

MINES AND WORKS REGULATIONS. ⁽¹⁾

PART I.—PRELIMINARY.

1. These Regulations may be cited as the *Mines and Works Regulations*. ⁽¹⁾ Short title.

2. These Regulations are divided into Parts, as follows:—

Parts.

Part I.—Preliminary, rr. 1-3.

Part II.—Relating to Mines generally, rr. 4-297.

Division 1.—Plans and Surveys, rr. 4-15.

Division 2.—Ventilation, rr. 16-26.

Division 3.—Precautions against Fire, rr. 27-34.

Division 4.—Health and Sanitation, rr. 35-53.

Division 5.—Explosives, rr. 54-71.

Division 6.—Ladders and Travelling Ways, rr. 72-81.

Division 7.—Winding and Signals, rr. 82-119.

Division 8.—Machinery, rr. 120-143.

Division 9.—Boilers, rr. 144-166.

Division 10.—Installation and Use of Electricity, rr. 167-235.

Division 11.—Safety and Protection, rr. 236-271.

Division 12.—Tests and Inspections, rr. 272-283.

Division 13.—Miscellaneous, rr. 284-297.

Part III.—Relating to Dredges specially, rr. 298-310.

Part IV.—Relating to Works generally, rr. 311-314.

Part V.—Relating to Smelting Works, specially, rr. 315-320.

Part VI.—Relating to certain Occupations, rr. 321-357.

(1) The *Mines and Works Regulations* (made under the *Mines and Works Regulation Ordinance 1935-1941*) comprise the original *Mines and Works Regulations*, as amended by the other Regulations referred to in the following Table:—

REGULATIONS MADE BY THE ADMINISTRATOR IN COUNCIL.

Description, number and year.	Date on which made by Administrator in Council.	Date on which published in <i>N.G. Gaz.</i>	Date on which took effect and came into operation.
<i>Mines and Works Regulations</i> (1936, No. 13)	4.4.1936	27.5.1936	30.6.1936 (<i>N.G. Gaz.</i> of 27.5.1936)
<i>Amending Regulations</i> (1937, No. 4)	5.2.1937	15.2.1937	15.2.1937 (<i>N.G. Gaz.</i> of 15.2.1937)
<i>Amending Regulations</i> (1937, No. 19)	7.9.1937	15.9.1937	15.9.1937 (<i>N.G. Gaz.</i> of 15.9.1937)
<i>Amending Regulation</i> (1938, No. 8)	28.6.1938	15.7.1938	15.7.1938 (<i>N.G. Gaz.</i> of 15.7.1938)

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Division 1.—Occupations requiring Certificates or Permits, rr. 321-322.

Division 2.—Certificates of Competency, rr. 323-332.

Division 3.—Examinations for Certificates of Competency, rr. 333-340.

Division 4.—Special Conditions affecting Different Examinations, rr. 341-347.

Division 5.—Permits of Employment, rr. 348-357.

Part VII.—General, rr. 358-374.

Definitions.

3.—(1.) In these Regulations, unless the contrary intention appears—

“agent” means a person acting on behalf of the owner or occupier of a mine or works and includes a person having the care or direction of a mine or works or of any part of a mine or works;

“apparatus”, in relation to the supply or use of electricity, means electrical apparatus;

“approved” means approved by an inspector in writing or, in relation to any type, make, or class of appliance or thing, means specified in a notice by the Administrator approving of the type, make, or class;

“authorized pressure”, in relation to a boiler, means the maximum working pressure as specified in a boiler certificate relating to the boiler and issued by a boiler inspector in accordance with these Regulations;

“boiler inspector” means a person holding a certificate of competency issued under these Regulations in respect of the occupation of a boiler inspector and includes an inspector;

“bulled hole” means a drill-hole in which a small charge of explosive has been fired for the purpose of enlarging the bottom of the drill-hole;

“circuit”, in relation to the supply or use of electricity, means an electrical circuit forming a system or branch of a system;

“conductor”, in relation to the supply or use of electricity, means an electrical conductor arranged to be electrically connected to a system;

“drive” means any passage in a mine in any direction or in any angle whatsoever other than a shaft: provided that the term may, if necessary, include any extension or continuation of a shaft;

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- “earthed”, in relation to the supply or use of electricity, means connected to the general mass of earth in such a manner as will ensure at all times an immediate discharge of electrical energy without danger;
- “electric line” means any wire, conductor, or other medium used for conveying, transmitting, or distributing electricity, with any casing, coating, tube, pipe, post, or insulator enclosing, surrounding, or supporting the wire, conductor, or other medium, or any part of it, or any apparatus connected with the wire, conductor, or other medium;
- “extra-high pressure”, in relation to the supply of electricity, means a pressure which may at any time exceed 3,000 volts;
- “high explosive” means any explosive compound which, by the transmission of an initial shock, is capable of conversion into gas in so short a period that the conversion is practically instantaneous;
- “high pressure”, in relation to the supply of electricity, means a pressure which may at any time exceed 650 volts but cannot exceed 3,000 volts;
- “live”, in relation to an electrical installation, means electrically charged;
- “low pressure”, in relation to the supply of electricity, means a pressure which cannot exceed 250 volts;
- “main haulage road” means a road which has been or for the time being is in use for removing skips by steam or other mechanical power;
- “medium pressure”, in relation to the supply of electricity, means a pressure which may at any time exceed 250 volts but cannot exceed 650 volts;
- “mine” means any place, pit, shaft, drive, level, or other excavation, drift, gutter, vein, lode, or reef wherein or whereby any operation for or in connexion with, mining purposes is or shall be carried on;
- “mine electrician” means a person holding a certificate of competency issued under these Regulations in respect of the occupation of mine electrician;
- “mine surveyor” means a person holding a certificate of competency issued under these Regulations in respect of the occupation of a mine surveyor;
- “missed fire”, in relation to any charge of explosive, means that the explosive has either partially or completely failed to explode;

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“open sparking” means sparking which, owing to the lack, in any apparatus, of adequate provision for preventing the ignition of inflammable gas external to the apparatus, would ignite the gas;

“Ordinance” means the *Mines and Works Regulation Ordinance* 1935 as amended from time to time;

“pressure”, in relation to the supply of electricity, means the difference of electrical potential between any two conductors through which the supply is given, or between any part of either conductor and earth as read by a hot wire or electrostatic voltmeter;

“recognized testing station” means a laboratory, workshop, or authority declared, by the Administrator by notice, to be a recognized testing station;

“rock drill” means any machine worked by mechanical or electrical power, which is used for the purpose of drilling holes in a mine;

“safety lamp” means an oil, gas, or electric lamp of a type approved by the Warden for use in inflammable atmosphere;

“satisfactory” means that which is, in the opinion of an inspector, satisfactory;

“socket” means a hole or part of a hole remaining after a charge has been exploded in it;

“system” means an electrical system in which all conductors and apparatus are electrically connected to a common source of electromotive force.

(2.) Any reference in these Regulations to a form shall be read as a reference to a form in the Schedule to these Regulations.

PART II.—RELATING TO MINES GENERALLY.

Division 1.—Plans and Surveys.

Scale of plans
and sections.

4. The plans and sections required to be made and kept under the provisions of Division 4 of Part III. of the Ordinance shall be drawn to a scale of not less than 1 in 500:

Provided that some other scale may be used in any particular mine where the consent of the Warden has been previously obtained in writing.

Bearings and
traverse lines.

5.—(1.) The bearings and the lengths of the traverse lines shall be shown on the drawings by means of lines and figures and all traverses shall be reduced.

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(2.) The true bearings shall be carried from the surface of a mine into the underground workings by accurate method.

(3.) Wherever practicable, the surveys of different levels of a mine shall be connected by direct bearings and measurements through winzes or by traverses through stopes.

(4.) Wherever a closed traverse cannot be obtained otherwise, every traverse which consists of more than one line shall be checked by returning over the same ground with a different set of survey stations.

6.—(1.) Wherever practicable, the instrument used in taking bearings shall be a theodolite and bearings shall be carried into the mine without the use of the magnetic needle. Instruments for taking bearings.

(2.) Wherever the use of a theodolite is rendered impracticable by the conditions existing in any mine or part of a mine a circumferentor or dial or other form of compass may be used.

(3.) Where a circumferentor or dial or other form of compass is used in taking bearings, both back and fore sight shall be taken along each line of the traverses, and corrections shall be made for local magnetic attractions.

(4.) In any case where an instrument referred to in the last preceding sub-regulation is used, a checking traverse shall be made unless a complete check of the accuracy of the work can be otherwise shown.

(5.) The description of the instrument used in taking the bearings shall be noted on the plan or section.

7. The measurements of—

- (a) the depths of shafts;
- (b) the distances between levels; and
- (c) winzes and rises,

Measuring instruments.

shall be made accurately with steel measuring bands or metal wires:

Provided that any winze or rise less than 30.5 metres in length may be measured with non-metallic tapes.

8.—(1.) Whenever the Warden so requires, a copy of the field notes of the survey upon which the plans and sections are based and the signature and date specified in sub-regulation (7.) of this regulation shall be certified and signed by the manager of the mine or the person making the survey and sent by the owner, agent, or manager of the mine to the Warden. Field Notes.
Sub-reg. (1)
sub. by 1937,
No. 19, r. 1.

(2.) The copy of the field notes shall be accompanied by a copy of the calculations made in the reduction of traverses.

(3.) Every line measured shall be entered in the field notes as a

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separate item and there shall also be entered the number of the survey station at the commencement and at the end of each line corresponding to that given on the plan of survey.

(4.) The bearings given in the field notes shall be those from which the plan or section is plotted and shall be—

- (a) deduced from the instrumental measurements;
- (b) read to the nearest minute; and
- (c) referred to the meridian of the datum line.

(5.) The field notes, the copy of the calculations which accompanies the field notes, and the plans or sections founded upon the field notes shall show the relation between the bearings upon which the notes, calculations, plans, or sections are based and the true meridian.

(6.) Survey stations shall be numbered consecutively in the field notes throughout the survey.

(7.) The field notes shall be—

- (a) signed by the person making the survey; and
- (b) dated with the date on which the survey was made.

Plans and sections of extensions.

9. All copies of plans and sections of extensions of workings shall show enough of the previously surveyed portions to allow of them being readily related, and affixed, to the plans and sections of the previously surveyed portions.

Datum line in survey.

10. One of the boundary lines of the mining tenement in which the mine is situated shall be taken as the datum line for the commencement of the survey on which the plans and sections are based.

Taking of levels.

11. Accurate levels shall be taken from the plats in every shaft and from the entrance to every adit or tunnel into the face of every drive and crosscut in a mine.

Tracings of overlying levels.

12. In any case in which the levels or other workings of a mine overlie one another in such a way that, when traced on a single sheet, the information prescribed to be furnished cannot be plainly marked upon the sheet, in addition to a general or skeleton plan, the plans and sections of the different levels or other workings shall be made and furnished separately as the Warden may direct.

Incorrect plans.

13. Where the Warden believes that any copy of a plan or section of the workings of any mine furnished under the Ordinance is incorrect, he shall notify the person who furnished the copy.

Authentication of plans.

14. The plans and sections shall—

- (a) be signed by the person who made the survey upon which they are based; and
- (b) bear the date when the survey was made.

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15. All copies of plans and sections furnished in accordance with the provisions of the Ordinance or these Regulations shall be— Material of copy plans.

- (a) either tracings on tracing linen or sun prints on good linen;
- (b) executed in a draughtsmanlike manner; and
- (c) for the purpose of transmission, wrapped round a roller, but not creased or folded.

Division 2.—Ventilation.

16. Such a quantity of pure air as an inspector deems adequate shall be caused to enter every mine and to circulate around the working places and stopes: Quantity of air.

Provided that in any case the quantity shall not be less than—

- (a) for each person underground, 2.75 cubic metres per minute; and
- (b) for each animal underground 11 cubic metres per minute.

17. The air to which persons in any mine are exposed or likely to be exposed shall not contain— Presence of gas.

- (a) more carbon dioxide than 0.25 per centum by volume; or
- (b) any detectable traces of—
 - (i) the oxides of nitrogen; or
 - (ii) sulphureted hydrogen.

18.—(1.) The maximum temperature of the air in any working place shall not exceed— Temperature of air.

- (a) 80 degrees (Fahrenheit) measured by a wet-bulb thermometer; or
- (b) 85 degrees (Fahrenheit) measured by a dry-bulb thermometer.

(2.) Where the temperature as measured by a wet-bulb thermometer is 75 degrees (Fahrenheit) there shall be a difference of at least 2 degrees (Fahrenheit) between it and the temperature as measured by the dry-bulb thermometer; and for every one degree (Fahrenheit) above 75 degrees (Fahrenheit) as measured by the wet-bulb thermometer the difference between the temperatures as measured by the wet-bulb and dry-bulb thermometers shall be increased by one degree (Fahrenheit) until the maximum temperature specified in the last preceding sub-regulation in respect of the dry-bulb thermometer has been reached:

Provided that where an inspector is satisfied that the air currents in any mine have sufficient velocity to render unnecessary the maintenance of the standards of temperature prescribed by this regulation he may issue a certificate, in accordance with Form 1, exempting the mine from the maintenance of the standards.

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Auxiliary
ventilation.

19. Where, in the opinion of an inspector, the ventilation of any part of a mine is unsuitable or inadequate, and there is no immediate prospect of improvement in the quality or quantity of the ventilation, he may, by notice in accordance with Form 2, require that, within the time limited in the notice, the additional or auxiliary ventilating appliances specified in the notice be installed and worked.

Records of
ventilation.

20. When required by an inspector, the owner, agent, or manager of a mine shall cause—

- (a) the quantity and quality of the air circulating in the various parts of the mine to be, at least once in every three months, determined and recorded in the prescribed Mine Register; and
- (b) the direction and force of all air currents and the position of doors, stoppings, and all ventilating appliances to be marked upon the plans required to be kept under the Ordinance.

Source of air
for ventilating
machines, &c.

21. The supply of air for ventilating machines or air compressors shall be drawn from the purest source available.

Cleaning air
mains, &c.

22.—(1.) Except where a special installation is provided to allay any nuisance arising from dust, all air mains from air compressors shall be furnished with sufficient traps to remove accumulations of water, and water shall not be allowed to blow through to working faces in the mine.

(2.) All air receivers and the pipes connecting them with the air compressors shall be cleaned as often as necessary to prevent any accumulation of oil or carbonised material in them.

Air currents
from inlet to
outlet.

23. The air currents in the ventilation of any mine shall be regulated so that the air passes through the workings from inlet to outlet without local circulations, that is, no air shall be allowed to return to any place in the mine before leaving the mine at the outlet.

Disused and
shut-off parts
of mine.

24.—(1.) Where any part of a mine has ceased to be used it may be shut off from the ventilating system in operation in the mine by securely closing it from the parts of the mine in use and thereupon the preceding provisions of this Division shall cease to apply to the part so shut off.

(2.) The part so shut off shall be noted in the prescribed Mine Register.

Exemption
from ventilation
requirements,
&c.

25.—(1.) Notwithstanding anything to the contrary contained in these Regulations, an inspector may—

- (a) upon an application, in accordance with Form 3, made by the owner, agent, or manager of any mine; and

(b) upon a statutory declaration by the applicant that specified mining operations of a temporary nature are contemplated and are necessary—

(i) to improve the ventilation or temperature of the mine; or

(ii) to open up ground otherwise inaccessible,

issue a certificate of exemption, in accordance with Form 4, allowing specified mining operations temporarily to be carried on in working places—

(c) at temperatures higher than 80 degrees (Fahrenheit), as measured by a wet-bulb thermometer, and 85 degrees (Fahrenheit), as measured by a dry-bulb thermometer; or

(d) where the conditions prescribed in this Division as to the circulation of air or otherwise are not complied with.

(2.) Any certificate granted under the last preceding sub-regulation shall be subject to such restrictions as to hours, or other conditions, of work as the inspector may impose and the certificate may at any time be withdrawn or cancelled at the discretion of the inspector.

26.—(1.) Wherever it comes to the knowledge of an inspector that the underground workings of different mines are separated by a distance of not more than 91.5 metres, the inspector shall, without delay, inform the Warden of the fact and report to him the circumstances of the case.

Connexions
between
different mines.

(2.) In the report the inspector shall recommend the adoption of such measures, in regard to connexion between the workings of the different mines, as appear to him to be requisite for the proper ventilation of, or for escape from, either mine.

(3.) The Warden may, upon consideration of the report, order the owner, agent, or manager of the respective mines to execute, within the time limited by the order and within his particular mining tenement, such work as may be necessary to complete the requisite connexion between the mines.

(4.) Where he is of the opinion that the connexion intended to be effected between the mines is for the benefit of the owner of one of them, the Warden may order the owner, agent, or manager of the one to execute, within the time limited in the order, the necessary work outside his particular mining tenement.

(5.) Where the owner, agent, or manager fails within the time limited in the order mentioned in the last preceding sub-regulation to execute the work, the Warden may order the owner to make such payments as he directs, to defray the cost of the work executed by another owner for the benefit of the first-mentioned owner :

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Provided that the first-mentioned owner, agent, or manager may, within the time limited for the execution of the work by him, lodge at the Warden's office an objection in writing setting out the grounds, which objection shall be heard and determined in the Warden's Court.

Division 3.—Precautions against Fire.

Adequate measures against fire.

27. The owner, agent, or manager of every mine shall take adequate measures, both underground and on the surface, against the outbreak of fire and for the suppression of any fire which may break out.

Warning to persons underground.

28. In the event of any outbreak of fire occurring underground, immediate warning shall be given to all persons underground and every practicable measure shall be taken to ensure their being brought to the surface without delay.

Measures subject to approval, and orders, of inspector.

29. All measures taken under regulations 27 and 28 of these Regulations shall be subject to the approval of an inspector, who may, if he considers them inadequate, order that such further measures shall be taken as appear to him necessary.

Unprotected lights.

30. A person shall not leave any unprotected light close to any timber in any part of a mine.

Warming food.

31. Proper and safe provision for warming food and drink underground shall be made whenever an inspector thinks it necessary and in such manner as he may direct.

Fireproof chambers for machinery.

32. Where any machinery is placed in chambers underground, the chambers shall be made fireproof.

Waste.

33. All waste used, or for use, in cleaning machinery underground shall be kept in a securely covered metal vessel.

Chips, shavings, and inflammable materials.

34. Wood chips, shavings, paper, or other inflammable waste material shall not be permitted to lie about or accumulate in any part of a mine or be thrown into passes.

Division 4.—Health and Sanitation.

Prevention of dust where rock drills used.

35. In or about every underground place where rock drills are in operation there shall at all times be used such jets or sprays of water or such other means as in the opinion of an inspector will effectually keep the air free from, and prevent the accumulation of, dust.

Dry materials to be damped.

36. In dry roads or other workings if the material broken from the working face is dry and dusty it shall not be removed until it has been effectually damped.

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37. Where, in any portion of the workings in which miners are at work, dust and fumes mingle with the air to such an extent as to create in the opinion of an inspector, a nuisance detrimental to the health of the miners or other persons who are, either temporarily or otherwise, exposed to the nuisance, the inspector shall require the manager of the mine to remove the nuisance by spraying or such other measures as the inspector deems effectual.

Dust or fumes to be removed by sprays, &c.

38. A person shall not work or remain, or be permitted to work or remain, in any place in a mine where the air is not free from dust, smoke, or fumes detectable by sight, smell, or other sense:

Persons not to work where air is bad.

Provided that a person using such appliances as are adequate to protect him from the dust, smoke, or fumes may enter the place for the purpose of carrying out, and there carry out, any rescue work.

39. Every person who damages, or misuses, or fails to use when necessary, any appliance provided by the owner, agent, or manager of the mine for the prevention of dust, fumes, or smoke, or for any other sanitary purpose shall be guilty of an offence.

Damaging sanitary appliances.

Penalty: Five pounds.

40.—(1.) Wherever required by an inspector by notice in accordance with Form 5 the owner, agent, or manager of a mine shall cause—

Testing dust.

(a) tests to be made of the quantity of dust present in the air in the working places, travelling ways, and crib places of the mine; and

(b) the results of the tests referred to in this regulation to be recorded in the prescribed Mine Register.

(2.) The method of, and the time limited for, making the tests shall be specified in the notice referred to in the last preceding sub-regulation.

41. Any debris, refuse, or other material which is likely to be detrimental to the health of persons working in a mine shall not, for the purpose of filling up excavations or for any other purpose, be sent down the mine whether the mine has been abandoned or not.

Material detrimental to health not to be used in filling.

42.—(1.) Where at any time more than three Europeans are ordinarily employed underground in one shift, a changing room, sufficient accommodation, and facilities for the purpose of enabling them to change and dry their clothes shall be provided aboveground near the principal entrance to the mine.

Changing room for Europeans.

(2.) The engine-house or boiler room shall not be used for the purpose, unless—

(a) the number of Europeans so employed does not exceed six;

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- (b) there is no direct access to the boiler or engine from the place where the changing and drying is done; and
 - (c) the consent in writing of an inspector is first obtained.
- (3.) In no case shall any clothes be changed or dried upon a boiler.
- (4.) In the changing room there shall be provided—
- (a) an ample supply of fresh hot water;
 - (b) one washing basin to every three Europeans employed underground in any one shift; and
 - (c) where there is a good supply of fresh water available, one shower bath, properly screened from observation, to every ten Europeans employed underground in any one shift.
- (5.) Adequate provision shall be made for the proper drainage of the waste water from the basins and shower baths in the changing room.

Changing room
for natives.

43.—(1.) Where at any time more than twenty-five natives are ordinarily employed underground in one shift, changing and drying facilities shall be provided for them similar to those required by sub-regulation (1.) of the last preceding regulation to be provided in the case of Europeans.

(2.) The changing room provided for natives shall be aboveground and as close to the principal entrance of the mine as the inspector shall require but apart from that provided for Europeans.

(3.) The engine-house or boiler room shall not be used by natives for the purpose of changing or drying clothes.

(4.) In the changing room there shall be provided—

- (a) an ample supply of fresh hot water;
- (b) one water tap and one washing place for every ten natives employed in any one shift; and
- (c) effectual measures for the removal of waste water.

(5.) Where required by the Warden or any inspector, a covered way shall be provided from the principal entrance of the mine to the changing room.

(6.) The European miner under whose control the natives have been working underground, or the compound manager, where a compound manager is employed at the mine, shall ensure that—

- (a) the natives shall go direct from the mine to the changing room and there wash and change their clothes; and

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(b) the clothes that have been divested shall remain in the changing room until thoroughly dry.

Penalty: Ten pounds.

44. Every changing room provided under these Regulations shall—
- (a) contain a fire or other satisfactory heating arrangements for the drying of clothes;
 - (b) be reasonably comfortable;
 - (c) be sufficiently lighted after dark; and
 - (d) be available for a reasonable time after every shift for which it is required.

Heating and lighting of changing room.

45. Where an inspector requires it in writing, the owner, agent, or manager of a mine shall provide for the use of persons employed aboveground at or about the mine such conveniences and facilities for the changing and drying of clothes as the inspector specifies in the writing.

Conveniences for employees above ground.

46. In and about every mine and its underground workings, the owner, agent, or manager of the mine shall provide such latrine accommodation and disinfectants and take such other measures for the purpose of sanitation and the prevention of nuisances as the inspector may direct.

Latrines in mines.

47.—(1.) In every mine where the circumstances do not permit of persons who are underground coming to the surface for the purpose of defecating, sanitary pans with disinfectants shall, at convenient places underground, be provided for the purpose, on the double service system.

Sanitary pans underground.

(2.) No person shall defecate underground otherwise than in the pans provided under this regulation.

(3.) Arrangements, approved by an inspector, shall be made for bringing the pans to the surface and emptying them there, and no human or other animal excreta shall be deposited in any of the workings of a mine without the consent of the Warden previously obtained and the Warden may at any time modify or withdraw the consent so obtained.

48. Where horses or other animals are employed underground, the levels and workings shall be kept free of their droppings.

Animal droppings to be removed.

49. Every underground stable shall be placed in a return airway and shall be maintained in a thoroughly clean condition.

Underground stables.

50.—(1.) Stagnant water shall not be permitted to remain upon, but shall be drained off, the floor of levels which are in use.

Stagnant water.

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(2.) Where any accumulation of stagnant water is being drained from a winze, every precaution shall be taken to prevent the pollution of the mine atmosphere by noxious gases given off by the water.

Drinking
water.

51.—(1.) In and about every mine a supply of pure drinking water, adequate for the consumption of the persons employed there, shall be provided unless there is a natural and continuous supply conveniently available.

(2.) Every provision shall be made which, in the opinion of an inspector, is necessary for preventing the drinking water from being polluted or rendered unwholesome.

Place for
eating meals.

52.—(1.) Where required by an inspector, there shall be provided, in or about a mine, accommodation and conveniences for the use of employees when eating their meals, and in or adjacent to the accommodation, an impervious metal receptacle sufficient to hold all waste food, paper, and other refuse there discarded by the employees.

(2.) The accommodation, conveniences, and receptacle shall be subject to the approval of the inspector and shall be maintained in a thoroughly clean and sanitary condition.

(3.) The contents of the receptacle shall be daily destroyed in an incinerator aboveground.

(4.) Any person who, in discarding waste food, paper, or refuse, neglects to use the receptacle provided shall be guilty of an offence.

Diseased
persons.

53.—(1.) The owner, agent, or manager of a mine shall not employ underground any person whom he knows to be suffering from tuberculosis of the respiratory organs, plumbism, or any other disease which the Administrator by notice⁽²⁾ declares to be a disease to which this regulation applies.

(2.) Any person who knows that he is suffering from any disease referred to in the last preceding sub-regulation shall not enter any underground working in a mine.

Division 5.—Explosives.

Storage of
explosives, &c.

54. Gunpowder or any other explosive or inflammable substance shall not be used or kept in or about any mine except upon the following conditions:—

(a) It shall be stored in such a magazine and in such quantities as may be approved;

(b) Detonators shall be kept in a separate and approved magazine;

(2) No notice has been published in *N.G. Gaz.*

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- (c) Apart from the approved magazine a quantity reasonably sufficient for use during six working days may be stored in the mine in a drive or chamber enclosed by an approved door;
- (d) The manager of the mine, or some person who is appointed by the manager and whose appointment is evidenced by an entry in the prescribed Mine Register, shall—
 - (i) be responsible for the safe custody of all high explosives;
 - (ii) not issue a quantity in excess of that which is reasonably sufficient for use in the mine during the six days immediately following the date of the issue;
 - (iii) immediately upon the abandonment of any face or workings, retake possession of all high explosives issued but there remaining unused; and
 - (iv) not negligently permit any other person to retain, remove, or dispose of any explosives contrary to these provisions;
- (e) An employee, other than the manager or the person appointed under the last preceding paragraph, shall not have in his possession at any one time a greater quantity of explosives than is required for use on the shift in which he is employed; and
- (f) All explosives in the mine shall, except when being used for the purpose of charging, be placed in a position which will ensure that they are not struck by any material thrown out from the working face.

55.—(1.) Whenever explosives are taken into the mine from the magazine, or other place of storage, on the surface they shall be conveyed direct—

Removal into mine from surface, &c.

- (a) to the underground magazine or chamber; or
- (b) if required for immediate use, to the place in the workings where required.

(2.) Unless otherwise approved, explosives shall not be taken to the underground faces of the mine except in a securely covered case or canister, of an approved type and make, containing not more than 20 lbs. of explosive.

(3.) There shall not be open at any one place at any one time, more than one case or canister which, unless actually in use for charging, shall be returned to the magazine or chamber provided on the surface or underground.

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Distribution
underground.

56. Where explosives are kept in any magazine or chamber underground in any quantity exceeding 20 lbs. their distribution shall be supervised by a European authorized by the manager, or by a person appointed under paragraph (d) of regulation 54 of these Regulations.

Naked light
prohibited in
magazine.

57.—(1.) A person with a naked light shall not enter any magazine or chamber or other place provided for the storage of any explosive or other inflammable substance.

