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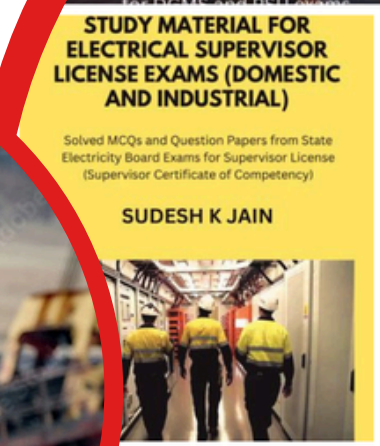

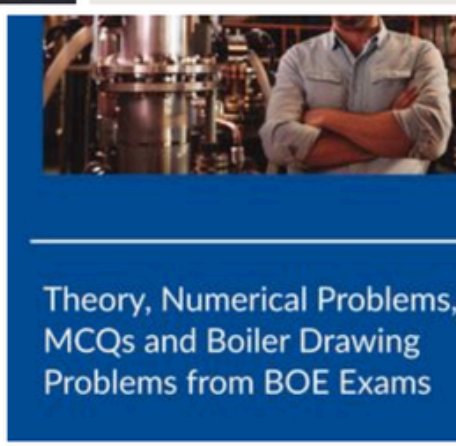



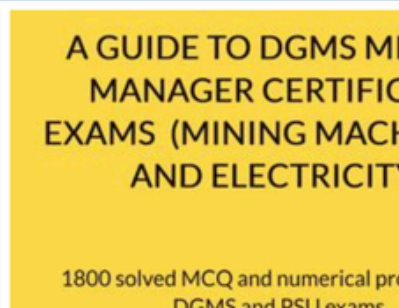

THE METALLIFEROUS MINES REGULATIONS, 1961

G.S.R. 337, dated the 18th October 1960 – In exercise of the powers conferred by section 57 of the Mines, Act, 1952 (35 of 1952), the Central Government hereby makes the following Regulations, the same having been previously published as required by sub-section (1) of section 59 of the said Act.

Chapter I. – Preliminary

1. Short title, extent and applications (1) These regulations may be called the Metalliferous Mines Regulations, 1961.

(2) They extend to the whole of India 2[***]

(3) They shall apply to every mine of whatever description other than a coal or an oil mine.

2. Definitions. – In these regulations, unless there is anything [repugnant in the subject or contest –

(1) "Act" means the Mines Act, 1952;

(2) "approved safety lamp" and "approved electric torch" mean, respectively, a safety lamp and an electric torch manufactured by such firm and of such type as the Chief Inspector may from time to time specify by notification in the Official Gazette;

(3) "Assistant Manager" means a person possessing a Manager's Certificate appointed in writing by the owner, agent or manager to assist the manager in the control, management and direction of the mine or part thereof, and who takes rank immediately below the manager;

(4) "auxiliary fan" means a forcing fan or an exhausting fan, used belowground wholly or mainly for ventilating a face or faces or blind ends;

(5) "banksman" means a person appointed to superintend the lowering and raising of persons, tools and materials and the transmission of signals at the top of a shaft or winze;

(6) "blaster" means a person possessing a Manager's, Foreman's, Mate's or Blaster's Certificate and appointed by the manager in writing to perform the duties of a blaster under these regulations, and includes a shotfirer;

(7) "bellman" means a person appointed to superintend the raising and lowering of persons, tools, materials and the transmission of signals at any landing;

(8) "Committee" means a committee appointed under section 12 of the Act;

(9) "competent person" in relation to any work or any machinery, plant or equipment means a person who has attained the 3[age of 20 years] and who has been duly appointed in writing by the manager as a person competent to supervise or perform that work or to supervise the operation of that machinery, plant or equipment, and who is responsible for the duties assigned to him, and includes a blaster;

(10) "District Magistrate" in relation to any mine, means the District Magistrate or the Deputy Commissioner, as the case may be, who is vested with the executive powers of maintaining law and order in the revenue district in which the mine is situated;

Provided that in the case of a mine which is situated partly in one district and partly in another, the District Magistrate for the purposes of these regulations shall be the District Magistrate authorised in this behalf by the Central Government;

(11) "explosive" shall have the same meaning as is assigned to that term in the Indian Explosive;

(12) "face" means the moving front of any working place or the inbye end of any drive, level, crosscut, raise or winz;

(13) "gas" includes fume or vapour;

(14) "landing" means any floor or platform in a winze, which is an authorised stopping place of the cage or other means of conveyance, and includes a 'plate';

(15) "machinery" means –

(i) any locomotive or any stationary or portable engine, air compressor, boiler or steam apparatus which is, or

(ii) any such apparatus, appliance or combination of appliances intended for developing, storing transmitting, converting or utilising energy, which is, or

(iii) any such apparatus, appliance or combination of appliances if any power developed, stored transmitted, converted or utilised threby is,

used or intended for use in connection with mining operations;

(16) "Manager" means a person possessing the prescribed qualifications and appointed in writing by the owner or agent to be in charge of a mine under the Act, and includes Mine Superintendent if appointed under section 17 of the Act;

(17) "material". Includes rock, debris, stone, mineral, ore or any other material;

(18) "Metalliferous mine" includes every mine other than a coal or an oil mine;

(19) "mine foreman" means a person possessing a Manager's or Foreman's Certificate and and appointed by the manager in writing, under the designation whatsoever, to perform the duties of supervision or control in a mine or part thereof and includes a Shift Boss;

(20) "mining mate" means a person possessing a Manager's, Foreman's or Mate's Certificate and appointed by the Manager in writing, under any designation whatsoever, to perform the duties of a mining mate under these regulations, and includes an Overseer or Head Mestri;

(21) "misfire" means the failure to explode of an entire charge of explosives in a shot-hole;

(22) "month" means a calendar month;

(23) "Official" means a person appointed in writing by the owner, agent or manager to perform duties of supervision in a mine or part thereof and includes an assistant manager, an underground manager, a mine foreman, a mining mate, an engineer and a surveyor;

(24) "permitted explosive" means an explosive manufactured by such firm and of such type as the Chief Inspector may from time to time specify by notification in the Official Gazette;

(25) "public road" means a road maintained for pblic use an under the jurisdiction of any Government or local authority;

(26) "quarter"means a period of three months ending on the 31st March, 30th June, 30th September or 31st December;

(27) "railway" means a railway as defined in the Indian Railways Act, 1890;

(28) "Regional Inspector" means the Inspector of Mines in charge of the region or local area or areas in which the mine is situated or the group or class of mines to which the mine belongs, over which he exercises his powers under the Act;

(29) "river" means any stream or current of water, whether seasonal or perennial, and includes its banks extending up to the highest known flood level;

(30) "roadway" means any part of a passage or gallery belowground which is maintained in connection with the working of a mine;

(31) "Schedule" means a schedule appended to these regulations;

(32) "shaft" means a vertical or inclined way or opening leading from the surface to workings belowground or from one part of the workings belowground to another, and includes an incline;

(33) "signalman" means a person appointed to transmit signals;

(34) "socket" means a shot-hole or part of a shot-hole remaining after being charged with explosive and blasted, and which is not known to be a misfired shot-hole;

(35) "Support" includes timber-work, masonry, packwalls, sandpacks, iron-work, or any other form of support;

(36) "tub" includes a wagon, car, truck, hutch, bandy, bucket or any other vehicle for conveying material, but does not include a railway wagon;

(37) "underground Manager" means a person possessing a Manager's Certificate appointed in writing by the owner, agent or manager to be in charge of the whole of the underground workings or a specified portion thereof, under the direction of the manager, and is thus superior to a mine foreman and a mining mate, and includes an Underground Agent;

(38) "ventilating district" means such part of a mine belowground as has an independent intake airway commencing from a main intake airway and independent return airway terminating at a main return airway and, in the case of mine or part thereof which is ventilated by natural means, the whole mine or part;

(39) "Winze" or "Raise" means a small shaft, either vertical or inclined, in the workings belowground;

(40) "working place" means any place in a mine to which any person has lawful access.

Chapter II – Returns, Notices and Records

3. Notice of opening – (1) The notice required by section 16 of the Act shall be submitted in Form I or First Schedule 1[and a copy thereof shall be submitted to the

Reional Inspector. The form shall be accompanied by a plan showing the boundaries of the mine and the shafts or opening of the mine, trijunction or revenue pillars and other prominent and permanent surface features :

Provided that, in respect of amine which has already been opened such a plan shall be submitted within sixty days of coming into force of the Metalliferous Mines (Amendment) Regulations, 1985:

Provided further that if the boundary of amine is changed as per sub-regulation(1) of regulation 111 a plan showing the boundary shall be submitted within seven days of the said change]

(2) When a mine has been opened, the owner, agent or manager shall forthwith communicate the actual date of opening to the Chief Inspector and to the Regional Inspector.

4. Quarterly Returns – On or before the 20th day of January, April, July, and October in every year, the owner, agent or manager shall submit to the Chief Inspector and the Regional Inspector correct returns in respect of the preceding quarter in Form II of First Schedule.
5. Annual Returns – (1) On or before the 20th day of February in every year, the owner, agent or manager shall submit to the District Magistrate and to the Chief Inspector annual returns in respect of the preceding year in Form III of First Schedule.

(2) If a mine is abandoned or working thereof is discontinued for a period exceeding 60 days, or if a change occurs in th ownership of a mine, the returns required under sub-regulation(1) shall be submitted within 30 days of abandonment or change of ownership or within 90 days of discontinuance, as the case may be:

Provided that the Chief Inspector may, by an order in writing and subject to such conditions as he may specify therein, allow such returns to be submitted up to any date not later than the 20th day of February in the year following that to which they relate :

Provided further that nothing in this sub-regulation shall be deemed to authorise the submission of any return later than the 20the day of February in the year following that to which it relates.

6. Notice of abandoned or discontinuance – (1) (a) When it is [intended to abandon a mine or to discontinue working thereof for a period exceeding four months, the owner, agent or manager shall, not less than 30 days before such abandonment or discontinuance, give to the Chief Inspector and the Regional Inspector a notice stating the reasons for the reasons for the proposed abandonment or discontinuance and the number of persons likely to be affected thereby :

Provided that in the case of a mine or part thereof to which Regulation 142 applies, notice as aforesaid shall also be given whenever it s intended to abandon a district or part of the mine, or to discontinue working thereof for a period exceeding four months :

Provided further that when, on account of unforeseen circumstances, a mine or part as aforesaid is abandoned or discontinued before the notice has been given or when without previous intention the discontinuance extends beyond a period of four months, the notice shall be given forthwith.

(b) Notwithstanding anything contained in clause (a), when it is intended to abandon, or discontinue for more than four months, any workings belowground over which is situated any property vested in the Government or any local authority or any railway or any building or permanent structure not belonging to the owner, the owner, agent or manager shall not less than 30 days before the date of such abandonment or discontinuance, give notice of his intention to the Chief Inspector and the Regional.

(2) When a mine or part aforesaid has been abandoned, or working thereof has been discontinued over a period exceeding four months, the owner, agent or manager shall, within seven days of the abandonment or of the expiry of the said period, give to the Chief Inspector, the Regional Inspector and the District Magistrate notice in Form I of First Schedule.

7. Notice of reopening – (1) When it is intended to reopen a mine after abandonment, or after discontinuance for a period exceeding four months, the owner, agent or manager shall, not less than 30 days before resumption of mining operations, give to the Chief Inspector, the Regional Inspector and the District Magistrate notice in Form I of First Schedule :

Providing that in the case of amine or part thereof to which Regulation 142 applies, notice as aforesaid shall also be given whenever it is intended to reopen a district or part of the mine after abandonment or after discontinuance for a period exceeding four months.

(2) When a mine or part as aforesaid has been reopened, the owner, agent or manager shall forthwith communicate the actual date of reopening to the Chief Inspector and the Regional Inspector.

8. Change of ownership and address etc. – (1) (a) When a change occurs in the name or ownership of a mine or in the address of the owner, the owner, agent or manager shall, within seven days from the date of the change, give to the chief Inspector and the Regional Inspector a notice in Form I of First Schedule :

Provided that where the owner of a mine is a firm or other association of individuals, a change –

(i) of any partner in the case of a firm;
(ii) of any member in the case of an association
(iii) of any director in the case of a public company; or
(iv) of any shareholder in the case of a private company

shall also be intimated to the Chief Inspector and the Regional Inspector, lwithin seven days from the ate of the change.

(b) When the ownership of a mine is transferred, the previous owner or his agent shall make over to the new owner or his agent, within a period of seven days of the transfer of ownership, all plans, sections, reports, registers and other records mainiained I pursuance of the Act and of the regulations, a orders made thereunder and all correspondence relating to the working of the mine relevant thereto; and when the requirements of this clause have been duly complied with, both previous and the new owners or their respective agents shall forthwith send the Chief Inspector and the Regional Inspector a detailed list of the plans, sections, repsorts, registers and other records that have been transferred.

(2) When any new appointment is made of an agent, manager, assistant manager, underground manager, surveyor or an engineer, if any, or when the employment to any such person is terminated or any such person leaves the said employment, or when any change occurs in the address of any agent or manager, the owner, agent or manager shall, within seven days from the date of such appointment, termination, leaving or change, give to the Chief Inspector and the Regional Inspector a notice in Form I of First Schedule.

1["8A. Appointment of agent. – (1) The owner of a mine shall submit in writing to the Chief Inspector and the Regional Inspector, a statement showing name and designation of every person authorised to act an agent on behalf of the owner of a mine in respect of management, control, supervision or direction of the mine.

(2) The statement shall also show the responsibilities of every such person and the matters in respect of which he is authorised to act on behalf of the owner of a mine.

(3) The statement aforesaid shall be submitted within one month from the date of coming into force of the Metalliferous Mines (Amendment) Regulations, 1985, in the case of mines already opened for reopened as the case may be, and in other cases within one month from the ate of opening or reopening of the mine.

(4) Any change, addition or alteration in the names or other particulars of the aforesaid statement shall be reported in writing to the Chief Inspector and the Regional Inspector within seven days from the date of such change, addition or alteration]

9. Notice of Accident – (1) (a) When there occurs in or about a mine –
   (i) an accident causing loss of life or serious bodily injury in connection with mining operations;
   (ii) an explosion or ignition;
   (iii) a spontaneous heating or outbreak of fire, or appearance of smoke or other indication of heating or outbreak of fire;
   (iv) an influx of noxious gases;

(v) an occurrence of inflammable gas in a mine to which Regulation 142 does not apply;
(vi) an irruption or water;
(vii) a rock-brust in workings belowground;
(viii) a premature collapse of any part of the workings;
(ix) any accident due to explosives;
(x) a breakage or fracture of a rope, chain, headgear pulley or axle or bearing thereof, or other gear y which persons are lowered or raised;
(xi) an overwinding of cases or other means of conveyance while men are being lowered or raised;
(xii) a breakage or fracture of any essential part of winding engine, crank-shaft, coupling, bearing, gearing, clutch, drum or drumshaft; or failure of emergency brake;
(xiii) a bursting of any equipment containing steam, compressed air or other substance at high pressure; or
(xiv) a breakage, fracture of failure of any essential part of any machine or appratus whereby the safety of persons may be endangered;

the owner, agent or manager shall forthwith inform the Regional Inspector about the occurrence by telephone or express telegram or by special messenger; and shall also, within 24 hours of every such occurrence, give notice thereof in Form IV-A of First Schedule to the District Magistrate, the Chief Inspector and the Regional Inspector and shall simultaneously exhibit a copy of the notice on a special notice board outside the office of mine and shall ensure that the notice is kept on the board in a legible condition for not less than 14 days from the ate of such exhibition.

(b) When a n accident causing loss of life or serious bodily injury occurs in or about a mine in connection with the generation, storage, transformation, transmission, supply or use of electrical energy, the owner, agent or manager shall also forthwith inform the Electrical Inspector o Mines by telephone, express telegram or special messenger;

(2) If death results from any injury already reported as serious 1[under sub-regulation (1) or if an injury other than the serious injury becomes serious, the owner, agent or manager shall, within 24 hours of his being informed of the same], give notice thereof to the District Magistrate, the Chief Inspector and the Regional Inspector.

(3) In respect of every person killed or injured as above, the owner, agent or manager shall send to the Chief Inspector particulars in Form IV-B and IV-C of First Schedule, within seven days of the occurrence or 15 days of the injured person returning to duty, as the case may be.

10. Notice of disease – Where any person employed in a mine contracts any disease notified by the Central Government in the Official Gazette, the owner, agent or manager shall, within three days of his being informed of the disease, send notice thereof in Form V of First Schedule to the District Magistrate, the Chief Inspector, the Regional Inspector and the Inspector of Mines (Medial).

CHAPTER III – Examinations and Certificates of competency and of Fitness

2[11. Board of Mining Examinations – (1) For the purposes of these regulations, there shall be constituted a Board of Mining Examinations (hereinafter referred to as the "Board).

(2) The Board shall consist of the Chief Inspector who shall be its Chairman Ex-officio and five members possessing technical qualification in mining, and

(a) having practical experience in metalliferous mines, or
(b) serving in an institution imparting education in mining engineering at the degree or equivalent level, or
(c) engaged in mining research,

to be appointed by the Central Government:

Provided that the Board shall be so constituted that it shall include at least three members possessing qualifications laid down in clause (a) and at least one member possessing qualifications laid down either in clause (b) or in clause (c).

(3) Every member (other than the Chairman) of the Board shall hold office for a period of three years from the date of the notification appointing him as a member of the Board or until his successor is appointed and takes charge whichever is later :

Provided that –

(i) a member may at any time resign his office;
(ii) a member appointed under clause (b) or sub-regulation(2) shall cease to hold office upon his ceasing to serve in any such institution, as is referred to in that clause;
(iii) a person appointed to fill a vacancy caused by reason of the death, resignation, or by reason of cesser of office under sub-clause (ii), of a member, shall hold office for the remaining period for which such member would have, but for such reason, continued as member.

(4) A person who holds, or who has held office as member of the Board shall, subject to the other provision of this regulation, be eligible for re-appointment to that office.

(5) A member of the Board (other than the Chairman) shall receive such remuneration as the Central Government may fix.
(6) An Inspector nominated in this behalf by the Chief Inspector shall act as the 1[Secretary to the Board hereinafter referred to in this regulation as the Secretary]

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(8)Notwithstanding anything contained in this regulation, the Central Government, may, if satisfied that it is necessary so to do in the public interest, re-

constitute to Board even though the term of office of all or any of the members thereof has not come to an end.

1[(9) Meetings of the Board shall be held as and when the Chairman considers them necessary, and unless otherwise decided by the Chairman, all meetings of the Board shall be held at Dhanbad

(10) (a) For every meeting of the Boad, not less than ten clear days' prior notice intimating the time and place of the proposed meeting and signed by the Chairman or the Secretary shall be given to each members who is not absent from India.

(b) Such notice shall be delivered at, or posted to, the usual place of residence of the member, and each such notice shall be accompanied by a list of items of business to be disposed of at that meeting.

(c) Notwithstanding what is contained in clauses (a) and (b), in cases of urgency, an emergent meeting may be called for by the Chairman at any time, by intimating the members, only two days in advance, of the time and date of such meeting and the subject matter for discussion at such meeting.

(11) (a) The Chairman shall preside at every meeting of the Board.

(b) If the Chairman is absent for any reason, the members present shall elect one from among themselves to preside over the meeting; and the member so elected shall, for the purposes of that meeting; have all powers of the Chairman.

(12) No business shall be transacted at a meeting of the Board unless at leat three members, including the Chairman, are present.

(13) (a) All matters which the Board is required to consider shall be conidered at its meeting, or, if the Chairman so decides, by circulation of the papers, to every member who is not absent from India.

(b) When any matter is referred to by circulation as aforesaid, any member can request that it should be considered at a meeting of the Board and the Chairman may direct that it shall be so considered but when two or more members so request, the Chairman shall direct that it shall be so considered at a meeting to be held.

(14) (a) The Secretary shall place, before the Board, a list of business to be transacted at the meeting.

(b) No business which is not included in such list shall be considered unless the Chairman permits.

(15) (a) Every matter at a meeting, shall be decided by the majority of votes of the members present at such meeting.

(b) Every matter referred to the members by circulation under sub-regulation(13) shall be decided by the majority opinion of the members to whom the papers were circulated, unless the Chairman reserves it for consideration at a regular meeting to be held later.

(c) In case of equal division of votes or opinions of the members the Chairman shall have a casting vote or opinion.

(16) (a) The Secretary shall record the minutes of each meeting in a bound-page book kept for the purpose and copies of such minutes of the meeting shall be circulated to all members present in India.

(b) The minutes so recorded shall be confirmed at the next meeting of the Board and singed by the Chairman in token thereof.

(17) (a) The Chairman, in addition to any other powers and duties conferred upon him under these regulations, shall, -

(i) present all important papers and matters to the Board as early as possible;
(ii) issue orders for carrying out the decisions of the Board;
(iii) have power to refer, in his discretion, any matter tot he Central Government for their orders; and
(iv) have powers generally to take such action or pass such ordrs necessary to implement the decisions of the Board.

(b) The Chairman may, during his temporary absence by reason of leave or otherwise, authorise any member o the Board to perform all or any of the duties of the Chairman during such absence.

(c) Unless the Chairman otherwise directs all proceedings of the Board shall be conducted in camera ad be regarded as confidential].

12.Certificate granted by the Board –(1) Certificates under these regulations shall be granted by the Board.

(2) Certificates granted by the Board shall be valid throughout the territories to which these regulations extend, and shall be of the following kinds –

(a) Manager's first class certificate of competency to manager a metalliferous mine (in these regulations referred to as a First Class Manager's Certificate);

(b) Manager's second class certificate of competency to manage a metalliferous mine (in these regulations referred to as a Second Class Manager's Certificate);

(c) Surveyor's certificate of competency to survey the workings of a mine (in these regulations referred to as a Surveyor's Certificate);

(d) Mine Foreman's certificate of competency to carry out inspections and duties as required under these regulations (in these regulations referred to as a Forman's Certificate);

(e) Mining Mate's certificate of competency to carry out inspections and duties as required under these regulations (in these regulations referred to as a Mate's Certificate);

1[(f) winding engineman's I Class certificate (in these regulations referred to as a First Class enginedriver's Certificate) to drive a winding engine of any type or class or of such type or class or of such type or class or types or classes as may be specified in the certificate;

(g) winding engineman's II class certificate (in these regulations referred to as a Second Class enginedriver's Certificate) to drive a winding engine of any type or class or of such type or class or of such type or class or types or classes as may be specified in the certificate;

(h) Blaster's certificate of competency to fire shots in a metalliferous mine (in these regulations referred to as a Blaster's Certificate); and

(i) Certificate of competency to test for the presence of inflammable gas (in these regulations referred to as a Gas-testing Certificate) : Provided that 2[any of the certificates aforesaid, other than an Engine Driver's Certificate and a Gas-testing Certificate] may be restricted to mines having open-cast workings only and this fact shall be endorsed on the certificate.

13. Examinations and Examiners. – (1) Certificates of competency shall be granted to successful candidates after such examination and in such form as the Board may prescribe :

3[Provided that the Board may, subject to the conditions to b specified in the bye-laws framed for the purpose, exempt any person 4****** from appearing at the examination or part thereof for the grant of a certificate referred to in regulation 12]

1[Provided further that the Board may, for a period of five years from the date of coming into force of the Metalliferous Mines (Amendment) Regulations, 1977 and subject to such conditions as may be prescribed in the bye-law made by the Board for the purpose, exempt any person, possessing such experience or such qualifications or both in

mining as may be approved by the Board in this behalf, from appearing at the examination or part thereof for the grant of a certificate referred to in regulation 12.]

(2) The examinations shall be held at such times and at such centres as may e fixed by the Board, and shall be conducted by examiners appointed by the Board.

(3) The examiners so appointed shall be subject to the orders of the Board in respect of all matters relating to the conduct of the examinations, and shall receive such remuneration as the Board, with the sanction of the Central Government, may fix.

(4) The Board may make 2bye-laws as to the conduct of the examinations and as to the granting o certificates of competency and of fitness as required under these regulations, and shall, so far as may e practicable; provide that the standard of knowledge required for the grant of certificates of any particular class and the standard of medical fitness shall be uniform throughout the territories to which these regulations extend. Every bye-law made by the Board under this regulation shall be published in the Official Gazette; and no such bye-law shall have effect until three months after the date on which it was so published.

14. Submission of applications – (1) Applications for an examination conducted by the Board shall made on a form supplied for the purpose.

(2) Notice regarding the date and place of the examinations for the Manager's and Surveyor's certificates shall be published under the order of the Board, in such periodicals as the Board may direct, not less than 60 days prior to the date fixed by the Board for receiving applications. The closing date for receipt of applications shall not be less than 60 days prior to the date fixed for the examination.

15. Age and general qualifications etc. of candidates – (1) (a) No person shall be admitted as a candidate at any examination held by the Board unless he is 3[20 years of age].

(b) No person shall be admitted as a candidate at any examination for a Manager's, Surveyor's, Foreman's, Mate's or Blaster's Certificate unless he holds a valid first-aid certificate or the standard of the St. John Ambulance Association (India):

Provided that if any candidate satisfied the Board that he has not had sufficient opportunity to obtain such first-aid certificate, the Board may admit him to the examination on such conditions, if any, as it thinks fit to impose.

(d) Every application for any examination as aforesaid shall be accompanied by :-

(i) A certificate of age granted by a Gazetted Officer or by the head master of a school or a Higher Secondary or equivalent standard;

Provided that in the case of a person holding a matriculation or equivalent certificate, such certificate shall be submitted as evidence of age;

(ii) a medical certificate obtained not more than two year prior to the date of this application, from a qualified medical practitioner not below the rank of a Civil Assistant Surgeon, or from a Certifying Surgeon certifying the candidate to be free from deafness, defective vision or any other infirmity, mental or physical, likely to interfere with the efficiency of his work; and

(iii) a certificate from some person of good repute as to the general good conduct and sobriety of the candidate.

(2) 1[After the 31st December, 1961] no person shall be admitted as a candidate at any examination for a Manager's or Surveyor's Certificate unless he has passed the matriculation examination of a recognised university, or its equivalent, and for a Foreman's, Mate's Engine-driver's or 2[Blaster's] Certificate unless he satisfies the Board that he is literate :

3[Provided that nothing in this sub-regulation shall be deemed to debar a person, not satisfying the provisions thereof, from being admitted at such an examination after the said date, if he had been admitted at a similar examination before that date].

4[(3)(a) No person shall be admitted as a candidate of an examination for a Manager's or Foreman's Certificate, which is not restricted to mines having opencast working only, unless he has obtained a Mate's certificate not so restricted and a Gas-testing Certificate and no person shall be admitted as a candidate at an examination for Manager's or foreman's Certificate restsricted to miens having opencast workings only, unless he has obtained a Mate's Certificate;

Provided that this clause shall not apply –

(i) to a candidate for a Manager's Certificate, if he already holds a Foreman's Certificate granted under regulation 22 or 23; and

(ii) to a candidate for a Manager's First Class Certificate, if he already holds a Manager's Second Class Certificate granted under regulation 22 or 23.

(b) Notwithstanding anything contained in clause (a), if a candidate satisfied the Board that he did not have sufficient opportunity to obtain a Mate's or Gas-testing Certificate, the Board may admit him to the examination for a Manager's or Foreman's Certificate on such conditions if any, as it may think fit to impose].

16. Practical experience of candidates for Manager's Examinations – (1) No person shall be admitted as a candidate at any examination for a First or Second Class Manager's

Certificate (other than an Exchange or Service Certificate to which the provisions of Regulations 22 and 23 respectively apply), unless he has satisfied the Board that he has had practical experience in a metalliferous mine for a period of not less than five and three years respectively :

Provided that –

(a) in the case of a candidate who has received 5[a diploma or degree in mining or mining engineering or other equivalent 6[qualification] approved in that behalf by the Central Government, such period shall be reduced to three and two years, respectively; and
(b) in the case of a candidate who has received 5[a certificate, diploma or degree in applied geology, civil, mechanical or electrical engineering, or other equivalent 6[qualification] approved in that behalf by the Central Government, such period shall be reduced to four and two and a half years, respectively.

(2) The nature of the practical experience required of a candidate for a Manger's Certificate shall be experience approved by the Board and gained in one or other of the following capacities in a metallifeous mine having an average employment of not less than 60 in workings belowgroud or not less than 160 in all in the mie 7[or in such other 8(mines) as the Boad may approve in this behalf] –

(a) as a workman, or a mining apprentice having direct practical experience of getting ore and of store work, timbering and repairing ; or
(b) as an official in respect of mining operations :

9[Provided that out of the period of experience required under sub-regulation(1) from candidates for the examination of –

(i) First Class Manager's Certificate, not restricted to mines having opencast workings only, a period of not less than eighteen months should have been spent in the working below ground of a mine.
(ii) Second Class Manager's Certificate, not restricted to mines having opencast workings only, a period of not less than twelve months should have been spent in the working below ground of a mine.

10[Provided further that the Board may approve a part of the period of the experience gained while engaged in inspection, rescue, research, planning or any other work, connected with mining operation, so however, that, the aforesaid period shall not, inclusive of the period of experience in coal mines approved under regulations 19, exceed one year in case of 1[Second Class] and one and half years in a First Class Manager's Certificate].

2[17. Practical experience of candidates for Surveyor's Examination – No person shall be admitted as a candidate at any examination for a Surveyor's Certificate unless he has satisfied the Board that he has had not less than two year's practical experience of surveying of a type approved by the Board, In case of candidates for a certificate which is not restricted to mines having opencast workings, the said experience shall include practical experience for a period of not less than six months of surveying the workings belowground of a mine having an average employment of not less than 60 in workings below ground or such other mines as the Board may approve in this behalf :

Provided that the aforesaid period of two years shall be reduced to six months in case of candidate who has received a certificate, diploma or degree in mining or mining engineering, mine surveying, or civil engineering or other equivalent qualification approved in that behalf by the Central Government, subject, however, to the condition that in case of a candidate for a certificate which is not restricted to mines having opencast workings, the said six months experience should have been gained in workings below ground of a mine as aforsiad.]

3[18. Practical experience of candidates for Mate's and Blaster's Examinations. (1) No person shall be admitted as a candidate at any examination for a Mate's Certificate unless the Board is satisfied that he has had practical experience and training in a metalliferous mine for a period of not less than three year :

Provided that the said period shall be reduced –

(a) to two years in the case of a candidate who has received a diploma or certificate in mining subjects or other equivalent qualification after a course of at leas two years' duration approved in that behalf by the Central Government 4[or who received has a degree in applied geology or in civil, mechanical or electrical engineering or other equivalent qualification approved in that behalf by the Central Government] ; and
(b) to one year in the case of a candidate who has received a diploma or degree in mining or mining engineering or other equivalent qualification approved in that behalf by the Central Government .

(2) No person shall be admitted as a candidate at any examination for a Blaster's Certificate unless the Board is satisfied that he has had practical experience and training in a metalliferous mine for a period of not less than two years, of which not less than six months shall be experience and training in connection with shot-firing :

Provided that the said period shall be reduced :

(a) to one year (including not less than four months in shot-firing) in the case of a candidate who has received a diploma or certificate in mining subjects or other equivalent qualification

after a course of at least two years' duration approved in that behalf by the Central Government 4[or who has received a degree in applied geology or in civil, mechanical or electrical engineering or other equivalent qualification approved in that behalf by the Central Government] and

(b) to six months (including not less than two months in shot-firing) in the case of a candidate who has received a diploma or degree in mining or mining engineering or other equivalent qualification approved in that behalf by the Central Government.

(3) The nature of practical experience required of candidates for the aforesaid examinations shall be experience of such a type as may e approved by the Board.]

19. Approval of experience of candidates for Engine-drive's Certificates. – In the case of a candidate part of whose experience has been obtained in a coal mine, the period of practical experience in a metalliferous mine as prescribed in 6[regulations 16,17 and 18] may be reduced by the Board to such an extent and subject to such conditons as it may specify.

20. Practical experience of candidates for Engine-driver's Certificate – No person shall be admitted as a candidate at any examination for an Engine-driver's Certificate unless he has satisfied the Board that he has had practical experience of driving a winding engine or as an assistant to a qualified winding enginedriver for a period of at least one year :

Provided that no person shall be permitted to appear at any examination for a I Class Engine Driver's Certificate unless he holds a II Class Engine Driver's certificate.

1[21 Examination fees – (1) Fees on the following scale shall be paid in respect of every application for admission to an examination :-

	Rs
(a) in the case of an examination for a First Class Manager's Certificate	50
(b) in the case of an examination for a IInd Class Manager's Certificate	30
(c) in the case of an examination for a Surveyor's Certificate	20
(d) in the case of an examination for a Foreman's Certificate	20
(e) in the case of an examination for a Mate's Certificate	10
(f) in the case of an examination for a I Class Engine Driver's Certificate	20
(g) in the case of an examination for a IInd Class Engine Driver's Cert.	10
(h) in the case of an examination for a Blaster's Certificate	6
(i) in the case of an examination for a Gas testing's Certificate	4

(2) The Chief Inspector may permit the refund of any fee paid under sub-regulation (1) where the candidate has died before the examination or where the fee has been erroneously paid.

(3) Except as aforesaid examination fee paid shall not once be refundable.

22. Exchange Certificates – (1) The Board may grant to any person holding a Manger's Surveyor's, Overman's or Foreman's, Sirdar's or Mate's or Engine-driver's or shotfirer's or Blaster's Certificate granted under any Act for the regulation of mines for the time being in force in any other country, a certificate of similar class under these regulations if he 2[possesses such practical experience and] passes such examination as the Board may stipulate :

Provided that a candidate fo the grant of a Manger's Exchange Certificate shall also satisfy the Board that he has undergone, for a period of not less than six months, a course of practical training in India in the manner and in the mines approved by the Chief Inspector for the purpose. Before the commencement of his practical training in India as aforesaid, every such candidate shall submit to the Chief Inspector an application in a form supplied for the purpose.

(2) The Board may grant to any person holding a certificate referred to in sub-regulation (1) granted under the Coal Mines Regulations made under the Act a similar certificate under these relations if he 3[possesses such practical experience and] passes such examination as the Board may stipulate :

4[Provided that the Board may, subject to such conditions as it may specify, exempt any person from appearing at the examination or part thereof, for the grant of an Exchange Certificate].

5[(2-A) An Exchange Certificate other than a Winding Engine drive' or Blaster's Certificate granted under sub-regulation (1) or (2) may be restricted to mines having open-cast working only, and in such a case the certificate shall contain an endorsement to that effect].

(3) Every application for the grant of an Exchange Certificate under this regulation shall be accompanied by :

(i) a medical certificate obtained not more than two years prior to the date of his application, from a qualified medical practitioner not below the rank of a Civil Assistant Surgeon or from a Certifying Surgeon, certifying the candidate to be free from deafness, defective vision or any other infirmity, mental or physical likely to interfere with the efficient discharge of his duties ; and

(ii) a certificate from some person of good repute as to the general good conduct and sobriety of the candidate.

(4) Fees on the scale laid down in regulation 21 shall be paid in respect of every examination under the regulation.

23. Service Certificate – (1) The Board may grant, until such 5date as may be notified by the Central Government for the purpose in the Official Gazette without written examination;

(a) a Manager's Certificate to any person –

1(i) who has attained the age of 35 years and wo satisfied the Board that he has worked, for a period of not less than eight years in the case of an applicant for First Class Manger's Certificate and six years in the case of an applicant for the Second Class Manager's as an Assistant Manager, underground manager, or manager or in any capacity accepted by the Board as equivalent or superior thereto in the planning, control and direction of mining operations of metalliferous mines of of a type approved by the Board if he passes a viva voce examination in such subjects as the Board may specify ; or]

2[(I-A) who has attained the age of thirty years and has received a diploma or certificate in mining or mining engineering or an Honours or a Master's Degree in Geology or other equivalent qualification, approved in the behalf by the Central Government, if he satisfied the Board that he has had such practical experience as complies with the provisions of sub-regulation (2) of regulation 16 for a period of not less than eight years, in the case of a First Class Manager's Certificate and six years, in the case of Second Class Manager's Certificate and if he passes a viva voce examination in such subject as the Board may stipulate :

Provided that practical experience for period of not less than three of the eight years in the case of a First Class Manager's Certificate and for a period of not less than two of the six years in the case of Second Class Manager's Certificate shall be in the capacity of an assistant manager or under manager or manager or in a capacity accepted by the Boards are equivalent or superior thereto in the control and direction of mining operation in mins of a size approved by the Board];

(iii) who has attained the age of 25 years and has received 3[a diploma, certificate or degree in mining engineering, applied geology, civil, mechanical, or electrical engineering or other equivalent qualification] 4approved in this behalf by the Central Government, if he satisfied the Board that he has had practical experience of the nature approved by the Board for periods of not less than five years for a First Class Manager's Certificate and three years for a Second Class Manager's Certificate and if he passes a viva voce examination in such subjects as the Board may stipulate :

Provided that not less than two years and one year respectively, of the said practical experience shall have been obtained in metalliferous mines in India;

For the purpose aforesaid only such experience shall be approved, as complies with the provisions of regulation 16(2), or is experience in the capacity of a manager or in a superior capacity in the control and direction of mining operations ;

5[(b) a Foreman's, Mate's or Blaster's Certificate to any person –

(i) who has attained the age of 25 years and who satisfies the Board that he has worked in the capacity of mine foreman, a mining mate or a blaster, as the case may be, in a metalliferious mine in India for a period of not less than three years in the case of a certificate restricted to miens having open-cast workings only and not less than four years in case of a certificate not so restricted and has passed such viva voce examination as the Board may stipulate;

(ii) who has attained the age of 23 years and has received a diploma or certificate in mining or mining engineering or other equivalent qualification approved under sub-clause (iA) of clause (a) or a degree in geology from any recognised university, if he satisfied the Boad that he has had such practical experience for a period of not less than two years in the case of a certificate restricted to mines having open-cast workings only and not less than three years in the case of a certificate not so restricted as has been specified in sub-regulation(2) of regulation 16 or in the capacity of a manager or in a capacity accepted by the Board as equivalent or superior thereto in the planning, control and direction of mining operations in metalliferous mines of a type approved by the Board and if he passes such viva voce examination as the Board may stipulate; or

(iii) who has attained the age of 21 years and has received a diploma, certificate or degree in mining engineering, applied geology, civil, mechanical or electrical engineering or other equivalent qualification approved under sub-clause (ii) of clause (a), if he satisfied the Board that he has had such practical experience for a period of not less than one year in the case of a certificate restricted to mines having open-cast workings only and not less than two years in the case of a certificate not so restricted as has been specified in sub-regulation (2) of regulation 16 or in the capacity of a manager or in a capacity accepted by the Board as equivalent or superior thereto in the planning, control and direction of mining operation in metalliferous mines of a type approved by the Board and if he passes such viva voce examination as the Board may stipulate].

