week during which the factory worked should be used in place 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 (c), the number of accidents which took place during the year should be given. In case of non-fatal accidents only those accidents which prevented workers from working for 48 hours or more should be indicated. FORM No. 21 Half yearly return Period ending 30th June 19131st December, 19 Name of Factory..... Name of Occupier.... Name of Manager.... (2) Postal Address... (3) Nature of Industry.... 1(4) Average number of worker employed daily— 1. The average daily number should be calculated by dividing the aggregate number Of attendance on working days by the number of working days during the half-year. In reckoning attendances, temporary as well as permanent employees should be counted, and all employees should be included, whether they are employed directly or under con- tractors. Attendances 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 process were not carried on should not be treated as working days. Form 22] Bihar Factories Rules, 1950 Men Women Adolescents— Male Female 1225 Children— Male Female (5.) Number of days work.ed during the year ending 30th June, 19 Certified that the information furnished dbove is, to the best of my knowledge and belief, correct. Signa ture of Manager. Name of Factory FORM No. 22 Muster Roll Place district Nature Serial Father's no. Name of name work For the period ending.. 1, 2,314 51 1 I[FORM Register of Accidents Serial no. of accidents 1 Date and time of accident 2 Name of persons Name & natute of accident injured and ki Iled njured Killed Date of re- porting (in Form no. 17) to Ins- pector 3 4 5 Descrip- tion 6 Date of return of injured person 8 No. of days injured per- son was ab- sent from work due to the accident 9 Signature of the manager or any person duly authori- sed in writing by the mana- ger 10 Provided further than in case of an accident as specified in sub-clause (c) of clause (i) of the schedule attached to Rule 96, the details of the accident may be entered in the register within 12 hours of the time when the fact that the injury , was likely to prevent the injured person from working for not less than 48 hours comes to the notice of the manager or of the person under whom the said person was employed. •1. SubS. by;s, O. 1580 da'ed 6-12-1975 Form 24] Bihar Factories Rules, 1950 FORM No. 24 Special Certificate of Fitness [227 (In respect of persons employed in operations involving use of lead compounds Serial no.. Date. I hereby certify that I have personally examined. .....v.....son of.... .... . residing at.. who is desirous of being employed as. ... . . and that his/her age, as nearly as can be ascertained from my examination, is..... . years, and that he/she is, in my opinion. fit for employment at work involving the use of lead compounds. Hi;/her descriptive marks are ;— L. T. I. of person examined. I certify that I examined the person mention- ed above on I extend this certifica te until Signature of Certifying Surgeon Certifying Surgeon. Note of symptom of lead poisoning (if any) o 2. 3. 4. 5. 6. 7. 8

9. Serial Number. Name of person examined. Father's name. Sex. Address. Name of the factory in which employed/in which wishes to be employed. Process of department in which employed/wishes to be employ- ed. Whether certificate granted. Whether declared unfit and cer- tificate refused. Reference number of previous certificate granted or refused.

FORM No. 25 Certificate of Fitness for Dangerous•Operations (Rule 96). I certify that I have personally examined . (Name) son of.. (Father's name) residing at.. is desirous of being employed as. ... .. Serial Number. . (address) who . (Name of factory) in. . (Deptt. & process), and. that as nearly as can be ascertained from by examina tion, he is fit/unfit for employment in the above noted factory

2. He is fit to be employed and may be employed on some other non- hazardous operation such as.

3. He may be produced for further examination after a period of

4. He is advised following further examinations.. ...

5. He is advised following treatment

6. The serial number of the previous certificate is .L. T. I. of person examined. Signature of Certifying Surgeon. L. T. I. of persons examined. Signature of Certifying Surgeon. NOTE.—I

2. The counterfoil should be retained by the Certifying Sur- geon and maintained in a bound book or in a file. The para which does not apply may be cancelled. Forms 26-27] Bihar Factories Rules, 1950