(2.) Where the magazine or chamber or other place is not provided with internal lighting, the manager shall provide suitable moveable and covered lights for the use of persons whose duty it is to enter the magazine, chamber, or other place.

Detonators on
the surface and
underground.

58.—(1.) Except as otherwise provided in this regulation, detonators for blasting shall be kept at the surface and in a covered box, but shall not be kept in the same magazine with any nitroglycerine compound.

(2.) Where approved, a supply of detonators in number not exceeding 100, may be kept in any one level or working face in a mine at any one time:

Provided that the detonators shall be—

- (a) kept at least 9 metres distant from other explosives in a covered box and in an approved magazine; and
- (b) taken out in quantities not greater than those required for immediate use.

Other
conditions
affecting
detonators.

59.—(1.) Cartridges shall not be primed with detonators except for immediate use.

(2.) Detonators shall not be—

- (a) placed in any travelling road, pass, or working face; or
- (b) fixed to the fuse except by means of pincers provided for the purpose by the manager.

Tools for
blasting,
tamping, and
ramming.

60.—(1.) In any mine there shall not be used any—

- (a) iron or steel pricker for blasting; or
- (b) iron or steel tool for tamping or ramming.

(2.) An iron or steel pricker or an iron or steel tamping-bar shall not be taken into any mine.

(3.) Where nitroglycerine explosives are used, only wooden rammers shall be used in charging.

Age restriction
in charge and
firing.

61. A person shall not charge a hole with any explosive nor fire any hole so charged unless—

- (a) he is of the age of eighteen years; and

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- (b) in the case of a native, he shall charge and fire in accordance with the permission of the manager of the mine, who shall be responsible for the safe firing, which permission shall be limited, where explosives are being used underground, to the charging and firing of single holes.

Para. (b) amended by 1937, No. 19, r. 2.

62.—(1.) A hole shall not be charged with explosive unless it is intended immediately to fire the charge.

Charging and firing.

(2.) All persons charging and firing explosives in any mine shall be jointly and severally responsible for the proper handling and firing of the explosives.

(3.) Every person about to fire a charge shall—

- (a) give clear and definite warning to all persons in the vicinity who are likely to be injured by the firing, and advise them of the location and number of all charges about to be fired by him; and
- (b) ensure that all gangways, ladder-ways, and other means of access or ingress to the workings where the charge is about to be fired, are effectually blocked against traffic by a notice in writing or by some other person conveniently posted and instructed by him.

(4.) A charge shall not be fired inside, or in contact with, any piece of timber underground without the previous consent of the manager of the mine or of an inspector, and if the consent is given by the manager he shall immediately notify the inspector in writing.

(5.) Where two or more parties working in proximity to one another have any firing to do at or about the same time, the persons in charge of them shall arrange the order in which each party shall do its firing in such a manner as to avoid, as far as practicable, confusion in counting the explosions resulting from the firing in the face where each party is working.

(6.) More holes than are intended to be fired in one round shall not be charged in any one face of the workings.

- (7.) (a) Except as otherwise provided in this sub-regulation, all firing underground shall be done at "crib-time" or at the end of a shift.
- (b) Where any charge has missed fire and the ground in the vicinity of the charge is for that or any other reason dangerous to human life, the firing may be done at any convenient time with the permission of the manager and after warning given as prescribed by this regulation.
- (c) The permission given under the last preceding paragraph shall be recorded by the manager in the prescribed Mine

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Register together with a statement of the conditions under which the firing was permitted.

- (d) An inspector may, upon application made to him by the owner, agent, or manager of a mine, exempt any mine or part of a mine from the requirements of this sub-regulation where it is represented and appears to him that the working or workings, at which firings are proposed to be done otherwise than in accordance with paragraph (a) of this sub-regulation—
- (i) is or are isolated from other workings; and
 - (ii) has or have adequate ventilation directly connected with the surface,
- and that hardship would be imposed by the enforcement of the requirements.
- (e) Any exemption granted under the last preceding paragraph shall be—
- (i) subject to such conditions as the inspector may impose and to revocation at any time; and
 - (ii) in accordance with Form 6.

Entry after firing.

63.—(1.) A person shall not enter any working place after firing has taken place until the fumes arising from the explosions have been effectually dispersed.

(2.) The period between the firing and entry by any person to the working place shall not, in any case, be less than ten minutes unless the person so entering is using a respirator, or other breathing apparatus, of an approved type:

Provided that such longer period, subject to alteration by him at any time, may be imposed by an inspector as he deems necessary after making any tests of the dust, fumes, and ventilation present at the working place.

Charges which have missed fire.

64.—(1.) A charge of gunpowder which has missed fire may be drawn by a copper pricker, but in no case shall an iron or steel tool be used for the purpose of drawing or drilling out such charge.

(2.) A charge consisting of any nitroglycerine compound shall not, under any circumstances, be drawn from a hole or (except as provided in the next succeeding sub-regulation) have its tamping removed.

(3.) In the case of any charge consisting of any nitroglycerine compound having missed fire it shall not be drawn, but the tamping shall be carefully removed to a depth which is distant not more than 30.5 centimetres and not less than 15.25 centimetres from the outer end of the charge and there shall be inserted for the purpose of exploding the original charge a fresh charge or charges until the original charge has been exploded.

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(4.) No new hole shall be bored in the neighbourhood of, and for the purpose of exploding, an unexploded charge.

(5.) A charge of any explosive which has hung fire or is supposed to have missed fire shall not be visited until 45 minutes shall have elapsed from the time of lighting the fuse:

Provided that this sub-regulation shall not apply to charges fired by an electric current where the conducting wires are first disconnected.

(6.) Where any charge hangs fire or there is any doubt as to its having missed fire, the person laying the charge shall report the fact to—

- (a) the person under whose immediate control he is working; or
- (b) the manager; and
- (c) the person (if any) who relieves him.

(7.) Where any hole has been charged and for any reason the charge has not been fired it shall be treated as if it had missed fire.

(8.) When owing to simultaneous explosions there is a doubt as to the number of consequent reports heard or as to the number of the explosions, a charge shall be deemed to have missed fire.

(9.) (a) In the event of the bottom of any hole in which a charge has been exploded remaining in any working place, then, unless and until it can be seen clearly by two persons that no explosive remains unexploded in the bottom, no work, whether of boring, barring down (except so far as may be absolutely necessary in order to make it safe to approach the bottom), picking, or otherwise, shall be done in the working place until the bottom has been broken away and completely exposed by a further charge inserted in the hole; but for the purpose of inspection the bottom shall be carefully cleared out, with the free use of water, before it is deemed to contain no explosive.

(b) This sub-regulation shall apply to all "old bottoms" wherever found.

(10.) (a) After the last charge has been fired in any working place in any open cut, and before the party working at the time it was fired has been relieved, the person who fired the shot, or a competent person who is a member of the party which fired the shot and entrusted by the other members of the party with the duty of inspecting the working place, shall, except in the case of a charge having missed fire or hung fire, carefully inspect the face of the working place.

(b) If, upon the inspection, there appears to be danger of any kind whether of a charge missing fire or hanging fire, or

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otherwise, the fact shall be reported to the relieving party before it comes to the face of the working place.

- (c) Each of the members of the relieved party, where there has been a failure to make the inspection required by this regulation, shall be guilty of an offence notwithstanding that the failure was due to the wrongful act or omission of any particular member or members of the party to whom the other members entrusted the duty of making the inspection and the report referred to in the last two preceding paragraphs.

Restriction on boring of drill-holes.

65. A drill-hole shall not be bored in any remaining portion of a hole in which a charge of explosive has been previously exploded.

Use of nitroglycerine compounds.

66.—(1.) Nitroglycerine compounds which are in a frozen or hard state shall not be used until they have been thoroughly thawed or softened in a dry vessel heated by warm water of a temperature not higher than 130 degrees (Fahrenheit).

(2.) Where fumes arising after and from the explosion of any nitroglycerine compound cannot be dispersed effectively by ventilation or by a spray of water, the fumes shall be neutralised or rendered innocuous by the person who supervised the blasting operation in which the explosion occurred, by spraying the site of the blasting with a solution of sulphate of iron before any person is allowed to approach the site.

(3.) Every person supervising the explosion of any nitroglycerine compound in any place where it is likely to freeze shall be supplied with the proper and safe means of thawing the compound and of spraying the site of the explosion.

Sub-reg. (4) am. by 1937, No. 19, r. 3.

(4.) A person shall not use any nitroglycerine or other high explosive compound for the purpose of igniting any fuse underground:

Provided that a person engaged in blasting operations may, for the purpose of "spitting" a fuse, use a small piece of gelignite or blasting gelatine if it is carefully and securely inserted at the extremity of the fuse.

Bulled holes.

67.—(1.) A bulled hole shall not be loaded with a further bulling charge unless and until it is thoroughly washed or swabbed out with water.

(2.) A bulled hole shall not be loaded with the main firing charge unless—

(a) it has been thoroughly cooled by being filled with water;
or

(b) a copper tamping rod which was inserted in the hole not sooner than thirty minutes after it had been bulled

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and which has been allowed to remain there for not less than five minutes is found to be nowhere hot to the touch.

68. A person shall not carry out any blasting operations in or about any mine in circumstances in which injury to any person is likely to occur. Blasting operations where injury likely.

69. A person shall not remove any explosive from any mine without the manager's consent in writing, a note of which shall be entered in the prescribed Mine Register by the manager. Removing explosives.

70.—(1.) A safety fuse of which the length is less than 1 yard and of which the rate of burning is less than 80 seconds or more than 100 seconds per yard shall not be used in any mine. Safety fuses, rates of burning.

(2.) The manager of the mine shall ascertain the rates of burning of the fuses used in the mine and shall ensure that the rates so ascertained shall be made known to all persons who are required to use the fuses.

71. Any fuse, detonator, or explosive found by an inspector to be defective or in any degree unsafe shall not afterwards be used but shall be destroyed forthwith. Destruction of defective fuses, detonators, and explosives.

Division 6.—Ladders and Travelling Ways.

72. In every shaft or winze which has an inclination of 35 degrees or more from the horizontal and which is used by persons for the purpose of ascending or descending, and notwithstanding the use there of machinery for either purpose, there shall be fixed ladders which an inspector deems satisfactory for the purpose. Ladders required in certain cases.

73. Except in a safety-cage, or as otherwise provided by these Regulations, a person shall not ascend or descend in a shaft or winze having the inclination referred to in the last preceding regulation unless for the purpose of making repairs, or in a case of pressing necessity. Ascent or descent by ladders.

74. Persons employed in sinking any shafts may ascend from, or descend into, the shaft for a distance not exceeding 61 metres by means of the bucket used for hoisting material from the shaft: Ascent and descent by bucket in certain cases.

Provided that where the material is hoisted direct to the surface the persons may, with the permission in writing of an inspector and upon such conditions as he may express in the permission, so ascend or descend for any greater distance if a "monkey" or other approved safety device is used on the bucket.

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Footways,
guiding ropes,
&c., in certain
cases.

75. In every shaft or winze which has an inclination of less than 35 degrees from the horizontal there shall be provided a sufficient footway, guiding rope, or chain:

Provided that in any case where an inspector so directs a ladder shall be fixed.

Fixing of
ladders.

76.—(1.) Any ladder permanently and habitually used shall not, except—

- (a) in the pump compartment of any shaft;
- (b) in a winze or rise giving access to a stope actually being worked; or
- (c) in special circumstances and with the consent in writing of an inspector,

be fixed at an inclination of more than 80 degrees from the horizontal.

(2.) Every ladder in a shaft shall be fixed so as to project at least 1 metre from the mouth of the shaft.

(3.) Ladders shall be so placed as to cover the manholes of the platforms or resting-places referred to in these Regulations, or as an inspector directs.

(4.) In the case of every shaft or outlet to which the provisions of paragraph (c) of sub-section (1.) of section 73 of the Ordinance apply, a ladder shall be securely fastened to the timbering or wall of the shaft or outlet.

Platforms to be
guarded in
certain cases.

77.—(1.) Every ladder (even a ladder fixed in a pump-shaft not used exclusively for pumping), when the ladder-way exceeds 18.25 metres in depth and has an inclination of more than 70 degrees from the horizontal, shall have, at intervals of not more than 9 metres, platforms or resting-places which in the opinion of an inspector are adequate for the protection of persons using the ladder:

Provided that the platforms and resting-places shall be installed in any case where the inclination of the ladder-way is less than 70 degrees from the horizontal and the inspector directs.

(2.) At every platform and resting-place there shall be fixed above every ladder some suitable hand-grip for the use of persons ascending or descending the ladder.

Construction
of ladders.

78.—(1.) Every ladder used in a mine shall be—

- (a) of strong construction;
- (b) securely fastened to the timbering or wall of the shaft in such a manner as the inspector approves; and
- (c) maintained in good repair.

(2.) The spaces between the rungs of every ladder shall not exceed 30.5 centimetres.

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(3.) The rungs of every ladder fixed in any mine shall be—

(a) not less than 12.5 centimetres distant from the wall against which the ladder is placed; and

(b) kept clear of everything which might interfere with the foothold.

79. During sinking operations in any shaft and for the purpose of preventing injury to the fixed ladder arising from blasting operations, as well as of securing a safe means of exit, chain or rope ladders shall be installed so as to extend from the lower end of the fixed ladder down to the bottom of the shaft:

Special ladders during sinking operations.

Provided that the chain or rope ladders shall not be used over a length of the shaft greater than 6 metres unless with the consent, in writing, of an inspector.

80.—(1.) A ladder, or where in the opinion of an inspector it is necessary a ladder with convenient platforms or suitable footways, shall be provided in each rise, winze, jump-up, or passage giving access to a stope or to a working at a higher or lower level or place in the mine and, where stages are used, means for ascending them safely shall be provided.

Ladders in rises, winzes, &c.

(2.) Each ladder, platform, footway, and stage as well as the rises, winzes, jump-ups, and passages in which they are provided shall be subject to the approval of an inspector.

81. Places of refuge shall be opened in rises at such points as may be required by an inspector.

Places of refuge.

Division 7.—Winding and Signals.

82. Every working shaft in which a cage or skip is used by which persons are lowered or hoisted, and every shaft in which appliances worked by steam or other machinery are used, shall be provided with guides, and effective means of communicating distinct and definite signals—

Means of signalling.

(a) from the bottom of the shaft, and from every entrance for the time being in work between the top and the bottom of the shaft, to the top and thence to the engine-room; and

(b) if required by an inspector, from the engine-room and top to the bottom of the shaft and to and between every entrance for the time being in work between the top and bottom of the shaft.

83. In every working shaft in which a cage or skip is used and in which more than one level is being worked at the same time a platman shall be placed in charge of the cage or skip.

When platman to have charge of cage.

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No pipes, cables,
&c., in winding
compartments.

84. No pipe for pumping or pipe for the conveyance of air or steam, no electric power cable, and no other thing which may cause obstruction shall be fixed in any winding compartment:

Provided that an inspector may, in writing, grant permission, subject to such conditions as he thinks fit, for a knocker line and for the temporary installation of pipes in the winding compartments of a flooded shaft for the purpose of unwatering the shaft.

Safety-cages
to be provided.

85. Safety-cages shall be provided, maintained, and used for the purpose of lowering or hoisting persons in every shaft, where an inspector so directs.

Cage covers.

86. A cage used for lowering or hoisting persons in any shaft shall have an overhead cover which shall be—

- (a) complete;
- (b) not less than 6 feet 6 inches above the floor of the cage;
- (c) constructed of—
 - (i) iron not less than $\frac{1}{4}$ inch thick; or
 - (ii) steel not less than $\frac{3}{16}$ inch thick; or
 - (iii) such other metal and of such thickness as may be approved by an inspector; and
- (d) fitted with sloping sides hung on hinges so as to be readily lifted upwards by persons within the cage.

Cages to be
numbered.

87. Every cage used in a mine shall have a distinguishing number which shall be plainly painted or marked on the cage in accordance with the directions of an inspector.

Number of
persons which
cage may carry.

88. The number of persons lowered or hoisted in a cage at any one time shall not exceed the number which an inspector, in writing, authorizes in any case, having regard to the size and construction of the cage and the strength of the gear and machinery involved in the lowering and hoisting of the cage.

No entering or
leaving a
moving cage.

89. A person shall not enter or leave a cage while it is in motion.

Materials, &c.,
to be lowered
or hoisted
separately
from persons.

90. Any truck, tool, iron, timber, rail, or other material (except material for the repair of the shaft) and any explosive shall not be lowered or hoisted in the same cage, bucket, or other carriage or receptacle as that in which any person is being lowered or hoisted:

Provided that a person having the actual custody of any explosive may be lowered or hoisted in a cage together with the explosive:

Provided further that a mine surveyor or sampler, or other person authorized by the manager, may be lowered or hoisted in a cage together with his instruments and material.

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- 91.** No timber, truck, tool, iron, rail, or other material shall be lowered or hoisted in any shaft unless it has been secured to a rope by means of a shackle or securely fastened in a cage or bucket. Timber being lowered in shaft must be secured.
Am. by 1937, No. 19, r. 4.
- 92.**—(1.) Wherever in any shaft, in which a cage is not available or in use, a person is about to be lowered or hoisted—
(a) by means of a rope; or
(b) where the person's duty renders it necessary, on the top of a cage-cover, Persons lowered or hoisted otherwise than inside cage.
- he may require to be securely stayed to the rope or the top of the cage-cover, as the case may be, by a strap or other fastening passed round the body and under the arms of the person.
- (2.) The straps or other fastenings referred to in the last preceding sub-regulation shall be provided and made readily available at every mine.
- 93.** An open hook shall not be used with a bucket in lowering or hoisting, but only such type of hook or shackle as may be authorized, in writing, by an inspector. Hook to be used with bucket.
- 94.**—(1.) A single-linked chain, other than the short coupling chain attached to the cage or load, shall not be used for lowering or hoisting any person in any working shaft or plane. Single-linked chains.
- (2.) When chains are used as couplings to cages, two single-linked chains of uniform size shall be used to each coupling.
- 95.** There shall be on the drum of every machine for winding the rope used in lowering or hoisting any person in a mine— Appliances to prevent drums slipping.
- (a) such flanges or horns; and
(b) if the drum is conical, such other appliances, as are sufficient to prevent the rope from slipping.
- 96.** Where any machine, driven by steam, water, oil, gas, electricity, air, or other force or power, is used in the lowering or hoisting of any person in a shaft, an adequate brake or other sufficient appliance (in addition to that on the fly wheel) shall be fitted to every winding-drum or gear in such a manner as shall enable the engine-driver to apply it without leaving the starting handle of the engine. Brake.
- Provided that where the depth of the shaft does not exceed 61 metres a single brake fitted to one of the winding-drums may be used where the permission in writing of the inspector is first obtained:
- Provided further that where the depth of the shaft exceeds 305 metres and the inspector so orders the brake shall be worked with steam, air, electricity, or water:

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Provided also that a brake shall not be permitted on any fly wheel except with the permission, in writing, of an inspector.

Dial or indicator on hoisting machine.

97. In addition to any mark shown upon the rope used in any mine for the purpose of lowering or hoisting persons or material, a dial or indicator shall (except in the case of a winch, petrol friction hoist, small prospecting hoist, or an electric or air hoist, used in sinking from an underground level) be attached to the machine, which winds or unwinds the rope, and the dial or indicator shall be so placed that to the person who works the machine the position of each cage or load in the shaft shall be visible at whatever level, chamber, or place of refuge it is at any time.

Rope cleaners.

98. In every mine, where any iron or steel wire rope of not less than $1\frac{1}{2}$ inches in circumference is in use for hauling, a proper machine approved by an inspector shall be used for cleaning and oiling the rope.

Use of spliced ropes.

99. Any rope which has been spliced shall not be used for the purpose of winding.

Re-shoeing of winding rope.

Sub-reg. (1) am. by 1937, No. 19, r. 5.

100.—(1.) Every winding rope shall be re-shod or re-capped at intervals of not more than three months.

Sub-reg. (2) am. by 1937, No. 19, r. 5.

(2.) At the time of re-shoeing or re-capping the rope, a portion of the rope not less than half the circumference of the drum and not less than six feet, measured from the lower end, shall be cut off.

Defective ropes to be discarded.

101. As soon as any rope becomes defective it shall be withdrawn from use in the transport of persons in any mine, unless the defective portion is at the end of the rope and has been cut off.

Complete history of rope required in certain cases.

102. Where, in or about any mine, there is any rope which has been previously used in any place outside the control of the manager of the mine, the rope shall not be used for lowering or hoisting any person unless the manager obtains a full history of the rope and an inspector is satisfied that it may be so used with safety.

Catches, &c., affixed to skids, &c.

103.—(1.) A spring catch, or automatic door or tumbler, of a suitable kind shall, when practicable, be affixed to every cage, skid guide, or framing, below the poppet-head of every shaft in which a cage is used, to prevent the fall of the cage down the shaft in the event of the cage being detached from the rope or chain by over-winding.

(2.) The automatic door or tumbler shall be surrounded by a proper platform and hand-railing, and at every plat or level where trucks are moved on or off the cage while in the shaft, the shaft shall be fitted with bearers (not being loose wooden bearers) securely and

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strongly hinged to the sole-piece of the plat set, or with other similar appliances approved by an inspector.

104. Gates (not less than 1.25 metres in height) shall be used in every shaft where hauling is done with a cage. Gates used in shafts.

105. Where persons are being lowered or hoisted with a bucket the speed attained by the bucket shall, except in the case of any apprehended danger, not exceed— Speed of lowering and hoisting with buckets.

- (a) 61 metres per minute, when the bucket is less than 30.5 metres from the surface; or
- (b) 152 metres per minute, when the bucket is 30.5 metres or more from the surface.

106. The driver of the winding-engine shall avoid all sudden movement in starting and stopping the engine, so as to preclude all unnecessary shock to any cage, bucket, or other means of conveyance which shall be gently started from, and brought to rest at, the proper stopping place. Starting and stopping of winding engine.

107.—(1.) An ungeared drum, or a single drum with brake or friction gear, shall not be used in a mine for the purpose of lowering any person, except a person who is in charge of, and must travel with, the cage, bucket, or skip, on occasions where double winding is to be commenced from another plat. Lowering and hoisting persons in special cases.

(2.) An electrically-operated hoist shall not be used to lower or hoist persons engaged in the firing of charges in any shaft or winze unless the charges are fired electrically from a safe distance and by the person who placed the charge.

108. At every mine employing persons below ground a door, or other similar appliance approved by an inspector, shall, during the lowering or hoisting of any person at any change of shift, be affixed to every cage entrance. Doors to cages.

109.—(1.) Every cage used in a mine shall be fitted with— Safety catches, &c., on cages.

- (a) special and suitable appliances to prevent its sudden fall down the shaft; and
- (b) a safety hook—
 - (i) with suitable detaching appliances fixed to the poppet-head to prevent it coming into contact with the poppet-head; and
 - (ii) capable of suspending, at the poppet-head, the cage when detached from the rope used in lowering or hoisting it in the shaft.

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(2.) The detaching and suspending hooks shall at least once in every month, be taken to pieces, examined, cleaned, and oiled by a competent person appointed for the purpose by the manager, and the person shall record the fact in the prescribed Mine Register.

(3.) There shall be at least 4.5 metres of clearance between the detaching hooks and the point of detachment when the cages are at the landing.

Testing of cages.

110.—(1.) No safety cage shall be used at any time unless and until it has been tested by the manager and, where an inspector is available, in the presence of an inspector, and found to be furnished with proper appliances and to be in good working order and condition.

(2.) The manager, or engineer in charge of the mine, shall, at intervals of not more than one month, test every cage from the drum and record the result of the test in the prescribed Mine Register.

(3.) The test referred to in the last preceding sub-regulation shall, whenever required by an inspector, at intervals of not less than six months, be conducted in his presence, and the inspector shall give to the manager 24 hours' notice, in accordance with Form 7, that he requires the test to be so conducted.

Chairs,

111.—(1.) Chairs or some other appliance approved by an inspector shall be used in all shafts where haulage is done with cages.

(2.) The chairs shall be secured to the sole plates of the plat sets so that they can be easily placed over the shaft and raised without trouble, and shall be fixed to the satisfaction of the inspector.

Use of whip,

112. A whip shall not be used for sinking shafts or lowering or hoisting persons unless two-thirds of the shaft is covered by a pent-house.

Signal and knocker lines,

113. Any signal or knocker line used shall be accessible to any part of the shaft and be so balanced as to be easily worked by hand without the aid of a lever, unless the signalling appliances are operated by electricity, in which case the appliances shall be approved by the inspector.

Verbal signals in certain cases,

114. A verbal signal or communication shall not be made up or down a shaft, exceeding 15.25 metres in depth, in which a cage is used except through speaking tubes or telephones, which shall whenever practicable be placed in the pump compartment of the shaft.

Instructions regarding methods of signalling.

115.—(1.) All instructions regarding the methods of signalling in mines to indicate that persons or materials are to be lowered or hoisted in a shaft shall—

- (a) accord with the code and rules prescribed for signalling;
- (b) be clear and distinct; and

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(c) be posted, and kept posted, in clearly legible form on framed boards.

(2.) Of the framed boards mentioned in the last preceding sub-regulation there shall be placed—

- (a) one in each chamber or entrance to the shaft;
- (b) one at the brace or near the top of the shaft; and
- (c) one in view of the person in charge of the machine used for lowering or hoisting persons or materials in the shaft.

(3.) Every European employed in any mine shall make himself acquainted with the instructions.

116. The methods of signalling in any mine shall accord with the following code and rules, in which “knock” includes “ring” and “pause” means the space of time required for making two knocks or rings:—

Methods of signalling.

A. General signals:—

Am. by 1937,
No. 19, r. 6.

- 1 knock: Stop when in motion; hold fast when stationary.
- 2 knocks: Lower.
- 3 knocks: Hoist.
- 4 knocks: Men on. To be followed by the signal to designate the destination of the cage.
- 6 knocks: Firing warning.
- 7 knocks: Change tanks or cages.
- 8 knocks: Change to hoist from a different level.
- 10 knocks: Accident occurred. (To be followed by signal of level.)

B. Level signals:—

Am. by 1937,
No. 19, r. 6.

- 1 knock, pause, 1 knock: No. 1 Level.
 - 1 knock, pause, 2 knocks: No. 2 Level.
 - 1 knock, pause, 3 knocks: No. 3 Level.
 - 1 knock, pause, 4 knocks: No. 4 Level.
 - 1 knock, pause, 5 knocks: No. 5 Level.
 - 2 knocks, pause, 1 knock: No. 6 Level.
 - 2 knocks, pause, 2 knocks: No. 7 Level.
 - 2 knocks, pause, 3 knocks: No. 8 Level.
 - 2 knocks, pause, 4 knocks: No. 9 Level.
 - 2 knocks, pause, 5 knocks: No. 10 Level.
 - 3 knocks, pause, 1 knock: No. 11 Level.
- and so on in series.

} Lower or hoist
(as the case
may be).

C. Sinking signals:—

(For use in all cases where—

- (i) a shaft is being sunk and winding is taking place from the bottom of the shaft—

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- (a) directly to the top of the shaft, by means of the main winding engine; or
 - (b) to a station underground, by means of the main winding engine or of an auxiliary winding engine; or
- (ii) firing in close proximity to the shaft and the firing is likely to cause injury to the cage passing.)
- 1 knock: Men on, hoist.
 - 6 knocks: Firing warning.

On receiving the firing warning, the engine driver of the winding engine shall hoist the bucket or cage at least a distance represented by one revolution of the engine, lower it again for the same distance and stand by ready until he receives the signal to hoist, when he shall hoist carefully.

Am. by 1937,
No. 19, r. 6.

D. Signals when repairing or timbering shafts:—

When persons are engaged in repairing or timbering work in any shaft, special notice of the fact shall be given by the person in charge of the repairing or timbering work to every engine driver who comes on duty. Thereupon the signal to lower (2 knocks) or to hoist (3 knocks) shall be taken, respectively, as meaning that persons are to be lowered or hoisted, and the winding shall be done slowly and with care.