(2) Any Service Certificate granted under sub-regulation (1) may be restricted to miens having open-cast workings only; and this fact shall be endorsed on the Certificate.

(3) Every application for the grant of a Service Certificate under this sub-regulation shall be accompanied by :

(i) a certificate of age granted by a Gazetted Officer of the Central Government or by the head-master of a school of a Higher Secondary or equivalent standard or by a qualified medical practitioner no below the rank of a Civil Assistant Surgeon ;

Provided that in case of a person holding a matriculation or equivalent certificate, such certificate shall be submitted as evidence of age ;

(ii) a medical certificate obtained not more than two years prior to the date of his application, from a qualified medical practitioner not below the rank of a Civil Assistant Surgeon or from a Certifying Surgeon, certifying the candidate to be free from deafness, defective vision or any other infirmity, mental or physical, likely to interfere with the efficient discharge of his duties; and

(iii) a certificate from some person of good repute as to the general good conduct and sobriety of the candidate.

(4) Fees on the scale laid down in Regulation 21 shall be paid in respect of every examination under this regulation.

24. Service Certificate for Surveyors. – (1) The Board may grant, until such date as may be notified by the Central Government for the purpose in the Official Gazette, a Surveyor's (restricted to metalliferous mines) to any person –

(i) 1[who has attained the age of 30 years and who satisfied the Board that he has worked as surveyors of metalliferous mines in India for a period not less than six years, and has had practical experience in surveying of the nature approved by the Board, if he passes such viva voce examination as the Board may stipulate; or]

(ii) who has attained the age of 25 years and has received 1[certificate, diploma or degree in mining, mining engineering, mine surveying or civil engineering or other equivalent 2qualification] approved in this behalf by the Central Government, if he satisfied the Board that he has had practical experience in surveying of the nature approved by the Board for a period of not less than two years (including not less than six months in the workings belowground of a metalliferous mine in India) and if he passes such viva voce examination as the Board may stipulate.

[NOTE- Any service certificate granted under this sub-regulation may be restricted to mines having opencast workings only, and such restriction shall be endorsed on the certificate].

(2) Every application for the grant of a Service Certificate under this sub-regulation shall be accompanied by :

(i) a certificate of age granted by a Gazetted Officer of the Government or by the head-master of a school of a Higher Secondary or equivalent standard or by a qualified practitioner not below the rank of a Civil Assistant Surgeon :

Provided that in case of a person holding a matriculation or equivalent certificate, such certificate shall be submitted as evidence of age;

(ii) a medical certificate obtained not more than two years prior to the date of his application, from a qualified medical practitioner not below the rank of a Civil Assistant Surgeon or from a Certifying Surgeon, certifying the candidate to be free from deafness, defective vision or any other infirmity, mental or physical, likely to interfere with the efficient discharge of his duties; and

(iii) a certificate from some person of good repute as to the general good conduct and sobriety of the candidate.

(3) Fees on the scale laid down in Regulation 21 shall be paid in respect of every examination under this regulation.

25. Validity of old Certificates – Any Engine-driver's or Blaster's Certificate granted under the Mysore Gold Mines Regulations, which is valid at the commencement of these regulations shall be deemed respectively to be the equivalent of an Engine-driver's or Blaster's Certificate granted under these regulations.

26. Duplicate Certificates – If any person proves to the satisfaction of the Board that he has, without any fault on his part, lost or been deprived of a certificate granted to hi, under these regulations, the Board may, upon realisation of the following fees and subject to such terms and conditions as it thinks fit, cause a copy of the certificate to be delivered to him –

(a) in the case of a Manager's or Surveyor's Certificate	Rs. 5
(b) in the case of any other certificate	Rs. 2

The word "DUPLICATE" shall be stamped across every such copy.

27. Certificates to be delivered to the manager. – When the holder of a Foreman's, Mate's, Engine-driver's, Blaster's or Gas-testing certificate is employed in a mine in a capacity which requires the possession of the said certificate, he shall deliver such certificate to the manager of the mine in which he is for the time being employed. The manager shall deliver to him a receipt for the same; and shall retain the certificate in the office at the mine so long as the holder thereof is so employed, and shall return it to him on his ceasing to be so employed.

28. Court of Enquiry into fitness of a person to hold a Manager's or Surveyor's Certificate. –(1) If a person who is the holder of a Manager's or Surveyor's Certificate, has been convicted of an offence made punishable under the Act with fine which may extent to RS. 500 or more or with imprisonment, or if it appears to the Central Government that he is unfit to continue to hold such a certificate by reason of incompetence or misconduct in the performance of his duties under the Act of under these regulations, the Central Government may appoint a Court to hold an inquiry to determine as to whether or not such person is fit to continue to hold such certificate.

(2) The following provision shall have effect with respect to the constitution and procedure of the Court holding an enquiry :-

(a) The court shall consist of a person or persons appointed by the Central Government and may conduct the inquiry either alone or with the assistance of an assessor or assessors so appointed.
(b) The Central Government may pay to the person or persons constituting the Court and to any assessor appointed to assist the Court, such remuneration and allowances as it may fix.
(c) The inquiry shall be public and shall be held at such place as the Central Government may appoint.
(d) The central Government may appoint any person to undertake the management of the case.
(e) The Central Government shall, before the beginning of the inquiry, furnish to the person whose fitness to continue to hold a certificate to be inquired into, a statement of the case on which the inquiry is instituted.
(f) The said person may appear at the inquiry either in person or by counsel, solicitor or agent approved by the Court, and may give evidence or call such witnesses as he thinks fit.
(g) If a majority of the persons constituting the Court thinks fit, the person whose conduct is under inquiry may be required to deliver up his certificate at any time before or during the inquiry; and such person shall be bound to comply with such requisition, unless he shows to the satisfaction of theCourt sufficient cause to the contrary.
(h) The Court shall, for the purpose of the inquiry, have all the powers of a civil court under the Code of Civil Procedure, 1908 (5 of 1908) for the purpose of enforcing the attendance of witnesses and compelling the production of registers, plans, sections, reports and other records and

material objects; and any person required as aforesaid to attend or to furnish any information shall be deemed to be legally bound to do so within the meaning of section 176 of the Indian Penal Code, 1860 (45 of 1860).

(i) The Court, for the purpose of the inquiry, may exercise such of the powers of an Inspector under the Act as it may think necessary or expedient.

(j) The Court shall, subject to the foregoing, have powers to regulate the procedure of the inquiry and to adjourn it from time to time.

(k) A person appearing as a witness before the Court may be paid by the Central Government such expenses as would be allowed to a witness attending a civil or criminal court.

(l) As the conclusion of the inquiry, the Court shall send to the Central Government a report containing a full statement of the case together with its opinion thereon, note of dissent, if any, submitted by the assessor or assessors and such account of or extracts from, the evidence as it may think fit; and if it considers that the certificate in question should be cancelled of suspended, it shall add a recommendation to the effect. Where the Court consists of more than one person, knot including the assessors(s), and there is disagreement between the members of the Court, a dissentient from the opinion of the majority may forward a separate report to the Central Government with a statement of his recommendations.

(3) The Central Government may, on the recommendation of the Court, cancel or suspend a certificate; and if it does so the fact of such cancellation or suspension shall be notified in the Official Gazette and if the certificate or a duplicate thereof granted under regulation 26, is produced, be endorsed upon it.

1[29. Suspensionof Certificate of Foreman, Mate, Engine driver, Blaster or Gas testing. –

(1) If the Regional Inspector is of the opinion that the holder of a certificate of Foreman, Mate, Engine-driver, Blaster or Gas testing is incompetent or is guilty of negligence or misconduct in the performance of his duties, he may hold an enquiry to determine whether or not such a person (hereinafter referred to as the delinquent) is to continue to hold such certificate.

(2) During such enquiry he shall record, -

(a) any evidence that the delinquent may like to give;

(b) the evidence of any witness that the delinquent may like to produce;

(c) the evidence of the Manager of the mine; and

(d) any other evidence that may be considered necessary or relevant by the Regional Inspector.

Unless the delinquent fails to be present inspite of sufficient notice, the evidence aforesaid shall be recorded in the presence of the delinquent and he shall be given

a reasonable opportunity to cross-examine the witnesses (other than those produced by him.). The Regional Inspector also may cross-examine the delinquent and the witnesses produced by him.

(3) If as a result of the enquiry the Regional Inspector is of the opinion that the delinquent is not fit to hold the certificate, he shall, within fifteen days from the date of the conclusion of his enquiry, submit a report to the Chairman of the Board together with his findings, notes of evidence recorded during the enquiry and other relevant records. After considering such report, evidence and records, the Chairman may without any further reference to the Board suspend the certificate of the delinquent for a period not exceeding three months.

(4) Where the Chairman is of the opinion that the suspension of the certificate for a period exceeding three months or its cancellation is called for, he shall recommend to the Board accordingly together with the findings of the Regional Inspector, the notes of evidence and other relevant records. A copy of such communication addressed to the Board together with the copies of the notes of evidence and the findings of the Regional Inspector shall also be sent to the delinquent who may submit his written representation within thirty days from the date of receipt of such copies.

(5) The Board may, after considering the evidence and other records and the written representation, if any, submitted by the delinquent, either increase the period of suspension or cancel the certificate as it deems fit.

(6) Where a certificate is suspended or cancelled under this regulation, the Chairman of the Board may call for such certificate and make suitable endorsement threreon.].

30. Validity of Foreman's, Mate's, Engine-driver's, Blaster's and Gas testing Certificates, - (1) (a) No Foreman's , Mate's, Engine-driver's, Blaster's shall remain valid for a period of more than five years unless the certificate bears an endorsement by the Regional Inspector to the effect that the holder thereof has, within the preceding five years, been examined and certified by a qualified medical practitioner appointed by the Chief Inspector to be free from deafness, defective vision or any other infirmity, mental or physical, likely to interfere with the efficient discharge of his duties.

(b) An application in respect of an examination of fitness in pursuance of clause(a) shall be made to the Chief Inspector, accompanied by a fee of 2[fifteen rupees].

3[(2) (a) A medical examination undergone in accordance with rule 29B of the Mines Rules, 1955 shall also be deemed to be an examination for the purpose of sub-regulations(1).

(b)The application for endorsement on a certificate by the Regional Inspector shall be accompanied by the certificate of fitness granted in terms of rule 29B of the Mines Rules, 1955 and a fee of five rupees.].

31. 4[Retirement age for Managers and Official etc. – (1) No person shall act as a manger or an official or a blaster or a winding engine man in a mine after attaining the age of 60 years unless he has obtained, within the preceding one year, a medical certificate of fitness certifying him fit to carry out the duties prescribed for him in the Act and in the regulations and orders made thereunder :

Provided that if the Chief Inspector or the Regional Inspector is of the opinion that a person as aforesaid though less than 60 years' of age, is medically unfit to carry on the duties prescribed for him in the Act and in the regulations and orders made thereunder, the Chief Inspector or the Regional Inspector may, by an order in writing, exceeding three months as he may specify therein; and no such person shall continue to act in any capacity as aforesaid after the period so specified unless he has obtained a medical certificate of fitness.

(2) The medical certificate of fitness as aforesaid shall be obtained from such authority and in such manner and after the payment of such fees as the Board may prescribe.

1[31. A. Right of the workers' representative to inspect the register maintained under the Mines Rules 1955 – The register maintained in Form 'B' under the Mines Rules, 1955 shall be made available for inspection to a workers' representative duly authorized by the persons employed in the mine on an application made by him in his behalf].

CHAPTER IV – Inspection and Mine Officials

32. Qualifications of Inspectors – (1) After the coming into force of these regulations, no new person shall be appointed as Chief Inspector unless he holds a degree or diploma in mining engineer of an educational institution approved by the Central Government and also a First Class Manager's Certificate granted under these regulations.

(2) After the coming into of these regulations, no person shall be appointed as in Inspector unless he holds a degree or diploma in mining engineering of an educational institution approved by the Central Government and also a First Class Manager's Certificate granted under these regulations:

Provided that –

(i) in relation to electrical machinery installed in mines, a persons holding a degree or diploma in electrical engineering of an educational institution approved by the Central Government may be so appointed;

(ii) in relation to other machinery or mechanical appliances installed in mines, a person holding a degree or diploma in mechanical engineering of an educational institution approved by the Central Government may be so appointed; and

(iii) in relation to the provisions of the Act and of the regulations, and of orders made thereunder, which relate to matters concerning the health and welfare of persons, a person holding a degree or diploma in medicine, surgery, and/or social science or labour welfare, as the case may be, of an educational institution approved by the Central Government 2[or a person holding such other qualifications as the Central Government may approve in this behalf] may be so appointed.

3* * * * * * *

4[33. Definition – For the purpose of these regulations –

(a) all excavations within the mine boundary and all premises, plants, machinery and works as specified in clause (j) of sub-section (1) of section 2 of the Act shall collectively constitute the mine;
(b) the expression, "average employment" of any mine, means the average per day during the preceding quarter of the total employment in all excavations and specified ancillary facilities within the specified mine boundaries (obtained by dividing the number of man days worked by the number of working days excluding the rest days and other non-working days.]

34. Qualifications and appointment of managers – (1)(a) No mine shall be opened, worked or re-opened unless there is a manager of the mine, being a person duly appointed and having such qualifications as are required by these regulations.

(b) No person shall act or be employed as a manager unless he is 23 years of age and is paid by, and is directly answerable to, the owner or agent of the mine.

(2) Except as hereinafter provided in sub-regulation (6), and subject to the provisions of sub-regulation (3), no person shall act or continue to act, or be appointed, as manager of a mine or mines the average employment of which corresponds to the figures given in column (I) of the table below unless he holds the corresponding qualifications given in column (ii) thereof :

(i)	(ii)
(a) In excess of 150 in workings below ground or of 400 in all the mine	A First Class Manager's Certificate
(b) In excess of 75 but not exceeding 150 in workings below ground, or in excess of 150 but not exceeding 400 in all in the mine.	A First or Second Class Manager's Certificate
(c) In any other case ……..	A First or Second Class Manager's Certificate or a Managers permit granted under sub-regulation (5).

Provided that no person shall act or continue to act, or be appointed, as manager of a mine or mines where work is being carried on by a system of deep-hole blasting and/or with the help of heavy machinery for the digging, excavation and removal, etc., of earth, stone, mineral or other material unless he holds a first class manager's certificate :

Provided further that where special conditions exist, the Chief Inspector may, by an order in writing, direct that in the case of any such mine as is referred to in clause (b) of the table, the manager thereof shall be the holder of a First Class Manager's Certificate, and that in the case of any such mine as is referred to in clause (c) of the table, the manager thereof shall be the holder of a First or Second Class Manager's Certificate:

Provided further that if any mine undertaking consists of two or more separate mines and if, in the opinion of the Chief Inspector, they are not sufficiently near to one another to permit of daily personal supervision being exercised by one manager, he may, by an order in writing, require the appointment of a separate manager for each of such mines.

(3) Where under the provisions of sub-regulation (2) a person holding a First or Second Class Manager's Certificate has been appointed as manager, a person holding lower qualifications shall not, except with the previous permission in writing of the Chief Inspector and subject to such conditions as he may specify therein, be so appointed during the succeeding twelve months, notwithstanding any reduction in the average output of the mine.

(4) No person shall act, or be appointed, as manager of more than one mine except with the previous permission in writing of the Chief Inspector and subject to such conditions as he may specify therein. No such permission shall have effect for a period exceeding 12 months, unless renewed. The Chief Inspector may at any time, by an order in writing, vary or revoke any such permission in the circumstances under which the permission was granted have altered or the Chief Inspector finds that the manager has not been able to exercise effective supervision in the mines under his charge.

(5)(a) The Chief Inspector may, after holding such examination as he may deem necessary and subject to such conditions as he may specify therein grant to any person holding a Forman's Certificate, a permit (in these regulations referred to as Manager's Permit) authorised such person to act as the manager of any specified mine, the average employment of which does not exceed 75 in workings below ground or 150 in all in the mine.

(b) A Manager's Permit shall be valid only for such period, not exceeding 12 months as may be specified therein. The Chief Inspector may renew any Manager's Permit for further periods not exceeding 12 months at a time.

(c) A fee of Rs.10 shall be payable in respect of every application for the grant of a Manager's Permit. No fee shall be charged for renewal thereof.

(d) The Chief Inspector may, by an order in writing, after giving the holder of such permit an opportunity to make his representation, cancel a Manager's Permit.

(6) The Chief Inspector may, by an order in writing, and subject to such conditions as he may specify therein, authorise any person whom he considers competent, being appointed to act as manager of any mine or mines for a specified period, notwithstanding that such person does not possess the qualifications prescribed in that behalf by sub-regulation (2); and may by a like order revoke any such authority at any time.

(7)(a) Where by reason of absence or for any other reason, the manager is unable to exercise daily personal supervision or is unable to perform his duties under the Act or these regulations, or orders made thereunder, the owner, agent or manager shall authorise in writing a person whom he considers competent to act as manager of the mine:

Provided that –

(i) such person holds a Manager's or Forman's Certificate;
(ii) no such authorisation shall have effect for a period in excess of 30 days, except with the previous consent in writing of the Chief Inspector and subject to such conditions as he may specify therein; nor without a like consent shall a second authorization be made to take effect upon the expiry of the first. The Chief Inspector shall not permit any such authorisation to extend over a period exceeding 60 days unless the persons holds such qualifications specified in sub-regulation (2);
(iii) the owner, agent or manager, as the case may be, shall forthwith send by registered post to the Chief Inspector and the Regional Inspector a written notice intimating that such an authorisation has been made, and stating the reason for the authorisation, the qualifications and experience of the person authorised, and the date of the commencement and ending of the authorisation; and
(iv) the Chief Inspector or the Regional Inspector may, except in the case of a persons possessing the qualifications specified in sub-regulation (2), by an order in writing, revoke any authority so granted.

(b) The persons so authorised shall, during the period of such authorisation, have the same responsibilities discharge the same duties, and be subject to the same liabilities as the manager.

(8)(a) No manager shall vacate his office without giving due notice in writing to the owner or agent at least 30 days before the day on which he wishes to vacate his office:

Provided that the owner or agent may permit the manager to vacate his office after giving a shorter notice.

(b) No owner or agent shall transfer, discharge or dismiss a manager unless the manager has been relieved by a duly qualified person as prescribed under sub-regulation (2).
(c) Nothing in sub-regulation (7) shall confer on the owner, agent or manager the right to authorise during any period of such notice, any person not duly qualified to manager the mine under sub-regulation (2), to act as the manager except in case of illness or other causes over which the manager has no control, or except with the previous written permission of the Chief Inspector and subject to such conditions as he may specify therein:
(d) A copy of every such notice and authorisation shall forthwith be sent to the Chief Inspector and to the Regional Inspector by registered post.

(9)(a) The owner or agent shall provide suitable residential accommodation for the manager and the under-manager or assistant manager within a distance of three miles from all mine openings; and every manager, under manager and assistant manager shall reside in the accommodation so provided:

Provided that where special difficulties exist which render compliance with these provisions not reasonably practicable, the Chief Inspector may, by an order in writing and subject to such conditions as he may specify therein, grant exemption from the same.

(b) No manager shall be entrusted by the owner or agent with any work, nor shall he himself perform any work, which will necessitate his frequent or prolonged absence from the mine.
(c) If any doubt arises as to any matter referred to in the foregoing clauses of this sub-regulation, it shall be referred to the Chief Inspector for decision.

(10) No manager shall act as agent or under manager or assistant manager or in any other supervisory capacity in another mine,

35. Appointment of assistant managers or underground managers – In every mine the average employment of which exceeds 450in working below ground or 1,200 in all in the mine, the manager shall be assisted by assistant managers and/or underground managers on the following scale:

Average employment	Number of assistant managers and/or underground managers
Upto 600 workings belowground, or 1,600 in all in the mine.	One
In excess of 600 workings belowground, or 1,600 in all in the mine	One additional assistant manager or underground manager, for every additional 500 persons employed belowground or 800 in all in the mine, or part thereof, for a period of five years from the commencement of the Regulations, and thereafter, for every 300 additional persons employed belowground or 800 in all in the mine or part thereof:

Provided that in a mine where the average employment exceeds 1200 in workings belowground or 3,200 in all in the mine, at least one of the assistant managers or underground managers as aforesaid shall hold a First Class Manager's Certificate:

Provided further that the Chief Inspector may, by an order in writing and subject to such conditions as he may specify therein, permit or require the appointment of assistant managers or underground managers in variation with these provisions.

NOTE. – For the purpose of this regulation, the expression "assistant manger or underground manager" shall include persons such as safety officers who hold equivalent qualifications.

36. Appointment of engineers – (1) At every mine where machinery is used, an engineer or other competent person not less than 23 years of age shall be appointed to hold general charge of such machinery, and to be responsible for its installation, maintenance and safe working.

Provided that nothing in this sub-regulation shall be deemed to ;prohibit the employment of two or more engineers or competent persons at one mine so long as the jurisdiction and sphere of responsibility of every such engineer or competent person is defined by the manager in his letter of appointment :

Provided further that after such date as the Central Government may notify in this behalf in the Official Gazette, no person (unless he holds 1[a degree or diploma in mechanical engineering or equivalent qualification] approved for the purpose by the Central Government) shall, except with the previous permission in writing of the Chief Inspector and subject to such conditions as he may specify therein, be appointed in an open cast mine worked by heavy earth-moving machinery in which the aggregate h.p. of all the machinery used exceeds 750, or in any other mine in which the aggregate h.p. of all the machinery used exceeds 250.or shall continue to act as an engineer or competent person as

(2) A notice of every such appointment, giving the name and full particulars of the qualifications and experience of the person so appointed, shall be sent to the Regional Inspector within seven days of such appointment :

(3) No person shall undertake the duties of an engineer of more than one mine without the previous permission in writing of the Regional Inspector and subject to such conditions as he may specify therein. The Regional Inspector may at any time, by an order in writing, vary or revoke such permission.

(4)Where by reason of temporary absence by any cause, the engineer, or competent person appointed under sub-regulation (1) is unable to perform his duties, the manager shall authorise in writing a person whom he considers competent to act in his place:

Provided that –

(a) notice of every such authorisation shall be sent to the Regional Inspector forthwith;
(b) no such authorisation shall have effect for a period in excess of 30 days except with the previous written consent of the Regional Inspector and subject to such conditions as he may specify therein; and
(c) the Regional Inspector may by an order in writing, revoke any authority so granted.

37. Appointment and qualifications of senior officials – (1)(a) At every mine, one or more overman shall be appointed to hold charge of the different districts of the mine on each working shift.

(b) The mine or district assigned to a Forman shall not be of such a size, nor shall any additional duties other than his duties under these regulations be such, as are likely to prevent him from carrying out in a thorough manner the duties prescribed for him under these regulations and in case any doubt arises as to the foregoing duties it shall be referred to the Chief Inspector for decision.

(2) Every person employed under sub-regulation (1) (a) as an official subordinate to the manager or to an assistant manager or underground manager and superior to the Mining Mate shall hold either a Manager's Certificate or an Forman's Certificate.

38. Appointment of surveyors – (1) At every mine having workings belowground and at such other mines or classes of mines as may be notified from time to time by the Central Government a person not less than

23 years of age and holding a Surveyor's Certificate shall be appointed to be the Surveyor for carrying out the surveys and levellings and for preparing the plans and sections required under the Act or the regulations, or orders made thereunder.

Provided that nothing in this sub-regulation shall be deemed to prohibit the employment of two or more surveyors at one mine so long as the jurisdiction and sphere of responsibility of each of the surveyors is defined by the manger in his letter of appointment.

(2) A notice of every such appointment giving the name and full particulars of the qualifications of the person so appointed, shall be sent to the Regional Inspector within seven days of such appointment.

(3) No person shall be appointed as a surveyor of more than one mine or in any other capacity in the same mine, without the previous permission in writing of the Regional Inspector and subject to such conditions as may be specified therein. The Regional Inspector may, by an order in writing, revoke such permission if the circumstances under which it was granted have altered or the Regional Inspector finds that the surveyor has not been able to carry out satisfactorily the work allotted to him.

39. Appointment of Officials and competent persons – (1)(a) The owner, agent or manager shall appoint such number of competent persons, including officials and technicians as is sufficient to secure, during each of the working shifts –

(i) adequate inspection of the mine and the equipment thereof;
(ii) a thorough supervision of all operations in the mine;
(iii) the installation, running and maintenance, in safe working order, of all machinery in the mine; and
(iv) the enforcement of the requirements of the Act and these regulations and orders made thereunder:

Provided that if the Regional Inspector finds that those appointed are inadequate, he may require the appointment of such number of additional competent persons by the owner, agent or manager as he considers necessary.

(b) Without prejudice to the requirement of clause (a), where the mine is worked on more than one shift, the owner, agent or the managers shall arrange that during the afternoon shift and the night shift, the mine is under the general supervision or an undermanager or assistant manager, if any, and of an experienced mine forman in other cases.

(2) It shall be the responsibility of the manager to see that the persons so appointed are competent to perform the duties assigned to them. No person shall be so appointed unless he is paid by the owner or agent and is answerable to the manager.

(3) Copies of all appointments made under sub-regulation (1) shall be entered in a bound-paged book kept for the purpose. A list of all such competent persons shall also be maintained.

(4) Without prejudice to the requirements of sub-regulation (2), every manager on taking over charge of a mine, shall satisfy himself that all persons already appointed under sub-regulation (1) are competent to perform the duties assigned to them; and if he finds them competent, he shall either countersign their authorisations or issue fresh ones.

40. General Management – (1) The owner, agent and manager shall provide for the safety and proper discipline of persons employed in the mine.

(2) Except in a case of emergency, no person who is not an official or a competent persons shall give, otherwise that through the manager, instructions to a person employed in a mine, who is responsible to the manager.

CHAPTER-V : Duties and Responsibilities of Workmen, Competent Persons and Officials, etc.

41. Duties of persons employed in mines – (1)(a) Every person shall strictly adhere to the provisions of the Act and of the regulations and orders made thereunder, and to any order or direction issued by the manager or an official with a view to the safety or convenience of persons not being inconsistent with the Act and these regulations; nor shall be neglect or refuse to obey such order or directions.

(b) No persons shall interfere with, impede or obstruct any person in the discharge of his duties, nor shall he offer or render any service, or use any threat, to any other person with a view to preventing him from complying with the provisions of the Act and of the regulations, and orders made thereunder or from performing his duties faithfully. If any person who receives any such offer or threat, fails to inform the manager forthwith, he shall also be guilty of a breach of these regulations.

(2) Every person shall, immediately before proceeding to work and immediately after terminating work at the end of his shift, have his name recorded in the register maintained under section 48(4) of the Act. In case of workings belowground, he shall get his name recorded every time he proceeds belowground or returns to the surface.

(3) No person shall go below ground unless he wears a hat of a type approved by the Chief Inspector.

(4)(a) No person shall, except with the authority of an official, remove or pass through any fence, barrier or gate, or remove or pass any danger signal.

(b) Subject to any directions that may be given by an official, no person shall, except for some justifiable purpose, go into any part of the mine other than that part in which he works, or travels to or from his working place by any roadway other than the proper travelling roadway.

(5) No person shall, while on duty, throw any stone or other missile with intent to cause injury, or fight or behave in a violent manner.

(6) Every person receiving any injury in the course of his duty shall, as soon as possible report the same to an official who shall arrange for the necessary first-aid to the injured person.

(7) No person shall sleep whilst on duty.

(8)(a) No person shall test for inflammable gas with a naked lamp, or brush or waft out inflammable gas. Should any person having a flame safety lamp find himself in the presence of inflammable gas, he shall not throw the lamp away or attempt to blow it out; but shall shelter it, hold it near the floor, avoid jerking it, and take it steadily into fresh air. Where the cannot take it into fresh air, he shall smother out the light or extinguish it in water.

[(b) No person shall, when trying examining for the presence of inflammable gas with a flame safety lamp, raise the lamp higher than may be necessary to allow the presence of inflammable gas to be detected.

(c)Every person using a safety lamp shall take proper care of it and shall not place it within 0.6 metre of the swing of any tool except in the case of a lamp which is actually worn, attached to the body of such person. In the case of a flame safety lamp he shall not place it on the floor unless it is necessary to do so for the safe performance of any particular work; and is the lamp becomes damaged, he shall at once carefully lower the flame until it is extinguished, and shall, at the first opportunity, report the damage to his superior official.

(9) Subject to the provisions of the Act and of these regulations and orders made thereunder, no person shall remain in a mine beyond the period over which his shift extends.

42. Duties of competent persons – Every competent person shall be responsible for the duties assigned to him. He shall be subject to orders of superior officials, and shall not –

(a) depute another person to perform his work without the sanction of his superior official;
(b) absent himself without having previously obtained permission from such official for the term of his absence or without having been relieved by a duty competent person; and
(c) without permission from such official, perform during his shift any duties other than those for which he has been appointed.

43. Duties of officials – (1) Every official shall carry out the duties assigned to him by the manager, undermanager or assistant manager in accordance with the provisions of the Act and of the regulations and orders made thereunder.

(2) Every official shall, to the best of his power, see that persons under his charge understand and carry out their respective duties properly.

44. Duties and responsibilities of managers – (1)(a) In every mine daily personal supervision shall be exercised by the manager; and in case of workings belowground, he shall visit and examine the workings belowground on at least four days in every week to see that safety in every respect is ensured. Of these inspections one at least in every fortnight shall be made during the night shift :

Provided that I the case of a mine where an assistant manager or underground manager holding a First Class Manager's Certificate is employed in compliance with the first provisio to regulation 35 and visits and examines the workings belowground on not less than five days in every week, it shall suffice if the manager visits and examines the workings belowground on not less than two days in every week:

Provided further that when owing to any unavoidable cause the manager or the assistant manager or under ground manager aforesaid is unable to carry out the aforesaid duties or inspections, he shall record the reason for the same in the book kept under clause (b).

(b) The manager, the undermanager and the assistant manager, if any, shall each maintain, in a bound paged book kept for the purpose, a diary; and shall record therein the result of each of his inspections and also the action taken by him to rectify the defects mentioned, if any.

(2) The manager shall make arrangements for all overmen and other officials to meet him or an undermanager, or assistant manager once in every working day for the purpose of conferring on matters connected with their duties.

(3)(a) The manager shall see that a sufficient supply of proper materials and appliances for the purpose of carrying out the provisions of the Act and of the regulations or orders made thereunder and for ensuring the safety of the mine and the persons employed therein, is always provided at the mine; and if he be not the owner or agent of the mine, he shall report in writing to the owner or agent when anything is required for the aforesaid purpose, that is not within the scope of his authority to order. A copy of every such report shall be recorded in a bound-paged book kept for the purpose.

(b) On receipt of a requisition under clause (a) the owner or agent shall take immediately and also shall, within three days of receipt of the requisition, inform the manager in writing of the action taken .

(4) The manager shall assign to every competent his particular duties, shall on his appointment make over to him a copy of the regulations, rules and bye-laws and of any orders made thereunder which affect him, and shall take all possible steps to ensure that every such person understands, carries out and enforces the provisions therein contained in a proper manner.

(5) The manager shall provide every overman with a tracing, upto the date of the last survey, showing the workings of the district belowground assigned to him. Where any work of reduction or extraction of pillars

is being carried out, such tracing shall show clearly the order in which such reduction or extraction is to be carried out.

(6) The manager shall examine all reports, registers and other records required to be made or kept in pursuance of the Act or of the regulations, or orders made thereunder, and shall countersign the same and date his signature. He may, however, by an order in writing, delegate this duty an undermanager or assistant manager except in cases where a specific provision is made requiring the manager to countersign a report or register.

(7) The manager shall give attention to, and cause to be carefully investigated, any specific representation or complaint that may be made to him in writing by an employee of the mine as to any matter affecting the safety or health of persons in or about the mine.

(8) When any accident, resulting in serious bodily injury to any person or in loss of life, occurs in a mine, the manager shall inspect the site of accident as soon as possible, and shall also either himself or through an undermanager or assistant manager, have an inquiry made into the cause of and circumstances attending the accident. The result of every such enquiry and a plan of the site of the accident showing details, shall be recorded in a bound paged book kept for the purpose.

(9) The manager shall perform such other duties as have been prescribed in that behalf under the Act, the regulations, or orders made thereunder.

(10) The manger may suspend or take such disciplinary action against any employee for contravention of any of the provisions of the Act, these regulations or orders made thereunder.

45. Duties and responsibilities of assistant mangers or underground manager – (1) The assistant manager or underground manager shall carry out the duties assigned to him by the manager, and shall see that in the part of the mine assigned to him by the manager, all work is carried out in accordance with the provisions of the act and of the regulations and orders made thereunder.

(2) The assistant mangers or underground manager shall, subject to the orders of the manager, visit and examine the workings under his charge, or part thereof, on every working day.

(3) The assistant mangers or underground manager shall, from time to time, carefully examine every travelable part of the mine or part thereof placed under his charge, whether frequented by workpersons or not.

(4) In the absence of the manager, assistant mangers or underground manager shall have the same responsibility, discharge the same duties and be subject to the same liabilities as the manager, but not so as to exempt the manager therefrom.

43. Duties and responsibilities of mine – The mine foreman or other competent person appointed under regulation 37(1) shall strictly observe the following provisions, namely –

(1) (a) Subject to the orders of superior officials, he shall have responsible charge and control of such part of the mine, and shall carry out such duties, as may be assigned to him by the manager.

(b) In the case of working belowground he shall, while on duty, carry a tracing of the workings of such district and shall keep the tracing up-to-date.

(c) He shall, in his district, make the inspections and reports required by these regulations.

(2) (a) He shall be responsible to see that the subordinate officials and competent persons in his district carry out their respective duties in a proper manner.

(b) He shall, to the best of his power, enforce in his district the provisions of the Act, of these regulations and orders made thereunder, and shall, subject to the control of the manager and the underground manager, assistant manager, if any, give such directions as may be necessary to ensure compliance with those provisions, and to secure the safety of the district and the safety and proper discipline of the persons employed therein.

(c) He shall have power to send out of the mine any person under his charge infringing or attempting to infringe any provision of the Act or of the regulations or orders made thereunder, or failing to carry out any direction given with regard to safety; and shall report in writing any such infringement or attempted infringement or failure to the manager.

(3) He shall see that sufficient supplies of timber brattice and other necessaries required for the safe working of his district are kept in convenient places therein.

(4) (a) He shall see that every air-crossing, stopping, door, brattice and other ventilation device is maintained in good order.

(b) He shall, in his district, see that the ventilation is effective; and when brattices or air pipes are required to be used for the ventilation of the working places, he shall see that they are kept sufficiently advance to ensure that an adequate amount of air reaches every such working place.

(5)(a) He shall see that all tracks and tramlines are properly laid, graded, ballasted or otherwise packed.

(b) He shall see that the manholes on the haulage roadways are kept safe, clear of any obstruction, and properly white-washed.

(c) He shall see that the stop-blocks, runway switches and other safety devices are fixed and used as required under the regulations, that drag or back-stays are provided and regularly used behind tubs ascending declines and that a sufficient supply of suitable sprags is provided where tubs are loaded on a gradient or lowered down a gradient by hand.

(d) He shall, if he finds any of the ropes, chains, signals, brakes, jig wheels and post or other apparatus in use in his district to be in an unsafe condition, stop the use of the same forthwith.

(6) He shall be responsible to see that except for the purpose of inspection, examination and repairs every person other than an official or a haulage attendant travels by the travelling roadway.

(7) He shall give prompt attention to the removal of any danger observed or reported to him, and shall see that dangerous places are adequately fenced off.

(8) He shall, under the direction of the manager, see that approved safety lamps are used and naked lights excluded wherever and whenever danger from inflammable gas is apprehended.

(9)(a) He shall devote the whole of his time to his duties and shall visit each working place in his district as often as may be necessary or possible.

(b) He shall not, except for justifiable cause, leave the district in his charge until he had finished the inspections required under these regulations and any other duties that he is required to perform, or until relieved by a duly appointed substitute.

(c) He shall, if the mine is working in a continuous succession of shifts, confer with the official succeeding him and give him such information as may be necessary for the safety of his district and of persons employed therein.

(10) He shall, at the end of his shift, record in a bound-paged book kept for the purpose a general report on the performance of all his duties during the shift, including anything concerning the proper working of the mine and the safety and discipline of persons employed in his district.

47. Duties and responsibilities of mining mates – Every mining mate or other competent person appointed under regulation 116 shall strictly observe the following provisions, namely :-

(1)(a) Subject to orders of superior officials, he shall have responsible charge and control of the district of the mine assigned to him by the manager or the assistant manager or underground manager.

(b) He shall take reasonable means to ensure the proper observance of the requirements of the Act and of the regulations, and orders made thereunder by persons under his charge and shall, as soon as practicable, report any contravention thereof to his superior official.

(2)(a) He shall make such inspection and reports as are required by these regulations, and in making such examination, he shall pay particular attention to edges of the goaf, if any, for checking supports.

(b) Except in the case of a mine working in a continuous succession of shifts, he shall, on completion of the first inspection of the district, proceed to the station appointed under regulation 116 and instruct all persons as to their places of work and as to any special precautions necessary to be observed by them.

(c) If he finds any person in a place other than the one assigned to him, he may order such person out of the mine, and shall forthwith report the matter to his superior official.

(d) He shall ensure that no inexperienced person is employed on any work except under the supervision of an experienced person.

(3)(a) He shall see that all travelling roadways to, and working places in, his district are made and kept secure.

(b) He shall report to his superior official any deficiency in timber, appliances and other necessaries required for the safe working of the district.

(4) Where either of the two ways affording means of egress from the district to the surface is not ordinarily used for travelling, he shall travel, once at least in every seven days, the whole of such way in order to make himself thoroughly acquainted with the same.

(5)(a) If he observes any dangerous place during the course of his inspections or if any danger at a place where workpersons are employed is reported to him, he shall, if the danger cannot be removed forthwith withdraw all persons from such place and shall not leave the place until the danger has been removed in his presence or all approaches to the place have been fenced off so as to prevent persons from inadvertently entering such place.

(b) He shall take care that any dangerous operation is carried out with due precaution, and in such cases shall be present throughout whenever any work of clearing falls of ground and setting of supports therein is being carried out.

(c) He shall cause the entrance to every place which is not in actual use or in course of working or extension, to be fenced across the whole width, so as to prevent persons from inadvertently entering such place.

(d) If he finds any accumulation of inflammable or noxious gases, he shall carry out the provisions of regulations 141 and shall not remove such accumulation until he has received instructions in that behalf from his superior official.