FORM No. 26 [229 Register of Surgeon's Fees for the Issue of Duplicate Certificates Paid into Treasury at.. . on (date)... Signature of Certifying Surgeon.. . Date Serial no. Number of pre- Name of persons Imtial of Certifying vious certificate to hom granted Surgeon 1 2 3 4 5 FORM No. 27 Certifying Surgeon's Visit Note on (date) 19 Visit to (factory) Name of Certifying Surgeon Examination and Certificates (A) Children— 1. Original examination.... Num ber examined. . Number granted certificates.. (B) 2. Examination of those holding provisional certificates.. . . Number granted certificates.. Number examined. Number of impounded provisional certificates.. .. 3. Re-examination of those holding certificates..... . Number of certificates cancelled.. Number-examined. Reason for cancellation in each case (i.e., general nature of unfitness) Adolescents— 1. 2. 3. 00 Original examination.... . . Number granted certificates.... .. Number examined. Examination of those holding provisional certificates. , , .. Number granted certificates..... Number examined.. Number of impounded provisional certificates..... .... .. Re-examination of those holding certificates. ... .. Number of certificates cancelled.. Number examined Reason for cancellation in each case (i. e. , general nature of unfitness).. Signed Certifying Surgeon. 230] Bihar Factories Rules, 1950 FORM No. 28 Diary of Inspector of Factories For the week ending Saturday, . 19 !Form 28. Defects found and orders issued Remarks Date Sunday Monday Tuesday Wednesday.. Thursday Friday Saturday Factories visited or other work done (if visited for a special purpose, state what) Form 28] Bihar Factories Rules, 1950 REVERSE SIDE OF FORM No. 28 [231 Analysis of visits, etc. Factories visited, etc. twice thrice „more than thrice Time (etc.) of visit During legal working hours During rest intervals Before or after legal wor- king hours On Sundays or holidays For enquiring into acci- dents For special purpose Total Number of factories visi- ted (all classes) Number of visits paid (all classes) The prosecution against occupied. days. ..... Under the Act at time of first visit Factories Prosecutions . Other work, any days. Not under the Act at time of first visit Found closed if Signature.. Inspector Date. of Factories Name of the factory.... Registration number of.. factory Name of occupier. . Name of Manager... Postal address.. Name of section or department which has closed. If the whole factory has closed please write "Total closure" 1 FORM No. 29 Closure Report of Factory Reason of Number of workers on the Date of closure 2 closure 3 register of factory or part of the factory which is clo- sed on the date of closure 4 Number of workers afÄ&ct- ted by the closure 5 Probable period of closure 6 Remarks 7 Form 30] Bihar Factories Rules, 1950 Jordnooo 10 -euetu JO umeu3!s sJ.edu 011) ino fiutKneo uosJ0d JO •uogeuiysop pue uopeogqenb 'ou1VN pue uopdposop suetnopaed o 00.2 0 Ino pogaeo vom ooueumtl -!etu ougn0J J0tpo '*unneq.10A0 'Buntl!ed JO SOJep qum 101dnooo JO .10fieUVU1 otp JO ourueui!s uosnd fiuyuyurexo JO umeufi!s uouod JO uop e,uasqo pue svcuou Jno poyneo uop -u!tuexop suepp pue potli0J,V uosJ0d JO 110!) -pui!sap 'suogeogqenb 'OtueN (S) pue (V) soltu-qns aopun uO poæeo JOOJeC1 •ou [233 0 o z 2341 1. 2. 3. 4. 5

6. Bihar Factories Rules, 1950 FORM No.31 (See Rule 57-A) Report of examination of Water sealed Gas-holder PART 1 Name and address of the factory. Department where the gas-holder is located. Details of the Gas-holder.— (a) Distinguishing number of the gas-holder. (b) Type and description of the gas-holder. (c) Name and address of the manufacturer. (d) Date of manufacturer. (e) Other details, if any. (a) Number of lifts— (b) Maximum capacity in cubic meters or cubic feet. (c) Pressure thrown by holder when full of gas. Particulars of gas to be stored in holder. (Form 31 Particulars of the condition of the following as observed at the time of examination : (a) Cown. (b) Side sheeting, including grips and cups. (c) Guiding mechanism, (Roller carriages, rollers, pins, guide rails and ropes). (d) Tank. (e) Other structure, if any, including columns, framing and bracing. (f) Any other observation

7. Particulars of the position of the lift as observed at the time of examination

8. Were the tank and lifts found suffciently level tor safe working ? If not, the steps necessary to remedy the defects

9. Fittings and appliances—(a) Are all fittings and appliances properly maintained and in a good condition ? (b) Repairs if any, required. (c) The period within which the repairs must be carried out. IO. Any other condition or measure that the examining person may consider necessary for safe working of the gas-holder. Is the gas-holder in such a condition as not to be considered safe 11. to be kept in operation ? 12. Other remarks and observations

13. Date of examination.I Certify that on. . the gas-holdar described above was thoroughly examined and such of the tests as were necessary made on the same day and that lhe above is a true report of my examination. Signature of the Examiner. (Full name.... ... Date.... .... Qualifications. Address.... .... Signature of Manager or Occupier PART 11 Detail of the repairs carried Out or other steps or measures taken to remove the defects and to comply with suggestions, recommendations and observations made by the examimng person with dates.

Form 321 Details.. Bihar Factories Rules, 1950 [235 (1) (2) (3) Dates.... .... Signature of Manager Occupier FORM No. 32 Register of trained adult male workers employed to carry out moun- ting or shifting of Belts, Lubrications, etc. [Section 22 (1) and Rule 59-AI l. Name of the factory, location and address.