E. Signals when lowering or hoisting persons:—

Before signalling the level to which persons are about to be lowered, the braceman shall notify the engine driver by special signal that the persons are on the cage.

A person shall not attempt to get on any cage, or to put on or take off any tools or materials from, or otherwise use, any cage left or suspended at or opposite any level without first ascertaining, by signals sent and received, that the engine driver is in control of the engine.

Any person using a cage in any shaft shall, immediately upon leaving the cage and before leaving the plat, notify the engine driver that the cage is at liberty by signalling "lower" or "hoist", and the engine driver shall not move the cage until he receives the signal that it is at liberty.

The engine driver shall not move the cage or other attachment after receiving any signal (except that of the firing warning mentioned in this regulation under the heading "Sinking signals") for at least—

- (i) two pauses, when lowering or hoisting materials; or
- (ii) six seconds, when lowering or hoisting persons.

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117.—(1.) In every working shaft, and in each winding compartment of a mine, except where electrical signalling is used, a line or some other appliance approved by an inspector shall be provided to enable danger signals to be communicated from any portion of the shaft or compartment to the engine driver or person in charge of the machinery. Danger signals.

(2.) Where electrical signalling is used in any mine and if an inspector requires, a knocker line or some other means of auxiliary communication shall be provided.

118. Unless an inspector considers it impracticable, a clear view shall be presented to the engine driver from his station to the shaft at the surface brace. Engine driver's view of shaft.

119. Wherever underground work is being done in a mine at a greater distance than 61 metres from the shaft or, in the case of an adit mine, from the entrance to the adit level, and the inspector requires, means satisfactory to him shall be provided for communicating signals— Signals for lower drives, &c.

(a) along the lower drives of the mine—

(i) to and from the plat at the bottom of the shaft;
and

(ii) to and from places in which work is being done;
and

(b) along the adit levels and drives of the mine.

Division 8.—Machinery.

120. The prescribed certificate or permit for the purposes of section 35 of the Ordinance shall be a certificate or permit granted under these Regulations. Certificate or permit required to drive winding engine, &c.

121. A person who is in charge of any machine which, for the security of life or limb, requires constant control shall not, for any reason whatsoever, during the period for which he is in charge, absent himself from, or cease his constant control over, the machine unless he is replaced by some other person qualified to control the machine. Constant control of machines in certain cases.

122.—(1.) All exposed machinery which when in motion may be dangerous to any person shall be securely fenced off. Fences and guards for machinery.

(2.) All electrical machinery and conductors shall be so placed and fenced, or guarded, that any person cannot be injured by inadvertent contact with any part of the machinery or conductors.

(3.) An effective guard, which shall not be removed while the machinery is in motion, shall be provided for every part of the

machinery and conductors which, without the guard, may be a source of danger to any person.

Certain clothing
not to be worn
near machinery.

123.—(1.) A person employed in close proximity to any moving machinery shall not wear, or be permitted to wear, any loose outer clothing.

(2.) Whenever required by an inspector, the owner, agent, or manager of a mine shall issue to every native employed in or about any machinery, and cause him to wear, short trousers instead of a lava-lava.

(3.) A person having the charge of any moving machinery or a person supervising any work in the vicinity of the machinery shall not permit any other person engaged upon work in close proximity to the machinery to wear any loose outer clothing.

Repairing, &c.,
of machinery
in motion.

124.—(1.) Where there is any risk of personal injury, the repairing, adjusting, cleaning, or lubricating of any machinery in motion shall be undertaken, or be required or permitted to be undertaken, only—

(a) by a skilled person; and

(b) when it is impracticable to stop the machinery.

(2.) Automatic devices for lubricating machinery in motion shall be employed wherever practicable.

Handling of
driving belts.

125.—(1.) Where any machinery is belt-driven and it is necessary to stop or start the machinery without interfering with the speed of the prime-mover, the machinery shall be permanently fitted with a satisfactory mechanical appliance for the purpose.

(2.) The shipping and unshipping of driving belts whilst the machinery is in motion is prohibited except in the customary shifting of light belts on the coned pulleys of machine tools for the purpose of alterations in the working speed.

Authority to
enter places
where
machinery
erected.

126.—(1.) A person shall not, without authority of the manager or of the person having charge of any machinery or boiler, enter any place where the machinery or boiler is erected.

(2.) The manager shall cause a notice to be posted at the entrance of the place to the effect that the authority to enter is required.

Air for air
compressors.

127. The supply of air for air compressors shall be drawn from the purest and coolest source available.

Winding
machinery
to be kept
ready.

128. When the usual means of egress from the underground workings of any mine is by means of machinery worked by power other than hand or animal power the machinery shall be ready for immediate use and the person in charge shall be in constant attendance.

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129. At every shaft where machinery is used for winding purposes, a European braceman shall be kept in constant attendance on miners during such time as the miners are engaged in sinking, or repairing, the shaft:

Special conditions affecting employment of bracemen.

Provided that, during the time and subject to the provisions of section 29 of the *Mines and Works Regulation Ordinance 1935*,⁽³⁾ an inspector may grant permission to a native to act as a braceman.

130. A person shall not—

- (a) wilfully damage; or
- (b) use, remove, or render useless,

Unlawful use or removal of machinery, fittings, &c.

any machinery, appliance, gear, fitting, timber, material, or other thing provided in or about any mine.

131. Every winding engine (except the class of winding engine defined in a notice by the Administrator in relation to this regulation) shall be—

Standard requirements of winding engines.

- (a) capable of hoisting to the surface the maximum unbalanced load from the greatest depth required, with the crank in the worst starting position; and
- (b) fitted with the following:—

- (i) An efficient depth indicator, approved by an inspector and fitted to his satisfaction to each drum, with marks spaced in such a manner as will show the engine driver when the cage or skip is within one revolution of the drum from the desired stopping place:

Provided that in any case where the engine has one fixed drum and one loose drum, not used for winding, one indicator on the fixed drum shall suffice:

Provided further that any winding engine, operating from one level only, need not, if an inspector certifies it to be unnecessary, be fitted with the indicator;

- (ii) A brake fitted to each drum and capable of holding, without any stop, double the maximum gross load when persons are being carried;
- (iii) A post brake, in every case where the cylinders of the engine exceed 8 inches in diameter;
- (iv) An automatically operated magnetically controlled brake or a gravity brake so arranged that it can be released by the engine driver

(3) Now the *Mines and Works Regulation Ordinance 1935-1941*.

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by the application of steam, air, or electricity and that it will automatically apply in the event of total or partial failure of the motive power of the winding engine:

Provided that this fitting shall be required only in the case of winding engines operating to a depth greater than 305 metres;

- (v) A foot brake so fitted and adjusted that there is at all times ample clearance between the end of the foot lever of the brake and the platform or floor, the lever being provided with a satisfactory device, operated by the engine driver's foot only, to ensure that the lever will be retained in position when the brake is fully applied and the engine driver's foot removed;
- (vi) A starting valve (or, in the case of a winding-drum operated by electricity, a starting switch) of any efficient type, where the winding engine is used for lowering or hoisting persons; and
- (vii) A locking gear so acting upon the operating gear of the clutch of the drum as to prevent the inadvertent withdrawal of the clutch.

Adjustment of steam or compressed air brakes.

132. Brakes applied or released by steam or compressed air shall be so adjusted as to preclude contact between the piston and the cylinder end, and ample clearance shall be provided in the cylinder to allow for normal wear of the brake.

Manipulation of brakes to be facilitated.

133. Every brake shall be so arranged that whether the engine is at work or at rest, it can be easily and safely manipulated by the engine driver whilst standing at the levers which control the engine.

Condition of brakes at change of shift.

134.—(1.) Every engine driver shall, at the time of finishing any shift, see that the brakes of his engine are in proper working adjustment before handing the engine over to his successor on the next shift.

(2.) The successor also shall, on taking over the engine, satisfy himself that the brakes are in proper working adjustment.

Testing of brakes.

135. The brakes on every winding engine shall be tested by an inspector at intervals of not more than one year in order to determine whether they conform to the standard required, namely, that they shall be capable of holding, without slip, twice the maximum gross load when persons are being carried, one person being reckoned as 145 lbs. in the computation of the load.

Retardation of winding engine.

136.—(1.) The cut-off of every winding engine shall be arranged so as to retard effectively the engine's maximum descending load.

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(2.) The cut-off may be made variable as the speed of the engine increases, but shall be so governed that in any emergency the cut-off shall be immediately available.

137. The driver of a winding engine shall not—

- (a) unclutch a drum from which persons may be suspended; or
- (b) lower persons or material from an unclutched drum.

Unclutching of drums.

138. Where any winding engine has been stopped for ordinary maintenance repairs that might affect its safe running, it shall not be used for lowering or hoisting any person until the engine driver has tried the engine and found it to be efficient.

Trial of engine after repairs.

139.—(1.) Every manager of a mine, or some other competent person by him appointed for the purpose whose appointment has been entered in the prescribed Mine Register, shall, at intervals of not more than one week, carefully examine every winding engine at the mine and all appliances which are appurtenant to the engine.

Testing of winding engines.

(2.) The manager or other person shall, in the prescribed Mine Register, enter and attest with his signature—

- (a) a statement of the condition in which he found the appliances;
- (b) the fact and particulars of any repairs or adjustments made; and
- (c) the date on which the examination was made.

140. Every such bolt, pin, or other fitting of any drum, brake, or clutch as might be a source of danger in the event of its becoming loose shall be rendered secure by means of a suitable locking device.

Bolts, pins, &c. to be made secure.

141. All winding gear shall, to the satisfaction of an inspector, be kept clean.

Winding gear to be kept clean.

142. Every overwind and every accident including any—

- (a) engine running out of control;
- (b) fracture of any part of the engine or winding gear; and
- (c) failure of—
 - (i) motive power;
 - (ii) brake efficiency;
 - (iii) overwinding prevention device; or
 - (iv) depth indicator,

Overwind, accident, &c., to be reported.

shall be promptly recorded by the manager, or caused by him to be recorded, in the prescribed Mine Register and be reported in writing by him to an inspector within 24 hours of the overwind or accident occurring.

Copy of regulations to be posted.

143. A printed copy of the regulations dealing with winding engines shall be posted in a conspicuous position in the engine room of every winding engine used for lowering or hoisting persons in a mine.

Division 9.—Boilers.

Particulars of boiler to be notified.

144. Every owner, agent, or manager who intends to install or erect any boiler at a mine shall before so installing or erecting the boiler—

- (a) forward to an inspector a notice, in accordance with Form 8, containing particulars of the—
 - (i) name and address of the mine;
 - (ii) name and address of the owner of the boiler;
 - (iii) type and description of the boiler;
 - (iv) grate bar area of the boiler; and
 - (v) purpose for which it is intended to be used; and
- (b) receive a certificate, in accordance with Form 9, issued and signed by a boiler inspector—
 - (i) stating that the boiler has been examined and found to be in good condition and fit for the purpose intended; and
 - (ii) specifying the maximum working pressure of the boiler.

Cleaning and testing of boilers, &c.

145.—(1.) Whenever a boiler inspector deems it necessary, and at intervals of not more than six months, every boiler shall be thoroughly cleaned.

(2.) At intervals of not more than twelve months every boiler, and at intervals of not more than 24 months every air receiver, shall be examined by a boiler inspector and subsequently be subjected by him to hydraulic test.

Precautions when cleaning and repairing boilers.

146.—(1.) While a boiler is being—

- (a) emptied and opened for any purpose; or
- (b) cleaned or repaired,

every precaution shall be taken to ensure the safety of persons in attendance on, or in the vicinity of, the boiler.

(2.) Before any person is allowed to enter the boiler or any of its flues the person having charge of the boiler shall satisfy himself that—

- (a) the boiler or flue is safe for persons to enter; and

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(b) the steam-stop, feed, blow-off, and all other valves or cocks which may be a source of danger are closed and securely locked or lashed in position, and are so closed and locked or lashed during the whole of the period when the boiler is being cleaned or repaired.

(3.) The person having charge of the boiler shall not permit water to be thrown on any hot flue-dust or ashes in any confined space or in any other place where danger may arise.

(4.) The owner, agent, or manager of the mine where the boiler is situated, and the person having charge of the boiler, shall ensure the observance of this regulation.

(5.) The name of the person having charge of the boiler during the whole period of cleaning or repairing shall be entered in the prescribed Mine Register.

147. Every boiler or steam-jacketed vessel installed, erected, or re-erected after the coming into operation of these Regulations shall have the following fittings and mountings:—

Fittings on
boilers, &c.

- (a) One steam pressure gauge—
 - (i) capable of registering, in pounds per square inch, a pressure up to one and one half times the authorized working pressure; and
 - (ii) fitted with a cock to enable it to be disconnected for testing while the boiler is under steam;
- (b) One feed check valve, with non-corrodible plugs, discs, and seats;
- (c) One stop-cock or valve, with non-corrodible plugs, discs, and seats, fitted to the boiler between the check valve and the boiler;
- (d) One stop valve, with non-corrodible valve fittings and seating, fitted between the steam pipe and the boiler;
- (e) One blow-off cock, with non-corrodible fittings;
- (f) One suitable pump or injector or other approved boiler feed apparatus;
- (g) One fusible plug, of approved design, in the crown of the fire-box or such other position as is prescribed by the Standards Association of Australia Boiler Code:

Provided that this fitting shall be required only in the case of a boiler which is not a water-tube boiler;
- (h) Two safety valves each of the area prescribed by the Standards Association of Australia Boiler Code:

Provided that one of the valves shall be encased and of an approved lock-up design;

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- (i) Two glass water gauges, with blow-off and drain cocks complete and, except in any case in which a boiler inspector grants exemption, with protectors of an approved design:

Provided that in the case of a boiler of less than six horse-power (nominal) not more than one glass water gauge shall be required where it is supplemented by two drain cocks;

- (j) One half-inch gas thread cock, with female end suitable for connexion with an approved test pump, the cock being fitted in such a position as a boiler inspector deems most convenient; and
- (k) One intermediate stop-valve or one isolating valve approved by a boiler inspector:

Provided that where two or more boilers are connected together the valve shall be fitted on the branch pipe leading to the main steam pipe, or in such other position as the boiler inspector may require, but so as to be between the main stop-valve on one boiler and any other connected boiler or steam pipe under pressure.

Fittings on air receivers and vacuum receivers.

148. Every air receiver, unfired pressure vessel, or vacuum receiver installed, erected, or re-erected after the coming into operation of these Regulations shall have the following fittings—

- (a) One pressure or vacuum gauge capable of registering the pressure prescribed for a steam pressure gauge under the last preceding regulation and fitted in the manner there provided;
- (b) One safety valve of the area prescribed by the Standards Association of Australia Boiler Code;
- (c) One stop-valve;
- (d) One blow-off or drain cock; and
- (e) One half-inch cock of the type referred to in paragraph (j) of the last preceding regulation.

Quality of fittings and mountings.

149. The fittings and mountings referred to in the last two preceding regulations shall be—

- (a) of a quality suitable for the authorized working pressure; and
- (b) flange-jointed unless otherwise satisfactory to a boiler inspector.

Boilers, &c., installed or erected before these regulations.

150. Every boiler installed or erected before the coming into operation of these Regulations shall, at the end of six months from the coming into operation of these Regulations, be required to comply

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with the provisions, except paragraph (k), of regulation 147 of these Regulations.

151. The key of every encased safety valve of a lock-up design shall be kept in the possession of the owner, agent, or manager of the mine, who shall be responsible for the maintenance and proper adjustment of the valves to ensure relief at the authorized pressure within the limits laid down in these Regulations.

Maintenance and adjustment of safety valve.

152. Failure to comply with any of the provisions of regulations 147 to 151, both inclusive, of these Regulations shall be an offence.

Penalty for breach of regulations 147 to 151, both inclusive.

Penalty: Twenty pounds.

153.—(1.) Except as otherwise provided in these Regulations, a boiler shall not be worked unless fitted with two safety valves each of sufficient area to relieve the boiler at a pressure not greater than 10 per centum above the authorized pressure.

Safety valves to relieve at certain maximum pressure.

(2.) The valves may be fitted on one boiler seat if the area of the opening to the boiler is not less than one and one-half times the area of one of the valves.

Penalty: Fifty pounds.

154. Every boiler set in brickwork or other material erected after the coming into operation of these Regulations shall be provided with such flues, and doors of such sizes, as to a boiler inspector appear necessary.

Setting of boilers.

155.—(1.) Every boiler shall be inspected by a boiler inspector at intervals of not more than twelve months.

Inspection of boilers.

(2.) The inspection may be made at any reasonable hour in the day time, subject to at least seven days' notice, in accordance with Form 10, to the manager of the mine at which the boiler is installed or erected.

(3.) The manager shall for the purpose of the inspection cause—

- (a) every boiler to be emptied, cooled, and dried;
- (b) every manhole door and mud-hole door to be taken off;
- (c) every furnace bar and brick or stone bridge to be taken out;
- (d) the interior of the boiler to be freed from encrustation;
- (e) when required by the boiler inspector, all brickwork or other material in which the boiler is set and of which the removal is necessary for inspection, to be taken down;
- (f) every furnace, flue, and uptake, connected with the boiler, to be swept clean; and
- (g) every safety valve to be taken to pieces.

(4.) The manager shall render such assistance as the boiler inspector shall require for the inspection.

Record of boiler inspection.

156. Every boiler inspector shall make a record, in accordance with Form 11, of each boiler inspection made by him under these Regulations and shall file it in such manner and at such place as the Warden shall direct.

Testing of boilers.

157.—(1.) A boiler inspector may, for the purpose of inspecting a boiler, test the boiler by hydraulic pressure if he considers it necessary to do so.

(2.) The manager of the mine where the boiler inspector requires such a test as is referred to in the last preceding sub-regulation, shall, for the purpose, cause—

- (a) the boiler to be completely filled with water; and
- (b) every valve and joint to be so adjusted and secured that it will be able to withstand, in the case of a boiler installed or erected after the commencement of these Regulations, a pressure of 50 per centum or, in the case of any other boiler, a pressure of 25 per centum, in excess of the authorized working pressure.

(3.) The boiler inspector shall record, in the prescribed Mine Register, the results of the test and report them to the Warden.

Use of dangerous boilers may be stopped.

158.—(1.) Where, upon any inspection or test made under these Regulations, it appears to a boiler inspector that any boiler is in such a condition that its continued use in that condition would be dangerous to human life, limb, or property he shall serve personally upon the owner, agent, or manager of the mine where the inspection was made, a notice, in writing, in accordance with Form 12, requiring him to desist from working or using the boiler—

- (a) at all; or
- (b) until the repairs or alterations specified in the notice have been effected; or
- (c) at a pressure greater than that specified in the notice; or
- (d) at a pressure greater than that specified in the notice, until the repairs or alterations specified in the notice have been effected.

(2.) Any person who fails to observe the requirements contained in the notice shall be guilty of an offence.

Penalty: Fifty pounds.

Working pressure where boilers coupled.

159. Where two or more boilers are coupled together and the authorized working pressures of the boilers are not the same, the actual working pressure of the boiler having the higher or highest authorized

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working pressure shall not exceed the actual working pressure of the boiler having the lower or lowest authorized working pressure unless a reducing valve is fitted to the satisfaction of a boiler inspector.

160.—(1.) The owner, agent, or manager, who, in respect of any boiler, proposes to—

Proposed repairs or alterations to be notified.

- (a) effect any repairs; or
- (b) alter the main structure; or
- (c) add or take away any fitting or appliance; or
- (d) alter, in any manner, its construction,

shall, in accordance with Form 13, notify an inspector of the proposed repairs, alterations, or additions.

(2.) The person who actually effects the repairs, alterations, or additions shall furnish to the inspector a report giving full particulars of what he has effected and such further particulars as the inspector may require.

(3.) The notice referred to in this regulation shall not be given where the repairs, alterations, or additions have been required by a boiler inspector under these Regulations.

161.—(1.) Every person who—

Persons increasing excessive pressure or tampering with fittings.

(a) by any means knowingly does anything to increase, or anything that tends to increase, the pressure at which any boiler works above—

- (i) the authorized working pressure of the boiler; or
- (ii) the pressure specified in any notice issued under regulation 158 of these Regulations; or

(b) aids, abets, or procures any act increasing or tending to increase the pressure at which any boiler works to the extent indicated in the last preceding paragraph; or

(c) tampers with any fitting or valve in any such manner as to interfere with its proper and efficient working; or

(d) knowingly conceals from a boiler inspector any defective fitting of which he is aware,

shall be guilty of an offence.

Penalty: Fifty pounds or imprisonment for six months.

(2.) Any person who is found to be in charge of a boiler which is working above the pressure indicated in either sub-paragraph (i) or sub-paragraph (ii) of paragraph (a) of the last preceding sub-regulation shall be deemed *prima facie* guilty of an offence under the last preceding sub-regulation.

162. When any boiler, steam engine, or other motor at any time used in, or installed or erected for the purpose of, operating any

Transfer of boiler.

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machinery at any mine has been transferred to any person or to any other mine, the owner, agent, or manager of the firstmentioned mine shall, within fourteen days of the transfer and in writing, notify an inspector of the name, occupation, and address of the person or the name and address of the other mine.

Boiler to exhibit maker's name, &c.

163. Every boiler installed or erected after the commencement of these Regulations shall be provided with a plate on which there shall be legibly cast or stamped—

- (a) the name of its maker;
- (b) its shop number; and
- (c) the date of its construction.

Particulars of boiler to be furnished.

164. In addition to particulars set out under paragraphs (a), (b), and (c) of the last preceding regulation, the owner, agent, or manager of the mine shall, in respect of every boiler installed or erected after the commencement of these Regulations, produce to any boiler inspector on demand—

- (a) the maker's test certificate specifying—
 - (i) the maximum working pressure for which the boiler was designed;
 - (ii) the pressure to which the boiler was hydraulically tested;
 - (iii) the brand and the tensile strength of the plates used in the making of the boiler; and
 - (iv) the date of the test on which the certificate is based; and
- (b) a print of a drawing of the boiler which shall show—
 - (i) all the principal dimensions;
 - (ii) the thickness of the plates;
 - (iii) the size and particulars of riveting; and
 - (iv) such other particulars as are necessary for computing the strength of the boiler.

Accident to boiler to be reported.

165.—(1.) Every accident which is of such a nature as to necessitate structural alterations or extensive repairs to a boiler shall, within 24 hours of the accident, be reported to an inspector by the owner, agent, or manager of the mine where the accident occurred and the owner, agent, or manager shall enter, in the prescribed Mine Register, the particulars of the accident.

(2.) The report shall give particulars of the accident and, if possible, assign its cause and shall specify the probable repairs or alterations necessitated.

Penalty: Fifty pounds.

166.—(1.) The Standards Association of Australia Boiler Code, so far as it relates to the design, construction, inspection, and operation of boilers and is not inconsistent with these Regulations, shall apply to all boilers installed or erected at any mine.

Standards Association of Australia Boiler Code to apply.

(2.) The Boiler Code referred to in the last preceding sub-regulation means the Boiler Code as amended from time to time and available at the office of the Warden.

Division 10.—Installation and Use of Electricity.

167. The owner, agent, or manager of every mine shall send to the Warden—

Notice of installation.

- (a) not later than one month after the coming into operation of these Regulations, particulars of every existing electrical installation; and
- (b) before effecting any future major electrical installation, particulars of the major installation proposed to be effected; and
- (c) before effecting any major alteration or major addition to any existing or future installation, particulars of the alteration or addition proposed to be effected.

168. All electrical installations, repairs, alterations, extensions, or other electrical work in a mine or works shall be done or effected by or under the supervision of a mine electrician.

Electrical installations, repairs, &c.
Sub. by 1937, No. 19, r. 7.

169.—(1.) Subject to the next succeeding sub-regulation, the owner or manager of every mine or works where electricity is used for power or lighting purposes shall appoint a mine electrician to superintend, subject to the authority of the manager, the operation of the whole electrical installation in the mine or works and shall record his name in the register prescribed by regulation 368 of these Regulations.

Supervision of electrical apparatus while in use.
R. 169 sub. by 1937, No. 19, r. 7.

(2.) An inspector may, in his discretion and on receipt of a written application, exempt in writing any mine or works from the provisions of the last preceding sub-regulation.

(3.) In any case in which an inspector deems it necessary to have electrical apparatus in any underground working of a mine or works specially supervised, he may notify the owner or manager, who shall thereupon appoint another mine electrician to supervise such electrical apparatus.

(4.) A mine electrician appointed under this regulation shall remain on duty and in continual supervision of the electrical installation or apparatus to which he is appointed while it is in use.

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Persons operating electrical apparatus.

170. A person, notwithstanding that he is the holder of the appropriate certificate of competency or permit of employment, shall not, nor shall he be required to, operate any electrical apparatus at any mine until he has been thoroughly instructed by a mine electrician in his duties in relation to the apparatus.

Telephone to surface where electricity used for power underground.

171. In every mine where electricity is used for power purposes direct telephonic, or other equally satisfactory means of, communication shall be provided between the surface and the main distributing centre underground.

Instructions regarding treatment for electric shock.

172.—(1.) In every generating transformer and motor house in or about, and at every principal entrance to, any mine where electrical apparatus is in use, there shall be posted legible directions as to the method of restoring persons suffering from electric shock.

(2.) Every person who is required to perform any duty at or about any electrical apparatus is required to make himself thoroughly acquainted with the directions.

Fire buckets to be kept in readiness.

173. In every electrical machine room at least one fire bucket filled with clean, dry sand shall be kept ready for the purpose of extinguishing any fire that might break out.

Accident affecting persons to be recorded and notified.

174.—(1.) Every accident arising out of the operation of any electrical apparatus and causing bodily injury (including shock or burn) to any person shall be reported promptly to the manager of the mine by the injured or any other person having knowledge of the accident.

(2.) The owner, agent, or manager, or some person appointed by him for the purpose, shall without delay—

- (a) record in the prescribed Mine Register; and
- (b) report to the nearest inspector or Warden, in accordance with Form 14,

the facts and date of the accident reported under the last preceding sub-regulation.

Breakdown or damage of electrical apparatus underground.

175. In the event, underground in any mine, of—

- (a) any breakdown, damage, or overheating occurring to any electrical apparatus; or
- (b) any portion of the electrical apparatus (not being a proper part of the electrical circuit) becoming alive,

any person having knowledge of the facts shall report them promptly to the manager of the mine, who shall record them in the prescribed Mine Register and sign the record.

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176. In every machine room and every other place underground which is illuminated by electricity and where any failure of electric light is likely to cause danger, proper lamps or other lighting devices approved by an inspector shall be kept ready for use in the event of the failure.

Provisions for failure of electric light.

177. A person shall not, unless he is authorized by the manager, enter any machine room or motor room.

Only authorized persons to enter machine room.

178. A person shall not—

- (a) wilfully damage or interfere with; or
- (b) without authority, remove or render useless,

Damaging or removing apparatus.

any part of any apparatus, electric line, or machine used in connection with the supply or use of electricity.

179.—(1.) Any electrical pressure higher than a medium pressure shall not be used underground except for the purpose of transmission.

Pressure permitted.

(2.) Where any higher pressure is used in accordance with the last preceding sub-regulation, it shall be used subject to the provisions of regulations 227 and 228 of these Regulations.

180.—(1.) In every case in which the generating station under the control of the owner, agent, or manager of the mine to which it supplies electricity is situated not less than 366 metres from the principal entrance to the mine, a switch or switches contained in a switch-box or switch-house, secured with a lock, shall be provided at or near the principal entrance to the mine.

Switch for cutting off supply.

(2.) Every generator shall be provided with a switch on each pole, between the generator and the bus-bars.

181.—(1.) In front of every switchboard in a generating station or machine room there shall be provided a passageway not less than 2 metres wide.

Requirements regarding switchboards.

(2.) Where there are any connections at the back of any switchboard no portion of the switchboard or any of its attachments shall be less than .75 metres from any wall.