(6) He shall, on receipt of information of an accident to any person in his district, proceed at once to the place of accident, inspect the place and, if required, supervise the rescue operations, and shall report or send notice of the accident to the manager or assistant manager or underground manager.

(7)(a) He shall devote the whole of his time to his duties, and shall not leave the district under his charge until the end of the shift or until relieved by a duly appointed substitute.

(b) If the mine is worked by a continuous succession of shifts, he shall, before leaving his district, confer with the sirdar or competent person succeeding him, and shall acquaint him with all matters requiring his personal attention and give him such other information as may be necessary for the safety of his district and of the persons employed therein.

48. Duties and responsibilities of blasters – Every blasters shall –

(a) carry out his duties in accordance with the provisions of the regulations and of any orders made thereunder with respect to the transport and use of explosives;

(b) be responsible for the observance by his assistants, if any, of such provisions and of any direction with a view to safety which may be given to them by a superior official;

(c) not hand over any explosives to any unauthorised person;

(d) see that clay, sand or other suitable stemming material is available in sufficient quantities at convenient places;

(e) be present when shots are being charged and stemmed; and shall himself fire the shots; and

(f) be responsible, when a shot has misfired, for seeing that the place is adequately fenced, and that the provisions of regulations 167 are strictly observed.

49. Duties of timberman – Every timberman shall carry out the orders of the manager, assistant manager or underground manager, foreman, mining mate or other competent person with respect to the securing of hangwall, footwall and back(roof). He shall at once report to the sirdar or other competent person any shortage of timber in his district. He shall also be responsible to see that woodcuttings are not left in any working belowground.

50. Duties of attendants of main mechanical ventilators – Every person in charge of the main mechanical ventilator shall –

(a) keep the ventilator running at the speed fixed by the manager;
(b) examine the machinery and observe the pressure-recorded or water gauge and the speed-indicator at intervals of not more than one hour, and shall, enter the readings of the indicator in a bound-paged book kept for the purpose at the fan-house;
(c) immediately report to his superior official any stoppage of, damage to, or defect or derangement in the machinery, or any unusual variation in the water-gauge or other indicators; shall also immediately report to him any unusual circumstances in regard to mine ventilation which may come to his notice; and
(d) where the ventilator is continuously operated, shall not leave his post until received by a duly appointed substitute.

51. Duties of lamp-room incharges – Every competent person in charge of a safety lamp-room–

(a) shall be responsible for ensuring that all lamps in the safety lamp-room are properly maintained in accordance with the provisions of the regulations;

(b) shall see that the safety lamp -room is kept in a neat and tidy condition, and that all damaged and defective gauges, glasses and other parts of safety lamps are not kept or stored in such room;
(c) shall see that fire extinguishers or other means of dealing with fires provided in the safety lamps room are in good condition and readily available for use;
(d) shall see that all records required by the regulations for the issue, return and maintenance of safety lamps are properly maintained; and
(e) shall carry out such other duties relating to the maintenance, issue and return of safety lamps as may be specified by the manager or the undermanager or assistant manager.

52. Duties and responsibilities of surveyors – (1) Every surveyor shall –

(a) make such accurate surveys and levellings, and prepare such plans and sections and tracings thereof, as the manager may direct or as may be required by the Act or by the regulations or orders made thereunder, and shall sign the plans, sections and tracings and date his signature; and
(b) be responsible for the accuracy of any plan and section, or tracings thereof that has been prepared and signed by him.

(2) The surveyor shall record in a bound-paged book kept for the purpose –

(a) the full facts when workings of the mine have approached to about 75 metres from the mine boundary, or from disused or waterlogged workings;
(b) any doubts which may exists concerning the accuracy of the plans and sections prepared under these regulations; and
(c) any other matter relating to the preparation of the plans and sections that he may like to bring to the notice of the manager.

Every entry in the book shall be signed and dated by the surveyor and countersigned and dated by the manager :

Provided that where in any mine two or more surveyors are employed, each of the surveyors shall make the entries aforesaid in respect of the workings in his jurisdiction or of the plans and sections in his charge.
(3) Nothing in sub-regulation (2) shall absolve the owner, agent or manager of his responsibility under the Act and under these regulations or orders made thereunder.

53. Duties and responsibilities of engineers – The engineer or other competent person appointed for the purpose –

(a) shall, subject to the orders of the manager and other superior official, hold general charge of all machinery at the mine; and shall be responsible for the proper installation, maintenance and safe working of such machinery;
(b) shall, when any machinery is shifted or newly installed, see that it is given a trial run before it is put into use and shall be present during every such trial run;
(c) shall be present throughout whenever any work is installing, changing or recapping of any winding rope, or of installing changing or annealing any suspension gear, is being carried on;
(d) shall see that the provisions of the Act and of the regulations and orders made thereunder relating to the installation, maintenance, operation or examination of machinery are properly carried out by himself or by subordinate officials, competent persons or workpersons as the case may be, appointed for the purpose; and
(e) shall, if mechanics, electricians or other subordinate officials or competent persons are appointed for the purpose, examine all reports, registers and other records relating to the installation, maintenance, operation or examination of machinery required to be made or kept in pursuance of the Act, these regulations or orders made thereunder, and shall countersign the same and date his signature.

54. Duties of winding enginemen – (1) At the beginning of his shift the winding engineman shall examine the engine, brakes and all appliances in his charge, and shall satisfy himself that they are in good working order.

(2) Every winding engineman shall during his shift keep the winding engine and apparatus connected therewith properly cleaned and oiled, and shall see that the engine room is clean and free of inflammable material.

(3) The winding engineman shall immediately report in writing to the engineer or other competent person appointed for the purpose any defect which he has noticed in the engine, brake, indicator, drum, rope or other appliances under his charge.

(4)The winding engineman shall not allow any unauthorised person to enter the engine room or in any way to interfere with the engine.

(5) Every winding engineman shall thoroughly acquaint himself with, and carefully attend to, the prescribed code of signals; and shall not start the engine until he has received the proper signal to do so. If the signal is indistinct, he shall not start the engine until it has been repeated and he clearly understands it.

(6) The winding engineman shall avoid jerk in starting, running and stopping the engine, and shall cause the cage or other means of conveyance to be brought gently to rest at any stopping place.

(7) While persons are being lowered or raised in the shaft, the winding engineman shall not drive the engine at a speed higher than that fixed by the manager for manwinding purposes and approved by the Regional Inspector by an order in writing.

(8) The winding engineman shall not unclutch the drum of his engine until he has assured himself immediately beforehand by testing the brake of the drum against the full power of the engine that the brake is in proper condition to hold the load suspended from the said drum. When the drum is unclutched, he shall use the brake only for th epurpose of maintaining such drum stationery, and shall not lower men or materials from an unclutched drum.

(9) The winding engineman shall on no pretext leave the handle or brake whilst the engine is in motion, or while persons are riding a cage or other means of conveyance in the shaft.

(10) The winding engineman shall not leave the engine whilst persons are at work in the shaft. Whenever he has occasion to leave the engine, he shall secure the drums with the brake and cut off the power.

(11) The winding engineman of a winding engine by wich persons are lowered or raised in a shaft, shall not leave the engine at the end of his shift unless all the persons have come out of shaft or unless relieved by a duly appointed substitute.

55. Duties of banksmen, bellmen and signalmen. – (1) Every banksman, bellmen and signalmen, as the case may be, shall observe the following provisions, -

(a) He shall, subject to the orders of a superior official, have full control of the top or bottom of shaft and the inset, as the case may be and shall report to such official any person who, without authority, gives a signal or disobeys instructions.

(b) He shall thoroughly acquaint himself with, and carefully attend to, the prescribed code of signals, and shall properly transmit the signals by the means provided. He shall not act on any signal the correctness of which he is in doubt, except a signal which he believes to be “to stop”. He shall not allow any unauthorised person to give signals.

(c) He shall immediately report to his superior official any defect in the signalling installation.

(d) He shall devote the whole of his time of duties, and shall not leave his post during the period of his duty. Where persons are raised or lowered in the shaft, he shall not leave his post at the end of his shift unless all the persons have come out of the shaft or unless relieved by a duly appointed substitute.

(e) He shall not allow more than the authorised number of persons to enter the case or other means of conveyance at any one time.

(f) He shall not, unless specially authorised in writing by the manager in that behalf, allow any persons when riding in a cage or other means of conveyance, to take with him any bulky material other than tools and instruments:

Provided that nothing in this clause shall be deemed to prohibit the carrying, in a cage or other means of conveyance, the explosives by a blaster or other competent person.

(g) After any stoppage of winding for repairs or for any other cause for a period exceeding two hours, he shall not allow any person to ride in the cage or other means of conveyance unless it has been run at least one complete trip up and down the working portion of the shaft.

(h) He shall not allow any person to ride on the top or edge of any cage or other means of conveyance except when engaged in examination, repair or any other work in the shaft.

(i) He shall, after persons have entered the cage, see that the cage gates on both sides are in position and closed, before signalling for the cage to be lowered or raised.

(j) He shall not allow any unauthorised person to handle tubs in or out of the cage. While tubs are being lowered or raised, he shall also see that the catches are holding the tubs properly before signalling the cage or other means of conveyance away. If he notices any defect in the tub-catches, he shall immediately inform his superior official.

(k) He shall not, at any entrance into a shaft or inset which is provided with gates or fences not worked by the cage or other means of conveyance, begin to remove the gate or fence until the cage or other means of conveyance has stopped at the entrance, and shall close the gate before he has signalled the cage or other means of conveyance away. He shall not permit any unauthorised person to open or interfere with the gate.

(l) He shall see that all fences and gates provided at the top of the shaft or at any inset are in position.

(m) He shall not permit any unauthorised person to remove a fence or gate; and if he notices any defect in such fence or gate he shall immediately inform his superior official.

(n) He shall keep the top of the shaft or the inset and the floor of every cage free from loose material.

(o) He shall, when long timber, pipes, rails or other material projecting over the top of a cage or other means of conveyance are lowered or raised, see that the projecting ends are securely fastened to the rope, chains or bow.

(p) He shall, when he suspects that the cages are not working smoothly in the shaft or when he hears anything unusual happening in the shaft while the winding engine is working, immediately give signal to the winding engineman to stop the engine.

(2)(a) At the beginning of his shift, the banks man shall see that the keps are in proper working order.

(b) The banksman, when he is informed of any danger in the shaft, shall not allow any person to descend except for the purpose of examination or repair; and during the time that such examination or repair is going on, shall be on duty and listen for signals.

(c) The banksman shall not permit any person descending the shaft to carry any intoxicating drink or drug, or allow any intoxicaed person to descend.

(3)Where the manager so directs by an order in writing the banksman or the bellman, as the case may be, shall also carry out the duties of a signalman.

56. Duties of haulage enginemen, brakesmen, and signallers. – (1) At the beginning of his shift, the haulage engineman shall examine the engine, its brake and all appliances in his charge, and shall satisfy himself that they are in good working order.

(2) The haulage engineman shall, during his shift, keep the haulage engine and apparatus connected therewith properly cleaned and oiled, and the engine-room clean and free of inflammable material.

(3) The haulage engineman and banksman shall report immediately to the engineer or other competent person appointed for the purpose any defect which he has noticed in the engine, drum, rope or other appliances under his charge.

(4) Whenever the haulage engineman has occasion to leave the engine, he shall cut off the power ands secure the engine with the brake.

(5) The haulage engineman, brakesman and signaller shall not allow any unauthorised person to enter the engine-room or in any way to interfere with the engine or signal, as the case may be.

(6) Every haulage engineman, brakesman and signaller shall thoroughly acquaint himself with, and carefully attend to, the prescribed code of signals. The haulage engineman shall not start the engine until he has received the proper signal to do so. If the signal is indistinct, he shall not start the engine until it has been repeated and he clearly understands it.

(7) The person in charge at the top of any haulage plane or incline shall see that the stop-block are blocking the way, before allowing any tub to be brought on to the tope landing; and shall cause the tubs to be securely coupled up to each other and to the rope or chain, before the stop block is opened. In case any alternative safety appliance is provided, he shall cause the same to be brought into use on every such occasion.

(8) The person who is responsible for the attachment, to the haulage rope, of any tub or set of tubs at any stopping place on any haulage plane or incline, shall see that no person remains in a position of danger at or near such stopping place while the rope is in motion.

(9) The person in charge of any tubs or set of tubs, which it is intended to sent up any haulage plane or incline on which drags or back-stays are required to be used, shall securely fix the drag or back-stay or cause it to be so fixed, before such tub or set of tubs is set in motion.

(10) The person in charge at the top or bottom of the incline shall see that no unauthorised person rides on any tub or haulage rope.

(11) Before a train of side-tipping tubs is set in motion, the person in charge shall see that the safety catches of all such tubs are properly secured.

57. Duties of Locomotive drivers and shunters – (1) The locomotive driver shall, before commencing work in his shifts, ensure that the audible signal and the brakes of the locomotive are in proper working order.

(2) The locomotive driver shall not work the on locomotive except during hours of daylight, unless the locomotive is fitted with sufficient headlights as prescribed.

(3) The locomotive driver shall immediately report to the engineer or other competent person appointed for the purpose any defect which he has noticed in the locomotive or any part or fitting thereof.

(4) The locomotive driver shall not set the locomotive in motion until audible warning has been given by him to persons whose safety may be endangered. He shall also give the audible warning when the locomotive is approaching a level crossing or any place where any person is at work or where the driver's sight is intercepted.

(5) The locomotive driver shall not leave a locomotive unattended away from the places where it is housed, unless he has ensured that it cannot be set in motion by any unauthorised person.

(6) The locomotive driver shall ensure that no unauthorised person drives, handles or raised on a locomotive.

(7) When tubs or wagons are being pushed in front of the locomotive, the shunter shall accompany the leading wagon.

58. Duties of magazine incharge – Every magazine incharge –

(a) shall, subject to the orders of superior officials, be responsible for the proper receipt, storage an issue of explosives in and from the magazine;
(b) shall maintain such records of explosives so received, stored and issued, as are required by the rules made under Indian Explosives Act, 1884, and under the Act and under the regulations, rules, byelaws and orders made thereunder;
(c) shall not issue explosives to any person other than a competent persons; and when explosives are returned to the magazine, shall re-issue such explosives before issuing fresh stock;
(d) shall record in abound-paged book kept for the purpose the names of various competent persons and the quantity and nature of explosives issued to each of them; and shall similarly record the quantity and nature of explosives returned to the magazine by each such person;
(e) shall securely lock each canister before issuing it to the competent persons and shall also check whether the canister is returned to the magazine in locked condition; he shall not issue explosives in any canister which is not in proper repair or which cannot be securely locked;
(f) shall not allow any unauthorised person to enter the magazine; and
(g) shall, if he discovers any shortage of explosives in the magazine forthwith inform the manager in writing.

59. Duties of register keepers and attendance clerks, etc. – (1) Every person appointed to keep registers or other records required by or under the Act and the regulations and any orders made thereunder, or to make entries therein, shall make the necessary entries in ink and with reasonable despatch.

(2) During the whole time that persons are at work, the attendance clerk shall remain on duty at attendance cabin which shall be provided near the workplaces, or in case of workings belowground, near the outlet used by the workpersons to enter and leave such workings.

(3) No person who is not an employee of the mine or is not entitled to enter the mine under the Act or under the regulations, or orders made thereunder, or is not so authorised by the manager, shall enter the mine. It shall be the duty of the attendance clerk to see that no such person enters the mine; if any such person forcibly enters the mine, the attendance clerk shall immediately report the matter in writing to the manger.

(4) If after the commencement of a shift any official or a competent person has not got his attendance recorded in the register maintained under section 48(4) of the Act, the attendance clerk concerned shall, within two hours after the commencement of the shift, report the fact in writing to the Manager, or the under manager or assistant manager of other official in charge of the shift.

CHAPTER-VI : Plans and Sections

60. General requirements about mine plans and sections – (1) Every plan or section prepared or submitted in accordance with the provisions of the regulations shall –

(a) show the name of the mine and of the owner, and the purpose for which the plan is prepared;
(b) show the true north, or the magnetic meridian and the date of the latter;
(c) show a scale of the plan at least 25 centimeters long and suitably subdivided;
(d) unless otherwise provided, be on a scale having a representative factor of

(i)200 : 1, in case of mica mines and other mines having small scale workings below ground;

(ii) 2,000 : 1, in case of mines having large open cast workings and also in case of surface plans of large leasehold areas ; and

(iii) 1,000 : 1, in other cases.

Provided that the Chief Inspector may, by an order in writing and subject to such conditions as he may specify therein, permit or required the plans to be prepared on any other suitable scale; and

(e) be properly inked in or durable paper or on tracing cloth, and be kept in good condition.

(2) The conventions shown in the Second Schedule shall be used in preparing all plans and sections required by the regulations.

(3) The plans and sections shall be accurate within such limits or error as the Chief Inspector may specify by a general or special order.

(4) The plans and sections required under these regulations shall be maintained up-to- date within three months except in case of open-cast workings in respect of which it shall suffice if the plans are maintained up-to-date within 12 months :

Provided that where any mine or part is proposed to be abandoned or the working thereof to be discontinued or rendered inaccessible, the plan and section shall be brought up-to-date before such abandonment or at the time of discontinuance; as the case may be, unless such abandonment or discontinuance has been caused by circumstances beyond the control of the owner, agent or manager, in which case the fact that the plan or section is not up-to-date shall be recorded on it.

(5)Plans and sections required to be maintained under the regulations shall be kept available for inspection in the office at the mine, and shall not be removed therefrom except by or with the approval in writing of the Regional Inspector, unless a true copy thereof has been kept therein.

61. Types of plans and sections – (1) The owner, agent or manager of every mine shall keep the following plans and sections :

(a) A surface plan showing every surface feature within the boundaries, such as telephone, telegraph or power transmission line, watermain, tram-line, railway, road, river, watercourse, reservoir, tank, bore-hole, shaft and incline opening, opencast working, subsidence and building on the surface.
(b) An underground plan showing :

(i) the position of the workings of the mine belowground;
(ii) every bore-hole and shaft (with depth),drive cross cut, winze, rise, excavation (stopped ground) and every tunnel and air passage connected therewith;

(iii) every pillar or block of mineal left for the support of any structure on the surface; and underground magazines, if any;
(iv) every important surface feature within the boundaries, such as railway, road, river, stream, watercourse, tank, reservoir, opencast working and building which is within 200 metres of any part of the workings measured on the horizontal plane;
(v) the general strike of the veins, lodes, reefs an mineral beds or deposits;
(vi) the position of every dyke, fault and other geological disturbance with the amount and direction of its throw; and
(vii) an abstract of all statutory restrictions in respect of any specified workings with a referred to the order imposing the same.

Whatever this plan is brought up-to-date the then position of the workings shall be shown by dotted line drawn through the ends of the workings and such dotted line shall be marked with the date of the last survey.

Provided that the Chief Inspector may, by an order in writing and subject to such conditions as he may specify therein, approve any other method of showing the up-to-date position of the working of the mine.

(c) A transverse section or sections of the workings through the shaft or shafts and main adits indicating clearly the surface and the dips of the vein, lode, reef or mineral bed or deposit at different points; and such sections of the strata sunk or driven through in the mine or proved by boring, as may be available.
(d) A vertical mine section or sections showing a vertical projection of the mine workings, where a reef, vein, lode or mineral bed or deposit has an average dip of more than 30 degrees from the horizontal;
(e) A ventilation plan, and section where necessary, showing the system of ventilation in the mine, and in particular –

(i) the general direction of air-current;
(ii) every point where the quantity of air is measured;
(iii) every air-crossing, ventilation door, stopping and every other principle device for the regulation and distribution of air;
(iv) every fire-stopping and its serial number;
(v) every room used for storing inflammable material;
(vi) the position of fire-fighting equipment;
(vii) every water-dam with dimensions and other particulars of construction;
(viii) every pumping, telephone and ambulance station; and
(ix) every haulage and travelling roadway.

(f) A water-danger plan and section showing :

(i) the position of the working belowground; an every borehole ans shaft (with depth), drive, crosscut, winze, rise, excavation and air passage connected therewith;
(ii) the position of every dyke, fault and other geological disturbance with the amount and direction of its throw;
(iii) levels taken in workings belowground at easily identifiable points sufficient in number to allow of the construction of sections along all drives, mainheadings and haulage roadways;
(iv) every source of water such as river, stream, water-course, reservoir, water-logged opencast workings on the surface, and also the outline of all water-logged workings belowground lying within 60 metres of any part of the workings measured in any direction;
(v) every reservoir, dam or other structure, either above or belowground, constructed to withstand a pressure of water or to control in inrush of water, along with reference to its design and other details of construction;
(vi) surface contour lines drawn at vertical intervals not exceeding five metres (or ten metres in the case of a mine where there are no working belowground ; or in cases of mines

situated in hilly terrain, such other larger interval as th Regional Inspector may permit by an order in writing and subject to such conditions as he may specify) over the whole area lying within 200 metres of any pat of the workings; and

(vii) the highest flood level of the area.

All levels taken above and belowground shall be referred to a plane in relation to a bench mark which shall be established on the surface in the mine. Particulars of this bench mark, together with its height above the Mean Sea Level, shall be shown on the plans and sections maintained under this clause.

(g) A geological plan of the area of leasehold, on a suitable scale specified or approved by the Chief Inspector by a general or special order in writing.

(2) where different reefs, lodes, veins or mineral beds or deposits overlie or run parallel to one another, the workings or each reef, lode, vein or mineral bed or deposit shall be shown on a separate plan and/or longitudinal section or sections; so however that if two reefs, lodes, veins or mineral beds or deposits are so situated in relation to each other than the parting between workings made therein is less than 10 metres at any place, such workings shall also be shown on a combined plan and/or longitudinal section , as the case may be in different colours.

(3)(a) (i) The plans kept under clauses (a) and (b) of sub-regulation (1) shall also show the settled boundary of the mine, or where the boundary is in dispute, the boundaries claimed by the owner of the mine and by the owners of the mines adjacent to the disputed boundary :

Provided that where it is not possible to show the complete boundary of leasehold on the same plan, an additional key plan or any other suitable scale showing such boundaries and the outline of the workings shall also be maintained.

(ii) The plans required to be kept under clause (b) of sub-regulation (1) shall also show the workings both above and belowground of all adjacent mines as are situated within 60 metres, measured on any plane, of the boundary claimed by the owners of the mines. The position of these workings also shall be maintained up-to-date within three months, or 12 months if permitted under regulations 60(4)

(iii) The plans required to be kept under clause (b) of sub-regulation (1) shall also, on every occasion that the workings are brought up-to-date in compliance with the provisions of clause (ii) of this sub-regulation, be signed by the surveyor and the manager of every adjoining mine having workings within 60 meters of the common boundary (or where the boundary is in dispute, within 60 metres of the boundary claimed by the owner of the mine) signifying the correctness of the common boundary, or the disputed boundaries as the case may be, and of the position of the workings in relation to one another.

(b) The owner, agent an manager of every mine shall give all reasonable facilities to the surveyors of its adjacent mine to carry out the surveys and levellings required to be made under this sub-regulation.

(4)(a) The Regional Inspector may, by an order in writing, require such additional details to be shown on the plans and sections required to be kept under these regulations, or the preparation and maintenance of such other plans and sections showing such details and on such scale and within such time as he may specify in the order.

(b) The Regional Inspector may, by an order in writing, require the owner, agent or manager to submit to him within such time such plans and sections, or tracings thereof, as he may specify in the order.

(c) The owner, agent or manager shall, at any time if required by the Regional Inspector, show on any plan or section the then position of the workings of the mine.

62. Copies of plans and sections to be submitted – The owner, agent or manager shall, on or before the 30 April of every year, submit to the Chief Inspector two up-to-date copies of the plans and sections maintained under clauses (b) , (c) and (d) of regulation 61(1). The provisions of this regulation shall be deemed to have been complied with if the owner, agent or manager gets the copies of plans and sections submitted hereunder during the previous years brought up-to-date at his own expense.

63. Plans and sections to be submitted after abandonment or discontinuance – (1) Where any mine (or in case of a mine to which regulation 142 applies, any part thereof) is abandoned or the working thereof has been discontinued over a period exceeding four months, the person who was the owner of the mine at the time of abandonment or discontinuance shall, within 30 days after the abandonment or within five months after the discontinuance of the workings, as the case may be, submit to the Chief Inspector two true copies of the up-to-date plan and section of the workings of the mine or seam or section maintained under clauses (b), (c) and (d) of regulation 61(1). Every such copy shall show the bearing and distance of at least one of the shafts or openings of the mine from a trijunction or revenue pillar or from any other prominent and permanent surface feature, the position of all water-dams built belowground (with their dimensions and other particulars of construction) and also the spot levels at the ends of the workings:

Provided that if a change of ownership occurs after the abandonment or discontinuance and before the expiry of the 30 days or five months aforesaid, as the case may be, such plans and sections shall be submitted forthwith.

(2) The original or a certified true copy of the plan and section submitted under sub-regulation (1) shall be kept in the office at the mine.

(3) The Chief Inspector may, on such conditions as he thinks fit to impose, and on payment of the cost of preparing copies as determine by him, supply copies of a plan or section submitted to him under sub-regulation (1) or such parts thereof as he thinks fit -

(a) to any person having a bona fide interest in the mine, seam or section;
(b) to the owner, agent or manager of an adjacent mine.

64. Survey instruments and materials – The owner or agent shall provide accurate and reliable survey instruments and materials for the proper carrying out of all survey and levelling work and for the preparation of plans and sections required under these regulations; and no other instruments shall be used in connection with any such survey or levelling work.

65. List of plans, sections and instruments and their storage – (1) All plans and sections, and tracings or copies thereof, kept at the mine shall be serially numbered or suitably indexed.

(2) Suitable arrangements shall be made at every mine for the proper storage and maintenance of every plan and section of all instruments and materials. Such arrangements shall, unless otherwise permitted by the Chief Inspector by an order in writing an subject to such conditions as he may specify, provide for flat storage of every plan and section maintained under clauses (b), (c) and (d) of regulation 61(1).

(3) Every field book and other notes used in the preparation of plans and sections required under these regulations shall be duly indexed and kept in the office at the mine.

(4) A list of all plans and sections maintained under these regulations, or any orders made thereunder, and tracings or copies thereof; of all survey instruments provided under regulation 64 with their respective types specifications and identification numbers; and of all field books and other notes kept under sub-regulation (3) shall be kept in a bound paged book kept for the purpose, and shall be brought up-to-date

whenever necessary. Every entry in the book shall be signed and dated by the surveyor, and countersigned and dated by the manager.

66. Preparation of Plans by Surveyors – (1) Every plan and section, and tracing thereof, prepared under these regulations shall be prepared by or under the personal supervision of a surveyor appointed under regulation 38.

(2) Every plan or section, or any part thereof, prepared by or under the supervision of a surveyor shall carry thereon a certificate by him to the effect that the plan or section or part thereof is correct; and shall be signed and dated by the surveyor and countersigned and dated by the manager on every occasion that the plan or section is brought up-to-date.

(3) Every tracing of a plan or section or of any part thereof shall bear a reference to the original plan or section from which it was copies and shall be certified thereon by the surveyor to be a true copy of the original plan or section. The certificate shall be signed and dated by him.

(4) If the surveyor fails or omits to show any part of the workings or allow the plans or sections to be inaccurate, he shall be guilty of a breach of these regulations. Nothing in this sub-regulation shall, however, exempt the owner, agent or manager of their responsibility to ensure that every plan or section prepared, kept or submitted under these regulations or by any order made thereunder is correct and maintained up-to-date as required thereunder.

67. Plans to be checked on change of ownership or on re-opening. – (1) When there is a change in ownership of a mine, or where a mine or part thereof is reopened, or where in any mine or part thereof it is intended to start any extraction or reduction of pillars or blocks of minerals , the owner, agent and manager shall ensure that the plans and sections of the mine or part are accurate. If any doubt arises as to the accuracy of the plans and sections in any respect, he shall have accurate plans and sections prepared afresh before any drivage or other work of development or of extraction or reduction of pillars is commended.

(2) If the Regional Inspector is of the opinion that any plan or section prepared, kept or submitted under the regulation is inaccurate, he may, by an order in writing, require a fresh survey made and a new plan or section prepared within such time as he may specify therein.

(3) If the plan or section required to be prepared under sub-regulation (2) is not prepared within the time specified in the order, or to the satisfaction of the Regional Inspector, or the plan or section is not prepared or brought upto-date as required under these regulations, he may get the plan or section prepared by any other agency; and the cost thereof, as certified by the Chief Inspector, shall be defrayed by the owner of the mine and recoverable from him as an arrear of land revenue.

CHAPTER-VII : Means of Access and Egress

66. Outlets from a mine – (1) No person shall be employed, or be permitted to enter or remain for purposes of employment, in any working belowground, unless the working is provided with at least two shafts or other outlets to the surface–

(a) with which every lode, reef, vein or mineral bed or deposit or section thereof, for the time being at work has a communication so as to afford separate means of ingress and egress to the persons employed therein;
(b) which do not have their surface openings in the same building; and
(c) which are under the sole control of the manager :

Provided that the Chief Inspector may, by an order in writing and subject to such conditions as he may specify therein, permit the employment belowground of persons even in a case where the two shafts or outlets are not under the control of the same manager.

(2) Suitable arrangements shall be made for persons to descend and ascend by each of such shafts or outlets. Where the shaft is vertical and more than 60 metres in depth, such arrangements shall be by means of a proper winding engine.. Every such winding engine shall be to installed and maintained as to be constantly available for use. In any doubt arises to whether any such arrangement is suitable or not, it shall be referred to the Chief Inspector for decision :

Provided that, if required by the Regional Inspector by an order in writing a proper winding engine shall be provided in a shaft more than 60 metres in depth even if it is not vertical.

(3) Such shafts, inclines or outlets shall not be less than 15 metres distant from one another at any point, and each shall be connected with the other by means of a walkable passage, not less than 1.8 metres high 1.5 metres wide, through the workings belowground that are being served by such shafts or outlets :

Provided that outlets made before the coming into force of these regulations may be closer than 15 metres but not less than 6 metres apart.

(4) Whenever the connection between two outlets which are required to be maintained under sub-regulation (1) has been obstructed or found dangerous, only such persons as are necessary to clear the obstruction or to repair the dangerous part of the connection or to make a new second outlet, as the case may be, shall be employed belowground until such time as the connection has been re-established or a new second outlet has been provided.

(5) The foregoing provisions of this regulation with respect to shafts and outlets shall not apply -

(a) to a shaft which is being sunk or to an incline or outlet which is being made;
(b) to any working for the purpose of making a connection between two or more shafts or outlets; and
(c) to any working for the sole purpose of searching for or proving minerals;

so long as not more than 20 persons are employed belowground at any one time in the whole of the different seams in connection with a single shaft or outlet:

Provided that if the single outlet is an un-walkable shaft (other than a shaft in the course of being sunk) and exceeds 30 metres in depth, it shall be provided both with ladders and with other means of raising an lowering persons :

Provided further that nothing in this sub-regulation shall be deemed to authorise the driving of roadways for the development purposes before a second outlet has been made in accordance with the said provisions.

(6) The Chief Inspector may, by an order in writing and subject to such conditions as he may specify, exempt from the operation of this regulation any mine in the case of which special difficulties exist which in his opinion make compliance with the provisions thereof not reasonably practicable.

69. Working shafts and winzes – (1) Every shaft in use or in course of being sunk and every other outlet shall be made and kept secure.

(2) Every shaft (and every winze or raise intended to be used for purposes of winding or haulage) in the course of being sank shall be provided with a permanent lining of metal, concrete or masonry, which shall at no time be more than six metres from the bottom of the shaft or winze:

Provided that where iron or steel rings with a substantial lagging are used below the permanent lagging and are kept close to the bottom of the shaft, this distance may be increased to not more than 20 metres:

If any doubt arises as to whether the strata are stable or not, it shall b referred to the Chief Inspector for decision.

(3) Every shaft or winze regularly used for lowering and raising persons or materials, in which water seeps out of the strata, shall be provided with water garlands or other means of collecting and conducting away seepage water.

(4) The top, all insets and bottom of every working shaft and the sump thereof shall be kept clear and free from loose materials, tools and debris.

70. Fencings and gates at outlets – (1) Every entrance to a mine from the surface, and the top and all entrances between the top and bottom, including the sump, if any, of every working, ventilating or pumping shaft, shall be kept securely fenced.

(2) Every walkable entrance from the surface to the workings belowground shall be provided with a substantial gate which shall be kept closed and locked when there are no persons belowground:

Provided that where such entrance is not used as a means of ingress or egress in or out of the mine, it shall be permanently closed so as effectively to prevent persons from entering therein.

71. Outlets from mine parts – Every part of a mine shall, where practicable, be provided with at least two ways affording means of egress to the surface. If any doubt arises as to whether the provision of two such ways is practicable or not, it shall be referred to the Chief Inspector for decision.

72. Periodic examination of outlets – (1) Every shaft, incline and other outlets provided as required by regulation 68 shall be examined, once at least in every seven days, by a mine foreman or other competent person. A report of every such examination shall immediately thereafter be recorded in a bound paged book kept for the purpose and shall be signed and dated by the person making the examination.

(2) If at the time of such examination or at any other time, the shaft or other outlet is found to be not safe, it shall not be used for any purpose, except as a natural airway, until it has been made safe in all respects. Report of every such action taken shall be recorded in the book kept under sub-regulation (1).

CHAPTER-VIII : Ladders and Ladderways

73. Provision of ladderways. – (1) Every shaft or winze, including shaft or winze in the course of being sunk, which has an inclination exceeding 25 degrees from the horizontal, shall be provided with a ladderway from the top to the bottom :

Provided that in the case of a shaft or winze in the course of being sunk, the ladderway may be provided within such distance, not exceeding 20 metres, from the bottom as to secure it from danger during blasting operations and a chain or rope ladder shall be provided from this point to the bottom of the shaft or winze :

Provided further that where the Chief Inspector is of the opinion that compliance with the provisions of this sub-regulation is not reasonably practicable, he may, by an order in writing and subject to such conditions as he may specify therein, grant an exemption therefrom.

(2) Every working place shall be provided with platforms or other means of keeping a foothold, and where necessary, with ladders from climbing.

74. Ladders. (1) Every ladder used in a mine shall –

(a) be of strong construction;
(b) subject to the provision of sub-regulation (2), be securely fixed in the shaft, winze or stope at an inclination of not more than 80 degrees from the horizontal;
(c) be made continuous or without perceptible overlapping or break except at a platform or sollar;

(d) project at least one metre above the mouth of the shaft, winze rise of stope and above every platform, except where strong holdfasts or hand-rails are provided;
(e) have rungs equally spaced and at a sufficient distance from the wall or from any timber to ensure proper foothold; and
(f) be maintained in good repair.

(2) Except in respect of the lowest 10 metres or a sinking shaft or winze, no ladder shall be placed at an inclination of more than 80 degrees from the horizontal.

Provided that the Regional Inspector may, by an order in writing and subject to such conditions as he may specify therein, permit a ladder to be fixed at a steeper inclination.

75. Provision of sollars etc. – (1) If a ladderway provided under regulation 73(1) exceeds 20 metres in depth and has an inclination of more than 30 degrees with the horizontal, platforms or sollars shall be provided at intervals of not ore than 15 metres along the underlie or slope of the shaft or winze. Where the inclination is more than 60 degrees from the horizontal, the platforms or sollars shall be provided at intervals of not more than 10 metres.

(2) If a manhole is provided at any platform in any shaft or winze, it shall be placed behind the ladder leading up from the platform.

(3) Every opening in a platform provided for the handing of timber or other materials shall be effectively closed off from the rest of the platform.

76. Guarding of ladderways. – (1) Every ladderway in a shaft or winze used for winding or other purposes shall be in a separate compartment or shall be adequately guarded from other compartments.

(2) Every ladderway below any place or travelling roadway where persons are stationed or pas, shall be provided with a suitable cover of substantial fence or guard.

77. Carrying of materials on ladderways. – No person shall carry or be permitted to carry a drill, tool, explosives or any loose material on a ladderway in a shaft or winze having an inclination of more than 45 degrees from the horizontal except so far as may be necessary for carrying out repairs :

Provided that nothing in this regulation shall prevent a person from carrying a drill, tool or explosives in suitable sling or container secured tot his person.

CHAPTER-IX : Transport of Men and Materials – Winding in shafts

78. Appointment of winding enginemen and their duties – (1) No person shall be appointed as a winding engineman unless he holds –

(a) in the case of an electric winding engine of 75 h.p. or more or of a steam or compressed air winding engine which has cylinders exceeding 30 centimetres of diameter, a I Class Engine Driver's Certificate and
(b) in any other case a II Class Engine Driver's Certificate:

Provided that this clause shall not apply to the driver of an Electrical Winding Engine upto 30 h.p. or of a steam or compressed air winding engine which has cylinders not exceeding 18 centimetres in diameter and which is not used for raising or lowering persons.

(2) Where special difficulties exist which made compliance with the provisions of sub-regulation (1) not reasonably practicable, the Chief Inspector may, by an order in writing and subject to such conditions as he may specify therein, relax and said provisions.

(3) No person, other than a winding engineman appointed under sub-regulation (1) or a duly appointed assistant working under his direct personal supervision shall operate any winding engine:

Provided that in an emergency any other competent person may be permitted to operate the engine.

(4) The name of the winding engineman on duty, together with the period of his shift shall be posted in the winding engine room. Where the Regional Inspector is of the opinion that the duties of any winding engineman are unduly arduous, he may by an order in writing require the period of his shift to be reduced to such period, not less than five hours, as he may specify.

79. New winding installations – (1) When it is intended to bring into use any new winding installation for lowering and raising persons, the owner, agent or manager shall, not less than 30 days before such use, give notice of such intention to the Chief Inspector and the Regional Inspector. The notice shall contain detailed specifications of the installation.

(2) If the Chief Inspector, by an order in writing to requires, such additions or alterations shall be made to the installation, as he may specify in the order.

80. Construction and installation of winding equipment – (1) Every part of a winding installation, including headgear shall be of sound construction and adequate strength, and shall be maintained in safe working order. In case of any doubt as to the foregoing, it shall be referred to the Chief Inspector for decision.

(2) The engine shall be firmly connected to a rigid foundation and shall be so designed, constructed and maintained that with the power provided, the raising and lowering of persons or materials can be carried out with ease, regularity and safety.

(3) Unless otherwise permitted in writing by the Chief Inspector and subject to such conditions as he may specify therein, every engine for winding shall be so situated in relation to the headgear that the winding rope shall not, in the extreme position, subtend in either direction an angle more than one and a half degrees with the plane of the sheave or pulley used in connection with the rope.

