

SOUTH AUSTRALIA

**MINES AND WORKS INSPECTION REGULATIONS, 1965**

# REGULATIONS UNDER THE MINES AND WORKS INSPECTION ACT, 1920

## *Mines and Works Inspection Regulations, 1965*

being

*Gaz.* 19 August 1965, p. 477<sup>1</sup>

as varied by

*Gaz.* 2 November 1967, p. 1975

*Gaz.* 3 October 1968, p. 1071

*Gaz.* 30 September 1971, p. 1232

*Gaz.* 24 May 1973, p. 2198

*Gaz.* 6 June 1974, p. 2221

No. 5 of 1979: *Gaz.* 18 January 1979, p. 107

No. 53 of 1984: *Gaz.* 12 April 1984, p. 906

No. 239 of 1987: *Gaz.* 15 October 1987, p. 1137<sup>2</sup>

No. 110 of 1988: *Gaz.* 30 June 1988, p. 2067<sup>3</sup>

No. 121 of 1989: *Gaz.* 29 June 1989, p. 1803<sup>4</sup>

No. 107 of 1990: *Gaz.* 28 June 1990, p. 1725<sup>5</sup>

No. 128 of 1991: *Gaz.* 27 June 1991, p. 2229<sup>6</sup>

No. 124 of 1992: *Gaz.* 25 June 1992, p. 1976<sup>7</sup>

No. 120 of 1993: *Gaz.* 24 June 1993, p. 2059<sup>8</sup>

No. 81 of 1996: *Gaz.* 30 May 1996, p. 2651<sup>9</sup>

- <sup>1</sup> Came into operation 1 January 1966: reg. 2.
- <sup>2</sup> Came into operation 1 November 1987: reg. 2.
- <sup>3</sup> Came into operation 1 July 1988: reg. 2.
- <sup>4</sup> Came into operation 1 July 1989: reg. 2.
- <sup>5</sup> Came into operation 1 July 1990: reg. 2.
- <sup>6</sup> Came into operation 1 July 1991: reg. 2.
- <sup>7</sup> Came into operation 1 July 1992: reg. 2.
- <sup>8</sup> Came into operation 1 July 1993: reg. 2.
- <sup>9</sup> Came into operation 1 July 1996: reg. 2.

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*Short Title*

1. These regulations may be referred to as the *Mines and Works Inspection Regulations, 1965*.

*Commencement*

2. These regulations shall come into operation on the first day of January, 1966.

*Parts of Regulations*

3. These regulations shall be divided into the following Parts:—

Part I—Mines (Division 1—General; Division 2—Sanitation and Hygiene; Division 3—Ventilation and Control of Dust and Fumes; Division 4—Safety and Protection; Division 5—Winding and Signals; Division 6—Explosives; Division 7—Ladders and Travelling Ways; Division 8—Internal-Combustion Engines Underground; Division 9—Underground Locomotives; Division 10—Use of Electricity; Division 11—Managers' Certificates and Permits; Division 12—Miners' Inspectors).

Part II—Quarries (Division 1—General; Division 2—Sanitation and Hygiene; Division 3—Ventilation and Control of Dust and Fumes; Division 4—Safety and Protection; Division 5—Explosives; Division 6—Use of Electricity; Division 7—Managers' Certificates and Permits; Division 8—Workmen's Inspectors).

Part III—Smelters (Division 1—General; Division 2—Sanitation and Hygiene; Division 3—Ventilation and Control of Dust and Fumes; Division 4—Safety and Protection; Division 5—Explosives; Division 6—Prevention of Lead and Gas Poisoning; Division 7—Use of Electricity; Division 8—Managers' Certificates and Permits; Division 9—Workmen's Inspectors).

4. All regulations previously in force made under and pursuant to the *Mines and Works Inspection Act, 1920-1964*, are hereby revoked as from the day on which the *Mines and Works Inspection Regulations, 1966*, come into force.