(3.) The space between the switchboard and any wall—

(a) shall be—

- (i) firmly and even floored; and
- (ii) except in the case of a low-pressure switchboard, accessible from each end through a door secured with such a lock as may be opened inside without the use of a key; and

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Para (b) am.
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(b) shall not be—

- (i) used as a storeroom or lumber room; or
- (ii) obstructed in any way by resistance frames or meters, or otherwise; or
- (iii) crossed by any cable, except below the floor, or at a height above the floor of not less than 2.25 metres.

Measuring
instruments
to be provided.

182.—(1.) Suitable instruments shall be provided for measuring the current and the pressure of each generator.

(2.) When the total power supplied by any feeder exceeds 50 kilowatts, the feeder connected with the bus-bars in the generating station shall be furnished with an ammeter on the main switchboard or in some other suitable position.

Earthing of
generators and
transformers.

183. The frames and bedplates of generators and transformers shall be efficiently earthed if the pressure at the terminals exceeds the limits of low pressure.

Earth and
fault detectors.

184. In every completely insulated circuit, earth or fault detectors shall be kept connected up in every generating and transforming station so as to disclose immediately any defect in the insulation of the system and the detectors shall be inspected daily by a competent person.

Arrangement of
circuit-breakers.

185. Circuit-breakers shall be arranged so that when the contact levers open outwards no danger exists of their striking any person attending to them.

When live
metal work
not permitted
on main
switchboard.

186. Where the supply of electricity is at a pressure exceeding the limits of medium pressure, there shall be no live metal work on the front of the main switchboard within 2.5 metres of the floor or platform and the space provided under sub-regulation (3.) of regulation 181 of these Regulations shall not be less than 2.25 metres in the clear.

When
insulating
floors or mats
to be provided.

187. Insulating floors or mats shall be provided for switchboards where medium or any higher pressure is used.

Insulating
material for
switches,
circuit-breakers,
and fuses.

188.—(1.) Every switch, circuit-breaker, and fuse shall have an incombustible base of marble, slate, or porcelain, or other suitable incombustible insulating material.

(2.) Every live part of a switch, circuit-breaker, or fuse, not being in a machine room or in a compartment specially arranged for the purpose, shall be covered with incombustible material, either non-conducting or of rigid metal, clear of all internal mechanism.

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189. Every main and distribution switchboard and fuse board shall be made of incombustible insulating material, such as marble or slate free from metallic veins, and be fixed in as dry a position as practicable.

Construction of main and distribution switchboards, &c.

190. Every fuse and every automatic circuit-breaker shall be so constructed as effectually to interrupt the current—

Construction of fuses and automatic circuit-breakers.

(a) when a short circuit occurs; or

(b) when the current passing through the fuse or circuit-breaker exceeds by—

(i) 200 per centum the working current of the motors; or

(ii) 100 per centum the maximum current of the cables permitted under regulation 198 of these Regulations which the fuse or automatic circuit-breaker protects.

191.—(1.) Every fuse shall be stamped, marked, or labelled so as to indicate the current at which it is intended to fuse.

Fuses to be stamped, &c.

(2.) Where fuse wire is used each coil shall be so stamped, marked, or labelled.

(3.) A fuse shall not be adjusted or replaced except by some competent person authorized by a mine electrician.

(4.) In a colliery, none but an enclosed fuse shall be used.

192. Every opening of a generator circuit-breaker or generator fuse shall be recorded by the person in charge of the generator station or machine room where it occurs by entering the fact, date, and time of the occurrence in the prescribed Mine Register and signing the record there entered.

Opening of circuit-breaker or fuse to be recorded.

193. All terminals and any live metal on machines underground shall, where practicable, be protected with insulating covers or metal covers connected to earth.

Terminals, &c. to be insulated.

194. Any major repair, or cleaning, of any live part of any switch or other electrical apparatus shall not be done when the current is turned on:

No major repairs or cleaning when current on.

Provided that this prohibition shall not extend to mere adjustment, wiping, or oiling:

Provided further that, where handling for the purpose of adjustment, wiping, or oiling is necessary in the case of any switch or other electrical apparatus working at a pressure higher than the limit of low pressure, the person so handling shall use gloves, mats, or shoes made of indiarubber or other non-conducting material.

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General requirements as to conductors and electrical apparatus.

195. Subject to these Regulations every electrical conductor or other electrical apparatus shall be—

- (a) adequate in size and power for the work it may be required to perform;
- (b) efficiently covered or safeguarded;
- (c) so installed, worked, and maintained as to reduce to the minimum any danger from accidental shock or fire or over-heating; and
- (d) so constructed and worked as to ensure that the rise in temperature due to ordinary working will not injure any insulating material employed in its construction or installation.

The size and insulation of conductors.

196. The size of any copper conductor used (except overhead wires used upon the surface) shall have relation to—

- (a) the maximum current of electricity which it is required to transmit;
- (b) the class of insulation which it possesses, that is to say either "Class A" or "Class B" as defined in the next succeeding regulation; and
- (c) the dimensions set out in the Schedule to regulation 198 of these Regulations.

Classes of insulation defined.

197. In the last preceding regulation, and in the next succeeding regulation and its Schedule—

"Class A" means a dielectric (which term does not include the braiding or taping) which is impervious to moisture and only needs mechanical protection, such as vulcanized rubber or bitumen; and

"Class B" means a dielectric, such as impregnated paper or fibre, which, to be effective, must be kept perfectly dry and, for that reason, needs to be encased in a waterproof sheath of some soft metal, such as lead, drawn closely over the dielectric.

Maximum current for conductors of various sizes.

198.—(1.) The maximum current of electricity which may be transmitted by a conductor having any dimension of gauge and section set out in Column 1 and Column 2 of the table contained in the Schedule to this regulation shall be in the number of amperes shown, immediately opposite the dimension, in Column 3 or Column 4 of the same table according as to whether the conductor has a "Class A" or "Class B" insulation, respectively:

Provided that Column 4 may be applied in the case of conductors underground having a "Class A" insulation.

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(2.) For the purpose of applying the table the current in the conductor shall be taken as equal to that required for the maximum number of motors or other current-using apparatus that are at any time used simultaneously on the circuit.

SCHEDULE.

TABLE SHOWING MAXIMUM CURRENT FOR COPPER CONDUCTORS.

1.	2.	3.	4.
GUAGE.	SECTION.	AMPERES.	AMPERES.
Number of Wires and Gauge in S.W.G. or Inches.	Nominal Size of Conductors in Square Inches.	Maximum Amperes for Conductors with Class A Insulation.	Maximum Amperes for Conductors with Class B Insulation.
1/18	.001810	3.2	4.2
3/22	.001825	3.3	4.3
1/17	.002463	4.0	5.4
3/20	.003016	4.7	6.4
1/16	.003217	4.9	6.8
1/15	.004072	5.9	8.2
7/22	.004266	6.2	8.5
1/14	.005027	7.0	9.8
3/18	.005364	7.3	10.3
7/20	.007052	9.0	13.0
7/18	.01254	14.0	21.0
19/20	.01912	20.0	29.0
7/16	.02227	22.0	33.0
19/18	.03399	31.0	47.0
7/14	.03483	31.0	48.0
7/.095"	.05	42.0	64.0
19/.058"	.05	42.0	64.0
19/16	.06039	48.0	75.0
19/14	.09442	68.0	108.0
19/.082"	.1	71.0	113.0
37/16	.1176	81.0	130.0
19/.092"	.125	84.0	136.0
19/.101"	.15	96.0	158.0
37/.072"	.15	96.0	158.0
19/12	.1595	102.0	166.0
37/14	.1838	114.0	187.0
37/.082"	.2	121.0	200.0
61/15	.2455	142.0	237.0
37/.092"	.25	145.0	241.0
37/.101"	.3	166.0	279.0
61/14	.3029	168.0	282.0
37/12	.3105	170.0	287.0
37/.110"	.35	187.0	317.0
37/.118"	.4	208.0	354.0
61/.092"	.4	208.0	354.0
61/.101"	.5	248.0	425.0
61/12	.5120	252.0	433.0
61/.110"	.6	282.0	493.0
91/.092"	.6	282.0	493.0
91/.098"	.7	320.0	560.0
91/.101"	.75	340.0	592.0
91/.104"	.8	352.0	624.0
91/.110"	.9	390.0	688.0
91/11	.9504	406.0	719.0
91/.118"	1.0	424.0	750.0
127/.101"	1.0	424.0	750.0

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(3.) Notwithstanding anything contained in this regulation, where the consent in writing of an inspector has been previously obtained the maximum current which may be transmitted by a conductor shall be as specified in the Standards Association of Australia Wiring Rules as amended from time to time.

Metal coverings to be continuous and earthed.

199. In any case in which the pressure at the terminals where the electricity is used exceeds the limit of low pressure, all metal coverings and armourings of cables shall be electrically continuous throughout and efficiently earthed.

Insulation for conductors inside mine.

200.—(1.) All conductors inside a mine, except as otherwise provided in these Regulations, shall be continuously covered with insulating material.

(2.) A continuously insulated cable shall be so constructed that when a piece of it has been tested by immersion in water for 24 hours it will, while still immersed, withstand, in the case of a cable intended for a low or medium pressure, 2,000 volts for 10 minutes between the conductor and the water and between cores if there are more than one in the cable.

(3.) Prior to the test referred to in the last preceding sub-regulation the piece shall be bent six times (three times in one direction and three times in the opposite direction) round a cylindrical surface not more than twelve times the diameter (or the shorter axis, where the section is not circular) of the finished cable.

(4.) Where the cable is intended for a high or extra-high pressure twice the working pressure shall be taken for the test referred to in sub-regulation (2.) of this regulation.

Certain conductors to be specially encased and fixed.

201. Where a medium pressure supply is used for—

- (a) power purposes; or
- (b) arc or incandescent lamps in series,

the conductors, other than trailing cables, which—

- (c) form the connexions to motors, transformers, or lamps;
or
- (d) are otherwise used in connexion with the supply,

shall be completely enclosed in strong armouring or metal casing efficiently connected with earth or be fixed at such a distance apart, or in such a manner, as to ensure that any danger from fire or shock shall be reduced to a minimum.

Conductors to be insulated from earth.

202. Every conductor shall be maintained completely insulated from earth:

Provided that the concentric system with earthed outer conductor may be used if arrangements are made to ensure that any danger from fire or shock shall be reduced to a minimum :

Provided further that the neutral point of a polyphase system, and the middle wire of a three-wire continuous-current system, may be earthed at one point.

203. Unless fixed so as to be out of reach of injury every conductor, other than an armoured cable, which is intended for a higher pressure than low pressure shall be protected with a suitable covering in addition to the proper insulation.

Additional protection for certain conductors.

204. The exposed ends of cables where they enter the terminals of switches, fuses, or other appliances shall be so protected and finished off that—

Exposed ends of cables to be protected, &c.

- (a) moisture cannot creep along the insulating material within the waterproof sheath; and
- (b) the insulating material, if of an oily nature, cannot leak out of the cable.

205.—(1.) Small wires for lighting circuits shall—

Fixing small wires for lighting circuits.

- (a) be enclosed in pipes or casings; or
- (b) without touching any timbers or metal work—
 - (i) be suspended from porcelain insulators; or
 - (ii) be tied to porcelain insulators with some non-conducting material which will not cut the covering of the wires.

(2.) Where metallic pipes are used they shall be electrically continuous and earthed.

(3.) Where separate uncased wires are used they shall be kept at least 5 centimetres apart and not be brought together except at lamps, switches, or other fittings.

(4.) In no case shall staples be used for the purpose of suspending or fixing the wires.

206.—(1.) Every cable used in a shaft shall be—

Insulating and fixing of cables in shafts.

- (a) highly insulated and substantially fixed; and
- (b) where it is not capable of sustaining its own weight, properly supported at intervals varying according to the weight of the cable.

(2.) Where the cable is not completely boxed in and protected from any falling material, it shall be so placed as to leave such space between it and the side of the shaft as will enable it to yield to, and lessen, the impact of the falling material.

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(3.) A cable in a shaft shall not be fixed in a winding compartment.

Protection and fixing of cables in drives, &c.

207.—(1.) Where any cable in a drive, or road, along which any material is conveyed cannot be kept at least 30.5 centimetres from any part of a truck or tram it shall be specially protected.

(2.) In any case where separate cables are used they shall be fixed—

- (a) not less than 15.25 centimetres apart; and
- (b) not vertically one above the other.

(3.) The cables and any wires, unless provided with metallic coverings, shall not be fixed to walls or timbers by means of metallic fastenings.

(4.) Where repairs are being carried out or blasting is being done in the drive or road, suitable timbering protection shall be provided for the protection of any cable in the drive or road.

Overhead bare wires.

208. Every overhead bare wire on the surface shall—

- (a) be properly secured to insulators;
- (b) except in the case of a wire carrying a less pressure than medium pressure, be provided with efficient lightning arrestors; and
- (c) be clear of all traffic, with a minimum ground clearance to be approved by an inspector but not less than 5.5 metres.

Lightning arrestors on transmission lines.

209. If any transmission line from the generating station to the shaft or mine entrance is overhead, efficient lightning arrestors shall be provided in connexion with it.

Standard of efficiency of insulation in collieries and other mines.

210.—(1.) In all collieries and in such other mines as the Warden shall direct, the standard of efficiency required to be maintained in respect of the insulation of every complete lighting and power circuit (including all machinery apparatus and devices in connexion with, or forming part of, the circuit), shall be such as ensures that the leakage of current shall not exceed one-thousandth part of the maximum supply current.

(2.) In the event of the leakage being greater than the limit mentioned in the last preceding sub-regulation, every proper measure shall be taken immediately to locate and remedy the leakage.

Tests of insulation of circuits, &c.

211. The insulation, in all underground workings and in all wet places, of every complete lighting and power circuit used for the purposes of any mine, shall be tested at intervals of not more than fourteen days by the mine electrician, who shall enter in the prescribed Mine Register the result of the test.

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212.—(1.) Every sub-circuit shall be protected by a fuse on each pole: Fuses, &c., to be installed.

Provided that in the case of the earthed middle wire of three-wire system the fuses may be on the outers only.

(2.) Every circuit having a current of more than 5 amperes at any pressure up to 125 volts, or 3 amperes at any pressure above 125 volts, shall be protected by either—

- (a) an automatic maximum current circuit-breaker on each pole; or
- (b) a switch-fuse, i.e., a detachable fuse on each pole constructed in such a manner as enables it to be removed from a live circuit with a minimum risk of shock.

213.—(1.) Every joint made in any cable shall be mechanically and electrically efficient, and, where reasonably practicable, shall be suitably soldered. Joints of cables.

(2.) Where the joint is not soldered it shall be made by means of a metal screw clamp or connector of a kind approved by an inspector.

(3.) The joint shall be insulated and, where the joint is in any armoured cable, it shall be made in a joint-box approved by an inspector.

214.—(1.) Every trailing cable for a portable machine shall be— Special requirements in respect of trailing cables.

- (a) specially flexible; and
- (b) heavily insulated and protected with extra stout braiding, hose pipe, or other equally effective covering:

Provided that metal armouring shall not be used upon any trailing cable which carries a current at a pressure exceeding the limit of low pressure.

(2.) Where any joint is made in a trailing cable, it shall be soldered and a clamp of any kind shall not be used for this purpose.

(3.) The two cables of a twin trailing cable shall be divided at the motor end only for such a length as is necessary for the making of connexion to the motor; and a twin cable with its outer covering complete shall be held securely by a suitable clamp on the motor frame in such a manner as to protect the trailing cable from injury and to prevent any mechanical strain being borne by the single ends making electrical connexion with the motor.

(4.) A fixed terminal box shall be provided at every point where a flexible conductor is joined to the main cable, and the terminal box shall—

- (a) have, fitted in it, a switch and fuse capable of entirely cutting off the supply from the trailing cable; and

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- (b) be so constructed that neither the plug attached to the flexible cable can be inverted or withdrawn nor the box be opened, while the switch is closed.
- (5.) Every trailing cable in use in any colliery, or in any other mine in which an inspector considers it necessary, shall be—
- (a) examined daily for abrasions and other defects, by a mine electrician and a record of the result of the examination shall be daily entered and signed by him in the prescribed Mine Register; and
- (b) observed carefully, by the person in charge of the machine to which the trailing cable is connected, with the view to the discovery of any defect and he shall, promptly upon the discovery, notify a mine electrician.
- (6.) The trailing cable shall be kept disconnected from any machine which is being loaded on to, or unloaded from, any power truck unless the construction of the machine is such as to make the electric power necessary for its loading or unloading.
- (7.) The trailing cable shall have a distinguishing number which shall be clearly indicated on a suitable label securely attached to the cable.
- (8.) (a) The insulation-resistance of every conductor of any trailing cable in any colliery, or in any other mine in which an inspector considers it necessary, shall be measured by a mine electrician at intervals of not more than fourteen days, the resistance being taken between the conductor and the surrounding water after the whole cable, with the exception of the ends, has been immersed for at least six hours.
- (b) The measurement referred to in the last preceding paragraph shall be made by means of an instrument suitable for measuring resistance up to 5 megohms, and the resistance measured shall be entered in the prescribed Mine Register, and the entry signed, by the person taking the measurement.
- (c) A trailing cable shall not be put into service unless the insulation-resistance of each conductor measures at least 1 megohm after immersion.
- (9.) Sub-regulations (1.), (4.), (5.), (7.), and (8.) of this regulation shall not apply to portable tools with a low pressure above ground.

Trolley wires
underground.

215.—(1.) Every trolley wire in any underground road or track shall be placed not less than 2.25 metres above the level of the road or track, unless—

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- (a) it is sufficiently guarded; or
- (b) the pressure is cut off from the wire at all times where the road or track is used for travelling on foot.

(2.) A trolley wire will be deemed to be sufficiently guarded if it is protected on each side by continuous boards placed not more than 10.25 centimetres from the wire and extending not less than 10.25 centimetres below the wire.

(3.) The hours during which the pressure shall be cut off and travelling on foot be permitted in the road or track shall be clearly indicated by notices and signals placed in a conspicuous position at each end of, and every entrance to, the road or track.

(4.) Except during the hours referred to in the last preceding sub-regulation a person, unless authorized by the manager, shall not travel on foot along any road or track which is not protected in the manner specified in sub-regulation (2.) of this regulation.

216.—(1.) A trolley wire shall not be used to carry current at any pressure exceeding low pressure unless the wire is—

Pressures at which trolley wires may be used.

- (a) above ground, and nowhere less than 2.25 metres above the road or track; or
- (b) underground, and protected in the manner specified in sub-regulation (2.) of the last preceding regulation; or
- (c) fixed in a place where persons are not required to work in proximity to it, and where travelling on foot, at any time, is permitted only to a person authorized by the manager so to travel there for the purpose of inspection and of effecting repairs.

(2.) Where the trolley wire is such that it conforms to either of the types set out under paragraphs (a), (b), and (c) of the last preceding sub-regulation a pressure not exceeding medium pressure may be used.

(3.) Where medium pressure is used, every trolley wire above ground in all places where persons are required to work in proximity to the wire shall be specially protected to the satisfaction of an inspector.

217. In connexion with the use of electric locomotives either insulated returns or uninsulated metallic returns of low resistance may be employed.

Returns to be used in connexion with electric locomotives.

218. Except where—

- (a) low pressure is employed; or
- (b) the concentric system, with earthed outer conductor, is used,

Current for trolley system to be generated separately except in certain cases.

the current supplied for the use of any trolley system, when the return is uninsulated, shall be generated by a separate machine and shall not

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be taken from, or be in connexion with, any electric line otherwise completely insulated from earth.

Prevention of contact between shot-firing and lighting or power cables.

219.—(1.) When shot-firing cables or wires are used in the vicinity of power or lighting cables, every precaution shall be taken to prevent the shot-firing cables or wires from coming into contact with the lighting or power cables.

(2.) Electricity from lighting or power cables shall not be used for firing shots.

Prevention of contact of signal and telephone lines with other conductors.

220. Every precaution shall be taken to prevent electric signal and telephone wires from coming into contact with other electric conductors, whether insulated or not.

Plan of installation.

221.—(1.) The owner, agent, or manager of every mine shall cause to be kept at the mine a plan showing the position of all permanent electrical machinery and fixed cables at the mine.

(2.) The plan shall—

(a) be, in respect of the general lay-out, upon a scale not smaller than 1 in 10,000;

(b) be, as far as practicable, up to date;

(c) be, in no circumstances, more than three months in arrears; and

(d) be otherwise subject to the same conditions as are prescribed in respect of plans by or under section 40 of the Ordinance.

(3.) The Warden or an inspector may require a plan, on a scale larger than that mentioned in the last preceding sub-regulation, showing any particular part of the machinery or fixed cables.

Construction and arrangement of motors.

222.—(1.) Every motor together with its starting resistance shall be protected by—

(a) a fuse constructed in accordance with the provisions of regulation 190 of these Regulations; and

(b) switches capable of entirely cutting off the pressure and fixed in a convenient position near the motor.

(2.) Every motor of 25 brake horse-power or over in a machine room underground shall be provided with a suitable ammeter to indicate the load on the machine.

(3.) If the pressure at the terminals where the electricity is used exceeds the limit of low pressure, the frames and bedplates of the motors other than portable motors shall be efficiently earthed.

(4.) Where any unarmoured cable or wire passes through any metal frame or into any box or motor-casing the aperture in the frame,

box, or motor-casing shall be substantially bushed with insulating collars and, where necessary, with gas-tight bushings which cannot readily become displaced.

(5.) Every terminal box of a portable motor shall either be securely attached to the machine or form part of it.

223.—(1.) The person in charge of a coal-cutter, drilling machine, or other portable and electrically operated machine—

Attention and repairs to portable electric machines in operation.

(a) shall not leave the machine while it is working; and

(b) shall, before leaving the working place, satisfy himself that the pressure is cut off from the trailing cable, which shall not be dragged along by the machine.

(2.) A person shall not effect any repair to a portable machine until the pressure has been cut off from the trailing cable.

224. When the insulation of a motor is found to have become damp during any stoppage, the person in charge of the motor shall cause the insulation to be thoroughly dried before putting the motor into operation again.

Damp insulation on motors to be dried.

225. Where any electric sparking or arc is produced outside a coal-cutting, drilling, or other portable motor or about the cables or rails connected with it, the motor shall be stopped until the defect responsible for the sparking or arc is remedied and the occurrence shall be reported immediately to a mine electrician.

Motor to be stopped if electric sparking occurs.

226.—(1.) A mine electrician shall, at intervals of not more than seven days, open and examine—

Motors, switches, &c., to be cleaned and examined regularly.

(a) the casing or inspection doors; and

(b) the casings of the switches and other appliances,

of all portable motors used underground.

(2.) The parts of the motors, switches, or other appliances disclosed by the opening and examination referred to in the last preceding sub-regulation shall be cleaned before the casings or other coverings are replaced.

(3.) Where special circumstances make it necessary to run any motor continuously for a period longer than seven days, the examination of the motor shall be made at the end of the run.

(4.) A report of every examination shall be entered in the prescribed Mine Register and the entry signed by the person making the examination.

227.—(1.) The limitations and restrictions imposed by regulation 179 of these Regulations upon the use underground of a pressure higher than medium pressure shall not apply to transformers and

Restrictions on use of high pressure.

induction motors in which the whole of the high pressure circuit is stationary.

(2.) The high pressure conductors (other than overhead lines above ground) which form the connexions of the transformers or motors or are otherwise used in connexion with the supply shall be—

- (a) completely enclosed in a strong armouring or metal casing sufficiently connected to earth; or
- (b) fixed at such a distance apart, or in such a manner, as reduces to a minimum any danger from fire or shot.

(3.) For work underground, when furnished with current at a pressure higher than medium pressure a transformer shall not be of less normal rating than 10 kilowatts, nor shall a motor be of less normal rating than 20 brake horse-power.

High pressure apparatus to be indicated.

228.—(1.) All the high pressure machines, apparatus, and lines shall be indicated by such use, at frequent intervals, of—

- (a) the word “DANGER”; or
- (b) red paint properly renewed when necessary; or
- (c) some other conspicuous method,

as to clearly show that they are of high pressure.

(2.) All terminals and live metal on machines over medium pressure above ground shall, where practicable, be protected by insulating covers or metal covers connected to earth.

Maximum pressure for portable machines.

229. Portable machines shall not be used at a pressure higher than a medium pressure.

Duplicate trailing cable for coal-cutting machines.

230.—(1.) Where electric coal-cutting machines are in use a duplicate trailing cable shall be kept in each section of the mine.

(2.) Where any trailing cable in service breaks down, or is damaged in any way, or inflicts a shock on any person, it shall be at once put out of service and the duplicate cable shall be substituted for it.

(3.) The cable so put out of service shall not again be used until after it has been repaired and tested at the surface of the mine and passed by a mine electrician.

Horse traffic to be suspended near trailing cable, &c.

231.—(1.) All horse traffic shall be suspended on the part of every road along which a trailing cable is extended for the purpose of fitting a machine.

(2.) A trailing cable shall at all times be supported clear of rails and traffic except when fitting.

232. The manager shall cause the roof of every coal-cutter motor to be carefully examined after such intervals of continuous work as an inspector shall approve, and the motor to be stopped for the examination.

Roof of coal-cutter to be examined regularly.

233. Arc lamps shall—

Use of arc lamps.

- (a) be so guarded as to prevent pieces of heated carbon falling from them;
- (b) not be used in situations where there is likely to be danger from the presence of coal dust; and
- (c) be so screened as to prevent risk of contact with any person.

234. In any place or part of a mine where safety lamps are used the following rules shall apply:—

Precautions when safety lamps used.

1. A higher pressure than the medium pressure shall not be transmitted beyond the inbye ends of the main airways, and all motors, transformers, and other apparatus connected with the higher pressure supply shall be placed in suitable chambers ventilated by intake air.
2. The pressure employed for the purpose of signalling shall not, in any one circuit, exceed 15 volts in an intake airway, or 10 volts elsewhere; and bare wires shall not be used for the purpose except in haulage roads.
3. The main cables shall be taken into the mine by way only of an intake airway unless it is more expedient for safety to use a return airway.
4. The covering of all electrical apparatus and conductors shall be so constructed as to eliminate all danger of firing gas by any sparking or flashing which may occur during the normal or abnormal working of the apparatus or conductors.
5. Electric haulage by locomotives on the trolley-wire system shall not be permitted.
6. If storage battery locomotives are used, the rules under this regulation which apply to motors shall be deemed to apply also to the boxes containing cells of the storage battery.
7. Motors, unless placed in such rooms as are separately ventilated with intake air, shall have all their current-cutting parts and their switches, starters, terminals, and connections completely enclosed in flame-tight enclosures—
 - (a) made of incombustible material;
 - (b) of sufficient strength to escape damage in the event of any explosion of fire damp occurring in the interior; and

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- (c) opened only by a person authorized by a mine electrician and only when the current is switched off.
8. Switches (except as provided in rule 7 under this regulation), circuit-breakers, and fuses shall not be of the open type but shall either—
- (a) be enclosed in gas-tight boxes; or
 - (b) be enclosed in oil-tight boxes and break under oil.
9. Where any joint is made in any conductor other than a trailing cable, a suitable joint box with an approved method of gas-tight sealing shall be used, and the conductor shall be connected by means of metal screw-clamps or connectors:
- Provided that some other equally safe construction may be adopted if it is approved by an inspector:
- Provided further that in any place or part of a mine where a shot may be fired the joint may be soldered by, or in the presence of, a person authorized in that behalf by the manager, subject to the observance of the same precautions in regard to examination and to removal of workmen with respect to the use of explosives in coal mines, and, where the place is dry and dusty, the same precautions as to watering, as are prescribed by these Regulations:
- Provided also that wires other than blasting wires or cables shall not be joined by merely twisting them together.
10. The person in charge of an electrical stationary machine shall—
- (a) be provided with, and shall use when working, a safety lamp or other suitable apparatus for the detection of fire damp; and
 - (b) where the presence of fire damp is indicated—
 - (i) immediately stop the machine;
 - (ii) cut off the current at the nearest switch; and
 - (iii) report the fact of the presence of fire damp to a mine electrician.
11. (a) Before a coal-cutting machine is brought within 18.25 metres of the working face, and on each occasion immediately before a cut is started or restarted, an examination for gas in the place where the machine is intended to work shall be made by the machine man about to operate the starting switch of the machine, unless the

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examination is then made by some other competent person authorized by the manager, or by him appointed for that purpose, and, where either person discovers any inflammable gas, he shall—

- (i) at once switch off the current from the machine and disconnect the trailing cable at the junction box;
 - (ii) prevent the machine from being brought by any person into the place where the gas is discovered;
 - (iii) at once erect a danger fence to warn persons against entering the place;
 - (iv) cause the trailing and duplicate cable, if any, in the immediate vicinity to be entirely removed from the place;
 - (v) prevent the cable from being brought back to the place, and the machine from being again started in the place, until the manager or deputy machine man has examined the place and pronounced it free from gas and has removed the danger fence;
 - (vi) forthwith report the fact to the manager; and
 - (vii) at the end of the shift, make and sign an entry of the facts in the prescribed Mine Register.
- (b) The machine man—
- (i) shall not allow a coal-cutting machine to continue in operation for a longer period than half an hour without making the examination mentioned in paragraph (a) of this rule; and
 - (ii) shall, where gas is discovered upon the examination, take all the steps required by paragraph (a) of this rule.