(4)(a) The diameter of the drums or sheaves of the winding engine, and of the pulleys and sheaves used in connection with the winding shall, unless otherwise permitted in writing by the Chief Inspector and subject to such conditions as he may specify therein, be not less than 80 times the diameter of the rope in the case of winding installations installed before the coming into force of there regulations and not less than 100 times the diameter of the rope in other cases:

Provided that the Chief Inspector may, by an order in writing, require that in the case of any specified winding installation installed before the date aforesaid, the diameter of the said drums, pulley or sheaves shall not be less than such size, upto 100 times the diameter of the rope, as he may specify in the order.

(b) The grooves of such sheaves or pulleys shall be suited to the diameter of such rope.
(c) Every pulley or sheaves used in connection with winding shall, while in motion, rotate in a vertical plane, and shall be maintained in such a condition that slipping is reduced to a minimum.

81. Spare rope to be kept in store. – At every mine where a shaft or winze is used for lowering or raising persons, at least one spare winding rope, suitable for use in such shaft or winze shall be kept in reserve.

82. Fittings of winding engines – At every shaft, including a shaft in the course of being sunk, where winding is effected by means of an engine, the following provisions regarding winding engines shall have effect, namely:

(1) There shall be on the drum such flanges, and also if the drum is conical or spiral such other appliances, as will be sufficient to prevent the rope from slipping or coiling unevenly. Except in the 'Koepe' system of

winding, the end of the rope shall be securely fixed in such a manner that the rope is not unduly strained. There shall be at least two turns of the rope on the drum when the cage or other means of conveyance is at its lowest working point in the shaft or winze.

(2)(a) There shall be provided one or more brakes on the drum which :

(i) if there are two cages or other means of conveyance, will hold such cages or other means of conveyance when the maximum torque is applied in either direction; or
(ii) if there is only one cage or other means of conveyance, will hold the loaded cage or other means of conveyance in midshaft when the maximum torque is applied downwards.

(b) At least one of the brakes shall be so designed that the brake remains at the 'on' position except when operated.

(c) Where the brake or brakes are power-operated, at least one of them shall be arranged to be applied automatically at all times if the power supply fails. In no case shall a brake be operated by an auxiliary electric current.

(d) The brake on the drum shall be used only for the purpose of keeping such drum stationary and not for lowering the cage or other means of conveyance, except in cases where the engine is to be worked at a very low speed as when examining the winding rope or the shaft or winze.

(3) Where the winding engine is worked by steam or compressed air, a screw stop-valve shall not be used as controlling valve of the engine.

(4) Every engine shall be equipped with a reliable depth-indicator (in addition to any mark on the rope) showing to the winding engineman the position of the cage or other means of conveyance in the shaft, and an automatic device that will ring a bell in the engine room when the ascending cage or other means of conveyance is at a distance of not less than two revolutions of the drum from the top of the shaft or winze. The depth-indicator shall be tested after every adjustment or replacement of the winding rope.

83. Shaft fittings – At every winding shaft, other than a shaft in the course of being sunk – to which the provisions of regulation 87 shall apply – the following provisions shall have effect, namely:

(1)(a) Efficient means shall be provided and maintained for interchanging separate, distinct and definite signals between the top of the shaft or winze and –

(i) the bottom or other permanent landing of the shaft; and
(ii) every inset for the time being in use.

There shall also be provided and maintained efficient means for transmitting such signals from the top of the shaft to the winding engineman. All signals shall be transmitted by mechanical or electrical means.

(b) In signalling, the following code of signals shall be used and strictly observed :

ONE RAP	:	STOP
TWO RAPS	:	LOWER
THREE RAPS	:	RAISE
FOUR RAPS	:	MEN ready to ascend or descend
FOUR RAPS	:	IN REPLY – men may enter the cage or other means of conveyance.

Anyother signals shall be addition to, and shall not interfere with, the foregoing.

Provided that the Chief Inspector may, by an order in writing and subject to such conditions as he may specify therein, permit the use of any code of signalling other than that specified above.

(c) A printed copy of the code of signals, including additional signals, if any, shall be posted prominently at the top of the shaft and at every such inset and landing and also in the winding engine room.

(d) No person other than the banksman, bellman or signalman shall give any signal unless he is an official of the mine or is authorised in writing by the manager to give signals.

(2)(a) Where the shaft or winze is vertical and exceeds 45 metres in depth, it shall be provided with sufficient number of guides to ensure smooth and safe travel of the cage or other means of conveyance.

(b) Where rope guides are used, the cheese-weights or bottom clams shall be kept so exposed as to permit regular examination.

(3) Above the topmost landing, 'dogs' or other devices for holding the cage or other means of conveyance in the event of an overwind shall be provided, or the guides, runners or receivers shall be sprung.

(4) Where the shaft or winze is vertical, protective roofing or pent-house sufficient to prevent danger from anything falling in the shaft or winze, shall be provided and maintained at the bottom of the shaft or winze and at all landings where persons ascend or descend. The gap, both vertical and horizontal, between the protective roofing and the top of cage, when the cage is at the bottom of the shaft, shall not exceed 15 centimeters.

84. Manwinding – At every shaft or winze, other than a shaft in the course of being sunk, where a winding engine is used for the purpose of lowring or raising persons, the following provisions shall have effect, namely :-

(1) In respect of every part of the winding installation, including pulleys or sheaves, cages, chains, distribution plates and detaching hooks, the following particulars shall be recorded in a bound paged book kept for the purpose -

(a) Name of the manufacturer and the year of manufacture;
(b) Specifications and dimensions;
(c) Reference to every certificate supplied with the part; and
(d) Any other detail that may be necessary or required by the Regional Inspector;

All entries in the book shall be made and signed by the engineer or other competent person, and shall be countersigned and dated by the manager.

(2) Whenever any part or article is replaced or any repaired part or article used in any winding installation, the fact of such replacement or repair shall be recorded in the book kept under sub-regulation (1).

(3) Where drum-clutches are provided, the following provisions shall have effect, namely –

(a) The operating gear of the clutch of the drum shall be provided with locking gear to prevent inadvertent withdrawal of the clutch.

(b) Every engine used for the lowering or raising of persons shall have a suitable interlocking device so fitted that it is not possible –

(i) to unclutch any drum unless the brakes of such drum are applied; or
(ii) to release the brakes until the drum clutch is fully engaged and securely locked.

(c) Unless the cage or other means of conveyance attached to the drum is resting at the bottom of the shaft, the drum shall not be unclutched unless the winding engineman has assured himself immediately beforehand that the brake is fully applied.

(4) If the shaft or winze is vertical, except in the 'Koepe' system or winding, there shall be provided between the rope and the cage or other means of conveyance a detaching hook. The space between such detaching hook, measured from the centre of the hole for attaching it to the rope shackle, and the detaching-bell or plate when the cage or other means of conveyance is at its normal position at the top of the shaft or winze, shall be not less than 3.6 metres where a geared engine is used, and not less than 7.5 metres where a direct acting engine is used.

(5) If the shaft or winze exceeds 300 metres in depth, there shall be a clear over-run space of not less than 7.5 metres below the lowest landing place. The sump below the lowest landing place shall be kept free from water or other liquid matter to such an extent that in case of an overwind, the persons riding in the case or other means of conveyance will not be submerged.

(6) In the case of every shaft or winze exceeding 100 metres in depth, unless exempted by the Chief Inspector by an order in writing and subject to such conditions as he may specify therein, the engine shall be fitted with an automatically recording speed indicator.

(7)(a) In case of every shaft or winze exceeding 100 metres in depth, there shall be provded an effective automatic contrivance to prevent overspeeding and overwinding, hereinafter called the 'Automatic Contrivance". The Automatic Contrivance shall prevent the descending cage from being landing at the pit bottom or other permanent landing at a speed exceeding 1.5 metres per second and shall also control the movement of the ascending cage in such a manner as to prevent danger to persons riding therein. The Regional Inspector may, by an order in writing, specify the maximum speed of winding in any shaft.

Provided that in case of any shaft or winze the Chief Inspector may, by an order in writing and subject to such conditions as he may specify therein, grant exemption from the provisions of this sub-regulation.

(b) Tests of every Automatic Contrivance and every brake shall be made by the engineer or other competent persons appointed for the purpose, in the following manner -

(i) once at least in every seven days, by raising each cage or other means of conveyance, in turn, to pass the last control point above the topmost landing; and

(ii) once at least in every three months, by attempting to land the descending cage at excessive speed. For the purpose of this test, the setting of the Automatic Contrivance may be altered so that pre-determined point in the shaft or winze is regarded as the landing.

The results of every such tests shall be recorded in a bound paged book kept for the purpose, and shall be signed and dated by the person making the test.

Provided that where special conditions exist, the Chief Inspector, may , by an order in writing an subject to such conditions as he may specify therein, permit the tests aforesaid to be carried out in such other manner as he may specify in the order.

(c) Unless the Automatic Contrivance is in full and fixed engagement with the winding engine, it shall be fully engaged, either automatically or by the winding engineman, wherever necessary to be lowered or raised; and a proper automatic indicator to show that this has been done shall be provided in such a position as to be easily seen by the banksman. No person shall be allowed to enter any cage or other means of conveyance until the indicator shows that the Automatic contrivance has been fully engaged.

(8) Except where an Automatic Contrivance is provided to prevent overwinding, a point shall be fixed and marked on the indicator of the engine in such a way as to show when the cage or other means of conveyance is at a distance of not less than twice the circumference of the drum from the completion of the wind; and if such cage or other means of conveyance contains persons, the winding engineman shall not, as soon as it has reached the point aforesaid, raise it for the remaining distance at a speed exceeding 1.2 metres per second.

(9) Where the only means of egress in a mine is by apparatus worked by steam or electricity, precautions shall be taken to ensure that the two winding engines do not fail simultaneously, and in particular, in the case of electric winding engines, the engines shall be capable of being connected to two separate power supplies. Unless the Chief Inspector by an order in writing otherwise directs, the provisions of this sub-regulation shall be deemed to be satisfied if an emergency winding gear is maintained.

(10)(a) Except in the 'koepe' system of winding, at the top of every shaft or winze where cages are used, suitable keps shall be provided and so arranged as to fall into the 'on' position when the operating lever is released.

(b)At every inset where keps or folding platforms are provided, arrangements shall be made to lock the keps or platforms securely in the 'off' position; and when in the 'off' ' position, such keps or platforms shall leavel the shaft or winze clear for the passage of the cage. In every such case, a proper automatic indicator to show the position of the keps or platforms, as the case may be, shall be provided in such a position as to be easily seen by the banksman.

(11)(a) Unless otherwise permitted by the Chief Inspector by an order in writing and subject to such conditions as he may specify therein every cage of other means of conveyance in which persons ride in a vertical or steeply inclined shaft or winze shall be –

(i) covered completely at the top;
(ii) closed in at the two sides in a manner sufficient to prevent persons or things from projecting beyond the sides;
(iii) provided with a rigid hand-bar fixed in a position where it can be easily reached by all persons in the cage or other means of conveyance; and
(iv) provided with suitable gates or other rigid fences such that the gap between the floor of cage or other means of conveyance and the lowest part of the gate of fence does not exceed 15 centimetres and that between any two members of the gate or fence does not exceed 25 centimetres. Gates or fences shall not open outwards; and they shall be so fitted and maintained that they cannot be accidentally opened.

Provided that so much of this sub-regulation as requires a covering at the top shall not apply in a shaft or winze which is less than 30 metres in depth.

(b) The floor of every cage or other means of conveyance shall be strongly constructed and so maintained to prevent any part of the body of a person riding in the cage or other means of conveyance from projecting beyond the floor.

(12) Not more than such number of persons as may be authorised by the manager shall be allowed to ride in the same cage or same deck of a cage or other means of conveyance at one time; and a notice specifying the number shall be posted at the top of every shaft or winze and at every inset and landing :

Provided that where the Regional Inspector is of the opinion that the number so authorised is high, he may, by an order in writing, required the manager to fix a lower maximum number of persons as may be specified by him.

(13)(a) Unless permitted by the Chief Inspector by an order in writing and subject to such conditions as he may specify therein, the total load when the authorised number of persons ride at any one time in any cage or other means of conveyance shall not exceed 60 per cent of the maximum load when materials are would.

(b) No person shall, when ascending or descending a shaft, take with him any bulky material other than tools and instruments, except when engaged in repairing the shaft or with the written authority of the manager.

85. Multi-decks – Where a cage has two or more decks which are used simultaneously, each floor at a landing shall be connected by an effective signalling device with the main floor of the landing; and only the banksman or the bellman or the signalman or an official, as the case may be, at such main floor shall give action signal, and only after he has satisfied himself that all cage gates are closed.

78 Winding of material – (1) Every cage used for the raising or lowering of tubs shall be provided of tubs shall be provided with catches or other effective contrivances to prevent the tubs failing out. The cage shall not be set in motion unless the catches or other effective contrivances are in position.

(2)(a) The floor of every cage shall be kept clean; and no skip, bucket or tub shall be filled up to such height that any of the contents can fall out.

(b) Before long timber, pipes, rails, or other material projecting over the top of the cage or other means of conveyance are lowered or raised, the projecting ends shall be securely fastened to the rope, chain or bow.

87. Winding in sinking shafts – At every shaft or winze in the course of being sunk, where a winding engine is use the following provisions shall have effect, namely :

(1) If the shaft or winze is vertical and exceeds 45 metres in depth, there shall be provided for each bucket or other means of conveyance a detaching-hook. Between the centre of the hole for attaching the detaching-hook to the rope shackle and the detaching bell or plate, when the bucket or other means of conveyance is at the tope landing, there shall be a clear over-run space of not less than 3.6 metres.

(2) Where the shaft or winze is vertical and exceeds 150 metres in depth –

(a) the bucket or other means of conveyance, when used for lowering or raising persons, shall be provided with sufficient cover overhead for protection from things falling down the shaft; and
(b) these shall be provided for each bucket or other means of conveyance a sufficient number of guides which shall be kept extended to within 22.5 metres of the shaft bottom at all times when sinking is in progress:

Provided that the Regional Inspector may, by an order in writing, require the provision of guides in a shaft or winze which is less than 150 metres in depth or is not vertical.

(3)(a) There shall be provided and maintained two separate means of interchanging distinct and definite signals between the bottom and the top of the shaft or winze. Efficient means shall also be provided and maintained for transmitting such signals from the top of the shaft or winze to the winding engineman. The signalling appliances shall be examined by a competent person once at least in every 24 hours. The result of every such examination shall be recorded in a bound paged book kept for the purpose and shall be signed and dated by the person making the examination.

1[(b) In signalling, the following code of signals shall be used and observed

ONE RAP	..	STOP
TWO RAPS	..	LOWER
THREE RAPS	..	TAKE UP SLACK or RAISE
FOUR RAPS	..	TAKE UP SLACK or RAISE when men are riding.

Any other signals shall be in addition to, and shall not interfere with, the foregoing.

Provided that the Chief Inspector may, by an order in writing and subject to such conditions as he may specify therein, permit the use of any code of signalling other than that specified above.

(c) A printed copy of the code of signals, including additional signals, if any, shall be posted prominently at the top of the shaft or winze and also in the winding engine room.

(d) Except while riding in a bucket or other means of conveyance, no person other than the chargeman or a person authorised in writing by the manager, shall give any signal.

(4) Every bucket or other means of conveyance in which persons or materials are conveyed, shall be of strong construction and so maintained as to prevent persons or materials from falling.

(5)(a) At the top of the shaft or at the landing where the bucket or other means of conveyance is normally landed, suitable doors or covering shall be provided. Except as may be required for the passage of the bucket or other means of conveyance, the doors or covering shall always be kept closed.

(b)Where the shaft or winze has an indication of 35 degrees or more from the horizontal and exceeds 45 metres in depth measured along its plane, persons working at the bottom shall also be protected by a suitable protective covering extending over the whole area of the shaft or winze, sufficient space being left therein only for the passage of the bucket or other means of conveyance; and the cover or scaffold shall be kept lowered –

(i)if the shaft or winze is vertical to not more than 22.5 metres from the bottom; and
(ii) in any other case, not more than 30 metres from the bottom :

Provided that where special circumstances exist, the Chief Inspector may, by an order in writing an subject to such conditions as he may specify therein, grant an exemption from the provisions of this clause.

(6) Not more than such number of persons as may be authorised by the manager shall be allowed to ride in the bucket or other means conveyance at one time; and a notice specifying such number shall be posted prominently at the top of the shaft or winze.

(7) When tools, implements or other materials are lowered or raised, the banksman or chargeman, as the case may be, shall see that -

(a) the bucket is properly loaded;
(b) materials are not loaded above the rim;
(c) long timber, pipes, rails, tools or other material with ends projecting over the rim are securely fastened to the rope, chains or bow; and
(d) the bucket, before being sent away, is steadied, and the bottom and sides thereof are free from adhering material.

(8) Where guides are provided, the bucket or other means of conveyance shall be raised slowly from the bottom of the shaft or winze, until the rider is picket up.

(9) While persons are at work on any scaffold or platform in the shaft or winze, the following precautions shall be strictly observed :

(a) The scaffold or platform shall be secured to the sides of the shaft in order to prevent it from swinging;
(b) The opening for the passage of the bucket or other means of conveyance, shall be so protected as effectively to prevent anything falling through it;
(c) The scaffold or platform shall not be lowered or raised except under the order of the chargeman or other competent person.

88. Winding ropes, etc. – At every shaft where a rope is used for winding purposes, the following provisions shall have effect, namely :

(1)(a) No rope, bar, link, chain or other attachment to a cage or other means of conveyance shall be used unless it is of good quality and manufacture, is free from any visible defect and is of adequate calculated strength :

Provided that the Chief Inspector may, by an order in writing prohibit the use of any rope or type of rope or bar, link, chain or other attachment where, in his opinion such use is unsafe.

(b)A single-linked chain shall not be used, except for the short coupling chain attached to a cage or other means of conveyance. Such singlelinked chain shall be attached to the safety hook through a distribution plate or other approved appliance.

(c)Where safety-chains are used, their length shall be such tat if the kingbolt breaks, the shock to the cage or other means of conveyance is as slight as possible.

(d) The attachment between the rope and the cage or other means of conveyance shall be of such type and be maintained in such manner as to obviate accidental disconnection.

(e) In case of a doubt, as to the fitness of any rope, bar, link, chain or other attachment used or intended for use, it shall be referred to the Chief Inspector for decision.

(2)(a) Except, in a sinking shaft less than 30 metres in depth, every winding rope shall be made of cold drawn steel wire, and the gauge of the wires used in the construction of such rope shall be suited to the diameter of the drums, pulleys and sheaves of the winding installation.

(b) In any shaft, including a shaft in course of being sunk, where persons are lowered or raised and where guides are not provided, no rope other than a rope of non-spinning type shall be used.

(c) No rope which has been spliced shall be used for winding purposes.

(d) No winding rope shall be used or continued in use, if its safety factor (i.e. the ratio between breaking load on the rope at any point and the maximum static load on it when the cage or other means of conveyance is at the lowest working point) is or becomes –

(i)less than 10 in the case of a shaft not exceeding 300 metres in depth;
(ii) less than 9 in the case of a shaft exceeding 300 metres but not exceeding 500 metres in depth;
(iii) less than 8 in the case of a shaft exceeding 500 metres but not exceeding 700 metres in depth;
(iv) less than 7 in the case of a shaft exceeding 700 metres but not exceeding 1000 metres in depth;
(v) less than 6 in the case of a shaft exceeding 1000 metres but not exceeding 1500 metres in depth;

(3)(a) For every rope in use or intended for use, a certificate showing its breaking load, quality, construction and diameter (obtained from the manufacturer or supplier) and a history of it use, including a record of diameters of the drums, sheaves and pulleys used in conjunction with the rope, shall be kept in a bound paged book kept for the purpose. All entries therein shall be made and signed by the engineer or other competent person, and shall be countersigned and dated by the manager.

(b) If in the case of a new rope a test certificate as to the amount of its breaking load is not available, it shall not be used unless a portion thereof, not less than three metres in length, has been cut off and tested in a laboratory, institution or test house approved by the Central Government for the purpose.

(4) No winding rope which has been in use for more than three and half year shall be used for winding purposes:

Provided that where the Regional Inspector is satisfied that due to sparing use any such rope is in good condition even after the expiry of the said period, he may, by an order writing and subject to such conditions as he may specify therein, allow the use of such rope for a longer period. Every application for permission to use a rope after the period of three and a half years aforesaid shall be accompanied by a copy of the entries, in respect of the rope, in the book kept for the purpose under sub-regulation (3), and also by a certificate as to the strength of the rope, obtained in the manner laid down in clause (b) of the sub-

regulation. The certificate aforesaid shall relate to a piece of the rope cut off not more than three months prior to the date of the application:

Provided further that where the Regional Inspector is of the opinion that any rope has become unsafe for use in a shaft before the expiry of the period of three and a half years aforesaid, he may, by an order in writing, prohibit the use of such rope for winding purposes. An appeal any such order may be preferred to the Chief Inspector.

(5)(a) No mode or type of capping shall be used, which fails to withstand a load of at least 10 times the maximum static load thereon.

(b) The cappel of a round rope shall not be attached to the rope by rivets passing through the rope.

(c) In those forms of capping, in which the wires at the end of the rope are bent back on the rope itself to form a cone, wedges formed by the lapping of soft iron wire shall be placed between the rope and that portion which is bent back. The length of the tapered portion of the socket shall be not less than 12 times the diameter of the rope.

(d) Where white metal is used in the capping of ropes, the tapered portion of the socket shall not be less than eight times the diameter of the rope.

(e) If white metal is used in the capping of ropes -

(i) its melting point shall not exceed 300 degrees centigrade, and its temperature when poured into the socket shall not exceed 363 degree centigrade;
(ii) in the length of rope which is to lie within the tapered part of the socket, the fibre core, if any, shall be cut and the wires shall be untwisted and thoroughly cleaned; and
(iii) the socket shall be heated to a temperature of about 100 degrees centigrade before the white metal is poured into it.

(6) Except in the 'Koepe' system of winding, every rope shall be recapped once at least in every six months, or if necessary, at shorter intervals and also after every overwind. Before every such recapping, a length, including the capping, of at least two metres shall be cut off the rope. Each piece of rope so cut-off shall be opened and its internal condition examined. The operation shall be carried out under the supervision of the engineer or other competent person, who shall record the date and other particulars thereof (including the length of the rope remaining after recapping) in a bound paged book kept for the purpose and shall sign and date the same.

89. Suspension gear – (1) All parts of suspension gear in regular use shall unless otherwise permitted by the Chief Inspector, be renewed after a period of service of not more than ten years, and at shorter intervals, if necessary.

(2)(a) All cage chains in general use and all other parts of suspension gear between the rope and the cage or other means of conveyance, including the detaching-hook, shall be taken apart, cleaned and carefully examined as to wear and tear (where necessary by gouging) and for rust and cracks, once at least in every six months, or if necessary, as shorter intervals. The various parts shall be annealed or given other proper heat treatment before being refitted. :

Provided that in the case of such chains or gear manufactured from a steel which is not liable to deterioration necessitating annealing or heat treatment, the Chief Inspector may by an order in writing and subject to such conditions as he may specify therein, grant exemption from the carrying out of this operation;

b) Every detaching bell or plate used in connection a safety-hook shall be examined, and the opening therein checked by calipers or gauges, once at least in every 30 days.

(c) The operations and examination required under this sub-regulation shall be carried out by or under the supervision of the engineer or other competent person, who shall record the date and other particulars thereof in a bound paged boo kept for the purpose, and shall sign and date the same.

90. Precautions after recapping, etc - After every installation or recapping of a rope and after every renewal or refitting of any suspension gear, the engineer or other competent person shall, after the cages or other means of conveyance fully loaded with materials have made five trips up and down the working portion of the shaft, examine the cappel and other parts of the suspension gear to see that they are in proper working order. A report of every such examination shall be recorded in the book kept under regulation 89(2), and shall be signed and dated by the persons making the examination.

91. Examination of winding equipment – (1) It shall be the duty of the engineer or other competent person to examine –

(a) Once at least in every 24 hours –

(i) the attachment of the winding rope to the drum, the depth indicator, every part of the suspension gear in the shaft, including cages or other means of conveyance and their gates, and every external part of the winding apparatus, upon the proper working of which the safety of persons depends; and
(ii) the brakes of the winding engines;

(b) Once at least in every seven days –

(i) each winding rope, by passing the rope at a speed not exceeding one meter per second; and
(ii) the external parts of the winding engine, the guides and the signalling arrangements fitted in a shaft or winze;

(c) Once at least in every 30 days, every winding rope, by passing the rope at a speed not exceeding 0.5 metre per second. For the purpose of this examination, the rope shall be cleaned of any entrusted dirt and grease at all places particularly liable to deterioration and at other places, not more than 30 metres apart throughout the length, and any reduction in the circumference of the rope and the superficial condition of the wires as to wear, corrosion, brittleness and fracture at every such place shall be noted; and

(d) Once at least in every 12 months, the winding engine as to the condition of its internal parts.

(2) A report of every such examination shall be recorded in a bound paged book kept for the purpose, and shall be signed and dated by the person who made the examination and countersigned and dated by the engineer, or where there is no duly qualified engineer, by the manger.

(3) If on any examination made as aforesaid, there is discovered any weakness or defect by which the safety of persons may be endangered, such weakness or defect shall be immediately reported in writing to the engineer or other competent person and to the manager; and until such weakness or defect is remedies the winding installation shall not be used.

92. Gates and fences – (1) At the tope of every shaft or winze and at every inset which is in use, there shall be provided suitably gates or fences which shall effectively close the openings into the shaft or winze at all times when a cage or other means of conveyance is not at the tope or the landing. Except with the permission of the Chief Inspector by an order in writing and subject to such conditions as he may specify therein, every such gate at the tope of a shaft shall be self-operating.

(2)(a) At every landing where it is necessary for persons to pass from one side of the shaft to the other, an adequate passbye shall be provided for enabling them to do so without entering or crossing the shaft. Every passbye so provided shall be not less than 1.8 metres high and 1.2 metres wide, and shall be kept clear of all obstructions.

(b) No person shall enter or cross, or be permitted to enter or cross the winding compartment of a shaft or winze except for the purpose of entering or leaving a cage or other means of conveyance or for undertaking an examination, repair or any other work therein; and no persons shall be allowed to work in any such space unless the cages or other means of conveyance, if any, have been stopped and adequate precautions have been taken for the protection of such person.

93. Duties of persons riding or working in shafts – (1) No person shall get or off a cage or other means of conveyance after the same has been signalled to be set in motion or leave it until it has reached the appointed stopping place; nor shall any person ride on the top or edge of any cage or other means of conveyance except when engaged in an examination, repair or any other work in the shaft or winze.

(2) Every person, when at or about the top or bottom of a shaft or any inset, shall obey the lawful orders and directions of the banksman or bellman, as the case may be.

(3)(a) NO person shall carry out any examination, repair or other work in any shaft while winding operations are being carried on; and no winding shall be carried on or permitted while persons are engaged in such examination, repair or work, except where winding is necessary for the same.

(b) The person in immediately charge of any examination, repair or work in any shaft shall warn the banksman and the winding engineman that such examination, repair or work is about to be undertaken.

(c) Every person while engaged in any examination, repair or other work in a shaft shall be accompanied by at least one other person; and all such persons shall be provided with effective safety belts unless otherwise efficiently protected against the risk of falling.

(d) Every person engaged in trying out an examination, repair or other work in a shaft shall be protected by a suitable covering from objects falling from above. Every such person shall also be provided with a protective hat; and shall wear the same when so engaged.

94. General precautions – (1) No unauthorised person shall enter or be allowed, in a winding engine room.

(2) No adolescent or woman shall descend or ascend a shaft in a cage or other means of conveyance unless accompanied by one or more adult males.

CHAPTER-X : Transport of Men and Materials – Haulage

95. Haulage roadways – The following provisions shall have effect with respect to every length of road or roadway in a mine where materials are transported in tubs by means of gravity of mechanical power, namely :

(1) Every such roadway shall –

(a) be of adequate dimensions and, as far as practicable, shall be straight and of regular gradient; and
(b) have tracks properly laid with rails of adequate section.

(2)(a) Pulleys, sheaves and rollers that alter the direction of a rope shall be securely fixed.

(b) No person shall guide or adjust a moving rope on to a drum, pulley, sheave or roller except with a lever or other proper appliance.

(3) Where haulage is effected by one or more ropes, there shall be provided and maintained -

(a) at the top of every inclined plane, at least one stop-block or other effective contrivance to arrest tubs from running or moving out of control;
(b) at least one run way switch or other effective contrivance below the first stop-block or other effective contrivance at a distance greater than the length of a set or train of tubs:

Provided that such distance shall not exceed the length of a set or train of tubs by more than 10 metres:

Provided further that where the Regional Inspector, by an order in writing so requires, the stop-block and the switch or other effective contrivance aforesaid shall be so intercoupled that they do not remain simultaneously ineffective:

(c) an attachment, behind an ascending tub or set or train of tubs, of a back-stay, drag or other suitable contrivance for preventing the tub, set or train of tubs running back. Where an endless rope or chain is used, the provisions of this clause shall be deemed to be satisfied if suitable automatic catches or other effective contrivance are provided at suitable intervals along the track to prevent the ascending tubs running back :

Provided that the Regional Inspector may, by an order in writing and subject to such conditions as he may specify therein, grant exemption from the operation of this clause on grounds that compliance with the provisions thereof is not reasonably practicable;

(d) safety hooks, jazz-rails or other suitable contrivances to prevent runaway in the forward direction;

(e) tub re-railers at intervals of not more than 250; and

(f) on every haulage roadway exceeding 30 metres in length, effective means of transmitting signal from every stopping place on the roadway to the place at which the machinery working the rope is operated. All signals shall be transmitted by mechanical or electrical means:

Provided that the Regional Inspector may, by an order in writing, require means of transmitting signals in the reverse direction also. If any doubt arises as to whether any means of transmitting signal is effective or not, it shall be referred to the Chief Inspector for decision.

(4)(a)(i) The following code of signals shall be used and strictly observed –

ONE RAP	..	STOP when in motion
TWO RAPS	..	LOWER or haul in slowly
THREE RAPS	..	START when at rest
FOUR RAPS	..	RAISE or haul out slowly

Any other signals shall be in addition to, and shall not interfere with, the foregoing.

Provided that the Chief Inspector may, by an order in writing an subject to such conditions as he may specify therein, permit the use of any code of signals other than that specified above.

(ii) A printed copy of the code of signals, including additional signals, if any, shall be posted prominently at the place in which the machinery that works the rope is operated and at all regular stopping places along the roadway.

(iii) No person, other than a competent persons or an official, shall give any signal.

(b) Where in any mine belowground, a system of haulage roadway (and conveyors, if any) extent to distance of more than 600 metres from the shaft or the entrance to the mine, efficient telephonic

communication shall be provided and maintained between the end of every such system and the bottom and top of the shaft or the entrance to the mine as the case may be :

Provided that where travelling is unduly arduous, the Regional Inspector may, by an order in writing, require the provision and maintenance of telephonic communication in any other case also.

(c) Where telephones or electrical signals are provided -

(i) adequate precautions shall be taken to prevent signal and telephone wires coming into contact with other cables and electrical apparatus;
(ii) signal wires shall be supported on insulators, and shall not be energised at more than 30 volts;
(iii) contact makers shall be so constructed as to prevent accidental closing of the circuit; and
(iv) in every gassy seam of the second or third degree], all signalling or telephonic communication circuit shall be constructed, installed, protected, operated and maintained in such a manner as be intrinsically safe.

(5) At places where telephone receivers are installed or where signals and safety contrivances are regularly operated, every person using the telephone or operating any such signal or safety contrivance shall be afforded adequate protection against tubs moving out of control.

(6)(a) Where any person is allotted to work or pass while the haulage is in motion, manholes for refuge shall be provided at intervals of not more than 10 metres:

Provided that where the gradient is less than 1 in 6 such manholes may be provided at intervals of not more than 20 metres.

(b) Manholes shall be not less than 1.8 metres in height and 1.2 metres in depth, and not less than 0.75 metres but not more than one metre in width:

Provided that the Regional Inspector may, by an order in writing and subject to such condition as he may specify therein, permit the use as manholes or cross-roadways other than haulage roadways, of dimensions larger than those aforesaid.

(c) Every manhole shall be kept clean and clear of obstruction, and white washed both inside and for a distance of not less than 0.3 metres around the aperture.

(d) As far as practicable, all manholes shall be provided on one side of the haulage roadway.

(e) In case where there are serious practical difficulties in providing manholes as specified in clauses (a) and (b), the Regional Inspector may, by an order in writing and subject to such conditions as he may specify therein, permit manholes to be at greater intervals or of other dimensions.

(f) Except where haulage is effected by means of an endless rope or chain, whenever the haulage rope is in motion, every person on the haulage roadway shall take shelter in a manhole.

(7) The manager or assistan manager or underground manager shall, by an order in writing, in respect of every haulage road or roadway, fix the maximum number of tubs, according as to whether they are loaded or not loaded, that may be coupled together to run as a set or train. A notice specifying the number of tubs so fixed shall be posted prominently at the top and at all regular stopping places of the haulage road or roadway.

(8) At all places where tubs are coupled or uncoupled, there shall be a clear space of not less than one metre –

(a) between, the tubs and one side of the roadway; and
(b) where there are two or more tracks also between the adjacent tracks.

(9)(a) When any roadway or face is in direct line with a haulage track and persons may be exposed to danger from runaway tubs, a strong buffer or other effective contrivance to prevent such danger shall be provided and maintained.

(b) A stopblock or other effective contrivance shall be provided near the entrance of every tramming roadway branching off the main haulage road or roadway, and on every track which slopes towards a shaft or winze.

96. Travelling roadways – (1) Except when an exemption in writing has been granted by the Regional Inspector and subject to such conditions as he may specify therein, travelling roadways, separate from haulage roadways on which haulage is effected by mechanical means or gravity, shall be provided for persons to travel to and from their working places.

(2) Every such travelling roadway shall –

(a) be not less than 1.8 metres high throughout;
(b) where the inclination exceeds 30 degrees from the horizontal, be provided with suitable steps or ladders;
(c) where the inclination exceeds 45 degrees from the horizontal, be provided, in addition to steps or ladders, with hand rails or ropes so as to ensure safe travel; and
(d) where the inclination exceeds 60 degrees from the horizontal, be provided, in addition to the steps or ladders and rails or ropes, with suitable platforms at intervals not exceeding 10 metres measured along the slope.

(3) Except for purposes of inspection, examination or repair, every person other than an official of a haulage attendant shall travel by the travelling roadway or compartment.

(4) Where persons using a travelling roadway or compartment have to cross a conveyor or a haulage worked by mechanical means or gravity, a suitable cross-over or cross-under bridge or other suitable device approved in writing by the Regional Inspector shall be provided.

(5) No haulage shall be used for the general conveyance of persons except with the permission in writing of the Chief Inspector and subject to such conditions as he may specify therein.

97. Tubs and their movement – (1)(a) On every tub there shall be provided and maintained at each coupling end a strong buffer projecting beyond the end and so arranged that when two such tubs are in tandem, the gap between the innermost ends shall not be less than 20 centimeters.

(b) On every side-tipping tub in use, safety-catches shall be provided to prevent accidental tipping. No tub or set or train of tubs shall be set in motion unless all the safety catches are properly secured.

(c) The attachment between a rope or locomotive and a tub or set or train of tubs, and the attachment between any two tubs in a set or train, shall be of a type approved in writing by the Chief Inspector by a general or special order and so maintained as to obviate accidental disconnection.

(d) The state of every buffer and drawbar of every tub in use and of every safety-catch, coupling-chain and other attachment shall be examined once at least in every seven days, by a competent person appointed for the purpose. A report of every such examination shall be recorded in a bound paged book kept for the purpose, and shall be signed and dated by the person who made the examination.

(2)(a) When tubs are about to be moved, persons likely to be endangered shall be warned.

(b) Two or more tubs shall not be moved by hand in close succession but shall be coupled and moved together. Two tubs shall be deemed to be in close succession when the distance between them at any time in less than 10 metres.

(c) No person shall cause or permit a tub to run uncontrolled except with the written permission of the manager:

Provided that the Regional Inspector may, by an order in writing, prohibit the uncontrolled movement of tubs at any place if he is of the opinion that such movement is likely to cause danger.

(d) No person while taking a tub down a gradient exceeding 1 in 20, shall go in front of the tub; and in every case where conditions are such that a person cannot control the tub from behind, he shall not take the tub down unless sprags or other suitable contrivances are used to control it.

(e) Where required for use, a sufficient number of sprags of suitable material and dimensions shall be provided.

(f) Every tub while standing on a track having a gradient of more than 1 in 20, shall unless held effectively by brakes or securely coupled to a haulage rope or locomotive, be effectively blocked, chained or otherwise secured.

(g) Except where haulage is effected by means of an endless rope, the coupling and uncoupling to tubs shall as far as practicable, be done only when the tub or set of the tubs, and the rope if connected to the set is not in motion.

(h) As far as practicable tubs shall not be coupled or uncoupled on a gradient.

(i) Whenever it comes to the attention of a haulage attendant that a tube being hauled by a rope, chain, locomotive or other mechanical means has got derailed, he shall immediately cause the haulage to be stopped. The tube shall then be re-railed, or detached from the rope etc., before the haulage is started again.

(3) No person shall ride on any tub or haulage rope except with the written authority of the manager. A list of all persons so authorised shall be maintained.

98. Protection at loading chutes. – Every chute where tubes are loaded shall be provided with suitable gates for holding back the column of material.

99. Haulage engines and ropes – (1) Every haulage engine shall be provided with an effective brake.

(2) (a). No rope shall be used for purposes of haulage if it has any serious visible defect over any length.

(b) Every rope which is capped shall be recapped once at least in every six months, and if necessary, at shorter intervals, under the supervision of a competent person.

(c) For every haulage rope in use, a record of size, construction, quality, name of supplier, and dates of installation and of recapping, shall be kept in a bound paged book kept for the purpose, and all entries therein shall be made by the competent person who shall sign the same and date his signature.

100. Roadway Conveyors – (1) Every roadway conveyor shall be so installed that –

(a) between the conveyor and one side of the roadway, there is a travelling space from obstruction not less than one metre wide;
(b) the conveyor or any part thereof does not scrape against wooden props or supports;
(c) the anchoring of the return station of the conveyor is independent of the face or roadway support.

(2) Where the inclination of the conveyor is such as to give rise to danger from sliding objects or material suitable devices shall be used to provide adequate protection against such danger.

(3) On every length of roadway in which a conveyor is installed for transporting loads over a distance exceeding 30 metres, there shall be provided and maintained effective means of transmitting signals from every point on the length of the road to the place at which the machinery working the conveyor is operated:

Provided that the Regional Inspector may, by an order in writing, require means of transmitting signals in the reserve direction also.