2. Registration number. Name of the Serial no. in regis- no. 1 worker 2 ter of adult work- ers (from no.. and ticket number if any 3 Depart- ment in which emplo- yed 4 Work on which em- ployed. Details of training 5 Signa- ture of Mana- ger 6 7 [236 Bihar Factories Rules, 1950

FORM No. 33 [Forms 33-34 Certificate to young persons considered fit to work at Machine, Plant or I. 2. 3. 4. 5

6. Process of dangerous character Serial number.. ... Name of the factory and location.... Registration number of factory..... Name of the young persons.. Serial number in the register of adult worker (from no. ...) or register of child workers (from no . Number and reference of the certifi- cate of fitness granted by the certify- ing surgeon Department and machine, plant and process on which the young person is to be employed. Certified that the young persons mentioned above have been fully instructed by me as to the dangers arising in connection with the Machine/ Plant/Process mentioned above and as to the precautions to be observed and has received suffcient training in work on the Machine/PIant/Process and that in my opinion he is fit to be employed on the said Machine/Plant/ Process

2. He is fit to be employed under the adequate and direct supervision of... Signature of the Manager. Signature of the Certifying Offcer. Full name and designation. J. 2. 3. 4. 5

6. WORM No.34 (See Rule 3-A) Form of Certificate of Stability Name of factory.... .... Village, town and district in which the factory is situated. Full postal address of the factory.. Name of the occupier of the factory. Nature of manufacturing process to be carried on in the factory.. . Number of floors on which workers will be employed. I certify that I have inspected the building/buildings the plans of which have been approved by the Chief Inspector in his latter no. .dated.. and examined the various parts including the foundation with special re- ference to the machinery, plant, etc., that have been installed. I am of Ins. by S. O. 686 dated 13-7-1988, the opinion that the building/buildings which has/have been constructed/re- constructed/extended/taken into use is/are in accordance with the plans approved by the Chief Inspector in his letter mentioned above, that is/they/ is/are structurally sound and that its/their stability will not be endangered its/their use as a factory/part of factory for the manufacture of.. .. . by for which the machinery, plant etc., is intended. Signature... Qualification... Address. . Date. If employed by a company or association, name and address of the company or association ; The certificate of stability shall be signed by a "competent person" as defined below 'Competent person" means a person holding any of qualifications exempting him from passing parts A and B of the Associate Membership Examination of the Institution of Engineers (India) whom the Chief Inspector considers competent for any specified

Form 35] 1. Bihar Factories Rules, 1950 P37 purpose by virtue of his experience. I[FORM No. 35 [See sub-rule (4) of Rule 59-C] Record of Eye-Examination Sl. no. 1 Deptt./works 2 Name of Worker 3 Examination of eye sight Sex 4 Occupation Nature Date of of work Employment Date 8 —Signature of Result Opthaleme- 6 7 9 logist 10 Age (on last birth day) 5 Remarks 11 Ins. by S. O. 686 dated 13-7-1988, SCHEDULE A (Rule—5) Fee payable for original licence and for annual renewal of licences for Factories and defined in Section 2 (m) of the Factories Act, 1948 Other than Electricity Genera ting, Transforming or Transmitting Factories Total rated Ca- Maximum number of persons proposed to be employed on any one day during the pacity (Power) Of the machineries and plants Insta- lied expressed in HORSE POWER year for which licence is to bc taken 1 1. 3. 4, 5. 6. 7. 8. 9. 10. 11. 12. 2 Nil 2. Not Exceeding Ditto Ditto Ditto Ditto Ditto Ditto Ditto Di tto Over 10 50 100 250 500 1000 2000 5000 20 3 100 225 450 650 1000 3000 4500 4750 6150 9000 13550 14075 50 4 300 400 650 1000 1500 4500 4750 5000 8350 100 5 450 550 750 1500 2150 4750 5000 6150 9000 10000 25000 25000 9500 mooo 14075 22500 25775 30500 250 6 550 750 1050 2150 2500 5000 6150 8350 9550 12550 25775 41000 500 7 750 1150 1650 2500 4000 5500 7125 9375 10000 13550 30500 45650 750 8 1000 2000 2150 4000 4500 7030 8340 11 875 12550 14075 41000 50550 1 ,ooo 9 1500 2500 3100 4500 5500 8290 9375 12550 13550 22500 45650 55000 2,000 10 1750 3000 3500 5500 6500 9375 11715 13550 14075 25775 50550 65500 5,000 11 2000 4500 5000 6500 8000 16875 18340 19690 22500 30500 55000 80000 10,000 12 2250 9500 10000 12500 15750 21105 22500 23965 25775 41000 60500 84500 25,000 13 2450 10000 12500 15250 26250 32890 36090 37800 41000 45650 80000 85000 Over 25,000 3000 25000 30000 31000 37500 48750 50700 52500 55350 60500 85000 90000 Form 35] Bihar Factories Rules, 1950 SCHEDULE 'B' [239 Scale of fees payable for Licence and Annual Renewal of Licence by all Electricity Generating, Transforming and Transmitting station (Factories). (A) Generating and Transforming stations (Factories) :— Not exceeding Ditto Ditto Ditto Ditto Ditto Ditto Di tto Ditto Ditto Ditto Ditto Ditto Ditto Ditto Ditto Ditto Over Total installed Generating Capacity in 50 100 150 300 500 750 1000 2500 5000 10000 25000 50000 75000 100000 150000 200000 300000 300000 Generating Statiop Rs. 250 450 650 750 1000 1500 2000 3500 4500 5500 7500 12000 15000 19500 24000 30000 39000 48000 Transforming (including Conversion Station) Rs. 150 250 4SO 700 750 1125 1500 2150 2500 3000 4500 6000 7500 9000 12000 18000 24000 30000 (b) All transmitting Stations (Factories) Rs. 4,500.00. Total rated Capacity (power) of machinery of plants means :— (a) In case of machinery of plants which generates or provide power, thc rated generating or producing capacity (power) expressed in Horse Power. (b) in case of any prime-mover the raised capacity expressed in Horse Power. (c) In case of any other plant or machinery the power expressed in Horse Power required kw to operate the machine at its normal rated capacities. (d) In case of electric furances, ovens or like plants, the consump- tion thereof for its rated or a normal operation converted in terms of Horse Power. (e) in case of furnances, ovens, and like plants fired by coal, all, gas or any other fuel the equivalent electric power converted into Horse Power. (f) In case of Steam Boilers and steam Generators, the rated capa- city of the Boiler expressed in terms of Horse Power. 240] Bihar Factories Rules, 1950 [Sch. C *ill For the Boiler used for supply of process steam evaporation capacity of 34.5 lbs. of water per hour would be taken as equivalent to Horse power