12. (a) Where either—

- (i) the coal-cutting machines are fitted by electric power; or
 - (ii) the machine men are paid at tonnage rates, a deputy machine man shall be employed.
- (b) In addition to the examinations required to be made under rule 11 under this regulation, the deputy machine man shall—
- (i) at least once in every shift, make an examination for gas in each place in which an electric coal-cutter is, or is intended to be, employed during the shift; and

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- (ii) enter, and sign, in the prescribed Mine Register the report of the examination so made.
13. Where electric power is used for fitting a machine, the machine man—
- (a) before the fitting, shall give notice to the deputy machine man of any intended fitting; and
 - (b) shall not fit, or permit to be fitted, any machine except in the presence, and under the supervision of the deputy machine man.
14. (a) All electric lamps which are installed shall—
- (i) be of the vacuum or enclosed type; and
 - (ii) (except on the main intake airways and mechanical haulage roads, being also on the outbye side of relighting stations), be protected by gas-tight fittings of strong glass; and
 - (iii) have no flexible cord connexions.
- (b) The electric lamps shall be replaced only—
- (i) by a competent person authorized by a mine electrician; and
 - (ii) while the current is switched off.

Application of the Standards Association of Australia Wiring Rules.

235. Except where there is any provision to the contrary contained in these Regulations, the Standards Association of Australia Wiring Rules, as amended from time to time, which are available at the office of the Warden, shall, so far as they are applicable, apply to the installation and use of electricity in every mine and shall be enforceable as if the Rules had been incorporated in these Regulations.

Division 11.—Safety and Protection.

Manholes where self-acting or engine planes.

236. Sufficient manholes for places of refuge at intervals of not more than 18.25 metres shall be provided in those portions of every mine where any underground plane, whether self-acting or operated by an engine, windlass, whim, whip, or gin, is used to convey persons.

Places of refuge in certain roads.

237.—(1.) Spaces in sufficient number and of adequate length, width, and depth for places of refuge shall be provided in any mine at intervals of not more than 91.5 metres along any road over which, or any part of which, the produce of the mine is borne—

- (a) by electric or animal traction; and
- (b) at a rate of more than 8 tonnes (metric) in any one hour.

(2.) Where the road is used by persons employed in the mine, to go to and from their work, the haulage or transport of any truck.

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mineral, or other material shall not be carried out over the road during any change of shift, if, in the opinion of an inspector, the haulage or transport is likely to cause injury to the persons so using the road.

238.—(1.) Where a shaft is being sunk, or a rise is being put up in rock-formation, and blasting is necessary, manholes, pent-houses, or short cross-drives, of such dimensions as are approved by an inspector shall be formed throughout the shaft or rise for places of refuge, and suitable and convenient means of access to the places of refuge shall be provided from the bottom of the shaft and the top of the rise.

Manholes in shaft.

(2.) In any case the manholes, pent-houses, or cross-drives shall not be more than 30.5 metres apart, nor shall more than 30.5 metres intervene between the top or bottom of the shaft or rise and the nearest manhole, pent-house, or cross-drive:

Provided that where a shaft is sunk with the use of a winding engine for lowering or hoisting persons, the manholes, pent-houses, or cross-drives shall not be more than 61 metres apart and the distance between the nearest of any of them and the top or bottom of the shaft shall not be more than 61 metres.

239.—(1.) Every manhole and space for a place of refuge shall, to the satisfaction of an inspector, be—

Dimensions, &c. manholes and places of refuge.

- (a) of adequate dimensions;
- (b) with its approach whitened or in some other way made conspicuous; and
- (c) kept constantly clear of everything likely to interfere with access.

(2.) A person shall not do anything which shall in any way interfere with the use of, or hamper access to, any manhole or space for a place of refuge.

240. The owner, agent, or manager of every mine shall provide for the drivers of stationary engines, stokers, and bracemen, while on duty, such protection from inclement weather as an inspector shall approve.

Protection for engine drivers, &c.

241. Wherever practicable, all persons in shafts shall be protected overhead from material falling down the shaft by means of a roof or other device which to an inspector seems sufficient.

Protection of persons working in shafts.

242. Every tramway other than a tramway drawn by a rope constructed on an elevated platform, and every fly wheel, and every exposed and dangerous part of any machinery which is in or about any mine, shall be securely and safely fenced.

Fencing certain tramways and machinery.

Fencing of ash pits, &c.

243. Every ash pit or ash heap shall be securely and safely fenced.

Fencing off dangerous places.

244. All dangerous places in a mine, including elevated platforms, pits, trap holes, belt drivers, and the like shall be fenced off so as to effectively safeguard from injury any person required or authorized to work or to be in the vicinity of any of the places.

Fencing of abandoned entrances, shafts, &c.

245.—(1.) The owner, agent, or manager of every mine shall cause—

(a) every entrance between the bottom of any working or pumping shaft and the poppet-head sheaves; and

(b) every abandoned or disused shaft or dangerous excavation, to be safely and securely fenced, railed, or covered:

Provided that a fence, or any gate in the fence, or any rail or cover may be temporarily removed for the purpose of ordinary mining operations where precautions are taken to preclude any danger arising from the temporary removal.

(2.) The position of every disused or abandoned shaft which has been covered shall be indicated by a notice affixed to a post on the surface.

Protection where fencing removed.

246. Where any fence or any gate in a fence or any rail or cover is temporarily removed, for the purpose of ordinary mining operations, from any entrance to a shaft, a strong horizontal bar shall be securely fixed across the entrance not less than 1 metre, or more than 1.25 metres, from the floor of the brace, chamber, or drive where the entrance is.

Doors to be fixed to plats.

247. At every plat where any hoisting operations are carried on, a door or some other appliance approved by an inspector shall be fixed, and, where a door is so fixed, a lever or handle shall be attached whereby the door can be safely lowered, or raised, into position.

Division of shaft.

248. Where in any shaft one portion is used for the descent or ascent of persons by ladders and another portion for lowering or hoisting material, the former portion shall be cased, or otherwise securely divided off, from the latter.

Skidding of certain shafts.

249. Every shaft which has a depth of more than 30.5 metres and in which a bucket is used for lowering or hoisting material, shall be skidded and provided with such means as shall in the opinion of an inspector be sufficient to steady the bucket.

Entering winding compartment prohibited except for repairs, &c.

250.—(1.) Except for the purpose of descending or ascending or for the purpose of effecting repairs, a person shall not enter or cross the winding compartment of any shaft.

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(2.) Before commencing any repairs such as are referred to in the last preceding sub-regulation, the person supervising the repairs shall inform the engine driver.

251. Every working or pumping shaft in every mine shall be effectively cased, lined, or otherwise made secure and a supply of timber sufficient for the purpose shall be kept available on the surface in a place convenient to the shaft. Shafts to be made secure.

252. Every drive and every excavation made in any mine, whether in the course of construction, or in use, or otherwise, shall be securely protected and made, and kept, safe for all persons employed in, or entitled to enter, the mine. Drives and excavations to be made safe.

253. As soon as practicable after the opening of every level in a mine it shall, as a means of exit, be connected with every level previously opened and with the surface, by means of passageways independent of, and separate from, the main shaft or other principal entrance to the mine. Connexions between levels and surface.

254. The position of all auxiliary exits shall be brought to the knowledge of all persons employed underground in any mine and the word "ESCAPE" shall in letters of such dimensions as shall render them conspicuous and easily legible, be painted and kept painted, or otherwise clearly marked out, at every entrance to a level, rise, or passageway which is used or intended to be used as an exit. Exits to be notified.

255. The manager of every mine shall cause ladders to be fitted and maintained in a state of efficiency as means of egress in all passageways which are used or intended to be used as means of egress. Ladders as means of egress.

256.—(1.) While any person is at work in the bottom of any shaft where sinking operations are in progress, there shall not be permitted in the same shaft— Protection during shaft sinking.

(a) any other operation to be carried on; or

(b) any tool, mineral, or other material to be lowered or hoisted from, or to, any one place to, or from, any other place,

unless a winding compartment, which is used for the purpose of the other operation, or for the lowering or hoisting, is protected to its full width below the place—

(c) where the other operation is being carried on; or

(d) within which the lowering or hoisting is being done,

by a securely constructed pent-house.

(2.) The pent-house, or any other protection which an inspector shall consider necessary in the circumstances, shall be constructed or provided in such a manner as the inspector requires.

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Boring rods to be kept in certain places.

257. In every working in the proximity of any part of a mine which is likely to contain a dangerous accumulation of water or of any noxious or inflammable gas, boring rods shall be kept and used for the purpose of perforating the ground of, or near, or at any angle from, the working to a distance, in advance, of—

(a) 6 metres, in the case of an alluvial mine; or

(b) 3 metres, in the case of a lode or coal mine.

Drives, &c., near water or gas.

258. A drive, gallery, or other excavation in any mine shall not be made within such a distance from any dangerous accumulation of water or gas as shall involve any risk to a person employed in the mine.

Lighting provisions.

259.—(1.) In every mine satisfactory lights, effectually protected from draughts of air, shall—

(a) be provided for the use of persons in each working plat in every main drive and at such other places as an inspector may require; and

(b) be kept constantly burning and be so fixed as to illuminate the upper entrances of all winzes, rises, and jump-ups.

(2.) Every person employed in any mine in any place where there is reason to suspect the presence of inflammable gas shall, whilst he is so employed, be provided with a safety lamp.

Means of escape in mines liable to inundation.

260.—(1.) In every mine which, in the opinion of an inspector, is liable to any inundation of water, there shall be constructed such rises, chambers, drives, and other workings as the inspector deems necessary to ensure the safety of, or to provide a means of escape from the lower workings for, all persons employed in the mine during the inundation.

(2.) At the foot of every rise, jump-up, or passageway, or other working which is available for the purpose of escape, a notice clearly indicating the means of escape available shall be conspicuously posted and maintained.

Additional connexions with surface.

261. Whenever an inspector is of the opinion that in any mine the existing connexions with the surface, whether by shaft, rise, or adit, do not provide adequate means of escape, he shall report the facts to the Warden who may, after investigation, order the owner, agent, or manager of the mine to construct such additional shaft, rise, or adit, as to the Warden appears necessary.

Riding in trucks, &c., on inclined planes.
Sub. by 1937,
No. 19, r. 9.

262. A person shall not upon any inclined plane above ground, of which the inclination is greater than ten degrees from the horizontal, or on any aerial ropeway, aerial tramway, flying fox, or other device of a similar nature, ride or be permitted to ride on or in any truck, skip, waggon, bucket, or other conveyance.

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263. The batter of any open-cut shall be at such an angle as, in the opinion of an inspector taking into consideration the surrounding conditions, is safe.

Angle of batter
in open-cut.

264. An inspector may, in the interests of safety, limit the height of any open-cut face, and may order the construction of benches where they appear to him to be necessary.

Height, &c.,
of open-cut.

265.—(1.) Where operations are being carried on in any open-cut, any stoping shall not be done within a distance of—

Working
beneath
open-cut.

(a) 30.5 metres below the level of the bottom of the open-cut;
or

(b) 61 metres horizontally in any direction from the open-cut:

Provided that an inspector may in writing, and subject to such conditions as he deems necessary to impose, permit stoping to be done within such lesser distance as he considers safe.

(2.) When operations in any open-cut have been completed, mining operations may be carried on under the open-cut.

266. The face of an open-cut shall not be worked over any ground which an inspector considers dangerous, except with his permission in writing and subject to such conditions as he may impose:

Working
open-cut
over dangerous
ground.

Provided that this regulation shall not preclude the sinking of any pass or passageway in the floor of any open-cut for the purpose of filling up any underground stope.

267. Where any blasting operations are being carried out in any open-cut or other surface working—

Precautions
where blasting
is done in
surface
working.

(a) places of refuge approved by an inspector shall be provided; and

(b) before any charge of explosive is fired, a warning shall be given with bell and flag; and

(c) after any danger arising from the explosion, or missfire, of the charge is over, a signal shall be given to indicate that the conditions are safe.

268.—(1) Where, at one or both of two mines in close proximity to one another, blasting is being done upon the surface no charge of explosive shall be fired at either of them until the warning given under paragraph (b) of the last preceding regulation has been answered by an intimation signalled from the other of them that every person there is in a place of refuge.

Blasting
signals to be
acknowledged
by adjoining
mine in
certain cases.

(2.) After all danger is over the signal given under paragraph (c) of the last preceding regulation shall be acknowledged from the other mine.

Working in dangerous ground with rock drills.

269. A person shall not be permitted in any mine, either underground or on the surface—

- (a) to work alone in or upon any ground which is heavy or dangerous; or
- (b) to operate a rock drill, working on a bar, unless some other person is within easy hearing distance.

First aid, ambulances, &c.

270.—(1.) At every mine where more than four persons are ordinarily employed, there shall be made available for the immediate use and benefit of the persons, a box containing antiseptics, splints, bandages and other first aid requisites:

Provided that, at any mine where more than twenty persons are ordinarily employed, there shall be made available, in addition, a casualty room and ambulances or stretchers.

(2.) The articles, requisites, and room made available under the last preceding sub-regulation shall, as regards the number, quantity, quality, and size, be subject to the approval of an inspector.

(3.) Every native labourer shall, upon leaving the mine after each shift, be, by some responsible person appointed by the manager, examined for cuts and other external injuries and shall receive the usual first aid treatment for such as are found upon examination.

Jamming in ore passes or chutes.

271.—(1.) Where in any mine any ore, mullock, or other material in any pass or chute refuses to run, or “hangs up”, or becomes jammed—

- (a) a person shall not enter the pass or the chute without the permission of an inspector or the manager;
- (b) the person whose duty it is to ensure the free running of the pass or chute shall report the fact to the person under whose immediate supervision he is working; and
- (c) where the pass or chute becomes so jammed as to require special effort to free it, not less than two persons shall be employed for the purpose of freeing it.

(2.) The Warden may, by notice in writing, require the owner, agent, or manager of any mine where a pass or chute is being, or may subsequently be, constructed for the purpose of conveying ore, mullock, or other material, to provide alongside the pass or the chute a man-way which in the opinion of an inspector is proper and safe.

Division 12.—Tests and Inspections.

Breaking strain of ropes.

272.—(1.) Before any rope, including any capstan rope, is used for winding in a mine the owner, agent, or manager shall obtain from the manufacturer a certificate of the breaking strain of the rope and shall make the certificate available at the mine for the perusal of any inspector.

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(2.) Where the certificate is not available or the inspector is not satisfied that the certificate submitted for his perusal is authentic and that it refers to any rope to which it is alleged to refer, he may require that, before the rope is used, a certificate as to its breaking strain shall be obtained from a recognized testing station after a test applied to a sample not less than 1 metre in length and cut off from the cage end of the rope.

273.—(1.) A rope or chain shall not be used in the shaft of any mine until it has been tested and proved to be capable of carrying a load which is one and one-half times the weight of the ordinary load which shall consist of the cage, truck, or buckets and contents and the weight of the rope or chain from the bottom of the shaft to the pit-head pulley or windlass.

Ropes and chains to be capable of carrying certain loads.

(2.) The working load in any mine shall not exceed one-eighth of the breaking strain of the rope or chain when new.

(3.) In any mine where persons are lowered or hoisted in any shaft or winze any rope or chain used for the purpose shall, whenever the inspector requires, be tested and proved to be capable of carrying a load which is one and one-half times the weight of the original load.

(4.) The result of every test made under this regulation shall, by the person making the test, be entered and signed in the prescribed Mine Register.

274. At every mine at which winding or hauling appliances are in use the manager, or some competent person appointed by him, shall record in the prescribed Mine Register—

Particulars of winding and haulage appliances, &c., to be recorded.

(a) the following particulars in regard to all winding and haulage ropes:—

- (i) designation of shaft (or haulage) where used;
- (ii) compartments (or tracks) where used;
- (iii) name and address of manufacturer;
- (iv) date of manufacture;
- (v) date of purchase;
- (vi) date when put in;
- (vii) length in metres;
- (viii) date of shortening;
- (ix) dates of tests after shortening;
- (x) breaking stress of wires at tests after shortening;
- (xi) dates of recapping;
- (xii) date of turning end for end;
- (xiii) diameter and circumference (or, in the case of flat ropes, the width and thickness) in centimetres;

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- (xiv) weight per metre in kilogrammes;
 - (xv) construction;
 - (xvi) number of strands;
 - (xvii) diameter of wires (expressed in centimetres);
 - (xviii) class of core;
 - (xix) class of steel used in construction;
 - (xx) breaking stress of steel of which wire made, expressed in tonnes (metric);
 - (xxi) breaking load of rope, expressed in tonnes (metric); and
 - (xxii) date when rope taken off;
- (b) after an inspection, which shall be made each day, particulars in regard to the condition of—
- (i) all winding and haulage ropes and their attachments to cages;
 - (ii) the brakes, depth indicators, cages, safety catches, and pulley wheels; and
 - (iii) every other external part of the winding and haulage appliances upon the proper working of which the safety of life depends;
- (c) after an inspection which shall be made at least once a week, particulars regarding the condition, generally, of—
- (i) the guides and winding compartments;
 - (ii) the signalling arrangements; and
 - (iii) the external parts of the winding engine and of the haulage system;
- (d) after an inspection (which shall be made at least once a week) of the structure of all winding and haulage ropes (for which inspection the ropes shall be thoroughly cleaned at selected places not more than 30.5 metres apart) to determine the extent of their deterioration, the following particulars in regard to them:—
- (i) the condition externally and, as far as possible, internally;
 - (ii) the reduction in diameter;
 - (iii) the internal corrosion; and
 - (iv) the estimated reduction in strength due to wear or other causes; and
- (e) after an inspection which shall be made at least once a year, the particulars in regard to the working and the condition of the internal parts of every winding and hauling engine.

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275.—(1.) Where any mine ceases operations for a period exceeding six months, the owner, agent or manager shall before work is resumed give to an inspector a notice in accordance with Form 15.

Examination before resumption where mine has ceased operations.

(2.) Within three days of the receipt of the notice, the inspector shall examine the appliances and workings of the mine and shall make an entry in the prescribed Mine Register indicating whether or not operations may be resumed with safety to the persons employed in the mine.

(3.) Any mining operation whatsoever shall not be resumed unless and until the entry indicates that operations may be resumed.

276.—(1.) Before any safety cage is, for the first time, used for lowering or hoisting persons in a mine it shall be tested in the presence of an inspector in order to ascertain whether or not the safety cage together with all its appliances is in fact safe.

Testing of safety-cage.

(2.) The safety cage shall not be used unless and until the inspector certifies by an entry in the prescribed Mine Register that the cage and all its appliances are in a safe working order and condition:

Provided that, where an inspector is not available to make the test, the safety cage may be used after a satisfactory test made by the manager who shall enter in the prescribed Mine Register the date and details of the test made by him, and shall at once forward a copy of the entry to the inspector.

(3.) The inspector, as soon as practicable, after receiving the copy of the entry, shall proceed to the mine and require a test to be made in his presence and shall, according to the results of the test, enter in the prescribed Mine Register his certificate of safety or otherwise.

(4.) At intervals of not more than two months, the manager shall either personally test, or cause some other competent person to test, each safety cage and all its appliances and shall enter, or cause the other person to enter, in the prescribed Mine Register, the date and details of the test, and he shall sign, or cause the other person to sign, the entry.

(5.) Every test required to be made under this regulation shall be made with full and empty trucks and, according as the inspector may direct, shall be made either from the shackle or from the drums.

277. The manager of every mine, or some other competent person assigned by the manager for the purpose, shall—

Manager to inform himself of condition of appliances.

(a) keep himself constantly informed of the state of all ropes, or other safety appliances, or gear used in connection with the cages or shafts of the mine; and

(b) at intervals of not more than one week—

(i) carefully examine the condition of the mine and all buildings, machinery, ropes, and other

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safety appliances, gear, shafts, levels, planes, and other places used in the working of the mine; and

- (ii) make and sign an entry in the prescribed Mine Register setting out the date and fact of the examination, his opinion of the condition, and of the need for alterations or repairs, having regard to the safety of persons employed in the mine.

Condemnation of appliances or gear.

278. Every rope or other safety appliance or gear which is at any time after examination by an inspector condemned by him shall forthwith be removed or, where, in the opinion of an inspector, it is capable of being so repaired as to make it safe to use, it shall be repaired to the satisfaction of the inspector before being further used.

Testing of winding rope before use.

279.—(1.) Every winding rope installed at any shaft in a mine and every connecting attachment between the rope and the cage, skip, or other conveyance, shall—

- (a) before being used for the first time; and
(b) before being used again after an interval of non-use exceeding one month,

be carefully examined and thoroughly tested for strength by the manager of the mine or some other competent person assigned by the manager for the purpose.

(2.) After the examination and test referred to in the last preceding sub-regulation, the winding rope and attachment shall be further tested before being used for the transport of any person in the shaft by being run for two complete trips up and down the working portion of the shaft with cage, skip, and other appliances loaded to the full extent authorized.

(3.) The date and results of the examination and tests under this regulation shall be entered in the prescribed Mine Register by the manager, or the other person assigned, who shall sign the entry.

Defect in winding appliances to be reported and remedied.

280.—(1.) Where, as the result of an examination or test, any weakness or defect is discovered in any winding rope or other winding appliance in any mine which involves any danger to the life or limb of any person, the weakness or defect shall be immediately reported to the manager and by him remedied.

(2.) A person shall not be lowered or hoisted in the mine by means of the rope or other appliance unless the weakness or defect has been remedied.

Testing of winding appliances in presence of inspector.

281.—(1.) An inspector may require any winding rope or other winding appliance in or about any mine to be examined and tested at a recognized testing station, or, in his presence, tested at the mine by

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the manager or other competent person assigned by the manager for the purpose, and may require such methods to be employed in the examination and test as appear to him desirable.

(2.) The manager of the mine shall afford every facility for the examination and tests in accordance with the methods required.

282. Where any winding rope is required to be tested at a mine, the following method shall, subject to these Regulations, be adopted:—

Method of testing ropes at mine.

- (a) The breaking strain of every separate wire contained in each strand of a sample cut off from the cage end of the rope shall be ascertained:

Provided that no account shall be taken of the strength of any wire in the sample, which is broken or is less than one-half the average strength of the wires of the same sort in the sample or which fails to pass the bending test prescribed by this regulation:

Provided further that the breaking strain of the whole sample shall be deemed to be five-sixths of the sum of the breaking strains of all the individual wires except those of which no account has been taken under the last preceding proviso; and

- (b) The bending test referred to in the last preceding paragraph shall be made by holding each wire of the sample in a vice of which the upper edge of each jaw is rounded to a quarter circle of two-fifths of an inch diameter and bending it, backwards, and forwards, through an angle of 180 degrees until it either breaks or withstands the following number of bends:—

- (i) in the case of a wire having a diameter not exceeding .08 inches, 8 bends; or
- (ii) in the case of a wire having a diameter exceeding .08 inches but not exceeding .09 inches, 7 bends; or
- (iii) in the case of a wire having a diameter exceeding .09 inches but not exceeding .1 inches, 6 bends; or
- (iv) in the case of a wire having a diameter exceeding .1 inches, 5 bends:

Provided that any rope which fails to withstand the number of bends specified in relation to its diameter shall fail to pass the test.

283. Where in any case a test of rope by sample has been made both at a recognized testing station and at a mine, and the results are at variance, a test made of the whole rope at a recognized testing

Conflict between tests.

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station, or, where a recognized testing station is not available, at the mine, shall finally determine its breaking strain.

Division 13.—Miscellaneous.

Weekly inspection by manager.

284. The manager of every mine shall at least once a week make a thorough inspection of every part of the mine and shall make and sign an entry in the prescribed Mine Register recording the facts which, at the time of the inspection, he finds existing generally in the mine in regard to safety and ventilation, and in regard to any other matter which is, by these Regulations, or by an inspector in writing, required to be the subject of record.

Stoping.

285. Except in the case of timber stopes and such other stopes as an inspector in writing may exempt, where any stoping is carried out by any method in which any excavation is filled with waste rock, sand, earth, or broken ore, as the support of any person engaged in working the stope, the filling shall at all times be maintained within a mean distance, from the back or roof of the excavation, of 3 metres measured at right angles from the surface of the filling or such greater distance as an inspector shall permit and define in an entry in the prescribed Mine Register.

Box method of rising.

286. In every rise in which compressed air is not being used and which is intended to be more than 9 metres in height above the recognized back, the box method of rising, or other approved means of dividing, or ventilating the rise, shall be adopted in any case required by an inspector and the method or means actually adopted shall be notified to the inspector without delay.

Wilful damage.

287. A person shall not wilfully damage or, without proper authority, remove or render useless, any fencing, covering, casing, lining, guide, means of signalling, signal-cover, rope, chain, flange, brake, indicator, ladder, platform, steam-gauge, water-gauge, safety-valve, or other appliance, gear, or thing in or about any mine.

Copy of Ordinance, &c., to be available at mine.

288. A copy of the Ordinance and of these Regulations shall—

(a) be kept at the mine, or if there is no office there, at some convenient place near the mine; and

(b) be available, at all reasonable times, for examination by the Warden or an inspector or by any person employed in the mine.

Plans and specifications of dams.

289.—(1.) The plans and specifications required to be lodged with the Warden under section 47 of the Ordinance shall show the following details:—

Mines and Works Regulations.

(a) In the case of a dam intended to be constructed—

- (i) a contour plan and cross-section of the locality and site of the dam together with the fullest particulars of the strata in or upon which each retaining-wall or weir of the dam is to be constructed;
- (ii) the longitudinal section showing the slope of the bed of the river or stream or other surface, rock, or strata upon which the retaining-wall or weir is to be constructed;
- (iii) plans and vertical end and mid-section of the retaining-walls or weirs showing the position, size, and details of all sluices, gates, and spillways;
- (iv) details of the anchorage of the base and ends of the retaining-walls or weirs at, or to, the natural rock or other strata;
- (v) details and nature of the materials proposed to be used in the construction, and particulars of the method of placing the materials in the formation of the retaining-walls or weirs, and, where concrete is proposed to be used, particulars of the nature and proportion of the rock, spalls, screenings, gravel, and cement used;
- (vi) particulars of—
 - (A) the factors allowed in the strength of the retaining-walls or weirs;
 - (B) the estimated capacity of the dam;
 - (C) the estimated area of the catchment, or maximum known flood capacity of the river or stream upon which the dam is to be constructed;
 - (D) the average and maximum known rainfall; and
 - (E) the estimated discharge capacity of sluices, gates, and spillways;
- (vii) particulars of the course of overflow waters indicating whether it is through, or adjacent to, any populated area or locality;
- (viii) details of the measures to be adopted in order to ensure safety in the event of an unprecedented rainfall, or of the bursting of the dam or the flooding of areas exterior to any

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natural channel or water-course by an uncontrolled escape of water from the dam; and

- (ix) details of the measures to be taken to prevent damage to the retaining-walls or weirs arising from logs, timber, or other materials carried into the dam by streams, storm waters, or other means; or

(b) In the case of a dam already constructed, but intended to be enlarged or altered—

- (i) plans, sections, details, and particulars of the existing dam and the retaining walls or weirs, and such other details and information as are required by paragraph (a) of this regulation in connexion with the construction of the dam;
- (ii) plans and sections of the intended enlargement or alteration of the dam and details of the anchorage to, and of any enlargement or alteration of, existing retaining-walls or weirs; and
- (iii) particulars of any alteration in the capacity of the dam.