(4) No belt conveyor shall be used in a mine belowground without the permission in writing of the Chief Inspector and subject to such conditions as he may specify therein.

101. Examination of haulage engines and track etc. – (1) It shall be the duty of a competent person to examine carefully -

(a) once at least in every 24 hours, every haulage engine, brake-wheel, rope and other appliance in use; and
(b) once at least in every seven days, every track where the haulage is effected by means of mechanical power of gravity, and every safety contrivance fitted thereon.

(2) A report of every such examination shall be recorded in a bound paged book kept for the purpose, and shall be signed and dated by the person who made the examination.

102. Examination of haulage and travelling roadways – It shall be the duty of the forman or other competent person to examine carefully, once at least in every seven days, the state of all haulage and travelling roads and roadways, including roadways leading to all the outlets of the mine which are in use. A report of every such examination shall be recorded in a bound paged book kept for the purpose, and shall be signed and dated by the person who made the examination.

103. Locomotives – (1) No locomotive shall be used belowground otherwise than in accordance with the permission in writing of the Chief Inspector and subject to such conditions as he may specify therein.

(2) No locomotive shall be used where the gradient of the track exceeds 1 in 15.

(3) No person other than the driver shall ride on any locomotive unless authorised in writing to do so by the manager.

(4) Except during shunting operations, the locomotive shall lead the tubs or set or train of tubs.

104. Movement of railway wagons – (1) No adolescent shall be employed in moving railway wagons.

(2) The movement of railway wagons shall be carried on under the supervision of a competent male person who shall himself control the brake.

(3) Before wagons are moved, persons likely to be endangered shall be warned by the competent persons appointed under sub-regulation (2).

(4) No person shall move or attempt to move a wagon by pushing at the buffer, or by pulling from in front.

(5) Where two or more wagons are moved simultaneously, the wagons shall be coupled together, and the number shall not exceed the number which can be effectively controlled; they shall be moved only by pushing from the sides or from behind the last wagon.

(6) No locomotive or wagon shall be moved when the natural light is insufficient, unless the approaching end is distinguished by a suitable light or is accompanied by a person carrying a lamp.

(7) No person, other than the competent person referred to in-sub-regulation (2), shall pass immediately in front of wagons moving under bins or screens, nor between moving wagons and the under-structure of the bins or screens.

(8) No person shall be upon the buffer of a locomotive or wagon in motion unless there is a secure hard-hold, or stand thereon unless there is also a secure footplace. No person shall pass over the coupling between any two wagons while the wagons are moving.

(9) No person shall cross a line of rails by crawling or passing underneath a train or wagon, nor shall a person sit or sleep underneath a wagon.

(10) Wherever railway wagons are specially placed so as to afford a thoroughfare, such thoroughfare shall be not less than five metres in width.

(11) No material shall be placed or dumped within 1.2 metres from either side of a track of rails.

105. Fencings and gates – (1) Where any haulage road or tramline passes over a public road, suitable gates shall be provided to prevent danger to public from a moving tubs, sets or trains of tubs or locomotive. Every such gate shall be fitted with a danger signal, and when the natural light is insufficient, also with warning lamps.

(2) Where occupied buildings are situated within 15 metres of any haulage road or tramline, a substantial fence shall be provided and maintained between such buildings and the haulage road or tramline.

CHAPTER-XI : Mine Workings

106. Opencast workings – In opencast workings, the following precautions shall be observed, namely: -

(1) In alluvial soil, morum gravel, clay, debris or other similar ground -

(a)(i) the sides shall be sloped at an angle of safety not exceeding 45 degrees from the horizontal or such other angle as the Regional Inspector may permit by an order in writing and subject to such conditions as he may specify therein; or

(ii) the sides shall be kept benched and the height of any bench shall not exc eed 1.5 metres and the breadth thereof shall not be less than the height:

Provided that the Regional Inspector may, by an order in writing and subject to such conditions as he may specify therein, exempt from the operation of this clause any working in the case of which special difficulties exist, which in his opinion make compliance with the provisions thereof not reasonably practicable; and

(b) where any pillar is left 'in situ' for the purpose of measurement, its height shall not exceed 2.5 metres; and where the height of such pillar exceeds 1.25 metres, the base of the pillar shall not be less than 1.6 metres in diameter.

(2) (a) Where 'float' or other similar deposit is worked by manual means on a sloping face, the face shall be benched and the sides shall be sloped at an angle of not more than 60 degrees from the horizontal. The height of any bench shall not exceed six metres and the breadth thereof shall not be less than the height:

Provided that where the ore-body consists of comparatively hard and compact rock, the Regional Inspector may, by an order in writing an subject to such conditions as he may specify therein, permit the height of the bench to be increased up to 7.5 metres while its width is not less than six metres :

Provided further that in case of a mine or part where special difficulties exist, the Chief Inspector may, by an order in writing an subject to such conditions as he may specify therein, relax the provisions of this sub-regulation.

(b) Where in any mine or part it is proposed to work by a system of deep-hole blasting and/or with the help of heavy machinery for its digging, excavation and removal in such manner as would not permit of compliance with the requirement of sub-regulation (1) the owner, agent or manager shall, not less than 60 days before starting such work, give notice in writing of the method of working to the Chief Inspector and the Regional Inspector; and no such work shall be commenced o carried out except in accordance with such conditions as the Chief Inspector may specify by an order in writing. Every such notice shall be in duplicate, and shall give the details of the method of working including the precautions that are proposed to be taken against the anger from falls of sides and material.

(3) In an excavation in any hard and compact ground or in prospecting trenches or pits, the sides shall be adequately benched, slopped or secured so as to prevent danger from fall of sides.

(4) No tree, loose stone or debris shall unless otherwise permitted in writing by the Chief Inspector be allowed to remain within a distance of three metres from the edge or side of the excavation.

(5) No person shall undercut any face or side or cause or permit such undercutting as to cause any overhanging.

107 Underground workings. – In every mine worked by a system of workings below ground, the following provisions shall have effect, namely –

(1) Unless otherwise permitted by the Regional Inspector by an order in writing and subject to such condition as he may specify therein, the height of every main drive shall b not less than 1.8 metres.
(2) The dimensions of pillars or blocks formed in any vein, load, reef or mineral bed or deposit shall be such as to ensure stability of the workings during the development and stoping stages ad between such stages.

1[(3) No extraction or splitting or reduction of pillars or blocks of minerals shall be commenced, conducted or carried out except with the prior permission in writing of the Chief Inspector and in accordance with such conditions as he may specify therein. An application for such permission shall be accom-anied by an up-to-date plan of the area where the pillars or blocks of mineral are proposed to be extracted or reduced, showing the proposed extent of extraction or reduction, the manner in which such extraction or reduction is proposed to be carried out, the thickness and other characteristics of the mineral deposit, the rate and direction of general dip and of the pitch of the vein, the nature of hangwall, and footwall, the stoping width, the depth of the workings, and such other particulars as the Chief Inspector may require. A copy of the application and the plan shall simultaneously be sent to the Regional Inspector.

(3-A) The operations of extraction, splitting and reduction of pillars or blocks of mineral shall be commenced, conducted or carried out in such a manner as to prevent, as far as possible, the extension of a collapse in the stoped-out area over-riding the pillars or blocks of minerals that have not been extracted].

(4) Nothing in sub-regulation (3) shall prevent the spilitting or reduction of any pillar or block of mineral bed or deposit where, in the opinion of the manager such work is necessary for haulage, ventilation, drainage or any other purpose necessary for the proper working of the mine, if 14 days' previous notice in writing of the intention to commence such work has been given to the Regional Inspector. Every such notice shall be accompanied by an offset plan showing details of the operation. If in the opinion of the

Regional Inspector such work is likely to endanger the stability of the workings, he may, by an order in writing, require the completion, before commencing such drivage or enlargement, of such protective works as he may specify therein.

(5) Proper provision shall be made to prevent the premature collapse of workings; and adequate steps shall be taken to isolate, control or remedy any such collapse which may occur.

108. Powers of Inspectors – If in any mine or part thereof, it appears to the Regional Inspector that the provisions of regulations 106 and 107 or of any order issued under any of these regulations have not been complied with, he may give notice in writing to the owner, agent or manager requiring him to take such protective measures, within such time as he may specify in the notice. In case of non-compliance with the requirements of the notice, the Regional Inspector may, by an order in writing, prohibit until the requirements specified in the notice are complied with to his satisfaction, the employment of any person other than those required for complying with the said requirements, in the part or parts of the mine in which protective measures are required to be taken.

1[108A. Pointing out contraventions during inspections – (1) If the Chief Inspector or an Inspector, during his inspection of any mine, finds or comes to know of any contravention of any provisions of Act or the regulations, rules, bylaws of orders made thereunder, he shall enter such contravention in an inter leafed paged and bound register kept for the purpose at the mine, in Form VI and shall also point out such contravention to the owner, agent or manager, it present on the spot. The Chief Inspector or the Inspector making the entry in the Register aforesaid shall duly sign such entries with date, and take a carbon copy of the entries for his record:

Provided that the Chief Inspector or the Inspector need not enter such contraventions which require confirmation after a survey or other further examination and he may subsequently intimate the owner, agent or manager, specifying the contraventions, if confirmed, and also any other contraventions which were, by inadvertence, not entered in the register aforesaid.

(2)The owner agent or manager shall check the aforesaid register once every day and countersign each entry therein. He shall et copies of such entries made out within three days of the ate of entry and display one such copy on the notice board of the mine for a period of at least fifteen days. When so required, the owner, agent or manager shall also supply copies of the entries to the registered trade unions of workers in the mine and to the State Government concerned.

(3) The owner, agent or manager of the mine shall return one copy, within a period not exceeding fifteen days from the date of the entry, to the Chief Inspector or the Inspector who made the entry with remarks thereon showing the action taken to remedy the contravention and the date on which such action was taken.

109. Workings under railways and roads, etc. – (1) No workings shall be made and no work of extraction or reduction of pillars shall be conducted at, or extended to, any point within 45 metres of any railway, or of any public works in respect of which this regulation is applicable by reason of any general or special order of the Central Government, or of any public road or building, or of other permanent structure not belonging to the owner of the mine, without the prior permission in writing of the Chief Inspector and subject to such conditions as he may specify therein.

(2) Every application for permission under sub-regulation (1) shall specify the position of the workings of the mine in relation to the railway or public road or works or building or structure concerned, the manner in which it is proposed to carry out the intended operations, and the limits to which it is proposed to carry out the said operations; and shall be accompanied by two copies of a plan showing the existing and the intended mining operations in so far as they affect the railway or public road or works or building or structure concerned. A copy of the application shall also be sent in the case of a railway, to the railway

administration concerned; and in the case of any public works as aforesaid, in such authority as the Central Government may by general or special order direct.

(3) Notwithstanding anything contained in the regulations, the stability of such railway, road, works, building or structure shall not be endangered until it has been dismantled, diverted or vacated, as the case may be.

(4) Where the stability of such railway, road, works, buildings or structure has been endangered due to any mining operations, the Chief Inspector may, by an order, in writing, require the owner to construct in the mine belowground or on the surface such protective works within such time as he may specify in the order.

110. Protective works before a mine is closed – [(1) The Chief Inspector may, by an order in writing, require the owner of any mine to which regulation 6 applies, to construct in the mine belowground or on the surface such protective works within such time as he may specify therein.

(2) If the owner fails to construct such protective works within the time specified in the order, the Chief Inspector may get the works executed by any other agency, and the cost thereof, as certified by the Chief Inspector shall be defrayed by the owner of the mine and recoverable from him as an arrear of land revenue.

(3) Until the protective works have been constructed to the satisfaction of the Chief Inspector, the means of entering the mine at not less than two entrances shall be kept intact and in working order.

111. Working near mine boundaries – 2[(1) The owner, agent or manager of every mine shall fixed boundaries of the mine. Notwithstanding anything contained in sub-regulation (2), the shall not be changed except with the permission of the Chief Inspector in writing and subject to such conditions as he may specify therein].

3[(2)] No working shall be made within a distance of 7.5 metres of the boundary of any mine and, in case of a disputed boundary, no working shall be made within a distance of 7.5 metres of the boundary claimed by the owner of an adjacent mine until such time as a binding agreement has been reached as to the correct boundary or the question has been finally determined by a court of law:

1[Provided further that, where the workings of any 2[mine], for any reason, are extended or get extended within any shorter distance than what is laid down herein above, the Chief Inspector may, by an order in writing, require the owner to construct such protective works within such time as he may specify in the order].

3[(3)] Notwithstanding anything contained in sub-regulation (1), the Chief Inspector may, by an order in writing and subject to such conditions as he may specify therein, permit the workings of any mine or part thereof to extend within any shorter distance than 7.5 metres aforesaid, or may require that the said working shall not extend further than a specified distance, not exceeding 60 metres, of such boundary.

112. Support of workings. – (1) The roof or back, hanging wall, footwall and sides of every roadway and working place, including airways and travelling roadways to second outlets, shall be made and kept secure.

(2)(a) If the Regional Inspector is of the opinion with respect to any mine or part thereof that systematic support for the roof or back hanging wall, footwall and sides, or either, or them, ought to be provided an maintained for the purpose of securing the safety of persons employed therein, he may serve upon the owner, agent or manager an order in writing specifying the mine or part, stating that he is of opinion aforesaid and requiring the provision and maintenance of support in accordance with a code of Timbering Rules which he may specify in the order.

(b)The manager shall hand over copies of the code of Timbering Rules to the assistant manager, the underground manager and to all other supervising officials concerned, and shall also post such copies at conspicuous places in the mine.

(c) The manager, assistant manager, underground manager and such supervising officials shall be responsible for securing effective compliance with the provisions of the Timbering Rules, an the mine or part thereof shall not be worked in contravention thereof.

113. Setting of supports. – (1) Every piece fo timber used as a support shall be set securely and on a secure foundation an whenever it becomes loose or broken shall, as soon as possible, be tightened or replace.

(3) Every crib set or pigstye used as a support shall be well built on a secure foundation, and shall be made and kept tight. Only rectangular pieces of material shall be used as members of a crib set or pigstye; so however that in case of timber it shall be sufficient o joggle two opposite sides to provide flat surfaces.
(4) The sides of every pack used for the purpose of support shall be well built on secure foundation. The pack shall be filled with debris or other suitable incombustible material, if so required by the Regional Inspector as shall be made as tight as practicable over its whole area.
(5) Where sand or other material is stowed for the purpose of support, it shall be paced tight.
(6) Except where it is no longer necessary for purposes of support, any support dislodged by or removed for any operation shall be replaced with the least possible delay.
(7) In every place wherein a fall of ground involving the displacement or breakage of supports has occurred, no work of clearing the fall or any part thereof shall be undertaken until the newly exposed roof or back hanging wall, footwall or side has been examined and made safe- if necessary, by temporary supports.

114. Steep workings – (1) In workings having an inclination of 30 degrees or more from the horizontal adequate precautions shall be taken to prevent danger to persons from falling or rolling of timber, tools or other appliances or material.

(2) No person shall work or be permitted to work at any place having an inclination of 45 degrees or more from the horizontal, where he is likely to slip or overbalance, unless he is secured by a safety belt or life line or is otherwise safeguarded.

115. Fencing and gates – (1)(a) Unless otherwise permitted by the Chief Inspector by an order in writing and subject to such conditions as he may specify the top of every opencast working shall be kept securely fenced.

(b) Where an excavation which has been formed as a result of any mining operation, extends within a distance of 15 metres from a public road or any building, substantial fencing shall be erected and maintained around the excavation.

(c) Where as a result of mining operations, a subsidence of the surface has taken place or is likely to take place and persons are likely to be endangered thereby, the owner, agent or manager shall keep the entire surface area securely and effectively fenced.

(2) Every entrance to a shaft, winze, ore-pass, chute sump, store or other dangerous place shall be provided with an efficient fence, barrier or gate, so designed and constructed as to effectively prevent any person from entering or falling therein.

(3) Where a shaft , winze rise, chute, ore-pass or stope leads directly into a working place or travelling roadway, such place or roadway and any working place situated on its dip side, shall be securely guarded or otherwise protected as to prevent danger to persons from falling materials.

(4) Every entrance from a roadway in a mine to a part of the mine which, for the time being, is neither being worked nor being used for any purpose, by reason of any cause whatsoever, shall be provided with a fence, barrier or gate so designed and constructed as to prevent any person from inadvertently entering that part of the mine.

(5) (a) Shaft and opencast workings temporarily or permanently out of use and any place in or about an excavation which is dangerous shall be completely filled in or kept securely fenced:

Provided that if in the opinion of the Regional Inspector, any disused trench, pit or other excavation is dangerous, he may, by an order in writing, require the same to be filled in to the level of the adjacent ground.

(b) Before a mine is abandoned or the working thereof discontinued, the owner, agent or manager shall cause the top or entrance of every shaft, incline or other opening into the mine to be fenced by a structure of a permanent character sufficient effectively to prevent persons falling into or entering the same.

116. Examination by mining mate – (1) Every place in a mine, whether belowground or in opencast working including travelling roadways and landings, where work is carried on or where persons are stationed or required to pass shall be placed under the charge of a mining mate or other competent person.

(2) The mine or district assigned to a mining mate or other competent person shall not be of such a size, nor shall any additional duties other than his duties under the regulations be such, as to be likely to prevent him from carrying out in a thorough manner the duties prescribed for him under the regulations. If any doubt arises as to the foregoing, it shall be referred to the Chief Inspector for decision.

(3)(a) At the entrance to every mine or district, one ore more stations shall be fixed by the manager; and except in the case of a mine working in a continuous succession of shifts no person other the persons making the examination under clause (b) or an official shall pass beyond any such station until all the roadways and working places to which such persons are required to have access, have been examined by the competent person in charge of the mine or district and found to be satisfactorily ventilated and in safe condition. Every such station shall be legibly marked 'STATION' and shall be of such a size as to accommodate all the persons employed in the district in any one shift.

(d) The mining mate or other competent person accompanied by such assistants as may be required shall, within two hours before the connection of work in a shift, inspect every part of the mine or district assigned to him, in which persons have to work or pass during the shift and all roadways and working places where work is temporarily stopped and shall ascertain the condition thereof as regards ventilation, sanitation, the presence of gases, the state of the roof and sides, presence of spontaneous heating and other fire risks, and generally so far as the safety of the persons is concerned.

    Provided that in the case of a mine or part to which regulation 142 applies, such inspection shall be made with an approved flame safety lamp; an that in the case of a mine or part to which regulation 123(1) applies, a cage containing suitable birds or other means of detecting carbon monoxide gas approved by the Chief Inspector shall be carried during every such inspection.

(e) Similar inspections shall be made once at least in every four hours during which the shift continues, of all the roadways and other working places to which persons engaged in the mine or district are required to have access;

(f) The mining mate or other competent person shall, at the completion of his shift, record without delay the result of his inspections in a bound paged book kept for the purpose. Every such report shall be a full and accurate report of the inspections and shall include the following.

(i) the details referred to in clause (b);
(ii) the number of persons working under his charge;
(iii) such instructions for the purposes of securing the safety of the persons as he may have given during his shift; and
(iv) the date and time of the inspections, the signature of the mining mate or other competent person, and the date and time when the report was written.

(g) In case of a mine where any other system of examination of working places has been in force, the Chief Inspector may, by an order in writing and subject to such conditions as he may specify therein, permit such a system to be continued in lieu of the system of examination laid down in this sub-regulation.

(12) In the case of a shaft in the course of being sunk, the competent person or chargeman shall –

(a) have entire charge of the shaft bottom and shall, in his shift, remain in the shaft while persons are at work at the bottom of the shaft. He shall be the last person to ascend the shaft at the end of the shift and if his shift is succeeded immediately by another shift, he shall not leave the bottom of the shaft until after the descent of the chargeman of the succeeding shaft; and

(b) after each round of shots, and at the beginning of every shift, and after every cessation of work in the shaft for a period exceeding two hours, shall examine the sides of the shaft and remove all loose pieces before persons are allowed to descend.

114. Avoidance of dangers – (1) If at any time it is found by a competent person in charge of a mine or district, that by reason of any cause whatsoever, the mine or district is dangerous, he shall immediately withdraw all persons from the mine or district; and the mine or district shall be fenced off so as to prevent persons inadvertently entering therein.

(2) The competent person shall also immediately inform the manager or under-manager or assistant manager about the danger, and shall record the fact in the book kept under sub-regulation (3).

(3) The manager or assistant manager or underground manager shall make, or cause to be made by a competent person, a careful examination of the mine or district; and no person shall, except in so far as is necessary for enquiring into the cause of the danger or for the removal thereof or for exploration, be re-admitted into the mine or district until the mine or district is reported to be safe. A report of every such examination shall be recorded without delay in a bound paged book kept for the purpose and shall be signed and dated by the person who made the examination.

(4) If the work of removing the danger is suspended before the danger is removed, the mine or district shall be securely fenced off effectively to prevent persons entering therein during the period of suspension.

(13) Notwithstanding anything contained in these regulations –

(a) where the danger arises from the presence of inflammable or noxious gas, the provisions of regulation 141 shall apply; and
(b) where the appearance in any part of amine of smoke or other sign indicates that a fire or spontaneous heating has or may have broken out the provisions of regulation 120 shall apply.

118. General precautions – (1) Where several persons are working together in any place, one of them shall be placed in charge. N person shall be so appointed unless he is 21 years of age and has had not less than three years' experience in the workings of a mine.

(2) No person shall work in any place other than his authorised working place.

(3) Every person shall carefully examine his working place before commencing work and also at intervals during the shift. If any dangerous conditions is observed, he shall cease all work at that place and shall either take immediate steps to remove such danger or inform an official or the competent person in charge of the mine or district. Where several persons are working together and one of them is in charge, the examination required by this sub-regulation shall be made by the person in charge.

(4) No person shall work or travel on any ledge or footpath less than 1.5 metres wide, from which he will be likely to fall more than 1.8 metres, unless he is protected by guard rails, fence or rope suitably fixed and sufficiently strong to prevent him from falling.

(5) (a) No person shall carry or be permitted to carry any load along a road or footpath having an inclination of 30 degrees or more from the horizontal.

(b) Every road or footpath, along which loads are carried by human agency, shall comply with the following requirements -

(i) its breadth shall not be less than one metre; and
(ii) at every place where the inclination exceeds 15 degrees from the horizontal, level steps shall be provided such that the vertical height of every step does not exceed 0.20 metre and the distance from the edge to the back is not less than 0.35 metre.

Explanation – Gang-planks used for loading purposes shall not be deemed to be part of a footpath for the purposes of this sub-regulation, provided that every gang-plank shall be so inclined or constructed as to give a secure foot-hold.

(6) No person shall be employed to lift, carry or move a load so heavy as is likely to cause bodily injury or injury to health of that person. In case of any doubt as to whether risk of bodily injury or injury to health is involved, it shall be referred to the Chief Inspector for decision.

(8) Every person shall ensure that tools, wood, stones, or other articles are not put down or allowed to remain, in or near a shaft , winze or opening into a stope where work is going on, in such position as may result in their falling into the shaft, winze, or stope, as the case may be.

(8) No person shall cast nay material down any chute, pass or stope or other place until he has assured himself that no person is in the way.

(9) No person shall work or be permitted to work alone in any remote part of a mine where, in any accident occurred he would not soon be discovered or assisted.

(10) No inexperienced person shall be employed in the mine for any work whereby he or other persons can be seriously endangered, except under the supervision and guidance of an experienced person.

CHAPTER XII – Precautions against Dangers from Fire, Dust, Gas and Water

119. Precautions against Fire – (1) (a) No oil, grease, canvas or other inflammable material shall be stored in any mine except in a fire-proof receptacle. Greasy or oily waste in workings belowground, shall be regularly removed to the surface.

(b) No person shall place or throw, or cause or permit to be placed or thrown, any naked light or lamp or ‘cheesa stick’ or kai-piece’ on or near any timber, wooden structure or other combustible material.

© Where explosives are used in blasting any timber forming part of stulls, sets and chutes sufficient water shall be applied to the timber both before and after firing a shot.

(2) (a) All surface structures and supports within a horizontal distance of 10 metres from all entrances to a mine shall be of incombustible material :

Provided that this clause shall not apply to temporary structures, supports and coverings at the top of a shaft or winze which is in the course of being sunk an to the small lid of a shaft-covering operated by the rope cappel.

(b) Dead leaves or dry vegetation shall not be allowed to accumulate or remain, and combustible materials other than material required for use within a period of 24 hours, and inflammable materials, shall not be stored within a distance of 15 metres from any entrance to a mine, which is not effectively sealed off from the workings belowground.

(c) No person shall light a fire or permit a fire to be lighted on the surface within a distance of 15 metres from any entrance to a mine, except by an order I writing of the manager and only for a special purpose specified in such order. All such orders shall be recorded in a bound paged book kept for the purpose:

Provided that this clause shall not apply to boilers other than vertical boilers.

(3) (a) Except with the previous permission in writing of the Regional Inspector and subject to such conditions as he may specify therein, no timber or other combustible material shall be used I the construction of or in connection with, any shaft lining or any room housing any machinery or apparatus belowgsround.

(b) Wood cuttings shall not be left in any working belowgroud, but shall be removed to the surface at the end of every shift.

©No person shall light a fire or permit a fire to be lighted in any workings belowground :

Provided that –

(i) in the case of a mine to which regulation 142 does not apply, flame or electric welding or repairing apparatus may be used belowground if permitted by a order in writing of the manager or assistant manager or underground manager. Every such order shall specify person who shall be in charge of the apparatus; and it shall be the duty of such person to bring the apparatus back to the surface when no longer required belowgsround; and

(ii) in the case of a mine to where the provisions of regulation 142 apply, a flame or electric welding or repairing apparatus may be used belowground if prior permission in writing has been obtained from the Regional Inspector and subject to such conditions as he may specify therein.

(d) No person shall leave a portable light or lamp belowground unless he has placed it in charge of some other person remaining therein.

(e) At the end of a shift, unless the mine is worked by a continuous succession of shifts, after all persons have left the mine, all lights shall be extinguished and all power cut off :

Provided that nothing in this clause shall be deemed to prohibit the running of a mechanical ventilator or auxiliary fan belowground after the shift is over.

(f) Proper provision shall be made to prevent an outbreak of fire or spontaneous heating belowground or the spread of fire to the mine from any adjoining mine; and adequate steps shall be taken to control or isolate any such fire or heating that may occur. Where in the opinion of the Regional Inspector the provisions of this clause have not been complied with or the steps so taken are inadequate, he may, by an order in writing, require such aditional precautions or steps to be taken within such time as he may specify therein. If any such order is not complied with within the specified period, the Regional

Inspector may prohibit until the order has been complied with, the employment in the mine or part, of any person whose employment is not, in his opinion, necessary for the purpose of complying with the order.

120. Precautions after a fire has broken out – (1) (a) On the appearance in any part of a mine of smoke or other signs indicating that a fire or spontaneous heating has or may have broken out, all persons other than those whose presence in the mine is deemed necessary for dealing with the fire or heating shall be immediately withdrawn from the mine. No person, other than those required for dealing with or sealing off the fire or heating, shall be admitted in the mine until the fire or heating has been extinguished or effectively sealed off and an examination has been made by the manager or by the assistant manager or underground manager and the mine has been declared to be safe. A report of every such examination shall be recorded in a bound paged book kept for the purpose and shall be signed and dated by the person making the examination :

Provided that the Regional Inspector may, by an order in writing and subject to such conditions as he may specify therein, permit the employment in the mine, of persons other than those required to deal with the fire or heating.

(b) The examination required by clause (a) shall be made with a cage contain in suitable birds or other means of detecting carbon monoxide gas approved by the Chief Inspector.

(2) During the whole time that any work of dealing with or sealing off a fire or heating belowground is in progress –

(a) a competent person shall be present on the spo0t throughout.

(b) There shall be available, at or near the place, two smoke helmets or other suitable apparatus for use in emergency; and \

(c) A cage containing suitable birds or other means of detecting carbon monoxide gas approved by the Chief Inspector shall be kept at all places where persons are employed.

121. Equipment for free-fighting – (1) a sufficient supply of sand or in combustible dust or sufficient portable fire extinguishers shall be provided at every entrance to a mine, at every landing and the bottom of every shaft or winze in use, at every engine room and at every other place where timber, canvas, grease, oil or other infalmmable material is stored.

(2) At every mine, the following provisions shall be made for dealing with any fire or heating belowground –

(a) A sufficient supply of sand or incombustible dust or sufficient portable are extinguishers shall be kept at suitable places at the entrance to every district; and

(b) In every mine employing 100 persons or more belowground on any one day in that of the previous year -\

(i) where pipes containing water under pressure are available, an adequate number of tape, not more than 120 metres apart, shall be provided on such pipes, Hose-pipes not less than 60 metres in length and the necessary fittings shall be provided.

(ii) Portalbe water tanks fitted with hand pressure pumps and hose-pipes not less than 60 metres in length and the necessary fittings shall be pro vided.

(3)(a) Soda acid type extinguishers or water shall not be used for fighting oil or electrical fires.

(b)Foam type extinguishers shall not be used for fighting electrical fires.

(c) Fire extinguishers containing chemicals which are liable, when operated, or give off poisonous or noxious gases, shall not be provided or used belowground :

Provided that nothing in this clause shall be deemed to prohibit the use belowground of fire extinguishers giving off carbon dioxide when operated.

(9) A competent person shall, once at least in every three months, examine every fire-extinguisher so provided, and shall discharge and refill it as often as may be necessary to ensure that it is in proper working order. A report of every such examination or refilling shall be kept in a bound paged book kept for the purpose, and shall be signed and dated by the person making the examination or refilling.

122. Apparatus for testing for Carbon Monoxide – In every mine to which regulation 123 (1) and 142 apply there shall be kept at the mine, constantly available for use, two or more suitable birds or other means of detecting carbon monoxide gas approved by the Chief Inspector :

Provided that the Regional Inspector may, by an order in writing, require compliance with this regulation in case of any other mine also.

123. Precautions when a fire exists belowground . – (1) In every mine in which a fire of spontaneous heating exists in workings belowground (whether such fire has been isolated by means of suitable seals or not), no work whatsoever shall be done in any part or section adjacent to the part or section on fire or believed to be on fire, except with the permission in writing of the Chief Inspector and subject to such conditions as he may specify therein.

(2) In every mine to which sub-regulation (1) and regulation 142 apply, arrangements shall be made, once at least in every 30 days, to ascertain the atmospheric conditions behind the seals of an area of old workings or a fire or spontaneous heating unless such seals are capable of resisting the force of an explosion :

Provided that the Chief Inspector may, by an order in writing and subject to such conditions as he may specify therein, exempt any mine or part thereof from the operation of this sub-regulation where in his opinion special difficulties exist which make compliance with provisions thereof not reasonably practicable.

(4) (a) Every seal erected to isolate or control a fire or spontaneous heating belowground shall be numbered, and shall be of adequate strength and shall be so maintained as to prevent any leakage of air or gas through it. Where water is likely to accumulate behind any such stopping, there shall be provided in the stopping a suitable pipe or other device to drain away the water without permitting any leakage or air or gas etc.

(b) where in any mine or part thereof the provisions of clause (a) have not been complied with or where in the opinion of the Regional Inspector the steps so taken are inadequate, he may give notice in writing to the owner, agent or manager requiring him to take such protective measures, within such time, as he may specify therein. In case of non-compliance with the requirements of the notice, the Regional Inspector may, by an order in writing, prohibit until the requirements of the notice have been complied with to his satisfaction, the employment in the mine or part, of any person whose employment is not, in his opinion, necessary for the purpose of complying with the requirements aforesaid.

(4)A competent person shall, once at least in every seven days, inspect all seals erected to isolate or control a fire or spontaneous heating belowground. During every such inspection, he shall ascertain the general condition of every seal, check it for leakage and presence of gas and ascertain the temperature and humidity of the atmosphere outbye the seal. For every seal, he shall place his signature, with date, on a check-board provided for the purpose at a suitable position on the seal; and this record shall be maintained for a period of not less than three months A report of every such inspection shall also be recorded in a bound paged book kept for the purpose an shall be signed and dated by the person making the inspection :

Provided that the Regional Inspector may, by an order in writing, require such inspection to be made at such shorter intervals as he may specify therein.

1124. Precautions against dust. – (1) The owner, agent or manager of every mine shall take such steps as are necessary for the minimising of emissions of dust and for the suppression of dust which enters the air at any work place belowgsroud or on surface and for ensuring that the exposure of workers to respirable dust is limited to an extent that is reasonably practicable but in any cast not exceeding the limits that ae harmful to the health of persons.

(2) For the purpose of this regulation, a place shall not be deemed to be in a harmless state for person to work or pass or be therein, if the 8 hours time – weighted average concentration of airborne respirable dust –

(i) in milligrams per cubic metre of air sampled by a gravimetric dust sampler of a type approved by and determined in accordance with the procedure as specified by the Chief Inspector by a general or special order, exceeds five in case of manganese ore and the value arrived at by dividing the figures of fifteen with the percentage of free respirable silica present in other cases; or

(ii) in case of respirable asbestos fibres, exceeds tow fibres per mililitre of air sampled by an open membrance filter and measured by a phase contrast optical microscope of a type approved by and in accordance with the procedure as specified by the Chief Inspector or by a general or special order.

Explanation – For the purpose of this regulation, the term "respirable asbestos fibre" means any fibrous form of mineral silicates of chrysolite, actionolite, amosite, anthophyllite, crocidolite, tremolite or any admixure threof with a length of greater than 5 micrometres and a diameter of less than 3 micrometres and a length to – diameter ratio greater than three is to one.

(3) (a) The owner, agent or manger of every mine shall, within six months of the coming into force of the Metalliferous Mines (Amendment) Regulations, 1988 and once at least every six months thereafter or whenever the Regional Inspector so requires by an order in writing, cause the air at every work place where airborne dust is generated to be sampled and the concentration of respirable dust therein determined :

Provided that, if any measurement at any workplace shows the concentration in excess of fifty percent or seventy five percent of the allowable concentration as specified in sub-regulation(2) (hereinafter referred to as 'permissible limit') the subsequent measurements shall be carried on at intervals not exceeding three months or one month respectively :

Provided further that, such measurements shall also be carried on immediately upon the commissioning of any plant, equipment or machinery or upon the introduction of any new work practice or upon any alteration therein that is likely to bring about any substantial change in the level of airborne respirable dust.

(b) The location, frequency, timing, duration and pattern of sampling shall be such that the samples drawn are, as far as practicable, truly representative of the levels of dust exposure of work persons, and he sampling shall include –

(i) 'static monitoring' to identify sources of dust emission and levels of dust concentration in working environment ; and

(ii) 'personal monitoring' of air reaching the breathing zone of work persons.

The sampling shall be duly supplemented by short-term sampling during peak-emissions.

(c)Samples shall be taken –

(i) by a person who has been specially trained for the purpose; and

(ii) by the sampling equipment and accessories that have bee checked to ensure correct maintenance and efficient operation thereof and examined, tested and calibrated on a date which is not earlier than one yar.

(d) Respirable dust content of the samples and quartz content shall be determined as soon as practicable at a properly equipped laboratory approved in writing by the Chief Inspector in that behalf.

(e) All result of measurements of airborne respirable dust and all other relevant particulars shall be systematically recorded within fourteen days of the date of collection of samples, in a bound paged book kept for the purpose. Every entry in the book aforesaid shall be countersigned and dated by the manager within twenty four hours after such recording.

(4)When the dust monitoring results have established that the permissible limit of dust concentrations being exceeded at any place, the relevant operation or operations causing excessive dust shall cease. The operation or operations shall not be resumed and allowed to be carried on until improvements have been made in the prevention and suppression of dust and fresh sampling carried out immediately on resumption of the said operation or operations has established that such improvements have reduced the dust concentration below the 'permissible limit' :

Provided that if the dust prevention and suppression device of any machinery or equipment fails to operate efficiently, the operation of the said machinery or equipment shall likewise cease and shall not be resumed until the defect therein has been rectified:

Provided further that, purely as a continency measure or as a secondary means of protection in a work situation wherein it is technically not feasible to reduce the respirable dust concentration below the 'permissible limit' or during the time period necessary to instal and commission any device or to institute any new work practice for dust prevention or suppression, compliance with the 'permissible limit' of dust exposure may be achieved by remote operation or by job rotation and failing which by the use os a respiratory equipment of a type specified from time to time by the Chief Inspector, by a general or special order in writing in this behalf.

(5) The owner, agent or manager or every mine where need of dust respirators might arise shall –

(a) ensure that, subject sot the second proviso to sub-regulation (4), no person goes into or works or is allowed to go into or work at any place where the respirable dust concentration is in excess of the 'permisible limit' unless he wears a suitable dust respirator; and

(b) Provide –

(i) sufficient dust respirators of appropriate design at no costs to concerned work persons for their use

(ii) for the dust respirators to be regularly cleaned, disinfected and maintained in efficient working order; and

(iii) for the proper fitting of and for thorough training of the concerned workers in the need for and correct use of respirators.

(6) To prevent the liberation and accumulation of dust and the propagation of airborne dust, the following provisions shall have effect, namely :-

(a) dust shall be suppressed as close as possible to its source of formation.

(b) During any operation of drilling or boring on surface or belowground -

(i) the production of dust shall be reduced by using bits which are sharp and of proper shape, by keeping suitable pressure on the bits and by keeping the h0les clear of the cuttings,

(ii) a jet of water shall be directed on to the cutting edge to wet the cuttings or other equally efficient device approved by the Chief Inspector shall be provided and kept in operation throughout the drilling or boring operation to prevent the atmosphere being charged with dust. Where pneumatic drilling is performed, water shall be turned on before turning on compressed air to the drill. When, however, drilling is done by hand, it shall be sufficient if holes are kept constantly moist during such drilling.

(c) Roadways on surface or below ground where mobile mining machinery ply shall be regularly wetted or shall be effectively treated with some other equally efficient agent to reduce dust being raised in the atmosphere to a minimum.

(d) No plant for the screening or sorting of minerals or ores and as far as practicable, no heap of cinder, cement, sand, mortar or other dry and fine material shall be placed within 80 m. of the top of any down-cast shaft or other intake airway not shall any such material be so handled as to make it air-borne an drawn into such shaft or airway.