2. Where a factory has its own electric power generating plants the amount of fees payable for the whole factory shall be the amount obtained by adding the amount payable for the factory excluding the power generating plant calculated as per SCHEDULE " A" and that payable for the power generating unit as per SCHEDULE "B" res- pectively. Where a factory has its own transforming station the amount of foes payable shall be calculated in a like manner. Where a factory has its own generating station as well as transforming station for drawing additional power from an external source, the fee payable shall be the amount obtained by adding the fees which would have been payable for the Generating Station, Transforming Station and the rest of the factory, respectively as if they were separate factories

3. In a steam power station, the capacities of the Generating units only would be taken into account and not of the Boilers. But if any such power station contains any boiler for supply of process steam, such boiler or part of boiler shall be separately counted for calculat- ing the installed Horse Power

4. In the• calculation of Installed capacity all spare stand by and emergency machines and plants shall be taken into account, and shall be deemed to be working, units and they shall not be excluded merely on the

ground that they were only stand by, spare or emergency units, which are to be operated only on special occasions and in emergencies

5. Where any machine is driven by an electric motor or any other prime-mover the rated capacity in Horse Power of the said motor shall be deemed to be the rated capacity of the machine, and the capacity of the motor or the prime mover and that of the driven machine shall not be counted separately

6. Where an electricity generating factory includes a transmitting or converting station or plant meant for recovering transforming, converting or transmitting of electric power supplied from a source outside the Generat- ing Station and which is not meant for transforming, _converting or trans- mitting power generated in the Generating Station itself the fees payable shall be the total of the fees payable by the Generating and Transforming including converting Station calculated• separately in accordance with the rate of fees prescribed under sub-head (a) and by the Transmitting Station under sub-head (b).SCHEDULE "C" Scale of fees payable for licence and annual renewal of licence for factoi ies declared under Section 85 of the Factories Act, 1948 (Act 63 of 1948) other than Electricity Generating, Transforming and Transmitting Stations (Factories) Rs. 10,500. Appx. I] Bihar Factories Rules, 1950 APPENDIX 1 Apertures for natural ventilation [241 The formula for lateral apertures (ventilating openings) for na tural ventilation referred to in Rules 18 and 20 are (a) (British measure) 0) 10 L=Length of room in feet. 1k Breadth of room in feet. F=Floor area in square feet. A=Aggregate area of ventilating openings in sq. feet. (b) Metric System. IO 30.48 10 B 30.48/ 10 L=Length of room in metres. B=Breadth of room in metres. F=Floor area in square metres. Az Aggregate area of ventilating openings in sq. metres. Note.— Formula (I) applies to rooms of ordinary shape or when the ventilat- ing openings are well distributed in rooms of any shape. Formula (2) applies to elongated rooms ventilated at the ends only.