(2.) The plans and sections shall be drawn to scale and all essential measurements shall be plotted on them.

Plans and specifications of certain works.

290.—(1.) Where, for the purpose of working any mine, it is proposed to construct any roadway, tramway, power transmission line, aerial ropeway, or pipe line, or other works over, upon, across, or through any land, whether any authority has or has not been already granted under the provisions of Part VI B. of the *Mining Ordinance* 1928-1935,⁽⁴⁾ the owner, agent, or manager of the mine shall forward to the Warden, for his approval, copies, in duplicate, of the plans and specifications of the proposed construction.

(2.) Any works to which the plans and specifications relate shall not be commenced until the Warden has signified his approval in writing and shall not be carried out otherwise than in accordance with the approval which shall be subject to such modifications of the plans and specifications, and such other conditions, as the Warden may impose.

Applications for approval for construction &c., of dams.

291. Where the approval of the Warden is required under the provisions of section 47 of the Ordinance, for the construction, alteration, or enlargement of a dam, application shall be made in accordance with Form 17 which shall be lodged with the Warden together with the prescribed plans and specifications.

(4) Now the *Mining Ordinance* 1928-1940.

Mines and Works Regulations.

292. Where the Warden or inspector requires that any dam, to which the provisions of section 48 of the Ordinance apply, shall be emptied, or discontinued to be used, and reconstructed or repaired, he shall serve upon the owner, or person in charge, of the dam a notice in accordance with Form 18.

Notice to repair dangerous dams.

293. Before any dam used for mining purposes is abandoned, the owner of the dam shall, unless he causes it to be emptied, cause to be constructed a by-pass or spillway capable of discharging, without injury to the dam, the maximum run-off of the watershed which feeds the dam.

Abandonment of dams.

294. Where it is proposed to remove from any portion of a mine any prop, timber, or stone wall the removal of which is subject to the provisions of section 58 of the Ordinance, notice in accordance with Form 19 shall be served upon the owner, agent, or manager of the adjoining mine at least seven days before the proposed removal and an application to an inspector shall be made in accordance with Form 20.

Notice regarding removal of props and timber.

295. Where in respect of the commencement or recommencement of any workings in a mine a notice is, under section 59 of the Ordinance, required to be given to the Warden, the notice shall be in accordance with Form 21.

Notice to commence working on shaft, &c.

296. Where the owner, agent, or manager of any mine commences to work any one part of the mine separately from any other part, he shall immediately give to the Warden a notice in accordance with Form 22 including particulars and a sketch plan sufficient to identify the parts which are being worked separately.

Notice of separate working of parts of mine.

297.—(1.) The owner, agent, or manager of a mine shall notify the Warden in accordance with Form 23, where the mine name, or the owner, agent, or manager of the mine, has been changed.

Notice of change in mine name, owner, agent, or manager.

(2.) The notice shall be given by leaving it at, or posting it in a registered envelope addressed to, the Warden's office within seven days of the change.

PART III.—RELATING TO DREDGES SPECIALLY.

298. The undermentioned safety appliances shall be provided and maintained in good order in connexion with every dredge used for mining purposes—

Safety appliances for dredges.

- (a) a lifebuoy, a light line, and a boat hook near the bow of the dredge;
- (b) a lifebuoy, a light line, and a boat hook near the stern of the dredge;

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- (c) a boat containing a light line and a boat hook; and
- (d) a looped wire line securely fastened around the outside of pontoons about 6 inches above the water line.

Additional safety appliances in certain cases.

299.—(1.) Where an inspector deems that the stream in which any dredge is being constructed or worked is deep or swift-flowing, he may require the owner, agent, or manager of the dredge to provide, in connexion with the dredge, a second boat.

(2.) Each of the two boats shall be furnished with a lifebuoy, a light line, and a boat hook not less than 7 feet long, all of which shall be kept in a condition ready for use.

(3.) Life belts shall be provided for every member of the crew of a boat when engaged in shifting the mooring lines of the dredge.

Safety appliances to be easily accessible.

300. All the safety appliances required to be provided in connexion with any dredge shall be kept in a conspicuous place easily accessible to persons on the dredge and any damage to, or loss of, the appliances, shall be immediately repaired.

Wellhole to be protected, &c.

301.—(1.) The wellhole of every dredge shall be fenced or covered as far as is reasonably practicable.

(2.) Where fencing or covering is not practicable, a movable gangway not less than 2 feet 6 inches wide and fitted with a substantial hand rail at each side shall be provided for, and used by, persons crossing the wellhole.

Buckets to be avoided.

302. Any person shall not step on the moving buckets or chain of any dredge.

Machinery, &c., to be protected.

303. All exposed belting or machinery of any dredge shall be furnished by the owner of the dredge with a satisfactory fence.

Stanchions and handrails to be provided.

304.—(1.) Where any dredge is not entirely covered in, the sides of the uncovered portion of the hull shall be fitted with—

- (a) stanchions not more than 8 feet apart; and
- (b) two substantial hand rails or tightly sprung wires or chains, the lower rail, wire, or chain not being more than 10 inches above the deck.

(2.) The fittings referred to in the last preceding sub-regulation may be movable, and moved when taking coal or other material on board the dredge, but shall be kept in position at all other times.

Gangway to bank.

305.—(1.) Every dredge which works close to a bank shall be provided with a gangway not less than 2 feet 6 inches wide and long enough to reach from the dredge to the bank.

(2.) The gangway shall be provided with a substantial hand rail at each side and be secured to the deck of the dredge.

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306. The freeboard between the deck of the dredge and the surface of the water shall at no time be permitted to be less than that required by the inspector.

Freeboard to be as required by inspector.

307. Every dredge shall be provided with approved latrine accommodation.

Latrine accommodation.

308. A dredge, except a dredge in operation at the commencement of these Regulations, or any of its appliances shall not be used for mining purposes unless and until an inspector is satisfied as to—

Dredge not to be used until approved.

- (a) the strength and soundness of the pontoons;
- (b) the efficiency of the safety appliances; and
- (c) the sufficiency of the freeboard.

309.—(1.) Where an inspector is of the opinion that any dredge is unsafe and should be suspended from operation or wholly condemned, he shall report to the Warden the facts upon which his opinion is based.

Procedure for suspension or condemnation of dredge.

(2.) Upon the receipt of the report, the Warden may issue a summons, returnable in fourteen days, and cause it to be served upon the owner, agent, or manager of the dredge, calling upon him to show cause why the dredge should not be either suspended from operation or condemned for all future use.

(3.) Upon the return, and proof of service, of the summons the Warden shall make full and open inquiry into the matters reported by the inspector and for the purpose shall—

- (a) take evidence on oath; and
- (b) if he considers it necessary, view the dredge.

(4.) After the inquiry has been completed, the Warden may by order either—

- (a) suspend the dredge from operation until the fulfilment of such conditions as he shall impose; or
- (b) condemn the dredge and declare it to be unfit for use for mining purposes; or
- (c) dismiss the summons.

(5.) Any owner, agent, or manager who disobeys the order and any person who knowingly does any act which is in violation of the order shall be guilty of an offence.

Penalty: Fifty pounds or imprisonment for six months.

310. A printed copy of the regulations contained in this Part shall be kept posted in a conspicuous place on every dredge and shall be renewed as it becomes torn or defaced.

Copy of this Part to be posted.

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PART IV.—RELATING TO WORKS GENERALLY.

Abatement of dust or fumes.

311. Where, in or about any works, an inspector finds any dust or fumes in any form or quantity which, in his opinion, constitutes a nuisance or is likely to cause any detriment to the health of any person there employed, he may require the manager to take such measures as the inspector deems adequate to abate the nuisance or avoid the detriment and the manager shall forthwith take the measures required by the inspector.

Damage and non-user of sanitary appliances.

312. Every person employed in or about any works who damages, misuses, or fails to use any appliance there provided for the abatement of any nuisance caused by, or the avoidance of any detriment likely to arise from, the presence of dust or fumes, or for any other purpose of a sanitary nature, shall be guilty of an offence.

Penalty: Twenty pounds.

Application of regulations under Part II.

313. Any regulation under Part II of these Regulations which the Administrator, by notice⁽⁵⁾ declares to be applicable to works generally, shall be deemed to be a regulation relating, and applying *mutatis mutandis*, to works generally.

Application of forms relevant to Part II.

314. Where any form is prescribed under or in relation to any regulation of Part II of these Regulations which is declared under the last preceding regulation to be applicable to works generally, the form shall be applicable, *mutatis mutandis*, to works generally.

PART V.—RELATING TO SMELTING WORKS SPECIALLY.

Drinking water.

315.—(1.) The owner, agent, or manager of every smelting works shall provide an ample supply of pure drinking water for human consumption and the supply shall be made freely and easily available to all persons employed in or about the works.

(2.) Every precaution shall be taken to prevent the water so provided from becoming polluted or being rendered unwholesome.

Drink containers to be covered.

316. A person shall not in or about any smelting works carry or use any vessel containing tea, water, or other fluid for drinking purposes unless the vessel is covered by a tight-fitting lid which shall not be removed in the works, except to permit of the contents of the vessel being poured out for drinking.

Water and standpipe for laying dust.

317. On every feed floor, tamping floor, and every other place in any smelting works where dust is raised, there shall be provided an ample supply of water for the purpose of laying the dust by sprinkling, and a standpipe and hose or other suitable contrivance.

(5) No notice has been published in *N.G. Gaz.*

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318.—(1.) At every smelting works where lead ores are smelted there shall be provided to the satisfaction of an inspector, having regard to the number of persons there employed,—

Warm water,
bath houses,
&c.

- (a) adequate accommodation in the form of bath houses and change rooms;
- (b) adequate supplies of clean water at a temperature of at least 70 degrees (Fahrenheit) made available for the bath houses; and
- (c) a sufficient number of wash basins.

(2.) The bath houses and change rooms shall be made available free of cost at all reasonable hours, and for every shift, to all persons employed in the works.

(3.) A caretaker shall be in charge of the bath houses and change rooms and shall keep a day book and record in the book the names of all persons who use the baths and wash basins.

(4.) A person shall not—

- (a) destroy, damage, deface, or disfigure any bath house or change room, or appliance in, or used in connection with, the accommodation; or
- (b) commit any unseemly or indecent act in or about the accommodation; or
- (c) enter or use any part of the accommodation whilst in a state of intoxication.

319. Every owner, agent, or manager of a smelting works shall use all prescribed means to ensure that the flue dust is—

Control of
flue dust.

- (a) not emitted from smelters' stacks;
- (b) wetted as soon as it is drawn from the flue; and
- (c) prevented from accumulating so as to become a nuisance or be injurious to persons employed in the smelting works.

320. At all smelting works where lead ores are smelted each furnace shall be surrounded with a hood which shall open below, so as to catch the fumes from the molten metal and slag, and the hoods shall terminate in a chimney or other similar means of access to the outer air.

Furnaces to
have special
hoods.

PART VI.—RELATING TO CERTAIN OCCUPATIONS.

Division 1.—Occupations requiring Certificates or Permits.

321. A person shall not be employed in or about any mine in any of the following occupations unless he is the holder of a certificate of competency in accordance with Form 24 issued by the appropriate Board of Examiners constituted under this Part:—

Occupations
for which
certificates are
necessary.

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- (a) Group I comprising:—
(i) metalliferous mine manager;
(ii) colliery manager;

* * *

- (iv) dredge master; and

- (b) Group II comprising:—

- (i) the driver of any winding engine or machinery, other than a winding engine or machinery operated by manual power, when used for raising or lowering men in a shaft or for raising or lowering materials in a shaft when the shaft is being sunk;
(ii) the driver of a steam engine or boiler;
(iii) mine electrician; and
(iv) boiler inspector:

Provided that the owner of a mine may appoint or allow any person who does not hold the prescribed manager's certificate to be a manager of the mine if not more than thirty persons are ordinarily engaged underground:

Provided further that the holder of any certificate granted under sections of the *Mining Ordinance* 1928-1935⁽⁴⁾ and specified in this proviso shall be deemed to be the holder of a certificate of competency granted and issued under these Regulations in respect of the occupation set out under the following reference to the respective certificates and sections:—

Certificates under sections 140 and 141:
Metalliferous mine manager.

First-class certificate under section 163:

Ordinary steam-engine driver; or

Winding-engine driver (either steam or electric):

Provided also that, notwithstanding anything contained in this Part, an inspector, upon being satisfied that a person is qualified to be admitted to examination for one of the occupations specified in this regulation and is competent to be employed in the occupation, may, upon payment of a fee of Ten shillings, authorize the person in writing to be employed in the occupation for a period not exceeding six months:

Provided also that any person who has been employed in the Territory as a dredge master for a period of six months

Sub-para. (iii)
omitted by
1937, No. 19,
r. 10.

Proviso sub.
by 1937, No. 19,
r. 10.

(4) Now the *Mining Ordinance* 1928-1940.

Mines and Works Regulations.

before the commencement of these Regulations shall be exempt from the provisions of this regulation.

322. Permits of employment may be granted and issued under this Part in respect of each of the following occupations:— Permits for certain occupations.

- (a) Alluvial miner;
- (b) Underground miner; and
- (c) Boiler operator.

Division 2.—Certificates of Competency.

323. The Administrator may, by notice, appoint a Board of Examiners for each of the occupations specified in regulation 338 of these Regulations. Appointment of Board. Am. by 1937, No. 19, r. 10.

324.—(1.) A Board of Examiners shall be constituted of a Warden appointed by the Administrator, who shall be chairman, and two other members. Constitution of Board. Sub-reg. (1) am. by 1937, No. 4, r. 1.

(2.) The two other members shall—

- (a) in respect of the occupation of metalliferous mine manager, colliery manager, dredge master, or mine surveyor, be two qualified mining engineers; and Para. (a) sub. by 1937, No. 19, r. 12.
- (b) in respect of the occupation of winding-engine driver, ordinary steam-engine driver, electric-motor driver, gas-engine or oil-engine driver, dredge winchman, mine electrician, or boiler inspector, be a qualified mechanical engineer and a qualified electrical engineer. Para. (b) sub. by 1937, No. 19, r. 12.

(3.) A Board may, for the better exercise of its powers in relation to any particular case, co-opt no more than two additional members who, whilst dealing with the particular case, shall have the same rights as any other member of the Board except the chairman.

325. Every member of a Board of Examiners shall cease to hold office on the thirty-first day of December in each year, but shall be eligible for reappointment. Members to retire annually. Am. by 1937, No. 4, r. 2.

326. The Administrator may, in the manner prescribed for the appointment of a Board of Examiners, appoint a person to fill any vacancy in a Board arising from the death, removal, or resignation of any member. Vacancies.

327.—(1.) Meetings of a Board of Examiners shall be convened by the chairman on not less than three days' notice to the other members, and each of the other members, not being an officer or employee of the Administration, shall be entitled to a fee of £3 3s. for every day on which he attends a meeting in addition to the amount Meeting and fees of Board. Sub-reg. (1) am. by 1937, No. 19, r. 13.

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actually and necessarily expended for his conveyance to and from the place of examination :

Provided that when any sitting does not continue for more than one hour the fee shall be £1 1s.

(2.) At any meeting of a Board two members, one of whom shall be the chairman, shall constitute a quorum.

(3.) Every question shall be decided by a majority of the votes of the members present at the meeting; and in the event of the Board being equally divided upon any question, the chairman shall decide the question by the exercise of a casting vote which he shall have in addition to the deliberative vote to which every member present shall be entitled.

(4.) The Warden may from time to time appoint any officer employed in the Warden's office to record and keep the minutes of meetings, and generally to act as secretary to the Board.

Duties and powers of Board.
Am. by 1937, No. 19, r. 14.

328. Subject to these Regulations, a Board of Examiners—

- (a) shall (if the subjects of examination for any occupation have been prescribed) examine the qualifications of any person who applies to it under regulation 334 of these Regulations;
- (b) may after the prescribed examination, grant and issue a certificate of competency to any applicant;
- (c) may, without examination, grant and issue a certificate of competency in accordance with regulation 336 of these Regulations;
- (d) shall keep a Register of Certificates in accordance with Form 25 and record in it particulars of all certificates of competency issued, suspended, or cancelled under these Regulations; and
- (e) shall issue to the person registered as the holder of any certificate of competency, a duplicate certificate upon—
 - (i) being satisfied that the original has been lost; and
 - (ii) the receipt of a fee of 10s. 6d.

Para. (c) am. by 1937, No. 19, r. 14.

Practical experience essential for certificate.

329. The Board of Examiners may refuse admission to the prescribed examination, and shall refuse a certificate of competency, to any person who fails to satisfy it that he has had such practical experience as is, in the Board's opinion, necessary to fit him for the occupation in respect of which he desires the certificate of competency.

Mines and Works Regulations.

330.—(1.) Upon the complaint of an inspector or a District Officer that the holder of any certificate granted and issued under this Part—

Procedure to cancel or suspend certificates.

- (a) is incompetent; or
- (b) has been guilty of—
 - (i) an offence under the Ordinance; or
 - (ii) a breach of any of these Regulations; or
 - (iii) any misconduct or negligence,

the Warden shall, by notice in writing signed by him, require the holder of the certificate to appear before him and show cause why the certificate should not be cancelled or suspended.

(2.) The notice shall—

- (a) appoint a place as well as a day and hour for the hearing of the matter, not sooner than seven days after the service of the notice; and
- (b) specify the grounds for requiring the holder of the certificate to show cause.

(3.) The evidence received at the hearing shall be on oath and shall be taken down in writing in the presence of the witness and, after being read over to him and found correct, signed by him as well as by the Warden.

(4.) Upon consideration of the evidence, the Warden shall—

- (a) record his finding and determine either—
 - (i) not to interfere with the certificate; or
 - (ii) to cancel the certificate; or
 - (iii) to suspend the certificate for a specified period; and
- (b) in writing, notify the holder of the certificate of the finding and determination; and
- (c) file at the Warden's office, all the papers including the depositions taken at the hearing.

331. The holder of any certificate of competency affected by the finding and determination may appeal to the Supreme Court in the manner, and subject to the conditions, prescribed for an appeal to the Supreme Court from a decision of the Warden⁽⁶⁾ under the *Mining Ordinance 1928-1935*.⁽⁴⁾

Appeal to Supreme Court.

332.—(1.) Upon the expiration of the time allowed for any appeal under the last preceding regulation the Warden may order the holder of the certificate of competency to deliver up, within the time specified in the Order, the certificate for endorsement according to the determination made under regulation 330 of these Regulations.

Delivery up of certificates.

(4) Now the *Mining Ordinance 1928-1940*.

(6) As to appeals to the Supreme Court under the *Mining Ordinance 1928-1940*, see Sections 104-113 of that Ordinance.

(2.) Any person who, without reasonable cause, fails to comply with an order under this regulation shall be guilty of an offence.

Penalty: Twenty pounds.

Division 3.—Examination for Certificates of Competency.

Time and place of examinations.

333.—(1.) The chairman of the Board of Examiners shall, by notice published once in the *New Guinea Gazette* and once in some newspaper circulating in the goldfields and mineral fields of the Territory, appoint a day, hour, and place for the holding of examinations for certificates of competency.

Sub-reg. (2) am. by 1937, No. 4, r. 3, and by 1937, No. 19, r. 15.

(2.) The notice shall specify the occupations for which, the place at which, and the date (not sooner than one month from the date of the publication in the newspaper) on which, the examinations are intended to be held, and the date not later than which applications may be lodged with the chairman of the appropriate Board of Examiners.

(3.) A copy of the notice appearing in the newspaper shall be posted in some conspicuous place at every post office in the goldfields and mineral fields, as soon after the publication in the newspaper as the exigencies of postal communication will permit of the receipt of the newspaper at the post office.

Applications for examination and certificate.

334.—(1.) Any person resident in the Territory may apply for an examination of his qualifications for, and for a certificate of competency in respect of, one or other of the occupations specified in regulation 321 or 338 of these Regulations.

(2.) The application shall be—

- (a) made in accordance with Form 26;
- (b) lodged with the chairman of the appropriate Board of Examiners not later than the date advertised for lodging it;
- (c) accompanied by the prescribed fee, a medical certificate as to physical fitness for the occupation, and testimonials from two responsible persons resident in the Territory as to the sobriety and integrity of the applicant.

Para. (b) sub. by 1937, No. 19, r. 16.

Evidence of theoretical study, &c.

335. The Board of Examiners before admitting any applicant to examination may require him to furnish, to the satisfaction of the Board, evidence that he has pursued such a course of theoretical study, and has had such practical experience, as the Board deems necessary to fit him for the occupation for which he desires a certificate of competency.

Mines and Works Regulations.

336.—(1.) Application for the grant and issue, without examination, of a certificate of competency in respect of one or other of the occupations specified in regulations 321 or 338 of these Regulations may be made in accordance with Form 27 by any person resident in the Territory who—

Application for certificate without examination.

- (a) holds from some authority, which the appropriate Board of Examiners deems worthy of recognition, a certificate, or a diploma, which he desires to be accepted as evidence of his competency in the occupation; or

* * * * *

Paras. (b) and (c) omitted by 1937, No. 19, r. 17.

(2.) The application shall be lodged with the chairman of the appropriate Board of Examiners, and be accompanied by—

Sub-reg. (2) am. by 1937, No. 19, r. 17.

- (a) the fee prescribed;
- (b) a medical certificate as to physical fitness for the occupation; and
- (c) testimonials from two responsible persons resident in the Territory as to the sobriety and integrity of the applicant.

(3.) Before granting the application the Board of Examiners shall be satisfied as to the fitness of the applicant, that he is identical with the person named in the certificate or diploma, which shall be produced to the Board for inspection, and that the certificate or diploma is of equal grade and corresponds to the certificate of competency applied for.

Sub-reg. (3) sub. by 1937, No. 19, r. 17.

337. The chairman of the Board of Examiners, whenever he deems it advisable, may require all particulars or information furnished in relation to any application under regulations 334 and 336 of these Regulations to be verified by a statutory declaration made by the applicant.

Statement of applicant to be verified.

338.—(1.) The fee payable by an applicant for examination for a certificate of competency in respect of any of the occupations set out hereunder shall be that stated opposite the occupation:—

Fees in respect of examinations for certificates.

Sub-reg. (1) am. by 1937, No. 19, r. 18.

	£	s.	d.
Dredge master	2	2	0
Winding-engine driver	1	11	6
Steam-engine driver	1	1	0
Electric-motor driver	1	1	0
Gas or oil-engine driver	1	1	0
Dredge winchman	1	11	6
Mine electrician	2	2	0
Boiler inspector	1	1	0
Metalliferous mine manager	3	3	0
Mine surveyor	2	2	0
Colliery manager	3	3	0

(2.) Where the fee has been paid under this regulation by any applicant whom the Board of Examiners has refused to admit to examination, he shall be entitled to a refund of half the amount paid.

Fee on application for certificate without examination.

339. An applicant under regulation 336 of these Regulations shall pay a fee of £1 ls.

Examinations to be written or oral.

340. Any examination, or any part of an examination, under these Regulations shall be either written or oral, or partly written and partly oral, as the Board of Examiners may in its absolute discretion require.

Division 4.—Special Conditions Affecting Different Examinations.

Examination for metalliferous mine managers.
R. 340A ad. by 1937, No. 19, r. 19.

340A. Every applicant for examination as to his qualifications for the occupation of metalliferous mine manager shall be required—

(a) to satisfy the Board of Examiners that he is not less than twenty-five years of age and has had practical experience in surveying, sampling, mining, and other underground working in metalliferous mines or the supervision thereof for a period of not less than—

- (i) five years, at least two years of which have been spent at the face as a practical miner;
- (ii) three years, and has completed a satisfactory course of instruction at a recognized University, School of Mines, or other Technical Institution; or
- (iii) three years, and is the holder of a mine surveyor's certificate of competency issued under these Regulations;

(b) to pass in the following subjects, operations, and matters:—

- (i) Mining, including—hydraulic sluicing methods; dredge mining; alluvial mining; open cuts; the laying out and construction of shafts, drives, chambers, levels, winzes, stopes, and other underground workings; the methods of bratticing, timbering, and otherwise supporting or filling workings; drainage of mines and pumping appliances used for drainage; haulage in shafts and underground planes; the strength of ropes and chains; the tapping of water in mines and the construction of underground dams; types of drills and other mining machines; the use, nature, and properties of explosives; the construction

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- and use of cages, safety catches, detaching hooks, apparatus for preventing overwinding, and all other safety appliances; and generally all matters connected with the working and development of a metalliferous mine;
- (ii) Mine ventilation, including—types of fans, blowers, and similar appliances; methods of ventilation; measurement of air currents and moisture in air and the cooling power of mine air; methods of catching, counting, and allaying dust; sampling of and determination of injurious dusts and impurities in mine air; and anemometers, konimeters, hygrometers, kata-thermometers and similar instruments;
 - (iii) Mine rescue work, including—the construction, care, and use of the principal types of portable breathing apparatus in common use in mines; types of dangerous gases and their occurrence and effect; and training of mine rescue squads;
 - (iv) Mine sampling and valuation, including—sampling of developed and undeveloped ore bodies, faces, cores, and alluvial and other deposits; sampling tools; diamond and other drilling layout; discounting of assay values of samples; and calculation of ore reserves and values;
 - (v) Mining geology, including—modes of occurrence of useful minerals; general principles of geology; knowledge of common rocks and of the properties of and methods of testing common useful minerals; laws of faults; disturbances in lodes, beds, leads, and other mineral deposits; occurrence of oil deposits; and economic geology generally;
 - (vi) Mining surveying, including the matters specified in sub-paragraph (i) of paragraph (c) of the next succeeding regulation;
 - (vii) Ore-dressing and sampling, including—construction, erection, and use of machines for crushing and dressing ores; the methods of ore-dressing; outlines of milling and treatment processes and machinery; battery practice; crushing; amalgamation; cyanidation;

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flotation; treatment of ores by chemical, mechanical, or other processes; methods of sampling ores; and waste products;

- (viii) Surface work, including—installation and management of machinery used about a mine or works; design and erection of poppet heads, hoppers, milling plants, mine buildings and structures; design of pipe lines; laying out and construction of tramways, water races, and flumes; elementary mechanical drawing; electricity applied to mining; strength of materials of construction; and testing of boilers, air compressors, and safety appliances;
 - (ix) Elementary mathematics, book-keeping, and mine accounts, including—the fundamental rules applied to whole numbers and to vulgar and decimal fractions; proportion; practice; percentage; extraction of square root; general mensuration of surfaces, plane figures, and solids; superficial measurement of masonry and timbers; contents of cylinders, cones, spheres, dams, lodes, ore bodies, ore paddocks, and similar matters; definition and explanation of book-keeping terms; pay sheets; accounts relating to the receipt and distribution of stores and the disposal of ore and metal; summaries of mineral produced and labour employed; analysis and comparison of costs; stock, cash, working, and revenue accounts; journals; and balance-sheets; and
 - (x) The law in force in the Territory relating to mining; and
- (c) to produce to the Board of Examiners a certificate from a recognized first-aid training society or a medical practitioner registered in the Territory or a State, that the applicant has undergone satisfactorily a course of training in first-aid to the injured, particulars of which certificate shall be indorsed on the certificate of competency as metalliferous mine manager before it is issued by the Board.

Examination
for mine
surveyors.