(e) In every working belowground–

(i) no machinery or equipment which is likely to emit dust in excess of 'permissible limit' shall be operated unless it is equipped with a suitable dust-prevention and suppression device and unless such device is operating efficiently ;

(ii) work places and rock walls in the vicinity thereof shall be, unless naturally wet throughout regularly washed down to prevent accumulation of dust and shall be kept thoroughly wetted during work shifts;

(iii) a current of air sufficient to clear away the dust emitted by any machinery or operation and to dilute the dust concentration below the 'permissible limit' shall be maintained by means of general ventilation and if necessary, by local ventilation, so however that, as far as practicable, the velocity of air in any roadway or workplace shall not be such as to raise dust in the atmosphere;

(iv) after blasting, working places shall not be entered, unless sufficient time has elapsed for dust, smoke and fumes to be cleared by a current of air and the broken ore or rock shall not be moved unless it has been thoroughly wetted with water;

(v) vehicles, tubs and conveyors used for transport of mineral or ores shall be maintained in good condition so as to minimise spillage or leakage and chutes, spiral conveyors, ore passes, bins, tipplers conveyor discharge points and skip loading and unloading installations shall be so controlled as to reduce the formation of dust to the minimum. Such material shall be also thoroughly wetted with water unless it is already wet or other effective means of dust suppression are used;

(vi) unless, owing to special difficulties, exempted in writing by Regional Inspector in that behalf and subject to such conditions as he might specify therein, water in pipes in sufficient quantity and under adequate pressure and independent of any pumping system shall be provided ad maintained so as to get maximum efficiency in the laying of dust.

(f) No process of crushing, breaking, disintegrating, opening, grinding, screening or sieving of ores, minerals or stone or any operation incidental thereto shall be carried out at any mine unless appropriate and effective dust control measures, such as, bust not limited to isolation, enclosure, exhaust ventilation and dust collection are designed, provided, maintained and used.

(g) The exhausted air, belowground or on surface, which contains dust in excess of the 'permissible limit' shall be efficiently diluted and if necessary filtered so as to reduce the cocentration of respirable dust threin below ten percent of the 'permissible limit' before being recirculated into working places or before emission into atmosphere.

(h) Every device used for the prevention and suppression of dust produced by any machinery, equipment or process as also for the filtering of the exhausted air and every dust respirator shall be inspected once at least in every seven days and shall be thoroughly examined and tested at least once in every period of six months and reports of the results of every such inspection, examination and test shall be recorded in the register maintained under clause (e) or sub-regulation (3).

(7) The owner, agent, or manager of every asbestos mine where mining operations are carried on and where 'permissible limit' of dust concentration is exceeded, shall also –

(a) Provide –

(i) sufficient protective clothing in good condition for the use of, at no cost to, the persons employed in such operations, as well as arrangements for proper dusting by means of a vacuum cleaner and for regular washing thereof;

(ii) suitable place for putting on and taking off the protective clothing;

(iii) well maintained washing and bathing places;

(iv)separate place for storing and changing personal clothing;

(v) clean and hygienic place for taking good or snacks -

(b) cause –

(j) sorting, separation, grading, mixing, compression and packing of asbestos fibres and collection and disposal of waste including filtered dust to be carried out in such a manner that asbestos dust does not escape into air ;

(ii) All machinery, plant, work premises and all internal surfaces of the building where milling operations are carried on to be maintained in clean state and free of asbestos waste. Such cleaning shall be carried out by means of a vacuum cleaner or by some suitable exhaust draught ad persons undertaking these operations or present thereat shall be provided with and wear appropriate respiratory equipment and protective clothing;

(iii) asbestos fibres to be packed in impermeable bags;

(iv) cautionary notices, in language or languages understood by the majority of work persons with standard warning symbol to be prominently displayed at every such place were milling of asbestos is carried on and where the 'permissible limit' of dust exposure is likely to be exceeded, to warn the persons as to the hazards to health from asbestos dust, as to the need for the use of protective clothing and of appropriate dust respiratory by persons entering therein and as to the synergistic effect on the hazards of smoking cigarettes, beedis, cigars, etc. and occupational exposure to asbestos dust.

(8) The manager of every mine where airborne dust is generated, shall formulate and implement a scheme specifying –

(a) the location, frequency, timing duration and pattern of sampling ;

(b) the instruments and accessories to be used for sampling ;

(c) the laboratory at which respirable dust content of samples and quartz content shall be determined ;

(d) the format in which the results of measurements of dust concentration and other particulars have to be recorded ;

(e) the organization for dust monitoring and for the examination and maintenance of dust prevention and suppression measures and dusts respirators ; and

(f) the manner of making all persons concerned with the implementation of the dust control measures fully conversant with the nature of work to be performed by each in that behalf.

(9) The Regional Inspector may, where special conditions exist, permit, or require by an order in writing and subject to such conditions as he may specify therein, any variation in the foregoing provisions or in the manager'' scheme.

(10) If any doubt arises as to any matter referred to in this regulation, it shall be referred to the Chief Inspector for decision]1.

125. Precautions against irruption of gas – Where any working is extended to within 30 metres of any stoped-out area or disused workings containing or likely to contain an accumulation of inflammable or noxious gases, there shall be maintained at least one bore-hole not less than 1.5 metres in advance of the working. The operation of drilling the bore hole shall be carried out under the supervision of a competent person; and where

inflammable gas is present or likely to be present, no lamp or light other than an approved safety lamp or torch shall be used in any such working.

126. Recovery and exploratory work – (1) After an explosion of inflammable gas has occurred in a mine only such persons as are authorise by the manager or by the principal official present at the surface, shall be allowed to enter the mine.

(2) When it is intended of proposed to reopen a mine or part thereof, which has been isolated, sealed off or flooded with water to deal with a fire or spontaneous heating, the owner, agent or manager shall, not less than 14 days before the commencement of such work, give notice in writing of such intention or proposal t the Regional Inspector and the Chief Inspector.

(3) Where it is intended to carry out any exploratory work in a mine or part belowground likely to contain irrespirable atmosphere –

(a) no party of less than three persons shall be allowed to proceed to carry out such work; and

(b) every such party shall carry a cage containing suitable birds or other means of detecting carbon monoxide gas approved by the Chief Inspector and also an approved flame safety lamp.

127. Danger from surface water – (1) Where any mine or part thereof is so situated that there is any danger of inrush of surface water into the mine or part, adequate protection against such inrush shall be provided and maintained. If any dispute arises as to whether such protection is adequate or not, it shall be referred to the Chief Inspector for decision.

(2) No workings shall be made in any mine vertically below –

(a) any part of any river, canal, lake, tank or other surface reservoir; or
(b) any spot lying within a horizontal distance of 15 metres from either bank of a river or canal or from the boundary of a lake, tank or other surface reservoir;

except with the permission in writing of the Chief Inspector and subject to such conditions as he may specify therein.

(3) Every application for permission under sub-regulation (2) shall be accompanied by two copies of a plan and section showing the existing position of the workings of the mine, the proposed layout of workings, the depth of the workings from the surface, the position and depth of any stoped -out area in the neighborhood, all faults and other geological disturbances and such other particulars as may affect the safety of the mine or of the persons employed therein.

Explanation. – Where sand or alluvium are lying in the course of a river, canal, lake, tank or reservoir, the depth from the surface shall be reckoned from the surface of hard ground underlying such sand or alluvium.

128. Danger from underground inundation. – (1) Proper provision shall be made in every mine to prevent irruption of water other liquid matter from the workings of the same mine or of an adjoining mine.

(2) (a) No working which has approached withi a distance of 60 metres of any disused or abandoned workins (not being workings which have been examined and found to be free from accumulation of water or other liquid matter), whether in the same mine or in an adjoining mine, shall be extended further except with the prior permission in writing of the Chief Inspector and subject to such conditions as he may specify therein :

Provided that if any heavy seepage of water is noticed in any working approaching, but not within 60 metres of, any such disused or abandoned working, such working shall be immediately stopped, an the Chief Inspector and the Regional Inspector shall forthwith be informed about the occurrence. The workings shall not be extended further except with the prior permission in writing of the Chief Inspector ad subject to such conditions as he may specify therein.

Explanation. – For the purpose of this sub-regulation, the distance between the said workings shall man the shortest distance between the said workings measured in any direction whether horizontal vertical or inclined.

(b)Every application for permission under clause (a) shall be accompanied by two copies of a plan and section showing the outline of such disused or abandoned workings in relation to the workings which are approaching the said workings and such other information as may be available in respect of the said workings.

(c) Except where otherwise permitted by the Chief Inspector by an order in writing and subject to such conditions as he may specify therein, no such working shall exceed two metres in width or height; and there shall be maintained at least one bore-hole near the center of the working face, and sufficient flank holes on each side and where necessary , bore-holes above and below the workings, at intervals of not more than five metres. All such bore-holes shall be, an shall be constantly maintained, at sufficient distance in advance of the working and such distance shall in no case be less than three metres.These precautions shall be carried out under the direct supervision of a competent person specially authorised for the purpose.

(d) The precautions laid down in clause © shall also be observed in any other working where any heavy seepage of water is noticed whether approaching disused or abandoned workings or not.

129. International flooding . (1) When the owner, agent or manager intends or proposed, by introducing water from the surface or from any other part of the mine or from an adjacent mine, to flood any part of the workings of his mine, he shall give in writing not less than 14 days' notice of such intention or proposal to the Chief Inspector and the

Regional Inspector and to the management of all adjoining mines and of such other mines as might be affected by such flooding.

Provided that the Regional Inspector may, be an order in writing and subject to such conditions as he may specify therein, permit such operations to be commenced on any day prior to the expiry of the said 14 days:

Provided further that the Regional Inspector may, by an order in writing, either prohibit any such operation or require that such operation shall not be commenced until such precautions as he may specify therein, have been taken to his satisfaction.

Explanation. – For the purposes of this sub-regulation, a mine shall have the meaning assigned to it under regulation 33.

(2) If the operations in respect of which notice is given under sub-regulation (1), are not commenced within 60 days from the expiry of the said 14 days, the notice shall be deemed to have lapsed and the provision of the sub-regulation(1) shall apply as if no such notice had been given.

130. Construction of a reservoir, dam or other structure. – (1) Where in any mine it is intended to construct a reservoir, dam or other structure to withstand a pressure of water or other material which will flow when wet, or to control an inrush of water (other than a reservoir, dam or structure for storing small quantities of water) the owner, agent or manager shall give in writing not less than 14 days notice of such intention to the Regional |Inspector. Every such notice shall be accompanied by two copies of plans and sections showing the design and other details of the proposed construction.

Provided that where the safety of the mine or of the persons employed therein is seriously threatened, the provisions of this regulation shall be deemed to have been complied with if the said notice is given to the Regional Inspector as soon as the work of construction is commenced :

Provided further that where such a reservoir, dam or other structure was constructed before the coming into force of these regulations, the said copies of the plans and sections shall be submitted to the Regional Inspector within three months of the coming into force of these regulations. Where these details are not available, the Regional Inspector shall be informed of the fact within the aforesaid period.

(2) The Regional Inspector may, by an order in writing, require such modification or alternations to be made by the design of any such reservoir, dam or structure as he may specify therein.

CHAPTER – VIII - Ventilation

131. Standard of ventilation. – (1) It shall be the duty of the owner, agent or manager of every mine to take such steps as are necessary for securing that there is constantly produced ion all parts of the mine belowground, ventilation adequate to clear away smoke, steam and dust; to dilute gases that are inflammable or noxious so as to render them harmless; to provide air containing a sufficiency of oxygen; and to prevent such excessive rise of temperature or humidity as may be harmful to the health of persons. If any doubt arises as to whether the ventilation in a mine or part thereof is adequate or not, if shall be referred to the Chief Inspector for decision.

(2) For the purpose of this regulations, a place shall not be deemed to be in a safe state for persons to work or pass therein if the air contains either less than 19 percent of oxygen or more than 0-5 percent of carbon dioxide or any noxious gas present in quantity likely to affect the health of any person; and such place shall not be deemed to be normally kept free from inflammable gas if the percentage of such gas at any point in that place exceeds one an a quarter.

(3) If with respect to any mine or part thereof the Regional Inspector is of the opinion that the ventilation is not adequate, he may, by an order in writing, require the installation and maintenance of such a mechanical ventilator as is capable of producing adequate ventilation in the mine or part.

132. Mechanical ventilators and their fittings. – (1) Every mechanical ventilator shall be installed in a fireproof housing situated at a safe distance from the opening, shaft or winze; and every mechanical ventilator, other than an auxiliary fan, shall be so designed an maintained that the current of air can be reversed when necessary.

(2) In every mine to which regulation 142 applies, if electricity is used for driving the mechanical ventilator, current shall be supplied to the drive motor of the ventilator through a separate circuit from mthe main distribution point of the mine.

(3) There shall be provided an maintained at every main mechanical ventilator –

(a) a suitable pressure-recording gauge or water gauge; and
(b) except where the ventilator is driven by a constant speed drive, a recording instrument by which the speed of the ventilator shall be continuously registered.

(4) At every shaft or winze ordinarily used for lowering or raising of persons or material, where a mechanical ventilator is installed, there shall be provided a properly constructed air-lock.

Provided that unless the Regional Inspector so requires by an order in writing, the provision of this sub-regulation shall not apply to a shaft or winze where a

mechanical ventilator was installed before the coming into force of these regulations.

(5) The flow of air produced by a mechanical ventilator shall, as far as practicable, be so arranged as to aid the natural ventilation.
(6) Every mechanical ventilator shall be in charge of a competent person appointed for the purpose, who shall not be entrusted with any other additional duties which may require him to go outside the fan house or which may interfere with his duties as incharge of the mechanical ventilator.
(7) In every mine in which a mechanical ventilator is in use, the quantity of air circulating in every ventilating district shall be measure once at least in every 30 days and recorded in a bound paged book kept for the purpose.

133. Standing Orders. – (1) For the purpose of ventilation, every mine shall be divided into such number of districts or splits as to ensure that separate current of fresh air is made available in every such district or split.

(2) The intake air shall be so arranged as to travel away from all stagnant water.

(3) In any mine or part where a mechanical ventilator is used, every drive, crosscut, winze or rise which is a connection between a main intake airway and a main return airway shall, until it has ceased to be required and has been sealed off, be provided with at least two doors so spaced that whenever one door is opened, the other door can be kept closed. Steps shall be taken or ensure that at least one of the doors is always closed. Any such connection which has ceased to be so required, shall be effectively sealed.

135. Brattices, doors, stoppings ad aircrossings. - (1) There shall be provided ad maintained in every mine such number of stoppings , doors and other devices as may be adequate to ensure compliance with the provision of regulations 131. If any doubt arises as to the adequacy of such ventilation devices, it shall be referred to the Chief Inspector for decision.

(2) (a) The space between the frame or every ventilation door and the roof and sides of the road, shall be built up with masonry or concrete, not less than 25 centimetres in thickness.

(b)Every such door shall be self-closing; and whenever opened, it shall be closed as soon as possible, and shall not be propped or fixed so as to remain open.
(c) If such door is required to be frequently kept open for the passage of men or material, there shall be, throughout every working shift, a door attendant at the door.
(d) Unless required for purposes of control of fire or otherwise, if a door is not in use, it shall be taken off its hinges and placed in such a position that it shall not cause any obstruction to the air current.

(3)(a) Every stopping between the main intake and main return airways shall be constructed of masonry or brickwork, not less than 25 centimetres in thickness or such greater thickness as may be required by the Regional Inspector, and shall be faced with a sufficient thickness of lime or cement plaster to prevent leakage of air.

(c) Every stopping in use shall be kept accessible for inspection.

(4) The partitions and walls of every air-crossing shall be not less than 25 centimetres in thickness if constructed or masonry or of concrete not properly reinforced, and not less than 15 centimeters in thickness if constructed of properly reinforced concrete.

(5) Every air-crossing, ventilation stopping, door or brattice shall be maintained in efficient working order and good repair.

(6) A competent person shall, once atleast in every 30 days, examine every airway, air crossing, ventilation stopping and door in use, an shall record the result thereof in a bound paged book kept for the purpose, and shall sign the same and date his signature.

136. Auxiliary fans.- (1) Every auxiliary fan :

(a) shall be installed, located and worked in such a manner that –

(i) a sufficient quantity of air shall, at all times, reach it so as to ensure that it does not re-circulate air; and

(ii) there is no risk of the air which it circulates being contaminated by any substantial quantity of inflammable or noxious gases or dust; and

(b) shall have an air-duct for conducting the air to or from the face or blind end; and such air-duct shall be so maintained as to minimise any leakage or air and to ensure an adequate supply of air to within 4.5 metres of the face or blind end.

(2) No auxiliary fan shall be started, stopped, removed, replace or in any way altered or interfered with, except by or on the authority of an official.

(3) No person shall enter or remain in any place which is dependent for its ventilation on an auxiliary fan, unless such fan is operating efficiently. Whenever the ventilation of any such place has been interrupted, whether by the stoppage of the fan or otherwise, no person shall so enter or remain therein, except for the purpose of restoring the ventilation, unless the place has been examined by a competent person and declared safe.

137. Precautions against fire in ventilation appliances. - The covering of every shaft, winze or rise sealed off or covered for ventilation purposes, every fan drift, duct or casing an every part of a mechanical ventilator or fan within such drift, duct or casting, and every air-crossing an ventilation door shall be constructed of fire-proof material :

Provided that this regulation shall not apply to the small lid of a shaft covering operated by the rope cappel.

138. Ventilation plants to be brought up-to-date. – As soon as any alteration is made in the ventilation of a mine, involving the erection or removal of an air-crossing or stopping or the alteration in the position or installation of a ventilator below ground, the erection, removal, alteration or installation, as the case may be, shall be shown on the ventilation plan maintained under-regulation 61.

139. Obstructions, interruptions and alterations. (1) No material or debris shall be allowed to accumulate in any level, drive, crosscut or any other part of the working below ground so as to impede the ventilation.

(2) Every roadway an working below ground which is not adequately ventilated shall be fenced or barricaded so as to effectively prevent persons entering the same.

(7) If any person becomes aware of any obstruction in, or interference with, or deficiencty of, ventilation in any mine or part thereof, he shall –

(a) if it falls within his power to remedy such obstruction, interference or dificiency, immediately take steps to do so; or
(b) cease all work at that place, and shall forthwith inform his superior official of such obstruction interference or deficiency.

(4) whenever there is any interruption of ventilation by the stoppage or any mechanical ventilator, including an auxiliary fan, installed below ground, the official in charge of the mine or part shall immediately take precautionary measures including withdrawal of men, if necessary against dangers that may arise out of non-compliance with the provisions of regulation 131, to restore the ventilation in the mine or part.

(5) No person shall alter the general system of ventilation in any mine or part except with the authority of the manger :

Provided that, in an emergency, an official or the mine may carry out such alteration as he may deem necessary for the safety of persons, but he shall as soon as possible inform his superior official an the manager about the same in writing.

140. Precautio ns against gas during de-watering and re-opening.- (1) No disused mine or shaft shall be de-watered except under the constant supervision of a no competent person and during such de-watering, approved safety lamps or torches shall be exclusively used, and there shall also be kept burning at every place where persons are at work at least on e approved flame safety lamp.

(2) (a) The first inspection of a mine or part which is re-opened after a discontinuance of mining o0erations for a period exceeding seven days and of any part of amine after being de-watered shall be made by a competent person with an approved

flame safety lamp and during such inspection, no additional light or lamp other than an approved electric torch or lamp shall be used.

(c) The result of every such inspection shall be recorded in a bound paged book kept for the purpose, an shall be sighed and dated by the persons making the inspection, and countersigned and dated by the manager.

141. Precautions against inflammable and noxious gases . – (1) For the purpose of this regulation, inflammable gas shall be deemed to have been found or detected when it is indicated by the lowered flame of a flame safety lamp or, where methane indicators are used, they indicate one and a quarter percent, or more of inflammable gas.

(2) When any person detects the presence of inflammable gas, he shall not brush or waft if out, but shall immediately withdraw from the place and shall inform his superior official about the same.

(3)Where in any place in a mine, inflammable or noxious gas is detected, all persons shall be withdrawn from the place, and the place shall be immediately fenced off so as to prevent persons invariantly entering the same. The competent person in charge shall, without delay, take steps to remove the gas by improving the ventilation.

(4) During the removal of such gas all persons except those necessary for such removal, shall be withdrawn from the return side of the ventilating district in which the gas has been detected unless the quantity of gas is, in the opinion of the competent persons, so small that such withdrawal is not necessary :

Provided that where the danger arises from the presence of inflammable gas, no naked light shall be used in the ventilating district in which the gas is detected.

(5) No person shall be re-admitted into the place where the gas was detected until a competent person has examined the place and has reported that the place is free from gas, Every such examination shall be made with an approved flame safety lamp and, in the case of noxious gas, also with a cage containing suitable birds or other means of detecting carbon monoxide gas approved by the Chief Inspector.

(6) Particulars of every occurrence referred to in sub-regulation (2) and of every examination made under sub-regulation(5) together with a statement as to where and when the gas was found and when it was removed, and in case of inflammable gas, the percentage thereof, shall be recorded in a bound paged book kept for the purpose, Every such entry shall be signed and dated by the competent person making the report, and countersigned and dated by the manager.

(7) In any part of a mine to which regulations 123(1) and 142 apply, or where the Regional Inspector may require by an order in writing, all unused workings which have not been sealed off, shall once at least in every seven days be

inspected by a competent person for the presence of inflammable or noxious gas. A report of every such inspection shall be recorded in a bound paged book kept for the purpose, and shall be signed and dated by the person who made the inspection.

142. Safety lamps to be used in gassy mines. – No lamp or light other than an approved safety lamp or torch or other installation permitted under the Indian Electricity Rules, 1956 shall be used or permitted to be used below ground in any mine, -

(a) in any part of a mine in which an explosion or ignition of inflammable gas has occurred;
(b) in any ventilating district in which inflammable gas has been found; and
(c) in any place in which, in the opinion of the Regional Inspector, inflammable gas is likely to be present in such quantities as to render the use of naked lights dangerous :

Provided that if safety lamps are not immediately available in the case of any mine to which clauses (b) and (c) apply, the Chief Inspector may, by an order in writing and subject to such conditions as he may specify therein, grant a temporary exemption from the operation thereof until such time as safety lamps can be obtained :

Provided further that the Chief Inspector may, by an order in writing and subject to such conditions as he may specify therein, exempt any mine or part thereof from the operation of this regulation on the ground that on account of the special character of the mine or part, the use of safety lamps is not necessary therein.

143. Contrabands. – In every mine or part of which regulation 142 applies, the following provisions shall have effect, namely –

(1) No person shall have in his possession belowground any cigar, cigarette, biri or other smoking apparatus, or any match or other apparatus of any kind capable of producing a light, flame or spark :

Provided that nothing in this sub-regulation shall be deemed to prohibit the use belowground of any apparatus for the purpose of shot firing or of relighting safety lamps, of a type approved by the Chief Inspector.

(2) For the purpose of ascertaining whether any person proceeding belowground has in his possession any article as aforesaid, a competent person other than the banksman, if any, shall be appointed to search every such person immediately before he enters the mine. The competent person shall be on duty throughout the shift, and no duties other than those under this regulation and regulation 149(2) shall be entrusted to him.

(3) The competent person so appointed shall make a thorogh search for the articles aforesaid and in particular shall –

(a) search or turn out all pockets;
(b) pass his hand over all clothings; and
(c) examine any article in the possession of the person searched.

(4) If the competent person suspects that the person searched is concealing any articles as aforesaid, he shall detain him, and as soon as possible refer the matter tot he manager or assistant manager or underground manager. No such person shall be allowed to enter the mine until the manager or other superior official is satisfied that the person has no such article in his possession.

(5) Any person who refused to allow himself to be so searched or who on being searched is found to have in his possession any of the article aforesaid, shall be guilty of an offence against this regulation.

144. Determination of environmental conditions. – In every mine having workings belowground extending to a depth of more than 50 metres from the surface, determinations shall, once at lest in every 30 days be made of temperature, humidity and such other environmental conditions as the Regional Inspector may by an order in writing stipulate,. at the blind end of every drivage and at such other points as the Regional Inspector may specify.

145. Appointment of Ventilation Officer.- In the case of any mine having extensive workings below ground, if the Chief Inspector by an order in writing so requires, the manager shall be assisted by a Ventilation Officer, holding such qualification as the Chief Inspector may specify in the order, who shall be responsible for supervising the maintenance of the ventilation system of the mine in accordance with the provisions of these regulations.

CHAPTER XIV – Lighting and Safety Lamps

146. General lighting .- (1) Adequate general lighting arrangements shall be provided during working hours –

(a) on the surface where the natural light is insufficient : in every engin house, in the vicinity of every working shaft, at every open cast working, at every shunting or marshaling yard, and at very place where persons have to work; and
(b) belowground –

(i) at every shaft landing and shaft bottom or siding which is in regular use;
(ii) in every travelling roadway normally used by 50 or more persons during any shift and in every working stope :

Provided that the provisions of this clause shall be deemed to have been complied with where electric or carbide lamps or lights are provided to every workperson;

(iii) at the top ad bottom of every self-acting incline in regular use;

(iv) at every place on a haulage roadway, at which tubs are regularly coupled or uncoupled or attached to or detached from a haulage rope;

(v) at every place at which tubs are regularly filled mechanically;

(vi) at every room and place containing any engine, motor or other apparatus in regular use; and

(vii) at every first aid station below ground :

Provided that in a mine or part where regulation 142 applies, the lighting fixtures shall comply with the provisions of the Indian Electricity Rules, 1956.

(2) The lighting provided in a mine shall, as far as possible, be so arranged as to prevent glare or eye strain.

(3) Where electric energy is available at the mine, the lighting arrangement made undr sub-regulation (1) shall unless otherwise permitted by the Chief Inspector by an order in writing and subject to such conditions as he may specify by electrical means.

(4) Where electric lighting is used, an additional light or lamp having no connection with electric supply shall be kept continuously burning –

(i) belowground, in every shaft bottom or landing in regular use and in every engine room; and

(ii) on the surface, after dark, at the top of every working shaft and in every engine room.

(5)Every electrical lamp-fitting shall be so constructed as to protect it from accidental damage; and adequate precautions shall be taken to prevent lamps being damaged from shot-firing.

147. Every person to carry a light. – The owner, agent or manager shall provide every person employed belowground with a light or lamp adequate to enable him to perform his duties in a proper and thorough manner and no such person shall proceed or remain belowground without such light or lam.

148. Standards of lighting. – (1) If any doubt arises as to whether any amp or light is of adequate lighting performance or not, it shall be referred to the Chief Inspector for decision.

(2) The Chief Inspector may, from time to time, by notification in the Official Gazette, specify –

(a) The type of lamp to be provided to specified categories of persons employed in a mine; or

(b) The standard of lighting to be provided in specified areas or places in amine.

149. Maintenance and examination of safety lamps. – In every mine or part thereof in which the use of safety lamps is for the time being required by or in pursuance of the regulations, the following provisions shall have effect, namely –

(1) A competent person appointed for the purpose shall clean, trim, examine and lock securely all such lamps before they are issued for use, and no such lamp shall be issued for use unless it is in safe working order and securely locked.
(2) A competent person appointed for the purpose shall examine every safety lamp at the surface immediately before it is taken belowground for use an shall assure himself, as far as practicable from external observation that such lamp is in safe working order and securely locked. \The person so appointed shall not perform any other duties, other than those prescribed under regulation 143(2).
(3) A competent person appointed for the purpose shall examine every safety lamp on its being returned after use. \If on such examination, any lamp is found to be damaged or misused, he shall record the nature of the damage or misuse in a bound paged book kept for the purpose Every such entry shall be countersigned and dated by the manager.
(4) The manager, assistant manger, under ground manager or a competent person appointed for the purpose shall, once at least in every seven days, examine thoroughly every safety lamp in use, and shall record the result of examination of every such lamp in a bound paged book kept for the purpose.
(5) No person shall be appointed as a competent person under this regulation unless he holds a Gas testing Certificate.

150. Use of safety lamps. – (1) Every safety lamp shall be numbered, and so long as the lamp is in use the number thereof shall be maintained in a legible condition.

(2) A competent person appointed for the purpose shall maintain a correct record of the lamps issued from and returned to the lamp-room, and in the record so maintained, the number of the lamp issued to and person shall be entered against his name.

(3) If any person returns to the lamp-room a lamp other than the one issued to him, he shall explain the cause and circumstances of the change.

(4) No unauthorized person shall either himself take or give out any safety lamp from the lamp-room.

(5)Every person who receives a lamp shall satisfy himself that it is complete and in good order; and should he find any effect therein, he shall immediately return it to the lamp-room.

(6) No. person shall willfully damage or improperly use, or unlock or open, or attempt to unlock or open any safety lamp.

(7) Should any person find that the safety lamp in his possession has become defective, he shall at once carefully extinguish the flame, if any, and report the defect to his superior official.

151. Maintenance ad repairs of safety lamps. – (1) Every safety lamp shall be properly assembled an maintained in good order. If any lamp is found to be defective or damaged, it shall not be issued for use until the defect or damage has been remedied.

(2) If the wires of any gauge of a flame safety lamp are broken or burnt away, the gauge shall not be reconditioned for further use.

(3) Damaged and defective gauges, glasses an other parts of a safety lamp shall not be kept or stored in the safety lamp-room.

(4) No glass of a safety lamp and no bulb of an electric safety lamp, shall be replaced except by a glass or bulb of such type as the Chief Inspector may, from time to time specify by notification in the Official Gazette; and no other part of a safety lamp (other than a wick or battery, as the case may be) shall be replaced except by a part manufactured by the manufacturers of the lamp to approved specifications. No repaired part shall be used in a safety lamp.

(5) In every flame safety lamp kept for the purpose of inspection or of testing for or detecting the presence of inflammable gas, no oil other than an oil of a type approved by the Chief Inspector shall be used.

152. Precautions to be taken in safety lamp-room. – (1) No unauthorised person shall enter the safety lamp room.

(2) No person shall smoke in the safety lamp-room

(3) Where petrol, benzol, or any other highly voltile spirit is used in safety lamps, the following precautions shall be observed–

(a) lamps shall be cleaned, refitted and refilled in a separate room;
(b) only such quantity of voltile spirit as is required for one working day shall be kept in any such room;
(c) internal relighters shall not be taken out of lamps and cleaned, repaired or refitted on the same table were lamps are cleaned, refitted or refilled; and
(d) adequate number of suitable fire extinguishers shall be provided and kept ready for use in every such room.

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CHAPTER XV – Explosives an Shotfiring

153. Type of Explosives to be used in mines. – No explosive shall be used in a mine except that provided by the owner, agent or manager. The explosives provided for use shall be of good quality an, as far as can be known, in good condition.

154. Storage of explosives. – (1) No owner, agent or manager shall store, or knowingly allow any other person to store, within the premises of a mine any explosives otherwise than in accordance with the provisions of rules made under the Indian Explosives Act, 1884.

(2) Explosives shall not be taken into or kept in any building except a magazine duly approved by the Licencing Authority under the Indian Explosives Act, 1884 :

Provided that the Regional Inspector may, by an order in writing and subject to such conditions as he may specify therein, permit the use of any store or premises specially constructed at or near the entrance to a mine for the temporary storage of explosives intended for use in the mine or of surplus explosives brought out of the mine at the end of a shift.

(3) Explosives shall not be stored below ground in amine except with the approval in writing of the Chief Inspector and subject to such conditions as he may specify therein. Such storage shall be done only in a magazine or magazines duly licenced in accordance with the provisions of rules made under the Indian Explosives Act, 1884.

(4) Every licence granted by the Licencing Authority under the Indian Explosives Act, 1884 for the storage of explosives, or a true copy thereof, shall be kept at the office of the mine.

155. Cartridges. (1) Unless otherwise permitted by the Chief Inspector by an order in writing and subject to such conditions as he may specify therein, no explosive, other than a fuse or a detonator, shall be issued for use in mine, or taken into or used in any part of a mine, unless it is in the form of a cartridge. Cartridges shall be used only in the form in which they are received.

(2) The preparation of cartridges from loose gunpowder, the drying of gunpowder an the reconstruction of damp cartridges shall be carried out by a competent person and only in a place approved by the Licencing Authority an in accordance with the rules made under the Indian Explosives Act, 1884.

156. Magazines, stores and premises to store explosives. – (1) Every magazine, or store or premises, where explosives are stored shall be in charge of a competent person who shall be responsible for the proper receipt, storage an issue of explosives.

(2) Explosives shall not be issued from the magazine unless they are required for immediate use. If any explosives are returned to the magazine or store or premises, they shall be reissue before fresh stock is used.

(3) Explosives shall be issued only to competent persons upon written requisition signed by the blaster or by a official authorised for the purpose, and only against their signature or thumb impression. Such requisition shall be preserved by the person in charge of the magazine or store or premises.

(4) The person in charge of the magazine or store or premises shall maintain, in a bound paged book kept for the purpose, a clear and accurate record of explosives issued to each competent person and a similar record of explosives returned tot he magazine or store or premises.

157. Cases and containers for carrying explosives. (1) No explosive shall be issued from the magazine or taken into any mine except in a case or container of substantial construction and securely locked. Cases or containers made of iron or steel shall be heavily galvanised; and no case or container provided for carrying detonators shall be constructed of metal or other conductive material.

(2) No detonator shall be kept in a case of container which contains other explosives, materials or tools; and two or more types of detonators shall not be kept in the same case of container :

Provided that nothing in this sub-regulation shall restrict the conveyance of primer cartridges fitted with detonators in the same case or container for use in a wet working or in a sinking shaft or winze.

(3) No detonator shall be taken out from a case or container unless it is required for immediate use.

(4) No case or container shall contain more than five kilogrammes or explosives, and no person shall have in his possession at one time in any place more than one such case or container :

Provided that nothing in this sub-regulation shall prohibit the conveyance of larger quantity of explosives in bulk for supplying an under ground magazine :

Provided further that the Chief Inspector may, by an order in writing and subject to such conditions as he may specify therein, permit the carrying of a larger quantity of explosives in a single case of container, or the use, at one time in one place, of more than one such case or container.

(5)Every case or container shall be numbered; and as far as practicable, the same case or container shall be issue to the same blaster or competent person, as the case may be, every day.

(6) The key of every case or container shall be retained by the blaster in his own possession throughout his shift.

158. Transport of explosives. – (1) While explosives in bulk are lowered or raised in a shaft or winze, a distinguishing mark shall be attached to the cage, skip or bucket

containing the explosive; or the person in charge of explosives shall travel in the same cage, skip or bucket.

(2) Every cage, skip or bucket containing explosives shall be gently lo wered or raised; and it shall be the duty of the banksman or bellman, as the case may be, to adequately warn the winding engineman before the cage, skip or bucket is set in motion.

(3) Where explosives are being carried on a ladder, every case or container shall be securely fastened to the person carrying it.

(4) No person other than a blaster shall carry any priming cartridge into a shaft which is in the course of being sunk. No such cartridge shall b so carried except in a thick felt bag or other container sufficient to protect it from shock.

159. Reserve Stations. – No case container containing explosives shall be left or kept below ground except in a place appointed by the manager or assistant manger or underground manager for the purpose and so situa ted that it is not frequented by workpersons. Every such place shall be kept clean, safe and adequately fenced and legibly marked 'RESERVE STATION'.

160. Blasters. – (1) The preparation of charges an the charging and stemming of holes shall be carried out by or under the personal supervision of a competent person, in these regulations referred to as a 'blaster'. The blaster shall fire the shots himself.

(2) No person shall be appointed to be a blaster unless he is the holder of Manager's, Foreman's Mate's or Blaster's certificate.

(3) If 30 or more persons are employed belowground at any one time in any mine or district under the charge of a competent person referred to in regulation 116, such person shall not perform the duties of a blaster.

(4) No person whose wages depend on the amount of mineral, rock or debris obtained by firing shots, shall be appointed to perform the duties of a blaster.

(5) The manger shall fix, from time to time, the maximum number of shots that a blaster may fire in any one shift; and such number shall not unless the Regional Inspector by an order in writing ad subject to such conditions as he may specify therein otherwise permits, exceed 80 in case they are fired electrically or by means of an igniter cord and 50 in other cases, and shall be based upon –

(i) the time normally require to prepare and fire a shot in accordance with the provisions of these regulations;

(ii) the time required for that blaster to move between places where shots are fired;

(iii) the assistance, if any, available to him in the performance of his said duties; and

(iv) any other duties assigned to him, whether statutory or otherwise :

Provided that the Regional Inspector may, by an order in writing an subject to such conditions as he may specify, permit the manager to fix the maximum number of shots to be fired by a blaster differently from the limits specified in this sub-regulation.

(6) The number of detonators issued to, and in the possession of, a blastr during his shift shall not exceed the maximum number of shots that he is permitted to fire under sub-regulation (5).

161 Shotfiring tools. - (1) Every blaster on duty shall be provided with –

(a) a suitable electric lamp or torch ;
(b) a tool, made entirely of wood, suitable for charging and stemming shotholes;
(c) a scraper made of brass or wood suitable for cleaning out shotholes;
(d) where fuses are used, a knife for cutting off fuses an, unless machine-capped fuses are provided, also a pair of suitable crimpers for crimping detonators; and
(e) where detonators are used, a pricker made of wood or a non-rerrous metal for priming cartridges.

(2) No tool or appliance other than that provided as above shall be used by a blaster.

162. Drilling, charging, stemming and firing of shotholes. – (1) No rill shall be used for boring a shothole unless it allows a clearance of at least 0.3 centimetre over the diameter of the cartridge of explosive which it is intended to use.

(2) No shothole shall be charged before it is thoroughly cleaned.

(3) Before any shothole is charged, the direction of the hole shall, where practicable, be distinctly marked on the roof or other convenient place.

(4) No detonator shall be inserted into a priming cartridge until immediately before it is to be use : however that in case of wt workings, priming cartridges may be prepared at the nearest convenient dry place; and such primed cartridges shall be cartied to the working place in a securely closed case or container. Detonators once inserted into a priming cartridge shall not be taken out.

(5) Unless otherwise permitted by the Chief Inspector by an order in writing and subject to such conditions as he may specify therein, the charge in any shothole shall consist of one or more complete cartridges of the same diameter and the same type of explosive.
(6) The blaster shall, to the best of his judgment, ensure that no charge in a shothole is over-charged of under-charged, having regard to the task to be performed.

(7) No shothole shall be fired by a fuse less than 1.2 metres in length.

(8) Every shothole shall be stemmed with sufficient an suitable non-inflammable stemming so as to prevent the shot from blowing out. Only sand loosely filled in, or soft clay lightly pressed home, or a compact but not hard mixture of sand and clay or water shall be used as stemming.

(9) In charging or stemming a shothole, no metallic tool, scraper or rod shall be used; an no explosive shall be forcibly pressed into a hole of insufficient size.

(10) No shot shall be fired except in a properly drilled, charged an stemmed shothole.

(11) Blasting gelatine or other high explosives shall not be lighted in order to set fire to fuses; but specially prepared 'kai-pieces' of such explosives may be so used. Such 'kai-pieces' shall be prepared only in the magazine, and a correct record of the issue, use and return of such 'kai-pieces' shall be maintained in the books kept under regulations 156(4) an 169(b).

(12) All surplus explosives shall be removed from the vicinity of a shothole before a light is brought near it for the purpose of lighting the fuse.

(13) As far as practicable, a shot shall be fired by the same blaster who charged it.

(14) In any mine in which explosives other than gunpowder are used, every shot shall, if so required by the Regional Inspector, be fired electrically.

(15) No more than 10 holes shall be fired in one round unless they are fired electrically or by means of an igniter cord.

(16) No shothole shall be charge except those which are to be fired in that round; and all shotholes which have bee charged shall be fired in one round.

(17) Where a large number of shots has to be fired, a shotfiring shall, as far as practicable, be carried out between shifts.

(18) No person shall remove any stemming otherwise than by means of water or an approved device, or pull out nay detonator lead or remove any explosive from any charged shothole.

163. Electric Shotfiring. – Where shots are fired electrically, the following provisions shall have effect, namely :-

(1) (a) No shot shall be fired except by means of a suitable shotfiring apparatus; an the number of shots fired at any one time by the apparatus shall not exceed the number for whichit is designed.

(b)Every electrical shotfiring apparatus shall b so constructed and used that –

(i) it can only be operated by a removable handle or plug. This handle or plug shall not be placed in position until a shot is about to be fired and shall be removed as soon as a shot has been fired; and

(ii) the firing circuit is made an broken either automatically or by means of a push-button switch.

(c) (i) No apparatus shall be used which is defective; an every apparatus shall m once at least in every three months, be cleaned an thoroughly overhauled by a competent person.

(ii)If the apparatus fails to fire all the shots in a properly connected circuit, the blaster shall return the apparatus to the manger or assistant manager or underground manager as soon as possible, and it shall not be use again unless it has been tested on the surface and found to be in safe working order.

(iii) The result of every overhaul test or repair is aforesaid shall be recorded in a bound paged book kept for the purpose an shall be signed an dated by the person making the overhaul, test or repair.

(2) No current from a signalling, lighting or power circuit shall be used for firing shots.

(3) The blaster shall –

(a) retain the key of the firing apparatus in his possession throughout his shift;

(b) use a well-insulated cable of sufficient length to permit him to take proper shelter, and in no case, shall this cable be less than 20 meters in length;

(c) before coupling the cable to the firing apparatus, couple up the cable himself to the detonator leads;

(d) take care to prevent the cable from coming into contact with any power or lighting cable or other electrical apparatus;

(e) take adequate precautions to protect electrical conductors and apparatus from injury;

(f) himself couple the cable to the firing apparatus; an before doing so, see that all persons in the vicinity have taken proper shelter as provided under regulation 164; and

(g) after firing the shots and before entering the place of firing, disconnect the cable from the firing apparatus.

(4) Where more than one shot are to be fire at the same time :-

(a) care shall be taken that all connections are properly made;

(b) all shots if fired belowground shall be connected in series;

(c) the circuit shall be tested either for electrical resistance or for continuity before connecting it to the firing apparatus. Such a test shall be made with an apparatus specifically designed for the purpose and after the provisions of regulation 164 have been complied with; and

(d) the cable to the shotfiring apparatus shall be connected last.

164. Taking shelter etc. – [1][(1) The blaster shall, before a shot is charged, stemmed or fired, see that all persons other than his assistants, if any, in the vicinity, have taken proper shelter and he shall also take suitable steps to prevent any person approaching the shot and shall himself take adequate shelter, along with his assistants if any, before firing the shots.

(1-A) in the case of an opencast working the blaster shall not charge or fire a shot –

(a) unless he has taken the precautions laid down in sub-regulation (1).

(b) Unless sufficient warning, by efficient signals or other means approved by the manager, is given over the entire area falling within a radius of 300 metres from the place of firing (hereinafter referred to as the danger zone) an also he has ensured that all persons within such area have taken proper shelter, and

(c) Where any part of a public road or railway lies within the danger zone, unless two persons are posted, one in either direction at the two extreme points of such road or railway which fall within the danger zone who have, by an efficient system of telephonic communication or hooter or loudspeakers or other means approved by the Chief Inspector or Regional Inspector intimated clearance of traffic to the blaster and have also warned the passers by and whenever possible the vehicle also, if any, which have passed by such road or railway :

Provided that if blasting is done in such a manner approved in writing, by the Chief Inspector or Regional Inspector , that the flying fragments from blasting cannot project beyond a distance of ten metres from the place of firing, the provisions of clauses (b) and (c) need not be complied with,

(1-B) (a) In the case of an opencast working, where any permanent building or structure of permanent nature, not belonging to the owner, lies within the danger zone, the aggregate maximum charge in all the holes fired at one time shall not exceed two kilograms unless permitted in writing by the Chief Inspector of the Regional Inspector and subject to such conditions as he may specify therein :

Provided that if blasting is done with delay detonators or other means an that there is a delay of at least half a second between successive shots fired, a maximum charge of two kilograms can be used in each hole;

Provided further that if the shortest distance from the place of firing to any part of such building or structure is less than 50 metres irrespective of the amount of the charge, no blasting shall be done except with the permission in writing of the Chief Inspector or the Regional Inspector and subject to such conditions as he may specify therein.

(b)Notwithstanding anything contained in clause (a) the Chief Inspector may, by an order in writing and subject to such conditions as he may specify, exempt any mine or part thereof from the operation of all or any of the provisions of clause (a) on the ground that the observance of its provisions is not necessary or reasonably practicable on account of the special conditions existing thereat].

(2) Where the workings, either above or belowground, offer insufficient protection against flying fragments or missiles, adequate shelter or other protection shall be provided.

(3) When two working places belowground have approached within three metres of each other, the blaster shall not fire any shot in any one of the said workings unless all persons have been withdrawn from the other working place and the same has been so fenced off as to prevent persons inadvertently coming in direct line of the shot.

(4) In any mine to which regulation 142 appliles, the following provisions shall have effect, namely :-

(a) Notwithstanding anything contained in the regulations, no shot shall be stemmed or fired by any person who does not hold either a Manager's Certificate, or Foreman's or Mate's Certificate together with a Gas-testing Certificate.
(b) Where more shots than one are charged for firing, the shots shall be fired simultaneously. No delay-action detonator shall be used, except with the previous permission in writing of the Chief Inspector and subject to such conditions as he may specify therein.
(c) If in ventilating district, presence of inflammable gas is detected in any place, no shothole shall be charged, stemmed or fired in that place or in any other place situated on its return side till such place has been cleared of gas and declared safe.
(d) Immediately before charging a shothole or a round of shotholes, and again before firing the shots, the blaster shall carefully test for inflammable gas at all places within a radius of 20 metres of the place of firing.

166. Inspections after shotfiring. – (1) After4 a shot has been fired, no person other than the blaster or any other competent person holding a Manger's or Foreman's Certificate appointed for the purpose by the Manager shall enter, or allow any other person to enter, the place until the area is free from dust, smoke or fumes. The blaster or other competent person shall, before any other person enters the place, make a careful examination and with his assistants, if any, make the place safe. No other person shall enter the place and where guards have been posted, they shall not be withdrawn until the examination has been made and the place has been declared to be safe in all respect. In the case of opencast workings, after shots have been fired, an all clear signal shall be given except in the case of a misfire.

(2) After shots have been fired, all persons engaged in clearing mineral, rock or debris shall look for unexploded cartridges and detonators. If such a cartridge and detonator is found, it shall be removed and shall as soon as possible be handed over to a blaster or other official.

167. Misfires. – (1) The number of shots which explode shall, unless shots are fired electrically or by means of an igniter cord, be counted by the blaster and another competent person authorized for the purpose; and unless it is certain that all the shots have been exploded, no person shall re-enter or be permitted to re-enter the place until 30 minutes after the firing of shots :

Provided that where shots are fired electrically, this interval may be reduced to not less than five minutes after the source of electricity has been disconnected from the cable.

(2) In the event of a misfire, the entrance or entrances to the working place shall be barricaded or fenced so as to prevent inadvertent access; and no work other than that of locating or relieving the misfire shall be done therein until the misfire has been located and relieved. In opencast workings, it shall be sufficient to mark the place of the misfire with a red flag.

(3) In the event of a misfire, the tamping may be sludged out with compressed air or water under pressure or removed by such other means as may be approved in writing by the Chief Inspector and subject to such conditions as he may specify therein. The hole shall thereafter be reprimed and fired.

(4) If the misfire contains a detonator, the leads or fuse thereof shall be attached by a string to the shotfiring cable or some distinctive marker.

(5) Except where the misfire is use to faulty cable or a faulty connection, and the shot is fired as soon as practicable after the defect is remedied, or where a shot has been reprimed and fired under sub-regulation (3) another shot shall be fired in a relieving hole which shall be so placed and drilled in such a direction that at no point shall it be nearer than 30 centimetres from the misfired hole.. the now hole shall be bored in the presence of a blaster, preferably the same person who fired the shot.

(6) After a relieving shot has been fired, a careful search for cartridges and detonators, if any, shall be made in the presence of the blaster or other competent person holding a Manager's or Forman's certificate approve for the purpose by the Manager amongst the material brought down by the shot :

Provided that in the case of workings belowground if such cartridge or detonator is not recovered, the tubs into which the material is loaded shall be marked and a further search made on the surface. As far as practicable the search for the detonators and cartridges and the loading of any ore stone or debris which may contain a detonator, shall be carried out without the aid of tools.

(7) If a misfired hole is not dislodged by a relieving shot, ,the procedure laid down I sub-regulation (5) and (6) shall be repeated. A misfired hole which cannot be dealt with in the manger so prescribed, shall be securely plugged with a wooden plug; an no person other than a blaster a mining official or a person authorised for the purpose shall remove or attempt to remove such plug.

(8) When a misfired shot is not found, or when a misfired shot is not relieved or reblastered, the blaster shall, before leaving the mine, give information of the failure to such official as may relieve or take over charge from him. He shall

also record, in a bound paged book kept for the purpose, a report on every misfire, whether suspected, and whether relieved or not relieved. It shall be the responsibility of the relieving blaster or official also to sign the report and later to record in the said book the action taken for reliving the misfired shothole.

(9) The blaster of the next shifts shall locate an reblast the misfired hole, but if after a thorough examination of the place where the misfire was reported to have occurred, the blaster or other competent person holing a Manager's or Foreman's certificate appointed for the purpose by the Manger, is satisfied that no misfire had actually occurred, the may permit drilling in the place.

168. Precaution in as of sockets etc. – (1) Before the commencement of drilling in any working place, the competent person in charge of the place shall see that all looser rock is removed from the face and the area lying within a radius of two metres of the proposed shothole is thoroughly cleaned or washed down with water and carefully examined for the presence of misfires or sockets :

Provided that where special conditions exists, the Chief Inspector may, by an order in writing and subject to such conditions as he may specify therein, grant a relaxation from these provisio ns.

(2) If any socket is found, it shall be dealt with in the manner prescribed in regulation 167.

(3) No person shall bore out a hole that has once been charged, or attempt to withdraw a charge either before firing or after a misfire, or deepen or tamper with any empty hole or socket left after shotfiring.

169. Duties of blaster at the end of his shift . _Immediately after the end of his shift, the blaster –

(a) shall return all unused explosive to the magazine, or where a store or premises or underground magazine is provided under regulation 153, to such store or premises or magazine; and

(b) shall record, in a bound paged book kept for the purpose, the quantity or explosive taken, used an returned, the places where shots were fired and the number of shots fired by him, and misfires, if any. Every such entry shall be signed and dated by him.

170. General precautions regarding explosives. (1) No person, whilst handling explosives or engaged or assisting in the preparation of charges or in the charging of holes, shall smoke or carry or use a light other than an enclosed light, electric torch or lamp :

Provided that nothing in this sub-regulation shall be deemed to prohibit the use of an open light for lighting fuses.

(2) No person shall take any light other than an enclosed light, electric torch or lamp into any explosive magazine or store or premises.

(3) No person shall have explosives in his possession except as provided for in these regulation, or secret or keep explosives in a dwelling house.

(4) Any person finding any explosives in or about a mine shall deposit the same in the magazine or store or premises. Every such occurrence shall be brought to the notice of the manager in writing.

CHAPTER XVI - Machinery and Plant

171. Use of certain machinery belowground. – (1) No internal combustion engine or steam boiler shall be used belowground in a mine expect with the permission in writing of the Chief Inspector and subject to such conditions as he may specify therein.

(2) In every mine or part of a mine to which regulation 142 applies, only flameproof electric apparatus and equipment shall be used belowground unless otherwise provided for under the Indian Electricity Rules, 1956.

172. General provisions about construction and maintenance of machinery. – All parts and working gear whether fixed or movable, including the anchoring and fixing appliances, of all machinery and apparatus used as or forming part of the equipment of amine, an all foundations in or to which any such appliances are anchored or fixed shall be of good construction, suitable material, adequate strength and free from visible defect, and shall be properly maintained.

173. Apparatus under pressure. – (1) All apparatus, used as or forming part of the equipment of a mine, which contains or produces air, gas or steam at a pressure greater than atmospheric pressure shall be so constructed, installed and maintained as to obviate any risk of fire, bursting, explosion or collapse or the production or noxious gases.

(2) Every air receiver forming part of a compressing plant shall be fitted with a safety valve and an air gauge which shows pressure in excess of the atmospheric pressure.

(3) Before an air-received is cased in or put in commission, the engineer or other competent person shall subject it to a hydraulic test at a pressure at least one-and-a-halftimes the maximum permissible working pressure. A similar test shall be made after every renewal or repair and in any case at intervals of not more than three years. The result of every such test shall be recorded in a bound paged book kept for the purpose and shall be signed and dated by the person carrying out the test.

(4) The supply of air for air-compressors shall be drawn from a source free from dust and fumes.

174. Precautions regarding moving parts of machinery – (1) Every winch or windlass shall be provided with a stopper, pawl or other reliable holder.

(2) Every fly-wheel and every other dangerous exposed part of any machiery used as, or formig part of, the equipment of a mine shall be adequa tely fenced by suitable guards of substantial construction to prevent danger; and such guards shall be kept in position while the parts of th machinery are in motion or in use, byt they may b removed for carrying out any examination, adjustment or repair if adequate precautions are taken.

(3) No person shall, or shall be allowed to, repair, adjust, clean or lubricate machinery in motion where there is risk or injury.

(4)No person shall, or shall be allowed to, shift or adjust a driving belt or rope while the machinery is in motion unless a proper mechanical appliance is provided and used for the purpose.

(5) No person in close proximity to moving machinery shall wear, or be permitted to wear, loose outer clothing.
(6) No unauthorised person shall enter any engine room or in any way interfere with the engine.

175. Engine rooms an their exits. – Every engine, motor an transformer room on the surface an every room in which highly inflammable materials are stored on the surface shall be kept clean, an be provided with at least two exists, Every such exit shall be properly maintained and kept free from obstruction.

176. Working and examination of machinery. (1) No machinery shall be operated otherwise than by or under the constant supervision of a competent person.
(2) In every mine to which regulation 142 applies, no person shall be appointed to supervise or operate any electrical machinery, apparatus or appliance other than a telephone or signalling vice or an electric lamp or light unless he holds a Gas-testing Certificate.
(3) Every person in charge of any machinery, apparatus or appliance shall, before commencing work, see that it is in proper working order; an if he observes any defect therein, he shall immediately report the fact to the manager, engineer or other competent person.
(4) Every person in charge of an air-receiver shall see that no extra weight is added to the safety valves and that the permissible pressure of air is not exceeded.
(5) A competent person or persons appointed for the purpose shall, once at least in every seven days, make a thorough inspection of all machinery and plant in use, and shall record the result thereof in a bound paged book kept for the purpose.

CHAPTER XVII – Miscellaneous

177. Fences. (1) Every tank or reservoir or other dangerous place in or about a mine, which has been formed as a result of, or is used in connection with, mining operations, shall be kept securely fenced.

(2) Every fence erected on the surface shall, once at least in every seven days, be examined by a competent person. A report or every such inspection shall be recorded in a bound paged book kept for the purpose, and shall be signed and dated by the person who made the examination.

(3) Any fence, gate or barricade may be temporarily removed for the purpose of repairs or other operations, if adequate precautions are taken.

(4) If any doubt arises as to whether any fence, guard, barrier or gate provided under these regulations is adequate, proper or secure, or as to whether the precautions taken under sub-regulation(3) are adequate, it shall be referred to the Chief Inspector for decision.

178. Notices. – where at any place smoking or unauthorised entries prohibited, notices to that effect shall be posted at conspicuous places at every entrance to the place.

179. Storage belowground of calcium carbide. – Calcium carbide shall not be taken or kept belowground until about to be used, except in a secure metal case or container containing not more than half a kilograme in weight thereof. No person shall have in the mine at any one time more than one such case or container.

180. Danger from poisonous substances. - (1) At every mineral dressing or separating plant where cyanide or other poisonous substance is used, there shall be kept a sufficient supply of a satisfactory and efficient antidose for poisoning.

(2) Water containing poisonous or injurious matter in suspension or solution must be effectively fenced off to prevent inadvertent access to it, and notice boards shall be put up at suitable places to warn persons from making use of such water.

(3) In no case shall water containing any poisonous matter in suspension or solution in a dangerous concentration be permitted to escape.

181. General Safety. – No person shall negligently or wilfully to anything likely to endanger life or limb in the mine, or negligently or wilfully omit to do anything necessary for the safety of the mine or of the persons employed therein.

1[182. Use, Supply maintenance of protective Footwear. – (1) No person shall go into, or work in, or be allowed to go into, or work in, a mine, unless he wears a protective

footwear of such type as may be approved by the Chief Inspector by a general or special order in writing.

(2) The protective footwear referred to in sub-regulation(1) shall be supplied free of charge, at intervals not exceeding six months, by the owner, agent or manager of a mine, who shall at all times maintain a sufficient stock thereof in order to ensure immediate supply as and when need for the same arises. Where a protective footwear is provided otherwise than as aforesaid, the supply shall be made on payment of full cost.

(3) The owner, agent of manager of a mine shall provide at suitable places in the mine dubbing and revolving brushes or make other suitable alternative arrangements for the cleaning of protective footwear by the persons using them. It shall however be the responsibility of the person supplied with the protective footwear to arrange the repair of the same at his own cost.

182A. Use and supply of helmet. (1) No person shall go into, or work, in or be allowed to go into or work in, a mine, other than the precincts of a mine occupied by an office building, canteen, creche, rest shelter, first aid room or any other building of a similar type, unless he wears a helmet of such type as may be approved by the Chief Inspector by a general or special order in writing :

Provided that where the Chief Inspector is of the opinion that due to special circumstances it is not necessary of reasonably practicable for any person or class of persons going into, or working in, a mine to wear a helmet, he may, by a general or special order in writing and subject to such conditions as he may specify therein, exempt such person or class of persons, from the operation of the provisions of this sub-regulation.

(2) The helmet referred to in sub-regulation(1) shall be supplied free of charge, at intervals not exceeding three years or such other interval as the Chief Inspector may specify by a general or special order in writing by the owner, agent or manager of a mine, who shall at all times maintain a sufficient stock thereof in order to ensure immediate supply as and when need for the same arises :

Provided that when a helmet is accidentally damaged during legitimate use, the owner, agent or manager shall immediately replace the damaged helmet free of cost.

(3) Where a helmet is provided otherwise than as aforesaid, the supply shall be made on payment of full cost.

182B. Supply of other protective equipment. – (1) Where is appears to the Regional Inspector or the Chief Inspector that any person or class of persons employed in a mine is exposed to undue hazard by reason of the nature of his employment, he may, by a general or special order in writing, require the owner, agent or manager of the mine to supply to such person or class of persons, free of charge, gloves, goggles, shinguards, or such other protective equipment as may be specified in the order.

(2) The protective equipment provided under sub-regulation(1) shall be replaced free of charge by the owner, agent or manager whenever it is rendered unserviceable by legitimate use. In any other event, the replacement shall be made on payment of full cost.

(3) If any dispute arises as to the life of any protective equipment, it shall be referred to the Chief Inspector for decision.

182C. Obligation of persons provided with protective equipment. – Whenever any person is supplied by the owner, agent or manager of a mine with any protective equipment, he shall use the same while doing the work for which he is supplied with such protective equipment.]

183.Information about sickness. – Every official or competent person shall, in case of sickness or of absence, give early and sufficient notice thereof to his superior official or the underground manager or the assistant manager or the manager, as the case may be, so that a substitute may be arranged.

184. Man power Distribution Plan. – During the first week of every month, a survey shall be made of the number of persons normally employed in every district and other places belowground in the mine; an a sketch plan showing the results of such a manpower survey, and signed and dated by the manager, shall be kept in the office of the mine and a copy thereof shall be kept with the attendance clerk.

185. Mining Mates and Mine Foreman. – (1) No person shall be appointed as a competent person under regulations 37(1), 72, 101, 120(2), 123(4), 135(5), 136(3) and 140(2) unless he is the holder of either a Foreman's or a Manager's Certificate :

Provided that in the case of mine having working belowground, the certificate aforesaid shall be one which is not restricted to mines having opencast workings only.

(2) No person shall be appointed as a competent person under regulations, 116,117,125,128(2)(c), 140(1) and 141, unless he is the holder of either a Mate's or a Foreman's or a Manager's Certificate :

Provided that –

(a) in the as of a mine having workings belowground, the certificate aforesaid shall be one which is not restricted to mines having opencast workings only; and
(b) in the case of a mine to which regulation 142 applies, every person holding a Mate's or Foreman's Certificate shall also hold a Gas-testing Certificate.

186. Delayed application of certain provisions. – The provisions of regulations 32, 34, 35, 37, 38, 160(2), 176(2) and 185 shall not come into force1 in respect of any mine and the provisions of Regulation 78(1) shall not come into force1 in respect of any mine other

than a gold mine until such date or dates as the Central Government ma y notify in that behalf in the Official Gazette :

Provided that, till such date as aforesaid, if any doubt arises as to whether any person appointed as a manager, assistant manager, underground manager, surveyor, mine foreman, mining mate, winding engine man or blaster is competent to perform the duties assigned to that post, it shall be referred to the Chief Inspector for decision.

187. Officials to be literate. – After coming into force of these regulations, no person shall be appointed as an official of a mine unless he is literate and is conversant with the language of the district in which the mine is situated or with the language understood by a majority of the persons employed in the mine :

Provided that this regulation shall not apply to any official employed in any mine on the date of coming into force of these regulations :

Provided further that so much of this regulation as requires a person to be conversant with the language of the district or of the majority of persons shall not apply to assistant managers, underground managers, engineers, and surveyors.

188. Writing of reports. – If any person required to make any report is unable to write, he shall be present when his report is written for him, and shall have it read over to him, and shall then attach his thumb mark to it or sign it. The person writing the report shall certify that it has been read over to the person for whom it was written, and shall sign the certificate an date his signature.

189. Payment of fees. – Any fees payable under these regulations shall be paid directly into the Treasury or a branch of the State Bank of India or by means of a Crossed Indian Postal Order and the receipt of the Treasury or Bank or Postal Order shall be sent to the Chief Inspector along with the application to which the fee relates.

2[190. Place of accident. – (1) Whenever an accident occurs in or about a mine causing loss of life or serious bodily injury to any person, the place of accident shall not be disturbed or altered before the arrival or without the consent of the Chief Inspector or the Inspector to whom notice of the accident is required to be given under sub-section (1) of section 23 of the Act unless such disturbance or alteration is necessary to prevent any further accident, to remove bodies of the deceased, or to rescue any person from danger, or unless discontinuance of work at the place of accident would seriously impede the working of the mine:

Provided that the work may be resumed at the place of accident in case the chief inspector or the inspector fails to inspect the place of accident within seventy-two hours.

(2) Before the place of accident involving a fatal or serious accident is disturbed or altered due to any reason whatsoever, a sketch of the site illustrating the accident and all relevant details shall be prepared (in duplicate) and such sketch shall be duly signed

by the manager or assistant manager, safety officers, surveyor and the workmen's inspector or, where there is no workmen's inspector by a work person nominated by the workers in this behalf :

Provided that, if the place is disturbed or altered to prevent further accident or rescue persons from danger before the sketch could be prepared, the same shall be prepared immediately thereafter giving all relevant details as existed before the place was disturbed or altered.

(3) One of the authenticated sketches shall be delivered or sent to the concerned inspector or Mines.

190A. Emergency plan. – (1) The manger of every mine having workings below ground shall prepare a general plan of action for use in time of emergency. The plan shall outline the duties and responsibilities of each mine official and men including the telephone operators, so that each person shall know his duties in case fire, explosion or other emergency occurs. All official and key men shall be thoroughly instructed in their duties so as to avoid contradictory orders and confusion at the time when prompt and efficient action is needed. The emergency plan shall also provide for mock rehearsals at regular intervals.

(2) The manager shall submit a copy of the aforesaid emergency plan prepared by him to the regional inspector, within 60 days of the coming into force of the Metalliferous Mines (Amendment) Regulations, 1985, or in the case of a mine which is opened or re-opened thereafter, within 30 days of such opening or re-opening. The regional inspector may, by an order in writing approve of such action plan, either in the Form submitted to him or with such additions and alterations as he may think fit, and the action plan so approved shall be enforced at the mine.

(3) On receiving information of any emergency, the manager and his absence the principal official present at the surface, shall immediately put emergency action plan in operation.]

191. Taking samples from mines. – Where for official purposes, an Inspector considers it necessary to take samples of any mineral, rope or other material, the owner, agent or manager shall make over to him such samples in such quantities as he may require.

1[192. * * * * *

193. Chief Inspector etc. to exercise powers of the Regional Inspector. – Any power granted under these regulations to the Regional Inspector may be exercised by the Chief Inspector or an Additional Chief Inspector or a Deputy Chief Inspector or any other Inspector authorised in writing in this behalf by the Chief Inspector.

194. Appeals to the Chief Inspector.- Against an order made by the Regional Inspector under any of these regulations, an appeal shall lie, within 15 days of the receipt of the

order by the appellant, to the Chief Inspector who may confirm, modify or cancel the order.

195. Appeals to the Mining Boards or the Central Government. – (1) Against any order of the Chief Inspector specified below an appeal shall lie, within 20 days of the receipt of the order by the appellant, to the 2[Committee constituted under section 12 of the Act[]:

(i) Original orders passed under proviso to regulation 34(2), regulation 107(3), regulation 109(1), and regulation 109(4), regulation 110, regulation 111(2), regulation 123(1), regulation 127(2), and regulation 128(2).

(ii)Orders passed on appeal against Regional Inspector's orders made under regulation 108, clause (a) of regulation 112(2), clause (e) of regulation 119(3) and clause (b) of regulation 123(3) .

(2) Every order of the Chief Inspector, against which an appeal is preferred under sub-regulation(1) shall be complied with pending the receipt at the mine of the decision of 3[the committee] :

Provided that 3[the committee] may on application by the appellant, suspend the operation of the order appealed against pending the disposal of the appeal.

196. Repeal and Saving. – The Indian Metalliferous Mines Regulations, 1926 and the Mysore Gold Mines Regulations, 1953 are hereby repealed :

Provided that all acts done or orders issued under any of the said regulations shall, so far as they are not inconsistent with these regulations, be deemed to have been done or issued under the corresponding provisions of these regulations.

FIRST SCHEDULE

FORM I
(See Regulations, 3,6,7,8)
Notice of opening, closing or change etc.

From
……..

……

To

1. The Chief Inspector of Mines Dhanbad, E.R.
2. The regional Inspector of Mines ……..
3. ……..
4. ……..

Sir,

I have to furnish the following particulars in respect of (I) …… at ……(Name) ……..(mineral) mine of ……(owner) :

---

1. *In case of CHANGE OF NAME OR MINE :
old name of mine …….. date of change ……..

---

2. (a) Situation of the mine : Village …… Police Station ……..Sub-Division (Taluq) ……State…….
*(b) In case of ANEW MINE, particulars of situation of mine :
Post Office ……..Telegraph Office ……..
Railway Station …… Rest House …….
(Give distance therefrom)
Means of travelling ……

Present Previous*

3. (a) Name and Postal address of (ii)
(a) Owner ……..
(b) Managing agent ,if any ……..
(c) Agents, if any…….
(d) Manager ……
*(b) In case of change, date of change …….

---

*4. (a) Name and qualifications etc. of Manager/Assistant Manager/Underground Manger/ Engineer/Surveyor (iii) whose appointment is terminated/who is appointed (iii):

(b) Date of appointment/termination of appointment (iii) :

---

*5 Date on which it is intended to open/re-open/abandon/discontinue (iii) the mine :

---

*6 Actual date of opening/Re-opening abandonment/discontinuance (iii) of the mine :

Yours faithfully,
Signature ……
Designation : Owner/Agent/Manager
Date ……..

INSTRUCTIONS
(i) Mention the matter to which the notice refers.
(ii) Need not be filled in if the notice relates to Item 4,
(iii) Delete whatever is not applicable.
*Only such columns to be filled in respect of which notice in given.

FORM II
(See Regulation 4)
Quarterly Return for the quarter ending ……..19

1. Name of mine ….…….Mineral worked …….postal address of mine …….
2. Situation of Mine : Place District ……..

State ……

3. Name of Owner ……
   Postal address of owner……
4. Name of managing agents, if any ……
   Postal address of managing agents, ……..
5. Name of agent, if any…….
   Postal address of agent ……
6. Name of manager ……..
   Postal address of manager ……..
7. Tables A to C duly filled in, are attached.
   Certified that the information given above and in Tables A to C below is correct to the gest of my knowledge.

Yours faithfully,
Signature ……
Designation : Owner/Agent/Manager

TABLE A
MACHINERY

(I)	Number in use

1. Rock drills :

   (i)
   (ii)
   (iii)

2. Heavy earth moving machinery :

   (i)
   (ii)
   (iii)
   (iv)

   (v)

3. Mechanical loaders used below ground :
   (i)
   (ii)
   (iii)

4. Conveyors : (2)
   (i)
   (ii)
   (iii)

———————————————————————————————————

Signature of person
Signing the return

INSTRUCTIONS

(1) Give types separately.
(2) Give length in metres.

1[TABLE A-I – OUTPUT, DESPATCH AND STOCKOFMICA* (in kilogrammes)

1	2	3	4	5	6
	Stock at the beginning of the quarter	Output during the quarter	Sale or Dispatches during the quarter		Stock at the end of the quarter
			Consigned by rail or road	Sold locally	
Crude mica Dressed Mica Mica Splittings Waste Mica					

Signature of person
Signing the return

INSTRUCTIONS

*If any other mineral, such as beryl, is also produced from the mine, particulars relating to such minerals shall be given in Table A-II

TABLE A-II – OUTPUT, DESPATCH AND STOCK OF MINEALS OTHER THAN MICA (a)

Mineral worked (b)	Stock at the beginning of the quarter	Output of mineral (c) during the quarter	Sale or dispatches during he quarter		Stock at the end of the quarter	Metal extracted if any (b)
			For export market	For home consumption		Name Qty.

Signature of person
Signing the return

INSTRUCTIONS

(a) The figures should be stated
  (i) in the case of gem-stones, in carats ;
  (ii) in the case of gold, silver and other precious metals, in grams;
  (iii) in the case of alum, amber, asbestos, beryl, graphite, jadestone, stealite, tin-ore, tungsten-ore, radio active minerals and rare minerals, such as, molybdenite, monazite, pitch blende, samarskite, tantalite and triplite, and also in case of tin, in kilogrammes; and
  (iv) in the case of clay, limestone, magnesite, marble, phosphetic rock, slate, salt and other stone, and all metalliferous ores except those referred to above, and also in case of other metals, in tonnes.
(b) If more than one mineralsare raised or metals extracted, separate figures should be given for each one of them.
(c) If the mineral is dressed, processed or treated before despach, the output of the dressed, processed or treated mineral (instead of crude ore), as the case may be, should be given].

TABLE B

NUMBER OF MAN-DAYS ETC.

Give maximum number of persons employed on any one day during the quarter-

(i) in workings belowground on ……(a)……

(ii) in all in the mine on ……..(a) ……

Number of working days during the quarter :

	Aggregate number of mandays workerd	Aggregate number of man days lost on account of absence				
	(b)	(c)	(d)			(e)
Below ground	Men	Women	sickness	Accident	Leave	Other cause	Total
(i) Face Workers and Loaders							
(ii) Others							
Opencast Workings :							
(i) Miners & Loaders							
(ii) Others(f)							
Above ground :							
Total							

If there is any marked increase or decrease in attendance or absence, please account for it.

Signature of person
Signing the return _____

INSTRUCTIONS

(a) Give day of the week and the date and month.

(b) The information should cove all persons "Employed" in the mine as defined in clause(h) of section 3 of the Mines Act, 1952, including clerical and subordinate supervisory staff.

(c) Total number of man-days worked should be obtained by adding the daily attendance for the whole quarter

(d) Total number of man-days lost by absence should be obtained by adding the daily absences for the whole quarter.

(e) Absences should include all cases in which a person is "scheduled to work" or is expected to turn up for work, but does not. All permanent employees are to be treated as "Schedule" to work. So far as temporary or casual employees are concentrated a person who attended work during the preceding week should be considered as scheduled to work during the week under consideration unless :

(i) He has reported his intention to quit, or

(ii) His services have been terminated by the management, or

(iii) He does not turn up for work during the whole week.

A person who has not worked during the preceding week, should be considered as "scheduled to work" only from the day in which he joins work during the week under consideration. Absence due to strike, lockout, lay-off or maternity leave should not be included as absence here.

(f) Persons employed in the removal of over burden should be included amongst "others" and not among "miners and Loaders".

TABLE C
HOURS OF WORK AND EARNING

Information should be furnished in respect of one complete working week during the last month of the quarter(a).

1. Attendance, man-hours worke d and cash earnings.

	Average daily attendance during the week (b)	Aggregate number of man-hours worked during the week(c)	Total cash payments for work done during the week (d)			
			Basic wages	Dearness allowance	Other cash payments (e)	total
			Rs.	Rs.	Rs.	Rs.
Below Ground: (i)Mine Foreman and Mining Mates (ii)Face Workers and Loaders (iii)Others						
Opencast Workings (i) Mine Forman and Mining Mates (ii) Mines & Loaders (iii) Others (Men) (f) Women)						
Above Ground: (i) Clerical and Supervisor y staff (ii) Others (men) women)						

2. total estimated value of concessions in kind (g) given during the week : Rs. –
3. Normal hours of production shifts :

	From	To
1st Shift		
2nd Sift		

3rd Shift

4. Number of workings days in the week :
5. If there is any major change in wages or hours of work as compared to the preceding quarter, please account for the change here.

Signature of person
Signing the return _____

INSTRU CTIONS

I. the information should cover all persons "employed" as in Table C. Particulars relating to payments etc., to monthly paid staff should be included on a pro-rata basis.

II. Average daily attendance should be obtained by dividing the aggregate number of attendances on all the shifts on all days during the week by the number of working days. Any day on which the mine did not work, for any cause whatsoever, should not be treated as a working day.

III. Aggregate number of man-hours worked during the week should be obtained by adding for the whole week, the number of man-hours worked every day. The number of man-hours worked on a day is obtained by summing up the number of hours worked by each person attending work on each of the shifts during the day, including o vertime worked, if any.

IV. Total cash payments should include all remuneration payable (and paid) for work done during the week before making deductions, if any, towards fines, provident fund contributions, etc., Employer's contributions to the provident fund or on account of welfare provisions should not be included. Bonuses not payable for every pay-period should also not be included.

V. Including over-time payments.

VI. Persons employed in the removal of overburden should be included among "Others" and not among "Miners and Loaders" or "Face Workers and Loaders".

VII. Concessions in kind (such as supply of food-stuffetc. Free or at subsidised prices) should be estimated in terms of the difference between the monetary value of the food stuffs, etc. at cost price and the value realised by sale at concessional price.

FORM III
(See Regulation 5)
Annual Return for the year ending on the 31st December, 19

1. Name of mine ……Mineral worked……
2. Postal address of mine ……..
3. Date of opening ……
4. Date of closing (if closed)
5. Situation of mine District……
   State …….
6. Name of Owner…….
   Postal address of Owner……..
7. Name of Managing Agents (if any)……..
   Postal address of Managing Agents……
8. Name of Agent (if any) as defined in section 2(c) of the Mines Act, 1952…….
   Portal address of Agent …….
9. Name of Manager…….
   Postal address of Manager……
10. Other superior supervisory staff employed as at the end of the yar. (Please give designations and numbers employed).
    ……..

……...

11. (a) Whether machinery is used ……
    (b) Nature of power used, if any (e.g., electricity, steam, compressed air, etc.)
12. Tables A to E2 duly filled in, are attached.

Certified that the information given above and in Tables A to E2 below is correct to the best of my knowledge.

Yours faithfully,
Signature ……
Designation : Owner/Agent/Manager

TABLE A.-EMPLOYMENT

Maximum number of persons employed on any one day during the year _____
(i)in workings below ground on ……(a)……..
(ii)in all in the mine on …….(a)……..

Classification	Total number of man-days worked during the year (b)			Number of days worked during the year	Average daily number of persons employed (c)				Total wages or salary bill for the year(d)
(1)	(2A)	(2B)	(2C)	(3)	(4A)	(4B)	(4C)	(4D)	(5)
Below ground: (i) Foremen and Mining Mates (ii) Face workers and loaders (iii) Others									
Opencast Working : (i) Foremen and Mining Mates (ii) Miners and Loaders (iii) Others (e)									
Above ground : (i) Clerical and Supervisory staff (excluding the superior supervisory staff mentioned in item 10 of Form III) (ii) Workers in any attached factory, workshop or mineral dressing plant. (iii) Others.									
Total									

Sigature of person
Signing the Return ……..

INSTRUCTIONS

(a) Give day of the week and the date and month.
(b) Obtained by adding the daily attendance for the whole year.
(c) Obtained by dividing the number of man-days worked by the number of working days. The total shown in column (4D) should agree with the quotient obtained by dividing the total shown in column (2C) by the number of working days shown in column (3)
(d) Includes all cash payments including bonuses. Employer's contributions to provident funds, welfare activities, etc., and concessions in kind should not be included.
(e) Persons employed in the removal of overburden should be included among "Others" and not among "Miners and Loaders" or "Face Workers and Loaders".