R. 340B ad. by
1937, No. 19,
r. 19.

340B. Every applicant for examination as to his qualifications for the occupation of mine surveyor shall be required—

- (a) to satisfy the Board of Examiners that he is not less than twenty-one years of age, has had technical instruction

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satisfactory to the Board, and has had experience in mine surveys for not less than twelve months;

- (b) to lodge with his application a complete plan and longitudinal and cross sections of a workings drawn by him in accordance with Division 1. of Part II. of these Regulations, together with field notes and calculations of a survey made by him; and
- (c) to pass in the following subjects, operations, and matters:—
- (i) Mine surveying, including—general principles and methods of mine surveying; the use, care, and adjustment of instruments used in surveying; mathematical calculations relating to mine surveying; drawing of plans on system of co-ordinates; sections; levelling in mines and on the surface; measurements of dams, dumps, and other earthworks; calculations of quantities; location, survey, and construction of mine roads, tramways, water races, aerial tramways, and power-transmission lines; solution of problems involved in the determination of dip, strike, and intersection of lodes; determination of the true meridian; topographical survey; transfer of azimuth underground; design and layout of workings including ore and mullock passes, travelling ways, and timber drives; underground and surface connexions; and bore-hole surveys;
 - (ii) Mine ventilation, including the items specified in sub-paragraph (ii) of paragraph (b) of the last preceding regulation;
 - (iii) Mine sampling, including—sampling of developed and undeveloped faces and alluvial and other deposits; and calculation of ore reserves and values; and
 - (iv) Mining geology, including the items specified in sub-paragraph (v) of paragraph (b) of the last preceding regulation.

341.—(1.) Every applicant for examination as to his qualifications for the occupation of dredge master shall satisfy the Board of Examiners that he—

- (a) is at least 25 years of age;
- (b) has had employment on dredges for periods aggregating not less than five years; and

Examination
for dredge
masters.

Para. (a) am.
by 1938, No. 8,
r. 1.

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Para. (c) ad.
by 1938, No. 8,
r. 1.

(c) is, or is deemed to be, the holder of a certificate of competency in respect of the occupation of a dredge winchman.

(2.) The applicant who is admitted to examination shall be required to pass in the subjects, operations, and matters indicated hereunder:—

- (a) the laying of lines and the methods of running lines for working a dredge;
- (b) the moving of a dredge up and down stream;
- (c) the mooring of a dredge and protecting a dredge against floods, etc.;
- (d) boats, and the working of boats under conditions incidental to dredging operations;
- (e) the law in force in the Territory relating to mining by dredging and to dredges for mining purposes; and
- (f) such matters relating to the safe working of dredges as the Board deems desirable, including a knowledge of machinery and the strength of ropes.

Examination
for
winding-engine
drivers.

342.—(1.) Every applicant for examination as to his qualifications for the occupation of winding-engine driver (steam or electric or both steam and electric) shall satisfy the Board of Examiners that he—

- (a) is not less than 21 years of age; and
- (b) is, or is deemed to be, the holder of—

- (i) a certificate of competency in respect of the occupation of an ordinary steam-engine driver, where he desires a certificate of competency relating to a steam winding engine; or
- (ii) a certificate of competency in respect of the occupation of an ordinary electric-motor driver, where he desires a certificate of competency relating to an electric winding engine; or
- (iii) a certificate of competency in respect of both the occupation of an ordinary steam-engine driver and of an electric-motor driver, where he desires a certificate of competency relating to both a steam winding engine and an electric winding engine; and

(c) has had general experience, for not less than 200 hours during a period of six months, in the operation of either a steam-winding engine or an electric-winding engine or of both a steam-winding engine and an electric-winding engine, under the supervision of a person who is, or is deemed to be, the holder of the appropriate

Para. (b) am.
by 1937, No. 4,
r. 4.

Mines and Works Regulations.

certificate in respect of the occupation of a driver of the particular type of winding engine, according as to whether the applicant desires the certificate secondly referred to in sub-paragraph (i), or (ii), or (iii), of the last preceding paragraph.

(2.) The applicant who is admitted to examination shall be required to pass in the subjects, operations, and matters indicated hereunder:—

- (a) the general duties of winding-engine drivers; precautions when taking charge, &c.;
- (b) the signal code as prescribed by these Regulations; prime signals and different combinations; precautions when giving signals, &c.;
- (c) the lowering and hoisting of men and materials and the precautions to be taken in connexion with that operation; the speed allowed; the determination of the speed; different forms of indicators;
- (d) brakes and their different forms; method of attachment of brakes to engine; mode of operation, and the testing of brakes;
- (e) winding accidents, their cause and prevention; action in case of emergency;
- (f) the cleaning and oiling of wire ropes; method of putting new rope on drum, &c.;
- (g) winding engines of different varieties; their operation and general construction; reversing gears, &c.;
- (h) the care of winding machinery; ascertainment of dangerous defects;
- (i) the management and construction of different types of air compressors; accidents with air compressors, &c.; and
- (j) the law in force in the Territory in relation to winding and signals and to the use of electricity and machinery, in their application to winding engines, in and about mines and works.

343.—(1.) Every applicant for examination as to his qualifications for the occupation of ordinary steam-engine driver shall satisfy the Board of Examiners that he—

Examination
for ordinary
steam-engine
drivers.

- (a) is not less than 19 years of age; and
- (b) has had experience, for not less than 700 hours during a period of twelve months, in or about steam-engine boilers under the supervision of a person who is, or is deemed to be, the holder of a certificate of competency in respect of the occupation of ordinary steam-engine driver or

Para. (b) am.
by 1937, No. 19,
r. 20.

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boiler inspector or a certificate deemed by the Board of Examiners to be the equivalent of such a certificate.

(2.) The applicant who is admitted to examination shall be required to pass in the subjects, operations, and matters indicated hereunder:—

- (a) general duties of an ordinary steam-engine driver; precautions when taking charge, etc.;
- (b) construction of various steam engines and boilers in general use;
- (c) details and use of parts, both internal and external, of steam machinery and boilers in general use;
- (d) correction of defects in steam engines and boilers; emergencies;
- (e) elementary arithmetic; and
- (f) the law in force in the Territory in relation to boilers and machinery in and about mines and works.

Examination
for ordinary
electric-motor
drivers.

344.—(1.) Every applicant for examination as to his qualifications for the occupation of ordinary electric-motor driver shall satisfy the Board of Examiners that he—

- (a) is not less than 19 years of age; and
- (b) has had experience, for not less than 140 hours during a period of four months, learning to operate electric motors and generators, under the supervision of a holder of a certificate of competency in respect of the occupation of an ordinary electric-motor driver or a certificate deemed by the Board of Examiners to be the equivalent of such a certificate.

Para. (b)
am. by 1937,
No. 19, r. 21.

(2.) The applicant who is admitted to examination shall be required to pass in the subjects, operations, and matters indicated hereunder:—

- (a) general duties of an ordinary electric-motor driver; precautions when taking charge, &c.;
- (b) use and construction of electric motors and generators, both A.C. and D.C.;
- (c) types of starters, methods of starting; switches, fuses, meters, &c.;
- (d) wiring, &c.;
- (e) general elementary knowledge of the application of electricity to mining; and
- (f) the law in force in the Territory in relation to the use of electricity in its application to electric motors in and about mines and works.

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345.—(1.) Every applicant for examination as to his qualifications for the occupation of a gas-engine or oil-engine driver shall satisfy the Board of Examiners that he—

Examination
for gas-engine
or oil-engine
drivers.

- (a) is not less than 19 years of age; and
- (b) has had experience, for not less than 140 hours during a period of four months, learning to operate gas-engines or oil-engines (of more than 25 horse-power), under the supervision of a holder of a certificate of competency in respect of the occupation of a gas-engine or oil-engine driver or a certificate deemed by the Board of Examiners to be the equivalent of such a certificate.

Para. (b)
am. by 1937,
No. 19, r. 22.

(2.) The applicant who is admitted to examination shall be required to pass in the subjects, operations, and matters indicated hereunder:—

- (a) general duties of a gas-engine or oil-engine driver; precautions when taking charge, &c.;
- (b) general principles of gas-engines and oil-engines;
- (c) the principal working parts of gas-engines or oil-engines; the different classes of producers and accessories; fittings and their uses;
- (d) necessary action in the case of emergencies and danger; and
- (e) the law in force in the Territory in relation to the use of machinery in and about mines and works.

346.—(1.) Every applicant for examination as to his qualifications for the occupation of a dredge winchman (steam or electric, or both steam and electric) shall satisfy the Board of Examiners that he—

Examination
for dredge
winchmen.

(a) is, or is deemed to be, the holder of—

- (i) a certificate of competency in respect of the occupation of an ordinary steam-engine driver, where he desires a certificate of competency in relation to a steam winch; or
- (ii) a certificate of competency in respect of the occupation of an ordinary electric-motor driver, where he desires a certificate of competency in relation to an electric winch; or
- (iii) a certificate of competency in respect of both the occupation of an ordinary steam-engine driver and of an electric-motor driver, where he desires a certificate of competency in relation to both a steam winch and an electric winch; and

Para. (a)
am. by 1937,
No. 19, r. 23.

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- (b) has had general experience, for not less than 200 hours during a period of six months, in the operation of either a steam or electric dredge-winch or both a steam and electric dredge-winch under the supervision of a person who is the holder of the appropriate certificate in respect of the occupation of a dredge winchman operating the particular type of winch according as to whether the applicant desires the certificate secondly referred to in sub-paragraph (i), or (ii), or (iii), of the last preceding paragraph.

(2.) The applicant who is admitted to examination shall be required to pass in the subjects, operations, and matters indicated hereunder:—

- (a) general duties of a dredge winchman; precautions when taking charge, &c.;
- (b) operation of bucket lines, &c.;
- (c) operation of dredge on the Spud System, &c.;
- (d) operation of dredge on the Head-line System, &c.;
- (e) cleaning and oiling of wire ropes;
- (f) on such other matters relating to dredging as are specified by the Board in the notice appointing the time and place of examination;
- (g) the law in force in the Territory in relation to dredges used for mining purposes.

Examination
for mine
electricians.

347.—(1.) Every applicant for examination as to his qualifications for the occupation of a mine electrician, shall satisfy the Board of Examiners that he—

- (a) is not less than 21 years of age;
- (b) has been the holder for a period of six months of a certificate of competency in respect of the occupation of an ordinary electric-motor driver or satisfies the Board of Examiners as to his technical and practical training in the occupation of electrician; and
- (c) has had general experience, for not less than 200 hours during a period of twelve months, in the operation and installation of electric services in and about a mine.

(2.) The applicant who is admitted to examination shall be required to pass in the subjects, operations, and matters indicated hereunder:—

- (a) the use of electricity in and about mines in so far as regards safety of life and property. (In this subject the examination will be limited to questions which are suitable for practical working electricians.);
- (b) the use and construction of electric motors and generators both A.C. and D.C.;

Para. (b)
am. by 1937,
No. 19, r. 24.

Mines and Works Regulations.

- (c) the law in force in the Territory in relation to the installation and use of electricity in and about mines and works; and
- (d) first aid to the injured, in cases of electric shock.

Division 5.—Permits of Employment.

348. Subject to these Regulations, the Warden or an inspector may issue a permit of employment in respect of any of the occupations referred to or included in regulation 322 of these Regulations.

Who may issue permits.

349.—(1.) A permit shall not be issued under the last preceding regulation unless—

Permits only issuable upon application and evidence of character.

- (a) application is made in accordance with Form 28;
- (b) evidence that the applicant is a person of sober habits and of general good conduct is produced; and
- (c) the prescribed fee is paid.

(2.) Every permit issued by the Warden or an inspector shall be in accordance with Form 29.

350. A permit shall not be issued in respect of the occupation of an alluvial miner unless the applicant for the permit satisfies the Warden or the inspector to whom the application is made that he—

Qualifications for alluvial miner's permit.

- (a) resides in the Territory;
- (b) can efficiently handle explosives; and
- (c) has had sufficient technical training and, in the aggregate, at least six months' practical experience in alluvial mining.

351. A permit shall not be issued in respect of the occupation of an underground miner unless the applicant for the permit satisfies the Warden or the inspector to whom the application is made that he—

Qualifications for underground miner's permit.

- (a) resides in the Territory; and
- (b) has had sufficient technical training and, in the aggregate, has been engaged in practical underground mining for a period of at least two years.

352. Notwithstanding the provisions of the last two preceding regulations, an inspector may, within six months from the commencement of these Regulations, grant to a person holding a miner's right at the commencement of these Regulations an alluvial miner's permit or an underground miner's permit, though that person has not had the practical experience prescribed in these Regulations.

Inspector may grant permit to person without prescribed practical experience in certain cases.

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Qualifications
for boiler
operator's
permit.

353.—(1.) A permit shall not be issued in respect of the occupation of a boiler operator unless the applicant for the permit satisfies the Warden or the inspector to whom the application is made that he—

- (a) resides in the Territory; and
- (b) is able efficiently to operate the type of boiler for the operation of which the permit is desired.

(2.) Where required by the Warden or inspector, the applicant shall produce a certificate by a qualified medical practitioner that he is mentally sound and physically capable of operating the type of boiler.

Restricted
operation of
boiler
operator's
permit.

354.—(1.) Every permit issued for the occupation of a boiler operator shall be limited in its operation to a particular boiler or boilers of which particulars sufficient for identification shall be specified in the permit.

(2.) Where at any time after the issue of the permit it appears to the Warden or an inspector to be desirable to extend the operation to any other boiler or boilers, he may so extend its operation by specifying the particulars of the other boiler or boilers in an endorsement, upon the permit, signed by him.

Fee payable
for permit.

355. The fee payable upon the issue of a permit under regulation 348 of these Regulations shall be 5s.

Register of
permits.

356. A register of all permits issued by the Warden or an inspector shall be kept at the Warden's office.

Suspension and
cancellation of
permits.

357.—(1.) Where it appears to an inspector that the holder of a permit for employment issued under this Part has shown himself to be incapable of, or grossly negligent in, discharging his duties, he shall report the facts to the Warden.

(2.) The Warden, upon consideration of the facts reported to him, may, by notice in writing signed by him, require the holder of the permit to appear before him and show cause why the permit should not be cancelled or suspended.

(3.) The notice shall—

- (a) appoint, for the hearing of the matter, a place as well as a day and hour not sooner than seven days after service of the notice; and
- (b) specify the grounds for requiring the holder of the permit to show cause.

(4.) After the conclusion of the evidence which shall be on oath, taken down in writing, and signed by the respective witnesses, the Warden shall record and pronounce his determination either—

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- (a) not to interfere with the permit; or
- (b) to cancel the permit; or
- (c) to suspend the permit for a specified period.

(5.) Where the Warden determines to cancel or suspend the permit he may order the delivery up to him of the permit for the purpose of endorsing his determination upon it.

(6.) The determination of the Warden under this regulation shall be final and conclusive.

PART VII.—GENERAL.

358. Where an inspector considers it proper to make an order under paragraph (c) of section 10 of the Ordinance, he shall serve upon the manager a notice—

Order
requiring
discontinuance
of operations
or use of
machinery.

- (a) in accordance with Form 30 where the order relates to sub-paragraph (i) of the section; or
- (b) in accordance with Form 31 where the order relates to sub-paragraph (ii) of the section.

359.—(1.) Every requisition by an inspector made, and delivered at a mine or works, under section 14 of the Ordinance, shall be in accordance with Form 32.

Requisition to
remedy danger
or defect.

(2.) Any appeal against the requisition shall be made to the Warden's Court by lodging, at the Warden's office within seven days after the delivery of the requisition, a notice of appeal in accordance with Form 33, a copy of which shall be served upon the inspector making the requisition.

(3.) The Warden may, for the hearing of the appeal, appoint any time after the expiration of seven days, or such shorter period as to which the parties assent, from the lodging of the notice of appeal.

360.—(1.) Where an owner, agent, or manager of a mine or works is required, under the Ordinance or these Regulations, to report any accident to an inspector or to the Warden, the report shall be made, if the accident is attended with loss of human life or bodily injury, in accordance with Form 14, and if the accident is not so attended the report shall be made in accordance with Form 34.

Reports of
accidents.

(2.) The facts relating to the accident shall be promptly entered in the prescribed Mine Register and a record shall also be made of the fact and date of the report.

(3.) Where the accident causes any of the effects referred to in paragraphs (a) and (b) of sub-section (1.) of section 62 of the Ordinance the report shall be made within 24 hours of the occurrence of the accident.

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(4.) Upon the receipt of any report indicating that a native has sustained any bodily injury, fatal or otherwise, the inspector or Warden shall advise the District Officer in accordance with Form 35.

Inquiry by
Warden into
accident.

361. Where the Warden proposes to hold, under the provisions of section 64 of the Ordinance, an inquiry into any accident which, occurring at any mine or works, results in the loss of human life or in serious bodily injury to any person, he shall, not less than seven days before the time appointed for the hearing of the inquiry, cause to be served upon the owner, agent, or manager of the mine or works a notice in accordance with Form 36.

Notice of
injury.

362.—(1.) The notice of injury which, under section 70 of the Ordinance, is required to be served upon the owner, contractor, or tributer of any mine or works, shall be in accordance with Form 37.

(2.) Where the injured person is a native, the notice may be given by a District Officer on his behalf or, where the injury has been fatal, on behalf of his personal representatives.

Summons to
attend or
produce
documents
at inquiry
under
section 20.

363.—(1.) Where, for the purpose of an inquiry held by him under the provisions of section 20 of the Ordinance, an inspector requires—

- (a) the attendance of any person to give evidence, he may issue a summons in accordance with Form 38; or
- (b) the production of any relevant book or document in the possession or control of any person, he may issue a summons in accordance with Form 39.

(2.) Either summons mentioned in the last preceding sub-regulation shall be served personally upon the person to whom it is addressed by showing him the original and leaving a copy of the summons with him.

Registration
of manager.

364.—(1.) The owner or agent of a mine or works shall, for the purpose of registering the name and address of the manager under section 21 of the Ordinance, lodge at the Warden's office a notice in accordance with Form 40.

(2.) The Warden shall keep a register in which he shall cause to be entered the name and address of every manager in respect of whom he receives the notice under the last preceding sub-regulation, and shall issue to the owner or agent a certificate of registration in accordance with Form 41:

Provided that the Warden may refuse a certificate for any one manager in respect of more than one mine or works, and may, by notice in accordance with Form 42, require the owner or agent of the mine or works, within one month after the service of the notice upon

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him, to appoint a different manager in respect of any additional mine or works and the owner or agent shall appoint a different manager accordingly and notify the Warden of the appointment.

365. Where, under the provisions of section 22 of the Ordinance, a deputy manager of any mine or works is appointed during the incapacity or absence of the manager notice of the appointment, in accordance with Form 43, shall be sent to the Warden.

Appointment of deputy manager.

366. Where, under the provisions of section 25 of the Ordinance, it becomes the duty of the manager of a mine to report that the mine or any part of the mine is dangerous, he shall make his report in accordance with Form 44.

Report by manager on dangerous condition in mine.

367. Where the Warden, or any inspector, exercises any power of exemption under the Ordinance or these Regulations he shall do so by Order in accordance with Form 45, and he may in the Order specify the period for which the exemption shall be operative.

Exemptions granted under Ordinance or Regulations.

368.—(1.) There shall be kept, at every mine or works, a book in accordance with Form 46, called, as the case may be, the "Mine Register" or "Works Register" in which there shall, in relation to the mine or works, be recorded from time to time—

Register to be kept at mine or works.

- (a) the inspector's observations upon, and the particulars of any alterations or requirements which he deems necessary in regard to, the condition in which he finds the mine or works or any machinery there;
- (b) any entry and memorandum made by the manager of the mine under section 25 of the Ordinance;
- (c) any certificate by an inspector under section 31 of the Ordinance; and
- (d) any other entries, statements, or particulars which are, under these Regulations, required to be so entered or recorded, or are required to be recorded without specifying any particular register or book in which they are to be recorded.

(2.) Every entry made in the book—

- (a) shall show—
 - (i) the date when it was made; and
 - (ii) the number of the relevant regulation, or section of the Ordinance, and the facts under such appropriate headings as "Ventilation", "Explosives", "Boilers" or "Electricity", or as the case may be; and
- (b) shall be signed by the person making it.

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(3.) The pages of the book shall be numbered consecutively and an index to the entries shall be kept up to date.

(4.) The book shall be made available at all reasonable times to any inspector who may, subject to these Regulations, require such modifications in the method of making any entry, or of keeping the index, as appear to him to be desirable.

Working hours
of persons in
charge of
machinery.

369. Except where the permission in writing of an inspector has first been obtained, a person in charge of any machinery at any mine or works shall not be employed for any one working period or shift of more than eight hours, and at the end of the period or shift there shall be an interval of at least eight hours before the commencement of the next period or shift.

Monthly,
half-yearly,
and yearly
returns.

370.—(1.) Where in accordance with the provisions of section 77 or 78 of the Ordinance the Warden requires the monthly, half-yearly, or yearly return mentioned in the section, he shall forward to the owner, agent, or manager of the mine or works in respect of which the return is required, a notice in accordance with Form 47.

(2.) The monthly return referred to in this regulation shall be made in accordance with Form 48.

(3.) The half-yearly or yearly return referred to in this regulation shall be made in accordance with Form 49.

(4.) Where the Warden considers the information furnished in respect of any matter, in any return, is not adequate or sufficiently clear he may require such further information, or such explanation of the information furnished, as he shall deem sufficient.

Written
approval
or consent of
inspector to be
recorded.

371.—(1.) Where under any regulation an inspector, being then at a mine or works, gives any approval, consent, instruction, or order in relation to the mine or works, for the giving of which approval, consent, instruction, or order no other method or form is prescribed, the inspector shall, in the prescribed Mine or Works Register, as the case may be, make an entry of the date and the facts.

(2.) Whenever the owner, agent, or manager of a mine or works receives any approval, consent, instruction, or order in any form specially prescribed, he shall, on the day of its receipt, make, in the prescribed Mine or Works Register, as the case may be, a brief entry of its effect and file the form in such a manner as to make it readily available for inspection at any time.

Responsibility
for
non-observance
of regulations
at mines or
works.

372. Where under any of these Regulations some act at, upon, or in connexion with, any mine, dredge, or works, is required to be done or is prohibited, without imposing upon any particular person the duty to do, or refrain from doing, the act, and there has been a failure so to do or refrain, the owner, agent, or manager of the mine, dredge, or works, where the failure occurs, shall be deemed to contravene the provision of the regulation requiring or prohibiting the act.

Mines and Works Regulations.

373.—(1.) Where under the Ordinance or any of these Regulations the attendance of any witness is required at any prescribed inquiry, or at the hearing of any matter by the Warden, the witness, or where the witness is an indentured labourer his employer, shall be entitled to such allowance as the Warden certifies is proper to reimburse the witness, or his employer, for any loss due to the attendance, and as does not exceed—

Allowances
for witnesses.

- (a) in the case of each non-native witness, £1 per day for the duration of his absence from his usual place of abode; and
- (b) in the case of each native witness, 1s. per day for the duration of his absence from his employment.

(2.) An assessor appointed under section 64 of the Ordinance shall be paid a fee of £1 10s. per day for the duration of his absence from his usual place of abode.

(3.) Every assessor and non-native witness resident not less than two miles from the place he is required to attend shall be paid the following allowance:—

- (a) the amount which he actually and necessarily expended for his conveyance to and from the place he is required to attend; or
- (b) if no amount is paid under the last preceding paragraph, the sum of 1s. 6d. per mile, after the first two miles, necessarily travelled to and from the place he is required to attend.

374. Subject to the Ordinance, the Warden may, upon the application of any party affected, enlarge the time prescribed in these Regulations for the doing of any act, where the application is made before, or within the shortest practicable period after, the expiration of the time and it appears to the Warden that the time prescribed is insufficient.

Enlargement
of time.

THE SCHEDULE.

Reg. 18.

FORM 1.

TERRITORY OF NEW GUINEA.

Mines and Works Regulation Ordinance 1935.

CERTIFICATE OF EXEMPTION FROM STANDARDS OF TEMPERATURE.

To the ^(a)
(b)

THIS IS TO CERTIFY that ^(a)
is exempt from the standards of temperature prescribed by regulation 18 of the Mines and Works Regulations.

Dated at this day of , 19 .
Inspector of Mines.

- (a) "Owner", "Agent", or "Manager", as the case may be.
- (b) Name of mine and address.

MINING—

Reg. 19.

FORM 2.

TERRITORY OF NEW GUINEA.

Mines and Works Regulation Ordinance 1935.

NOTICE TO INSTALL AND WORK ADDITIONAL VENTILATION.

To the ^(a)
_(b)

YOU ARE HEREBY NOTIFIED that you are required, within _____ days from date, to have installed and working in the part[s] of ^(a) which is set out hereunder the following additional or auxiliary ventilating appliances:—

Dated at _____ this _____ day of _____, 19 _____
Inspector of Mines.

- (a) "Owner", "Agent", or "Manager", as the case may be.
- (b) Name of mine and address.

Reg. 25(1.) (a).

FORM 3.

TERRITORY OF NEW GUINEA.

Mines and Works Regulation Ordinance 1935.

APPLICATION FOR EXEMPTION FROM VENTILATION REQUIREMENTS.

To the Inspector of Mines
at _____

I HEREBY APPLY for exemption from the ventilation requirements in the under-mentioned working places of ^(a) for the purpose of ^(b) by carrying on the temporary mining operations and with the objects specified in the accompanying statutory declaration made by me in accordance with the provisions of sub-regulation (1.) of regulation 25 of the Mines and Works Regulations. The working places for which the exemption is sought are as follows:—

Dated at _____ this _____ day of _____, 19 _____
Owner, Agent, or Manager.
_(a)

- (a) Name of mine and address.
- (b) State whether "to improve ventilation or temperature of mine" or "to open up ground otherwise inaccessible".

Reg. 25(1.).

FORM 4.

TERRITORY OF NEW GUINEA.

Mines and Works Regulation Ordinance 1935.

CERTIFICATE OF EXEMPTION FROM VENTILATION REQUIREMENTS FOR TEMPORARY OPERATIONS.

To the ^(a)
_(b)

THIS IS TO CERTIFY that your application dated the _____ day of _____, 19 _____ for exemption from the ventilation requirements of the Mines and Works Regulations has been granted and that you are PERMITTED TEMPORARILY to carry on at ^(a) the mining operations specified below but subject to the conditions and restrictions set out hereunder:—
_(c)

Issued at _____ this _____ day of _____, 19 _____
Inspector of Mines.

- (a) "Owner", "Agent", or "Manager", as the case may be.
- (b) Name of mine and address.
- (c) See regulation 25(2.).

Mines and Works Regulations.

Reg. 40.

FORM 5.

TERRITORY OF NEW GUINEA.

Mines and Works Regulation Ordinance 1935.

NOTICE TO MAKE DUST TESTS.

To the ^(a)
(b)

TAKE NOTICE that you are required within _____ days from date to make tests of the quantity of dust present in the air in the working places, travelling ways, and crib places of ^(b) and that in the making of the said tests you shall employ the following method:—

Issued at _____ this _____ day of _____, 19 _____
Inspector of Mines.

- (a) "Owner", "Agent", or "Manager", as the case may be.
(b) Name of mine and address.

Reg. 62(7.)(e).

FORM 6.

TERRITORY OF NEW GUINEA.

Mines and Works Regulation Ordinance 1935.

EXEMPTION FROM RESTRICTIONS UPON FIRING UNDERGROUND.

To the ^(a)
(b)

I HEREBY EXEMPT the parts of ^(b) which are specified hereunder, from the requirements of sub-regulation (7.) of regulation 62 of the Mines and Works Regulations, subject to the following conditions:—

Dated at _____ this _____ day of _____, 19 _____
Inspector of Mines.

- (a) "Owner", "Agent", or "Manager", as the case may be.
(b) Name of mine and address.

Reg. 110.

FORM 7.

TERRITORY OF NEW GUINEA.

Mines and Works Regulation Ordinance 1935.

NOTICE TO TEST SAFETY CAGES.

To the ^(a)
(b)

TAKE NOTICE that I shall require that the test referred to in sub-regulation (2.) of regulation 110 of the Mines and Works Regulations shall be conducted in my presence on the _____ day of _____, 19 _____
at _____ a.m.
p.m.

Dated at _____ this _____ day of _____, 19 _____
Inspector of Mines.

- (a) "Owner", "Agent", or "Manager", as the case may be.
(b) Name of mine and address.

Mines and Works Regulations.

Reg. 155.

FORM 10.

TERRITORY OF NEW GUINEA.

Mines and Works Regulation Ordinance 1935.

NOTICE OF INTENTION TO INSPECT BOILERS.

To the Manager,
(a)

TAKE NOTICE that on the _____ day of _____, 19 ____ an inspection will be made of every boiler installed or erected at (a)

Your attention is directed to the provisions of sub-regulations (3.) and (4.) of regulation 155 of the Mines and Works Regulations.

Dated at _____ this _____ day of _____, 19 ____
Boiler Inspector.

(a) Name of mine or works and address.

Reg. 156.

FORM 11.

TERRITORY OF NEW GUINEA.

Mines and Works Regulation Ordinance 1935.

RECORD OF BOILER INSPECTION.

made at _____ mine
situated at _____ works
on the _____ day of _____, 19 ____

Official No.:

Type of boiler:

Date of manufacture:

Description of boiler setting:

Material of construction (steel or iron):

Diameter and length of shell:

Thickness of shell plates:

Particulars of riveting of longitudinal joint:

Number of furnaces:

Diameter of furnaces:

Thickness of furnace plates:

Particulars of longitudinal joint of furnace (riveted or welded):

Description of circumferential joint of furnace and length of longest ring of plates:

Thickness of end plates:

Description, number, and distribution of stays:

Number of stay tubes and particulars of distribution:

Thickness of firebox plates:

Particulars and distribution of screwed stays:

Particulars of firebox stays:

Absence (or otherwise) of defects around blow-off cock and bend:

Condition of pressure gauge:

Variation from standard gauge:

Number and condition of the water gauge glasses and mountings:

Condition of these mountings:

With regard to proper safety valves—

(a) Number:

(b) Type (locked etc.):

(c) Diameter:

(d) Condition:

Area of each fire-grate:

Date of last test:

Dates of last two cleanings:

Hydrostatic test pressure:

MINING—

Nature and extent of alteration in shape of furnaces as ascertained by trammel gauges when under hydrostatic test pressure:

Weakness, if any, disclosed by hydrostatic test:

Repairs recommended:

In the case of a locomotive or portable boiler—

(a) Diameter of boiler:

(b) Particulars of thickness and riveting of longitudinal joints of shell or barrel plates:

Supplementary particulars and remarks:

The foregoing particulars are a true record of the inspection referred to above.

Dated at _____ this _____ day of _____, 19____
Boiler Inspector.

Reg. 158.

FORM 12.

TERRITORY OF NEW GUINEA.

Mines and Works Regulation Ordinance 1935.

NOTICE PROHIBITING OR RESTRICTING USE OF BOILER.

To the ^(a)
_(b)

TAKE NOTICE that you are hereby required to desist from working or using the undermentioned boiler ^(c)

The boiler referred to above is ^(d)

Dated at _____ this _____ day of _____, 19____
Boiler Inspector.

(a) "Owner", "Agent", or "Manager", as the case may be.

(b) Name of mine or works and address.

(c) Specify particulars showing extent of the prohibition or restriction intended (*See* sub-regulation (1.) of regulation 158).

(d) Insert description sufficient to identify boiler.

Reg. 160.

FORM 13.

TERRITORY OF NEW GUINEA.

Mines and Works Regulation Ordinance 1935.

BOILER REPAIRS OR ALTERATIONS.

NOTICE.

To the Inspector of Mines
at _____

I HEREBY GIVE NOTICE that in relation to ^(a)
boiler[s] now erected at ^(b)
particulars of which are given below, I propose to effect the following repairs,
alterations, or additions:—
^(c)

The work will be done by ^(d)

Particulars of Boiler referred to in this Notice:

Type of boiler:

Date of manufacture:

Description of boiler setting:

Type of safety valves:

Dated at _____ this _____ day of _____, 19____
Owner, Agent, or Manager.

(a) Insert "one" or "two" or as the case may be.

(b) Name of mine or works and address.

(c) State nature of repairs, alterations, or additions proposed to be made.

(d) Insert name and address of person who is actually to effect the repairs, &c.

TERRITORY OF NEW GUINEA.

Mines and Works Regulation Ordinance 1935.

REPORT OF ACCIDENT CAUSING BODILY INJURY.

I HEREBY REPORT that an ACCIDENT occurred in the ^(a) _____ of ^(b) _____
 on the _____ day of _____ a.m. when the shift boss in charge was
 _____ p.m. European
^(c) AND THAT the particulars of the accident are as follows:—

Particulars of the Accident.

Injured person's—			Result of injury (fatal or non-fatal).	Description of non-fatal injury.	What done with injured ^(d) .	Name of doctor attending.	Cause of accident ^(e) .
Full name (and, if a native, contract number).	Age.	Status (married or single).					

Dated at _____ this _____ day of _____, 19 _____

Owner, Agent, or Manager.
^(b)

(a) State part of mine or works. (b) Name of mine or works and address. (c) Name. (d) Treated locally, sent to hospital, &c.
 (e) If explosion, the name of the explosive to be given.

Mines and Works Regulations.

3653

MINING—

Reg. 275.

FORM 15.

TERRITORY OF NEW GUINEA.

Mines and Works Regulation Ordinance 1935.

NOTICE OF RESUMPTION OF MINING OPERATIONS.

To the Inspector of Mines
at

I HEREBY GIVE NOTICE that it is intended to resume mining operations
at ^(a) _____ day of _____, 19

You are requested to examine the appliances and workings of the said mine
and to indicate whether or not the operations may be resumed with safety.

Dated at _____ this _____ day of _____, 19
^(a) Owner, Agent, or Manager.

(a) Name of mine and address.

* * * * *

Sec. 47.
Reg. 291.

FORM 17.

TERRITORY OF NEW GUINEA.

Mines and Works Regulation Ordinance 1935.

APPLICATION FOR APPROVAL TO CONSTRUCT, ALTER,
OR ENLARGE A DAM.

To the Warden

1. I HEREBY APPLY FOR AUTHORITY to construct, alter, or enlarge a dam
having a capacity of _____ gallons, situated at
and intended to be used in connexion with mining operations at

2. I have this day lodged, in accordance with section 47 of the
abovenamed Ordinance, plans and specifications showing the details
of the proposed alteration.
enlargement.

Dated at _____ this _____ day of _____, 19
Signature of applicant.

Sec. 48.
Reg. 292.

FORM 18.

TERRITORY OF NEW GUINEA.

Mines and Works Regulation Ordinance 1935.

NOTICE TO EMPTY OR REPAIR DAM.

To

YOU ARE HEREBY NOTIFIED that the dam situated at and constructed (or used)
for mining purposes at _____ and constructed (or used) for
mining purposes at ^(a) _____ is defective and
dangerous to human life property and YOU ARE REQUIRED forthwith to empty and keep empty
discontinue to use
the said dam until you have effected such reconstruction or repairs as shall be
satisfactory to ensure safety.

Dated at _____ this _____ day of _____, 19
Warden or Inspector of Mines.

(a) Name of mine and address.

(4) No Form numbered "16" appeared in the *Mines and Works Regulations* as
published in *N.G. Gaz.*

Mines and Works Regulations.

Sec. 58.
Reg. 294.

FORM 19.

TERRITORY OF NEW GUINEA.

Mines and Works Regulation Ordinance 1935.

REMOVAL OF PROPS, TIMBER, ETC.

NOTICE TO ADJOINING MINE.

To the ^(a)
_(b)

TAKE NOTICE that it is proposed, at the expiration of seven days from the date of this notice, to remove the props, timber, or stone wall from the under-mentioned portions of the ^(c) and that, since the said removal may affect the safety or accessibility of either that mine or the adjoining mine, application is being made for the consent of an inspector of mines.

Portions of Mine and Particulars of Props, &c., Proposed to be Removed:

Dated at this day of , 19

Owner, Agent, or Manager.
_(c)

- (a) "Owner", "Agent", or "Manager", as the case may be.
- (b) Name of adjoining mine and address.
- (c) Name of mine and address.

Sec. 58.
Reg. 294.

FORM 20.

TERRITORY OF NEW GUINEA.

Mines and Works Regulation Ordinance 1935.

REMOVAL OF PROPS, TIMBER, ETC.

APPLICATION FOR CONSENT OF INSPECTOR.

To the Inspector of Mines
at

I HEREBY APPLY for the consent required under section 58 of the above-mentioned Ordinance for the removal from the undermentioned portion of ^(a) of the props, timber, or stone wall particularized hereunder.

I have this day given notice to the ^{owner} agent _{manager} of the adjoining mine, viz., ^{owner} _{manager}, the safety or accessibility of which may be affected by the said removal, that it is proposed to effect the removal after the expiration of seven days, and that this application for consent is being made.

Portions of Mine and Particulars of Props &c., Proposed to be Removed:

Dated at this day of , 19

Owner, Agent, or Manager.
_(a)

- (a) Name of mine and address.

MINING—

Sec. 59.
Reg. 295.

FORM 21.

TERRITORY OF NEW GUINEA.

Mines and Works Regulation Ordinance 1935.

COMMENCEMENT OF WORK ON NEW OR ABANDONED SHAFTS ETC.
NOTICE.

To the Warden
at

TAKE NOTICE that working was, on the _____ day of _____, 19____, on ^(a) _____ commenced [*or recommenced*] upon a shaft [*or vein or lode or seam*] which is new [*or had been abandoned or discontinued for a period of _____ months*] and which is located in the undermentioned portion of the said mine:

Dated at _____ this _____ day of _____, 19____.
Owner, Agent, or Manager.
^(a)

(a) Name of mine and address.

Reg. 296.

FORM 22.

TERRITORY OF NEW GUINEA.

Mines and Works Regulation Ordinance 1935.

NOTICE OF SEPARATE WORKING OF PARTS OF MINE.

To the Warden
at

TAKE NOTICE that the parts of ^(a) _____ which are described and delineated in the appended particulars and sketch plan, are now being worked separately.

The particulars of the several parts are:—

Sketch Plan.

Dated at _____ this _____ day of _____, 19____.
Owner, Agent, or Manager.
^(a)

(a) Name of mine and address.

Reg. 297.

FORM 23.

TERRITORY OF NEW GUINEA.

Mines and Works Regulation Ordinance 1935.

NOTICE OF CHANGE IN MINE NAME [*or OWNER or AGENT or MANAGER.*]

I the undersigned
being the present owner [*or agent or manager*] of ^(a) _____

HEREBY GIVE NOTICE that a change was made on the _____ day of _____, 19____ with the result that the present name [*or owner or agent or manager*] of the mine is as follows:—

Name:
Address:

Dated at _____ this _____ day of _____, 19____.
Owner, Agent, or Manager.
^(a)

(a) Name of mine and address.

Mines and Works Regulations.

Reg. 321.

FORM 24.

TERRITORY OF NEW GUINEA.

Mines and Works Regulation Ordinance 1935.

CERTIFICATE OF COMPETENCY

for the occupation of

Certificate No.

THIS IS TO CERTIFY that _____ of _____
has satisfied the Board of Examiners appointed under the Mines and Works
Regulations that he is competent to discharge the duties attaching to the
occupation of _____

Issued at _____ in the Territory of New Guinea, this
_____ day of _____, 19____, to the said
who has, for the purpose of identification, affixed his signature hereto.

Signature of holder.

Chairman of the Board of Examiners.

Entered in the Register of
Certificates at Folio _____

Secretary to the Board.

Date / / 19____

Reg. 328.

FORM 25.

TERRITORY OF NEW GUINEA.

Mines and Works Regulation Ordinance 1935.

REGISTER OF CERTIFICATES.

Certificates Issued.				Memoranda of suspension or cancellation or issue of duplicates.	
Progressive No.	Date of Issue.	Occupation.	Holder's Name.	Date.	Particulars.

MINING—

Reg. 334.

FORM 26.

TERRITORY OF NEW GUINEA.

Mines and Works Regulation Ordinance 1935.

APPLICATION FOR EXAMINATION AND CERTIFICATE

for the occupation of

1. I, _____, of _____, hereby apply for examination and a certificate of competency for the abovementioned occupation.

2. I am _____ years of age having been born on the day of _____, 1 _____ at _____.

3. I have had practical experience extending over a period of _____ in ^(a) _____ which experience was gained at _____.

4. I have pursued a course of theoretical study at _____ in the following subjects and for the duration set opposite each subject:—
(Subjects) _____ (Duration) _____

^(a) 5. I am the holder of a certificate of competency granted under the Mines and Works Regulations for the occupation of *Mining Ordinance 1928-1935* for the occupation of _____.

6. Forwarded herewith are—

- (i) medical certificate as to physical fitness for the above occupation;
- (ii) testimonials from _____ and _____ as to my sobriety and integrity; and
- (iii) the fee of £ _____ payable for examination.

Dated at _____ this _____ day of _____, 19 _____.

Signature of applicant.

(a) Occupation.

(b) This paragraph to be used only in appropriate cases.

Reg. 336.

FORM 27.

TERRITORY OF NEW GUINEA.

Mines and Works Regulation Ordinance 1935.

APPLICATION FOR CERTIFICATE WITHOUT EXAMINATION

for the occupation of

1. I, _____ of _____ hereby apply for the issue to me, without examination, of a certificate of competency for the abovenamed occupation.

2. I request that the undermentioned certificate[s] or diploma[s], viz., _____ which was issued to me by ^(a) _____ were _____

_____ be accepted as evidence of my competency for the occupation for which I now desire a certificate of competency.

3. I have had practical experience extending over a period of _____ in ^(a) _____ which experience was gained at _____.

4. Forwarded herewith are—

- (i) medical certificate as to physical fitness for the above occupation;
- (ii) testimonials from _____ and _____ as to my sobriety and integrity; and
- (iii) the fee of £1 ls.

Dated at _____ this _____ day of _____, 19 _____.

Signature of applicant.

(a) Name and address of authority issuing certificate or diploma.

(b) Occupation.

Mines and Works Regulations.

Reg. 349.

FORM 28.

TERRITORY OF NEW GUINEA.

Mines and Works Regulation Ordinance 1935.

APPLICATION FOR PERMIT OF EMPLOYMENT

in the occupation of

1. I, _____ of _____, hereby apply for a permit of employment in respect of the abovementioned occupation.

2. I have had practical experience extending over a period of _____ in ^(a) _____ which experience was gained at _____.

3. Particulars of my technical training are as follows:—

4. I enclose herewith—

- (i) the fee of 5s. payable for the permit; and
- (ii) testimonial from _____ and _____ as to my sobriety and general character.

Dated at _____ this _____ day of _____, 19 _____.

Signature of applicant.

(a) Occupation.

Reg. 349.

FORM 29.

TERRITORY OF NEW GUINEA.

Mines and Works Regulation Ordinance 1935.

PERMIT OF EMPLOYMENT

for the occupation of

Permit No. _____

THIS PERMIT is issued to _____ of _____ (whose signature is, for the purpose of identification, affixed hereto) and entitles him to be employed as _____ at ^(b) _____ ^(c) _____.

Issued at _____ this _____ day of _____, 19 _____.

Signature of holder.

Warden or Inspector of Mines.

(a) In the case of a boiler operator particulars of the boiler should be inserted in addition to the words "boiler operator".

(b) Name of mine or works and address.

(c) Where operation of particular permit is not restricted the words "or elsewhere in the Territory" should be added.

MINING—

Reg. 358.

FORM 30.

TERRITORY OF NEW GUINEA.

Mines and Works Regulation Ordinance 1935.

ORDER TO CEASE OPERATIONS AND WITHDRAW PERSONS.

To the Manager

(a)

YOU ARE HEREBY ORDERED forthwith to cease all operations in the under-mentioned part[s] of (a) and to withdraw therefrom all persons now engaged or being therein until you have taken and completed, for the purpose of ensuring safety, the following action:—

(b)

Description of Part[s] of Mine [or Works]:

Dated at this day of , 19 .

Inspector of Mines.

(a) Name of mine or works and address.

(b) State fully what action required to be taken.

Reg. 358.

FORM 31.

TERRITORY OF NEW GUINEA.

Mines and Works Regulation Ordinance 1935.

ORDER TO DISCONTINUE USE OF UNSAFE MACHINERY.

To the Manager

(a)

YOU ARE HEREBY ORDERED forthwith to discontinue at (a) the use of (b) until you have, in order to render it them safe, taken the following steps:—

(c)

Dated at this day of , 19 .

Inspector of Mines.

(a) Name of mine or works and address.

(b) Describe machinery sufficiently to identify it.

(c) Set out particulars of action required.

Reg. 359.

FORM 32.

TERRITORY OF NEW GUINEA.

Mines and Works Regulation Ordinance 1935.

REQUISITION TO REMEDY DANGER OR DEFECT.

To the Owner [or Manager],

(a)

YOU ARE HEREBY REQUIRED to remedy (b) the undermentioned matter, thing, or practice which I find to be a danger or defect existing at (a) by taking the action particularized hereunder:

Description of Danger or Defect found:

Particulars of the Remedial Action required:

Dated at this day of , 19 .

Inspector of Mines.

(a) Name of mine or works and address.

(b) Specify time, e.g., "forthwith" or "within 7 days from the delivery of this requisition" or as the case may be.

Mines and Works Regulations.

Reg. 359.

FORM 33.

TERRITORY OF NEW GUINEA.

Mines and Works Regulation Ordinance 1935.

REQUISITION TO REMEDY DANGER OR DEFECT.

NOTICE OF APPEAL.

To the Inspector of Mines
at

TAKE NOTICE that I hereby appeal against the requisition dated the
day of , 19 at
(a) and requiring that certain action
specified in the requisition should be taken in order to remedy a danger [or
defect] alleged to exist at (a)

The grounds upon which the appeal is based are as follows:—

Dated at this day of , 19
Owner or Manager.
(a)

(a) Name of mine or works and address.

Reg. 360(1).

FORM 34.

TERRITORY OF NEW GUINEA.

Mines and Works Regulation Ordinance 1935.

REPORT OF ACCIDENT WITHOUT BODILY INJURY.

I HEREBY REPORT that an ACCIDENT occurred in the (a)
of (b) on the day of , 19
at a.m.
p.m.
when the shift boss in charge was (c)
European

AND THAT the particulars of the accident are as follows:—
(a)

Dated at this day of , 19
Owner, Agent, or Manager.
(a)

(a) State part of mine or works.

(b) Name of mine or works and address.

(c) Name.

(d) Give fullest particulars as regards the nature, causes, and effects of the accident.

MINING—

Reg. 360(4).

FORM 35.

TERRITORY OF NEW GUINEA.

Mines and Works Regulation Ordinance 1935.

INJURY TO NATIVE.

ADVICE TO DISTRICT OFFICER.

To the District Officer
at

I HEREBY ADVISE you that it has been reported to me that an ACCIDENT occurred at ^(a) on the day of , 19 , and that as a result the following natives sustained the injuries specified opposite their names hereunder:—

Name.	Contract No.	Injury.

Dated at this day of , 19 .
Warden or Inspector of Mines.

(a) Name of mine or works and address.

Reg. 361.

FORM 36.

TERRITORY OF NEW GUINEA.

Mines and Works Regulation Ordinance 1935.

NOTICE OF INQUIRY BY WARDEN INTO ACCIDENT.

To the ^(a)
_(b)

TAKE NOTICE that an inquiry under the provisions of section 64 of the above-named Ordinance will be held at on the day of , 19 at o'clock in the noon.

The abovementioned section provides that this notice shall, upon its receipt by you, be posted in some conspicuous place at the ^(b)

Dated at this day of , 19 .
Warden.

(a) "Owner", "Agent", or "Manager", as the case may be.
(b) Name of mine or works and address.

Mines and Works Regulations.

Reg. 362.

FORM 37.

TERRITORY OF NEW GUINEA.
Mines and Works Regulation Ordinance 1935.
NOTICE OF INJURY.
(Under Section 70.)

To the ^(a)
_(b)

TAKE NOTICE that on the _____ day of _____, 19____, and
whilst employed as ^(c) _____ at ^(b) _____

^(a) _____ was injured by sustaining
^(c) _____ killed _____

Dated at _____ this _____ day of _____, 19____.

Signature.
Address.

- (a) "Owner", "Contractor", or "Tributer", as the case may be.
(b) Name of mine or works and address.
(c) Occupation.
(d) Full name of injured person and, if a native, contract number.
(e) Nature of injury.

Reg. 368(1.) (a).

FORM 38.

TERRITORY OF NEW GUINEA.
Mines and Works Regulation Ordinance 1935.
SUMMONS TO TESTIFY AT INQUIRY.
(Under Section 20.)

To

YOU ARE HEREBY SUMMONED to attend at _____
on the _____ day of _____, 19____, and
there to GIVE EVIDENCE at an inquiry, in relation to ^(a) _____
, to be held under the provisions
of section 20 of the *Mines and Works Regulation Ordinance 1935* and your
attention is directed to the fact that neglect or failure without reasonable cause,
to obey this summons renders you liable to a penalty of Twenty pounds.

Issued at _____ this _____ day of _____, 19____.

Inspector of Mines.

(a) Name of mine or works and address.

Reg. 363(1.) (b).

FORM 39.

TERRITORY OF NEW GUINEA.
Mines and Works Regulation Ordinance 1935.
SUMMONS TO PRODUCE DOCUMENTS.
(Under Section 20.)

To

YOU ARE HEREBY SUMMONED to bring with you to
on the _____ day of _____, 19____, and
there to PRODUCE the undermentioned books and documents at an inquiry to
be held under the provisions of section 20 of the *Mines and Works Regulation
Ordinance 1935* and your attention is directed to the fact that neglect or failure,
without reasonable cause, to obey this summons renders you liable to a penalty
of Twenty pounds.

The documents and books which you are required to bring and produce as
aforesaid are _____
and such other documents and books in your possession and control relating in
any respect to the matter of an inquiry into the safety and well-being of persons
employed at ^(a) _____

Issued at _____ this _____ day of _____, 19____.

Inspector of Mines.

(a) Name of mine or works and address.

MINING—

Reg. 369(1).

FORM 40.

TERRITORY OF NEW GUINEA.

Mines and Works Regulation Ordinance 1935.

NOTICE OF APPOINTMENT OF MANAGER.

Notice is hereby given that _____ has been appointed as Manager of _____ of _____ where there are employed _____ Europeans and _____ natives.

(b) The aforesaid _____ is the holder of the certificate of competency prescribed in respect to the occupation of _____

It is requested that a Certificate of Registration be sent to _____ of _____

Dated at _____ this _____ day of _____, 19 _____

(c) Owner or Agent.
(a)

- (a) Name of mine or works and address.
- (b) Strike out this paragraph if notice relates to Manager of works (and not of a mine).
- (c) If the notice signed by a person as the Agent of the Owner the full name of the Owner (whether an individual or a company) should be stated.

Reg. 364(2).

FORM 41.

TERRITORY OF NEW GUINEA.

Mines and Works Regulation Ordinance 1935.

CERTIFICATE OF REGISTRATION OF MANAGER.

THIS IS TO CERTIFY that I have this day registered the name and address of _____ and the name and address of _____

_____ of which _____ mine, works, notice of the appointment of the said _____ as manager, has been duly received.

Dated at _____ this _____ day of _____, 19 _____

Warden.

- (a) Name of registered manager.
- (b) Name of mine or works and address.

Reg. 364(2).

FORM 42.

TERRITORY OF NEW GUINEA.

Mines and Works Regulation Ordinance 1935.

NOTICE TO APPOINT MANAGER.

To the Owner [or Agent], _____

I refuse a certificate of registration in respect of the appointment of _____ as manager of _____ for the reason that the said _____ is already the manager appointed and registered for _____

_____ and I require you to appoint, within one month after service upon you of this notice, a different manager at the first mentioned _____ mine. works.

Dated at _____ this _____ day of _____, 19 _____

Warden.

(a) Name of mine or works and address.

Mines and Works Regulations.

Reg. 365.

FORM 43.

TERRITORY OF NEW GUINEA.

Mines and Works Regulation Ordinance 1935.

NOTICE OF APPOINTMENT OF DEPUTY MANAGER.

To the Warden
at

This is to notify that
whose name has been registered as the manager of ^(a)
is ^(b)

and that during the incapacity of the said
absence

owner
I, as agent of the said mine, have appointed ^(c)
manager works,

to be deputy manager.

You will be advised upon the recovery of the manager.
return

Dated at this day of , 19
Owner, Agent, or Manager.
^(c)

(a) Name of mine or works and address.

(b) State whether "incapacitated by illness or accident" or "about to be absent for more than 7 days".

(c) Insert full name.

Reg. 366.

FORM 44.

TERRITORY OF NEW GUINEA.

Mines and Works Regulation Ordinance 1935.

REPORT BY MANAGER UPON THE DANGEROUS STATE OF MINE.

To the Inspector of Mines
at

I HEREBY REPORT that owing to a danger which has arisen in ^(a)
I have ceased operations in the part[s] of the mine where the danger exists,
namely:—^(b)
and I have withdrawn therefrom all persons who were engaged or otherwise
in the said part[s].

^(c) The facts relating to the abovementioned danger are as follows:—

Dated at this day of , 19
Manager.
^(c)

(a) Name of mine and address.

(b) Full particulars of parts of mine affected.

(c) Details of the danger arising.

Mines and Works Regulations.

Reg. 370(1).

FORM 47.

TERRITORY OF NEW GUINEA.

Mines and Works Regulation Ordinance 1935.

MONTHLY
NOTICE REQUIRING HALF-YEARLY RETURN.
YEARLY

To the ^(a)
(b)

TAKE NOTICE that I require you to furnish, in relation to ^(b)
monthly
, the half-yearly return in accordance
yearly

with section ⁷⁷
78 of the Ordinance and regulation 370 of the Mines and Works
Regulations.

Dated at this day of , 19 .
Warden.

(a) "Owner", "Agent", or "Manager", as the case may be.
(b) Name of mine or works and address.

Reg. 370(2).

FORM 48.

TERRITORY OF NEW GUINEA.

Mines and Works Regulation Ordinance 1935.

MONTHLY RETURN

in relation to ^(a)
for the MONTH OF , 19 .

Name of commodity won or treated.	Production or output (weight or quantity).	Persons employed in relation to commodity.				
		Total number.	On Sundays (names) ^(b) .			
Gold ..						
Silver ..						
Copper ..						
Iron ..						
Platinum ..						
Osmiridium ..						
Sulphur ..						
Coal ..						
Petroleum (liquid) ..						
Petroleum (gaseous) ..						
^(c) ..						
^(c) ..						

Dated at this day of , 19 .
Owner, Agent, or Manager.
(a)

- (a) Name of mine or works and address.
(b) Where space is inadequate, insert the words "See back hereof" and set out a list of names on back of form and sign at the end of the list.
(c) Blank spaces reserved for other commodities not specified in the form.

MINING—

Reg. 370(3).

FORM 49.

TERRITORY OF NEW GUINEA.

Mines and Works Regulation Ordinance 1935.

**HALF-YEARLY
YEARLY RETURN**

in relation to ^(a)
for the Period ended _____, 19 .

Stores and rations.						Employees.				Machinery.		Direct im-ports.	Compensation for death or injury.							
Held.		Issued.		Otherwise disposed of.		Paid.		Nature.	Installed.	In operation.	Mine drainage. Water conserved. (galls.)		Commodity.	Value (£).	Date.	By.	£	Date.	To.	£
Commodity.	Quantity.	Value (£).	Commodity.	Quantity.	Value (£).	Commodity.	Quantity.					Value (£).	Class.	No.	Salaries (£).	Wages (£).	Commodity.	Value (£).	Date.	By.

Dated at _____ this _____ day of _____, 19 .

Owner, Agent, or Manager.
^(a)

(a) Name of mine or works and address.