TABLE B – TYSPE AND AGREGATE HORSE-POWER OF ELECTRICAL APPARTATUS

1. Electricity generated, purchased or received otherwise (in kwh).

	Generated	Purchased or received
(a) For own use (b) For sale		

2. System of supply (whether direct current or alternating current) :-
   (i) Voltage of supply
   (ii) Periodicity
   (iii) Source of supply

3. Voltage at which current is used for :

	Above ground	Below ground
(a) Lighting (b) Power		

4. Length of cables (in metres)
   (i) High pressure
   (ii) Medium pressure

5. Total number and aggregate horse-power of motors

	In use		In reserve	
	Number of units	Total h.p.	Number of units	Total h.p.
(a) Installed above ground for : (i) Winding (ii) Ventilation (iii) Haulage (iv) Pumping (v) Mineral treatment plants (vi) Workshops including foundry, smithy etc. (vii) Miscellaneous (specify)				

Total :				
(b) Installed above ground for : (i) Winding (ii) Haulage (iii) Ventilation (iv) Pumping (v) Other portable machines (drill, etc.) (vi) Conveyors, loaders, scrapers, etc. (vii) Electric traction (locomotives, etc.) (viii) Miscellaneous (specify) _____ Total :				

Signature of person
Signing Return ……

TABLE. C- TYPE AND AGGREGATE HORSE-POWER OF MACHINERY AND EQUIPMENT OTHER THAN ELECTRICAL APPARATUS

	In use		In reserve	
	Number of units	Total h.p.	Number of units	Total h.p.
(I) Power generators : (a) Boilers (b) Steam Turbines (c) Diesel Engines (d) Gasoline, Gas or Oil Engines other than Diesel Engines (e) Hydraulic Turbines or Water Wheels (f) Air Compressors Total :				
(II)Machinery Installed above ground for : (i) Winding (ii) Ventilation (iii) Haulage (iv) Pumping (v) Mineral dressing plants (vi) Workshops including foundry, smithy etc. (vii) Miscellaneous (specify) _____ Total :				
(III)Machinery Installed above				

ground for : (i) Winding (ii) Haulage (iii) Ventilation (iv) Pumping (v) locomotives, etc. (vi) Miscellaneous (specify) Total :				

Signature of person
Signing Return ……

TABLE D. - EXPLOSIVES, SAFETY LAMPS, ROCK DRILLS AND MECHANICAL VENTILATORS

1. Explosives :

Name of explosive	Quantity used (in kgm)	Number of detonators used	
		Electric	Ordinary

2. Safety Lamps :

Name and type of safety lamps*	Number of safety lamps according to method of locking		
	Lead rivet	Magnetic	Other

- Mention type, such as flame type, electric hand type, electric cap., etc.

3. Rock drills.

Name and type etc. of rock drill	Number in use

4. Mechanical Ventilators.

Name and size of Mechanical Ventilator	Position where installed	Average total quantity of air delivered per minute	Water gauge obtained (in centimeters)

Signature of person
Signing the Return ……

(a) (b)

TABLE E1. – OUTPUT ETC. OF MICA

	Opening Stocks on 1ST Jan. , 19	Output during the year	Value of mica produced (c)	Despatches		Closing stock on 31st Dec. , 19
				Consigned by rail or road	Sold locally	

Cruda Mica Dressed Mica Mica Splittings Waste Mica						

Signature of person
Signing the return ……..

INSTRUCTIONS

(a) In Kilogrammes.
(b) If any other mineral such as beryl is also produced from the mine, give particulars regarding such minerals in Table E2
(c) The value required is the pit-head or ex-factory value. Royalty figures will not be accepted in place of value.

(a)

TABLE E2 : OUTPUT ETC. OF MINERALS OTHER THA MICA

Name of Mineral raied(b)	Openin g stock on 1st Jan., 19	Out put of the Mineral(c)		Value of the mineral produced (d)	Despatches		Closing stock on 31st Dec., 19	Metal extracted, if an, at the mine(e)		
		As received from the mine	After processing if any		For export market	For house consumption		Name	Quantity	Value
1	2	3A	3B	4	5A	5B	6	7A	7B	7C

Signature of person
Signing the Return……

INSTRUCTIONS

(a) The figures should be stated :
  (i) in the case of gem-stones, in carats;
  (ii) in the case of gold, silver and other precious metals, in grammes;
  (iii) in the case of alum, amber, asbestos, beryl, graphite, jadestone, steatite, tin-ore, radio-active minerals and rare minerals such as molybdenite monazite, pitch blende, samarskite, tantalite and triplite, and also in case of tin, in kilogrammes; and
  (iv) in the case of clay, limestone, magnesite, marble, phosphetic rock, slate, salt and other stone, and all metalliferous ores except those referred to above, an also in case of other metals in tons.

(b) If more than one minerals are raised or metals extracted, separate figures should be given for each of them.
(c) If the mineral is dressed, processed or treated before despatch, the output of the dressed, processed or treated mineral (instead of crude ore), as the case may be, should be given.

(d) "Value" should be calculated upon actual or estimated selling price at the pit-head. Any charges incurred in transporting the mineral outside the mine property should not be included. Royalty figures will not be accepted.
(e) Each metal should be shown separately.

FIRST SCHEDULE
FORM IV-A
(See Regulation 9)

Notice of Accident/Occurrence

From :
……..
……

1. The Chief Inspector of Mines, ……..Dhanbd, E.Rly.
2. The Regional Inspector of Mines ……..
3. The District Magistrate/District Collector ……
4. The Electric Inspectorof Mines (in case of electrical accidents only, Dhanbad).E .R. …….

Sir,

I have to furnish the following particulars of a fatal accident/a serious accident/a dangerous occurrence (I) which occurred at the…… Mine (also state name of mineral produced) of ……. (owner) :

1. PARTICULARS OF STHE MINE :

Situation of mine	Mineral worked	Name and postal address of owner
Village		
Post office		
Police station		
Sub-Division (Taluq)		
District		
State		

2. PARTICULARS OF THE ACCIDENT :

Date and hour of accident /occurrence	Place and Location in mine	Number of persons(s)	
		Killed	Seriously injured

Classification of accident / occurrence(ii) Its cause and description

3. PARTICULARSOF INJURIES ETC. :

Name of person(s)(iii)	Nature of employment	age	sex	Nature of injury and if fatal, cause of death (iv)
Killed				
1				
2				
3				
Injured				

1
2
3

Particulars in respect of every person, killed or injured, in form IV-B are enclosed/ shall be forwarded within a week (I)

Yours faithfully,
Signature ……
Designation : Owner/Agent/Manager
Date ……..

INSTRUCTIONS

(I) Delete whatever is not applicable ;
(II) Under one or other of the following heads, namely :-
1. Explosion and ignition of inflammable gas :
2. Falls of ground :
   (a) falls of roof;
   (b) falls of side, wall or face;
   (c) rockburst;
3. Haulage :
   (a) above ground
   (b) below ground
4. In shafts :
   (a) Overwinding of cages or other means of conveyance ;
   (b) Breakage of ropes, chains or drawgear;
   (c) While ascending or descending by machinery;
   (d) By falling;
   (e) By falling objects (excluding falls of ground);
   (f) Miscellaneous;
5. Explosives;
6. Machinery :
   (a) Above ground;
   (b) Below ground;
7. Suffocation by gases;
8. Irruption of water
9. Premature collapse of workings;
10. Outbreak of fire or spontaneous heating;
11. At railway sidings belonging to the mine;
12. Electricity; or
13. Miscellaneous :
   (a) above ground
   (b) below ground

(iii) In block capital.
(iv) Attach separate sheet, if necessary.

FIRST SCHEDULE
FORM IV-B
(See Regulation 9)
Particulars of Deceased/Injured person
(To be given separately in respect of every person killed or injured in an accident in the mine)

1. General :
   (i) Name of mine ……..
   (ii) Mineral produced ……
   (iii) Owner …….
   (iv) District …….(v) State ……

2. Name of Injured Worker …….
3. Time of Accident :
   (i) Date ……(ii) Time …… ……..(iii) Shift ……
   (iv)Number of shifts worked per day at the mine …….
   (v) Time when the worker began work on the day f the accident……

4. Occupation and Experience of the Worker :
   (i) State the nature of job he was doing at the time of accident……..…
   (ii) Was it his regular occupation ? ……..
      (a) If yes, state length of experience at the occupation :
      At your mine …….
      Previous experience , if any ……..
      (b) If no, state how long employed at this job…….
   (iii) State total experience in mining , coal and metalliferous ……
   (iv) Give details of experience in mining work ……..

5. Place of accident :
   (i) if belowground, state :
      (a) Whether development area or depillaring/stoping area……
      (b) Number or Name of Seam/Vein……..
      (c) Dimensions at the place of accident ……..
   (ii) If on surface, state whether on railway, tramway, power plant or elsewhere (to be specified)….
   (iii) If other, state whether open-workings, shaft or elsewhere (to be specified) ……
6. Nature of Injury :
   (i) State whether fracture, amputation, laceration, bruise, sprain, crushing injury or other (to be specified)……..
   (ii) Part of body injured (to be specified precisely) ……..

7. Degree of Disability :

   (i) if fatal, date and time of expiry ……..
   (ii) If permanent disablement, specify :-
      (a) the part or parts of the body lost, if any ……
      (b) the part or parts of body gone out of use …….
      (c) Whether disablement, was total or partial ……..

   (iii) If temporary disablement, state number of days forced to remain idle ……
8. Responsibility for the Accident :

   (i) Was any safety provision(s) contravened ? ……..
   (ii) If so, by whom ? ……
   (iii) What action was taken against the offender ? …….
   (iv) Could the accident have been avoided ? …….
   (v) If so, how ? ……..

Signature ……
Designation : Owner/Agent/Manager

Date ……..

FIRST SCHEDULE
FORM IV-C
(See Regulation 9)
Particulars of Injured person returned to duty
(To be given separately in respect of every person within 15 days of his return to duty)

1. General :
   (i) Name of mine ……..
   (ii) Mineral produced ……
   (iii) Owner …….
   (iv) District ……
   .(v) State ……
2. Name of Injured Worker …….
3. Return to duty :
   (i) Date when returned to work ……..
   (ii) Whether rturned to regular job or some other job (to be specified) ……..
4. Compensation :
   State amount of compensation paid, or to be paid, if any ……..

Signature ……
Designation : Owner/Agent/Manager
Date ……..

FIRST SCHEDULE
FORM V
(See Regulation 10)

Notice of Disease notified under section 25

From :
……..
……

1. The Chief Inspector of Mines, ……..Dhanbd, E.Rly.
2. The Regional Inspector of Mines ……..
3. The Inspector of Mines (in case of electrical accidents only, Dhanbad).E .R. …….
4. The District Magistrate/District Collector ……

Sir,

I have to furnish the following particulars with respect to an occupational disease contracted by a person employed in the…… Mine (also state name of mineral produced) of ……. (owner) :

1. PARTICULARS OF THE MINE ETC:

(i) Situation of mine……
Village……
Post office……..
Police station……..
Sub-Division (Taluq)…….
District……..
State…….
(ii)Mineral worked ……
(iii) Name and postal address of owner ……

2. PARTICULARS OF PERSON AFFECTED :

(I) Name (in Block Capitals) ……..
(II) Caste or surname ……
(III) Permanent address –

Village……
Post office……..
Police station……..
Sub-Division (Taluq)…….
District……..
State…….
(iv) Sex……..
(v) Date of birth (or age)…….
(vi) Occupation ……
How long engaged ? ……
(vii) Date of commencement of employment :
(a) in your mine …….
(b) In mining …….
(c)

3. PARTICULARS OF DISEASE ETC. :
(i) nature of disease from which the person is suffering (state stage) ……
(ii) Date of detection of disease ……..
(iii) Name, registration number and address of Medical Practitioner suspecting disease……

Signature ……
Designation : Owner/Agent/Manager
Date ……..

1[FORM VI
(See regulation 108A)

Name of Mine ……Owner ……Manager ……..
Seam/vein etc. Section/Area etc. …….
Inspected by ……Accompanied by Shri ……..on ……19.

Places Inspected	Mines Act/Metalliferous Mines Regulations/Mines Rules/Section/ Clause number etc.	Contravention observed	Action taken by Management to remedy the contravention	Date of rectification of the contravention	Remarks, if any

The contraventions mentioned above are not exhaustive. A letter giving the details of other contravention observed may follow in due course,

Signature of Inspection Officer [Signature of Mine Official]
(IO) accomp anying I.O
Date Date
Designation Designation]

2**********

STATUTORY ORDERS ISSUED UNDER THE METALLIFEROUS MINES REGULATIONS, 1961

Approval of Institutions and their degrees, diplomas and certificates under the MMR, 1961

S.O. 2792, dated the 23rd September, 1963. – In pursuance of the provisions of proviso (b) to sub-regulation (1) of regulation 16 of the Metalliferous Mines Regulations, 1961, the Central Government hereby approves the educational institutions mentioned under column I of the table below in respect of such diplomas, certificates, degrees or other qualifications awarded by the tem as are specified in the corresponding entry under column II of the said table.

TABLE

I Name of Institution	II Degrees, Diplomas or Certificates awarded
1. Any University in India established by law	Degree in applied Geology or in Civil, Mechanical engineering
2. Indian School of Mines, Dhanbad.	(i) Certificate in Geology (Awarded upto 1950-51) (ii) Diploma of Associateship in Geology (Awarded upto 1950-51) (iii) Diploma of Associateship in Applied Geology,
3. Delhi Polytechnic	Diploma in Civil, Electrical or Mechanical Engineering

S.O. 2793, dated the 23rd September, 1963. – In pursuance of the provisions of proviso (b) to sub-regulation (1) of regulation 16 of the Metalliferous Mines Regulations, 1961, the Central Government hereby approves the educational institutions mentioned under column I of the table below in respect of such diplomas, certificates, degrees or other qualifications awarded by the them as are specified in the corresponding entry under column II of the said table.

TABLE

I Name of Institution	II Degrees, Diplomas, Certificates awarded
1. Any University in India established by law	Degree in mining.
2. Indian School of Mines, Dhanbad.	(i) Certificate in Metal Mining (Awarded upto 1938-39) (ii) Diploma of Associateship in Mining Enginering.
1[3. The Institution of Engineers (India) incorporated by Royal Charter 1935.	Pass in Sections A and B of the Associate Membership Examination in Mining Engineering Branch.]
"INDIA" (only for the purpose of Manager's Certificates restricted to open cast mines)	
1. Indian School of Mines, Dhanbad	M. Tech. (opencast Mining) D.I.S.M. (Opencast Mining)
UNITED KINGDOM	
1. London University	(i) Degree in B.Sc. in Mining for Internal Students subject to the Degree being endorsed by the University with a certificate of four months' practical experience in a mine. (ii) Degree of B.Sc. in Mining for External Students.
2[2 University of Sheffield	Bachelor of Engineering (Mining)
3. Leeds University	Degree of B.Sc. in Mining.
4. Birmingham University	Degree of B.Sc. in Mining
5. Camborne School of Metalliferous Mining, Cornwal (England)	Diploma of Associateship in Metalliferous Mining]
6. University of Wales	Degree of B.Sc. in Mining Engineering.
U.S.A.	
1. Colorado School of Mines	Degree in Mining Engineering
3[2. Wisconsin State College and Institute of Technology, Platteville, Wisconsin	Bachelor of Science in Mining.
1[PORTUGAL REPUBLIC	
1. Higher Technical Institute of the Technical University of Lisbon	Degree in Mining Engineering.

S.O. 2795, dated the 23rd September, 1963. – In pursuance of the provisions of proviso to regulation 17 of the Metalliferous Mines Regulations, 1961, the Central Government hereby approves for the purpose of said regulation the educational institutions mentioned under column I of the table below in respect of such diplomas, certificates, degrees or other qualifications awarded by the them as are specified in the corresponding entry under column II of the said table.

TABLE

I Name of Institution	II Degrees, Diplomas, Certificates awarded

INDIA

(List of Institution and authorities awarding Degree/Diploma in Mining, after full time course of study)

1. Any University in India established by law	Degree in mining.
2. Indian School of Mines, Dhanbad.	(i)Certificate in Coal Mining (Awarded upto 1950-51) (ii) Certificate in Metal Mining (Awarded upto 1938-39) (iii) Diploma of Associateship in Mining Enginering.
3. Bengal Engineering College, Sibpore	Diploma in Mining (awarded up to 1929)
4. State Council for Engineering and Technical Education, West Bengal.	Licentiate Diploma in Mining Engineering.
5. Board of Technical Education, Rajasthan, Jodhper	Diploma in Mining
6. State Council of Technical Education and Training, Orissa	Diploma in Mining Engineering
7. Central Board of Technical Examination, Mysore	Licentiate in Mining Engineering
8. Shri Jayachamarajendra Occupational Institute, Bangalore	Diploma in Mining
9. State Board of Technical Education and Training , Andhra Pradesh.	Diploma in Mining Engineering
10. State Board of Technical Education (formerly Technological Examination Board,), Madras	Licentiate in Mining Engineering
11. State Board of Technical Education, Bihar	Diploma in Mining and Mine Surveying
12.Madhya Pradesh Board of Technical Education, Bhopal	Diploma in Mining and Mine Surveying
2[13. Board of Technical Examination, Mysore	Diploma in Mining and Mine Surveying
3[14. Board of Technical Examinations, Maharashtra, Bombay	Diploma in Mining and Mine Surveying
15. The Institution of Engineers (India) incorporated by Royal Charter 1935.	Pass in Sections A an B of the Associate Membership Examination in Mining Engineering Branch]

5(List of Institution and authorities awarding Degree/Diploma in Mining, after part time course of study)

1. State Board of Technical Education, Bihar	Diploma in Mining and Mine Surveying (Re-organised Mining Classes, Bhaga, Dhanbad).
2. Mining Education Advisory Board, West Bengal	Final Merit Certificate (Evening Mining Classes run by the Directorate of Mines and Minerals, Government of West Bengal].

I	II

(List of Institution and authorities awarding Degree/Diploma in Mining, after full time course of study)

1. Any University in India established by law	Degree in Civil Engineering
2. All India council of Technical Education	National Certificate in Civil Engineering
3.Assam Engineering Institute, Gauhati	Certificate in Civil Engineering
4. Bihar College of Engineering, Patna	(1) Surveyor's Certificate (2) Civil Engineering Subordinate Diploma
5. Board of Technical Education, Kerala	Diploma in Civil Engineering
6. Board of Technical Education, Rajasthan,Jodhpur	Diploma in Civil Engineering
7. Board of Technical Examination, Mysore (formerly Central Board of Technical Examination, Mysore)	L.C.E./ Diploma in Civil Engineering
8. Civil Engineering School, Allahabad	Overseers Certificate
9. Civil Engineering School, Lucknow	Overseers Certificate
10. College of Engineering, Poona	Civil Engineering diploma prior to 1950

11. College of Engineering, Guidy	Upper Subordinate Diploma, L.C.E. from 1942 to 1953.
12. College of Engineering, Osamania Univeristy (formerly Osmania Engineering College), Hyderabad	Upper Subordinate (Ist Class) Overseer Certificate from 1941
13. College of Enginering and Technology, Jadhavpur	Diploma of the Overseer Course
14. College of Military Engineering, Kirkee	Overseers' Building and Road Course
15. Department of Technical Education, Bombay	Diploma in Civil Engineering
16. Department of Technical Education, Gujarat State, Ahmedabad (previously Bombay)	Overseers Diploma
17. Director Geneal of employment and Training (Ministry of Labour and Employment, Government of India)	Surveyor's Diploma
18. Director of Industries, Punjab	Common Civil Overseer's Certificate
19. Government Polytechnic, Nagpur University (formerly Government Engineering School, Nagpur	(1) Surveyor's Certificate (2) L.C.E.
20. Government School of Engineering, Rasual	Overseership Certificate
(21) Governments Technical College, Hydrabad (formerly Osmania Technical College, Hyderabad	L.C.E.
(22) Howett-Engineering School, Lucknow	Ovearseers Certificate (Granted by the Department of Public Instruction from 1936 to 1944 and by the U.P. Government from 1946)
23. H.R.H. the Prince of 'wales Institute of Engineering an Technology, Jorhat	Certificate in Civil Engineering.
24. Kalikata Shilpa Vidya Pith	L.CE. awarded by the Adhoc Committee. Provincial Council for Engineering and Technical Education. West Bengal.
25. Kerala University (formerly Travancore University)	Diploma in Civil Engineering
26. Mainamati Survey Institute, Tripura	Survey Final Examination.
27. M.E.M. Engineering College, Jodhpur	Diploma in Civil Engineering
28. Murlidhar Gajan and Technical Institute, Hathras	Surveyor's Examination
29. Muslim University, Aligarh	Diploma in Civil Engineering
30.Nagpur University	L.C.E.
31. National Council for Rural Higher Education	Diploma in Civil Engineering
32. Orissa School of Engineering, Cuttack	(1) Surveyor's Certificate (2) Civil Engineering Subordinate Diploma, L.C.E
33. Overseer Examination Board (Bengal) (Before partition)	L.C.E
34. Polytechnicl Faculty of Technological (including engineering)	Diploma in Civil Engineering (obtained after a course of at least three years)
35. Punjab Polytechnic (formerly Punjab Government School of Engineering, Nilokheri).	Overseer's Diploma in Civil Engineering from December, 1947
36. Ramgarhia Polytechnic, Phagwara (formerly Vishwakarma polytechnic Institute.	Diploma in Civil Engineering Course, Overseer Course.
37. Saugar University	Diploma in Civil Engineering
38. School of Engineering, Bangalore	Diploma in Civil Engineering
39. Shri Jaichamarajendra Occupational Institute, Banglore	Diploma in Civil Engineering
40. State Boar of Technical Education and Vocational Training, Bihar	Diploma in Civil Engineering after a course of study lasting for 2 and half years
41. State Board of Technical Education and Training, U.P. (formerly in adhoc Board of Engineering Education , UP)	Overseer Diploma in Civil Engineering

42. State Board of Technical Education, Pubjab	Overseer Diploma in Civil Engineering
43. State Board of Technical Education and Training, AP	LCE
44. State Board of Technical Education (formerly Technological Diploma Examination Board,) Madras	LCE/Diploma in Civil Engineering
45.State Council of Technical Education, Assam	Diploma in Civil Engineering
46. State Council of Engineering and technical Education, West Bengal	LCE
47. Technological Diploma Examinations Board, AP	LCE
48. Trihat School of Engineering, Muzaffarpur	Supordinate Engineering Course in Civil Engineering from 1952.
49. University of Roorkee (formerly Thomson Civil Engineering College, Roorkee)	Diploma in Civil Engineering (formerly Civil Overseership)
50 West Bengal Survey Institute, Bandal	Senior Surveyor's Certificate
51. State Council of Technical Education and Training, Orissa	Diploma in Civil Engineering

FOREIGN

1. N.E.D Engineering College, Karachi	Diploma in Engineering
2. Ashanulla School of engineering, Dacca	Sub Overseer's Diploma, LCE
3. Government Technical Institute, Insein, Burmah	Diploma in Civil Engineering
4. London University, UK	(1) B.Sc. Degree in Mining for Internal Students subject to the degree being endorsed by the University with a certificate of four months' practical experience in a mine. (2) Degree of B.Sc. in Mining for External Students.
5. Colorado School of Mines, USA	Degree in Mining Engineering
1[6. University of Sheffield	Bachelor of Engineering (Mining)
7. Leeds University	Degree of B.Sc, in Mining
8. Birmingham University	Degree of B.Sc. in Mining
2[9. Wisconsin State College and Institute of Technology, Platteville,Wisconsin	Bachelor of Science in Mining
10. Comborne School of Metalliferous Mining, Cornwall (England).	Diploma of Associateship in Metalliferous Mining
3[11. Higher Technical Institute of the Technical University of Lisbon, (Portugal) Republic	Degree in Mining Engineering

S.O. 1675, dated the 30th May, 1966. – In pursuance of clause (b) of the proviso to Sub- regulation (1)and clause (b) of the proviso to sub regulation (2), of regulation 18 of the Metalliferous Mines Regulations, 1961. And in supeersession of all the notifications issued on the subject, the Central Government hereby approves institutions and authorities mentioned in column I of the table below in respect of such diplomas, certificates, degrees or other qualifications awarded by the them as are specified in the corresponding entry under colu mn II of the said table.

TABLE

I Name of Institution	II Degrees, Diplomas, Certificates awarded
INDIA	
1. Any University in India established by law	Degree in mining.
2. Indian School of Mines, Dhanbad	(i) Certificate in Metal Mining (awarded upto 1938-39)

	(ii) Diploma of Associateship in Mining Engineering)
4[3. "The Institution of Engineers (India) incorporated by Royal Charter, 1935	Pass in Sections A and B of the Associate Membership Examination in Mining Engineering Branch].
UNITED KINGDOM	
1. London University	(i) Degree in B.Sc. in Mining for Internal Students. Subject to the Degree being endorsed by the University with a certificate of four month's practical experience in a mine.
	(ii) Degree of B.Sc. in Mining for External students.
2. University of Sheffield	Bachelor of Engineering (Mining)
3. Leeds University	Degree of B.Sc in Mining
4. Birmingham University	Degree of B.Sc. in Mining
5. Camborrne School of Metalliferous Mining, Cornwal	Diploma of Associateship in Metalliferous Mining
U.S.A.	
1. Colorado School of Mines	Degree in Mining Engineering
2. Wisconsin State College and Institute of Technology, Plattevile, Wisconsin	Bachelor of Science in Mining.
1[PORTUGAL REPUBLIC	
1. Higher Technical Institute of the Technical University of Lisbon	Degree in Mining Engineering]

S.O. 1676, dated the 30th May, 1966. – In pursuance of clause (a) of the proviso to Sub- regulation (1)and clause (a) of the proviso to sub regulation (2), of regulation 18 of the Metalliferous Mines Regulations, 1961. And in supersession of all the notifications issued on the subject, the Central Government hereby approves institutions and authorities mentioned in column I of the table below in respect of such diplomas, certificates, degrees or other qualifications awarded by the them as are specified in the corresponding entry under column II of the said table.

TABLE

I Name of Institution	II Degrees, Diplomas, Certificates awarded
INDIA	
1. Board of Technical Education, Rajasthan, Jodhpur	Diploma in mining.
2. CentralBoard of Technical Examination, Mysore	Licentiate in Mining Engineering
3. Madhya Pradesh Board of Technical Education, Bhopal	Diploma in Mining and Mining Surveying
4. Shri Jayachamarajendra Occupational Institute, Bangalore	Diploma in Mining
5. State Board of Technical Education and Training, Andhra Pradesh	Diploma in Mining Engineering
6. State Board of Technical Education, Bihar	Diploma in Mining and Mine Surveying
7. State Board of Technical Education (Formerly Technological Diplomas Examination Board), Madras	Licentiate in Mining Engineering
8. State Council for Engineering and Technical Education, West Bengal	Licentiate in Mining Engineering

9. State Council of Technical Education and Training, Orissa	Diploma in Mining Engineering
2[10. Board of Technical Examination, Mysore	Diploma in Mining and Mine Surveying
3[11. Board of Technical Exsaminations, Maharashtra, Bombay	Diploma in Mining and Mine Surveying
4[12. Mining Education Advisory Board, Bihar and West Bengal	Final Merit Certificate
13. State Board of Technical Education, Bihar	Final Merit Certificate

S.O 1455, dated, the 17th May, 1963. – In pursuance of the provision of sub-clause (ii) of clause (a) of sub-regulation (1) of regulation 23 of the Metalliferous Mines Regulations, 1961, the Central Government hereby approves the educational institutions mentioned under column I of the Table below in respect of such diploma certificates or degrees awarded by them as are specified in the corresponding entries under column II of the said Table.

TABLE

I Name of Institution	II Degrees, Diplomas, Certificates awarded
INDIA	
1. Any University in India established bylaw	Degree in mining or 5[in applied geology] or in civil, mechanical or electrical engineering.
2. Indian School of Mines and Applied Geology, Dhanbad	(i) Certificate in Metal Mining (awaded up to 1938-39). (ii) Diploma of Associateship in Geology (awarded up to 1950-51). (iii) Diploma of Associateship in Mining Engineering (iv) Diploma of Associateship in Applied Geology
3. Delhi Polytechnic	Diploma in Civil, Electrical or Mechanical Engineering
UNITED KINGDOM	
1. London University	(i) Degree of B.Sc. in Mining for Internal Students subject to the Degree being endorsed by the University with a certificate of four months' practical experience in a Mine. (ii) Degree of B.Sc. in Mining for External Students
1[2. University of Sheffield	Bachelor of Engineering (Mining).
3. Leeds University	Degree of B.Sc. in Mining.
4. Birmingham University	Degree of B.Sc. in Mining
2[5. Camborne School of Metalliferous Mining Cornwall - England	Diploma of Associateship in Metalliferous Mining.]
U.S.A.	
1. Colorado School of Mines	Degree in Mining Engineering
3[2 Wisconsis State College and Instistute of Technology, Platteville, Wisconsin	Bachelor of Science in Mining].
4["Portugal Republic"	
1. Higher Technical Institute of the Technical University of Lisbon	Degree in Mining Engineering].

S.O. 250 dated the 6th January, 1966 – In pursuance of sub-clause (ia) of clause (a) of sub-regulation(1) of regulation 23 of the Metalliferous Mines Regulation, 1961, the Central Government hereby approves the qualifications mentioned in column 2 of the Table below of the institutions mentioned in the corresponding entry in column 1 thereof as equivalent qualifications for the purposes of the said sub-clause, namely :-

TABLE

I	II
Name of Institution	Degrees, Diplomas, Certificates awarded
Mining Indian	
1. Bengal Engineering College, Sibpore	Diploma in Mining (awarded up to 1929)
2. Mining Education Advisory Board, Bihar and West Bengal	Final Merit Certificate (awarded up to 1958)
3. Mining Education Advisory Board, West Bengal	Final Merit Certificate (Evening Mining Classes run by the Directorate of Mines ad Minerals, Government of West Bengal.)
4. State Board of Technical Education, Bihar	(a) Final Merit Certificate (awarded in 1959 and 1960 to students of Evening Mining Classes, Bhaga). (b) Diploma in Mining and Mine Surveying (including students of re-organised Mining Classes, Bhaga, Dhanbad-awarded from 1961 onwards)
5. Shri Jayachamarajendra Occupational Institute, Bangalore	Diploma in Mining
6. State Board of Technical Education and Training, Andhra Pradesh	Diploma in Mining Engineering
7. Madhya Pradesh Board of Technical Education, Bhopal	Diploma in Mining and Mine Surveying
8. State Board of Technical Education (Formerly Technological Diplomas Examination Board), Madras	Licentiate in Mining Engineering
9.Central Board of Technical Examination, Mysore	Licentiate in Mining Engineering
10. State Council of Technical Education and Training, Orissa	Diploma in Mining Engineering
11. Board of Technical Education Rajasthan, Jodhpur	Diploma in Mining.
12. State Council for Engineering and Technical Education, West Bengal	Licentiate Diploma in Mining Engineering
Geology - Indian	
13.Any University in India establishd by Law	(a) Honours Degree in Geology. 5[(b) Degree of M.A. or M.Sc. in Geology]
Mining – Foreign	
14. Camborne School of Metalliferous Mining, Cornwall (England)	Diploma of Associateship I Metalliferous Mining.

S.O. 2796, dated the 23rd September, 1963. – In pursuance of clause (ii) of sub-regulation (1) of regulation 24 of the Metalliferous Mines Regulations, 1961, the Central Government hereby approves for the purpose of said regulation the educational institutions mentioned under column I of the table below in respect of such diplomas, certificates, degrees or other qualifications awarded by the them as are specified in the corresponding entry under column II of the said table.

TABLE

I Name of Institution	II Degrees, Diplomas, Certificates awarded
INDIA	
(List of Institution and authorities awarding Degree/Diploma in Mining, after full time course of study)	
1. Any University in India established by law	Degree in mining.
2. Indian School of Mines, Dhanbad.	(1) Certificate in Coal Mining (Awarded upto 1950-51) (2) Certificate in Metal Mining (Awarded upto 1938-39) (2) Diploma of Associateship in Mining Enginering.
3. Bengal Engineering College, Sibpore	Diploma in Mining (awarded up to 1929)
4. State Council for Engineering and Technical Education, West Bengal.	Licentiate Diploma in Mining Engineering.
5. Board of Technical Education, Rajasthan, Jodhper	Diploma in Mining
6. State Council of Technical Education and Training, Orissa	Diploma in Mining Engineering
7. Central Board of Technical Examination, Mysore	Licentiate in Mining Engineering
8. Shri Jayachamarajendra Occupational Institute, Bangalore	Diploma in Mining
9. State Board of Technical Education and Training , Andhra Pradesh.	Diploma in Mining Engineering
10. State Board of Technical Education (formerly Technological Examination Board,), Madras	Licentiate in Mining Engineering
11. State Board of Technical Education, Bihar	Diploma in Mining and Mine Surveying
12.Madhya Pradesh Board of Technical Education, Bhopal	Diploma in Mining and Mine Surveying

I	II
(List of Institution and authorities awarding Degree/Diploma in Mining, after full time course of study)	
1. Any University in India established by law	Degree in Civil Engineering
2. All India council of Technical Education	National Certificate in Civil Engineering
3.Assam Engineering Institute, Gauhati	Certificate in Civil Engineering
4. Bihar College of Engineering, Patna	(3) Surveyor's Certificate (4) Civil Engineering Subordinate Diploma
5. Board of Technical Education, Kerala	Diploma in Civil Engineering
6. Board of Technical Education, Rajasthan,Jodhpur	Diploma in Civil Engineering
7. Board of Technical Examination, Mysore (formerly Central Board of Technical Examination, Mysore)	L.C.E./ Diploma in Civil Engineering
8. Civil Engineering School, Allahabad	Overseers Certificate

9. Civil Engineering School, Lucknow	Overseers Certificate
10. College of Engineering, Poona	Civil Engineering diploma prior to 1950
11. College of Engineering, Guidy	Upper Subordinate Diploma, L.C.E. from 1942 to 1953.
12. College of Engineering, Osamania Univeristy (formerly Osmania Engineering College), Hyderabad	Upper Subordinate (Ist Class) Overseer Certificate from 1941
13. College of Enginering and Technology, Jadhavpur	Diploma of the Overseer Course
14. College of Military Engineering, Kirkee	Overseers' Building and Road Course
15. Department of Technical Education, Bombay	Diploma in Civil Engineering
16. Department of Technical Education, Gujarat State, Ahmedabad (previously Bombay)	Overseers Diploma
17. Director General of employment and Training (Ministry of Labour and Employment, Government of India)	Surveyor's Diploma
18. Director of Industries, Punjab	Common Civil Overseer's Certificate
19. Government Polytechnic, Nagpur University (formerly Government Engineering School, Nagpur	(3) Surveyor's Certificate (4) L.C.E.
20. Government School of Engineering, Rasual	Overseership Certificate
(21) Governments Technical College, Hydrabad (formerly Osmania Technical College, Hyderabad	L.C.E.
(22) Howett-Engineering School, Lucknow	Ovearseers Certificate (Granted by the Department of Public Instruction from 1936 to 1944 and by the U.P. Government from 1946)
23. H.R.H. the Prince of 'wales Institute of Engineering an Technology, Jorhat	Certificate in Civil Engineering.
24. Kalikata Shilpa Vidya Pith	L.CE. awarded by the Adhoc Committee. Provincial Council for Engineering and Technical Education. West Bengal.
25. Kerala University (formerly Travancore University)	Diploma in Civil Engineering
26. Mainamati Survey Institute, Tripura	Survey Final Examination.
27. M.B.M. Engineering College, Jodhpur	Diploma in Civil Engineering
28. Murlidhar Gajan and Technical Institute, Hathras	Surveyor's Examination
29. Muslim University, Aligarh	Diploma in Civil Engineering
30.Nagpur University	L.C.E.
31. National Council for Rural Higher Education	Diploma in Civil Engineering
32. Orissa School of Engineering, Cuttack	(1) Surveyor's Certificate (2) Civil Engineering Subordinate Diploma, L.C.E
33. Overseer Examination Board (Bengal) (Before partition)	L.C.E
34. Polytechnicl Faculty of Technological (including engineering) M.S,. University of Baroda (formerly Kalabhavan renamed as Faculty of Technology including Engineering M.S. University, Baroda)	Diploma in Civil Engineering (obtained after a course of at least three years)
35. Punjab Polytechnic (formerly Punjab Government School of Engineering, Nilokheri).	Overseer's Diploma in Civil Engineering from December, 1947
36. Ramgarhia Polytechnic, Phagwara (formerly Vishwakarma polytechnic Institute.	Diploma in Civil Engineering Course, Overseer Course.
37. Saugar University	Diploma in Civil Engineering
38. School of Engineering, Bangalore	Diploma in Civil Engineering
39. Shri Jaichamarajendra Occupational Institute, Banglore	Diploma in Civil Engineering

40. State Boar of Technical Education and Vocational Training, Bihar	Diploma in Civil Engineering after a course of study lasting for 2 and half years
41. State Board of Technical Education and Training, U.P. (formerly in adhoc Board of Engineering Education , UP)	Overseer Diploma in Civil Engineering
42. State Board of Technical Education, Pubjab	Overseer Diploma in Civil Engineering
43. State Board of Technical Education and Training, AP	LCE
44. State Board of Technical Education (formerly Technological Diploma Examination Board,) Madras	LCE/Diploma in Civil Engineering
45.State Council of Technical Education, Assam	Diploma in Civil Engineering
46. State Council of Engineering and technical Education, West Bengal	LCE
47. Technological Diploma Examinations Board, AP	LCE
48. Trihat School of Engineering, Muzaffarpur	Supordinate Engineering Course in Civil Engineering from 1952.
49. University of Roorkee (formerly Thomson Civil Engineering College, Roorkee)	Diploma in Civil Engineering (formerly Civil Overseership)
50 West Bengal Survey Institute, Bandal	Senior Surveyor's Certificate
51. State Council of Technical Education and Training, Orissa	Diploma in Civil Engineering

FOREIGN

1. N.E.D Engineering College, Karachi	Diploma in Engineering
2. Ashanulla School of engineering, Dacca	Sub Overseer's Diploma, LCE
3. Government Technical Institute, Insein, Burma	Diploma in Civil Engineering
4. London University, UK	(1) B.Sc. Degree in Mining for Internal Students subject to the degree being endorsed by the University with a certificate of four months' practical experience in a mine. (2) Degree of B.Sc. in Mining for External Students.
5. Colorado School of Mines, USA	Degree in Mining Engineering
1[6. University of Sheffield	Bachelor of Engineering (Mining)
7. Leeds University	Degree of B.Sc, in Mining
8. Birmingham University	Degree of B.Sc. in Mining].
2[9. Wisconsin State College and Institute of Technology, Platteville,Wisconsin	Bachelor of Science in Mining
10. Comborne School of Metalliferous Mining, Cornwall (England).	Diploma of Associateship in Metalliferous Mining].
3[11. Higher Technical Institute of the Technical University of Lisbon, (Portugal) Republic	Degree in Mining Engineering

Tks/11/10/99