**PART I  
MINES**

**DIVISION 1—GENERAL**

*Interpretation*

5. In this Part unless the context otherwise requires or some other meaning is clearly intended—

"the Act" means the *Mines and Works Inspection Act, 1920-1964*:

"authorised person" means a person authorised pursuant to section 7 of the Act to inspect a mine:

"high explosive" means an explosive which is not effective unless fired by a detonator:

"inspector" means the Chief Inspector of Mines and any inspector of mines appointed under the Act:

"machinery" means steam or other engines, boilers, furnaces, air receivers, stampers or other crushing apparatus, ore reduction or concentrating or treatment plants, winding or pumping gear, trucks, tramways, whims, whips, windlasses, and includes all chains, straps, bands, belts, wires, ropes, cables, tackle, blocks, tools and all appliances of whatsoever kind used in or about or in connection with a mine:

"manager" means a person for the time being having the immediate charge or direction of the mining operations on a mine:

"mine" means (1) any place in, on, or under which underground mining has been or is being carried on and (2) works:

"mining" means—

- (a) by underground methods prospecting for, obtaining or collecting; and
- (b) treating

any metal, mineral, coal, guano, precious stones, salt, gypsum, or shale, but does not include the making of geological or geophysical surveys; and "to mine" has a corresponding meaning:

"owner" means any person who, either in his own name and on his own account, or jointly, or jointly and severally, or concurrently with any other person or persons, is the immediate proprietor or lessee or occupier of a mine or any part thereof, but does not include a person—

- (a) who merely receives a royalty, rent, or fine from a mine; or
- (b) who is merely the proprietor of a mine which is subject to a lease, grant, or licence for the working thereof; or

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(c) who is merely the owner of the soil and not interested directly or indirectly in the products of the mine:

"works" means any battery, crushing plant, ore concentrating works, cyanide or chlorination works, leaching plant, or other works wherein operations are carried on for the treatment of the products of mining:

"contractor" includes tributer:

"the Minister" means the Minister of Mines.

#### *Exemptions*

6. If the Chief Inspector is satisfied that compliance with a provision of this Part is unnecessary, impractical, or undesirable in any particular circumstances, or that a satisfactory alternative procedure, action, or installation will be adopted, taken or installed, he may, in his discretion, exempt any person or class of persons from the duty to comply with that provision.

Any such exemption may be granted subject to any conditions and limitations which the Chief Inspector deems necessary.

The Chief Inspector may cancel any such exemption, if any condition thereof is contravened or not complied with, or if he is satisfied that the circumstances under which the exemption was granted have altered.

7. (1) The duties and responsibilities created and defined by the regulations and subregulations set forth in Column 1 of the Schedule to this regulation shall be performed and discharged according to their tenor as hereinafter provided in this regulation.

(2) Subject to regulation 21, the person whose respective titles or descriptions appear in Column 2 of the Schedule shall perform and discharge, or (as the case may require) ensure the performance and discharge of, the duties and responsibilities created and defined by those regulations and subregulations opposite which the titles or descriptions respectively appear in all respects according to the tenor thereof: Provided that where the title or description "Contractor" appears in Column 2 of the Schedule, the provisions of this subregulation and of subregulation (3) shall with respect to a contractor apply to the extent only that the duties or responsibilities created and defined by the regulation or subregulation appearing in Column 1 opposite such title or description touch and concern that part, or those parts, of the mine and those persons to which or to whom a contractor's power and authority extends.

(3) Where the titles or descriptions of two or more persons appear opposite any regulation or subregulation in Column 1 of the Schedule, subregulation (2) of this regulation shall apply to those persons jointly and severally.

(4) Where the performance or discharge, or (as the case may require) the ensuring of the performance or discharge, of a duty or responsibility created and defined by these regulations is, in any particular case, delegated by a person or persons specified by Column 2 of the said Schedule, such delegation shall not, in any respect excuse non-compliance with the provisions of subregulation (2) and subregulation (3) of this regulation.

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(5) Where there has been a contravention of, or failure to observe, or perform, or comply with, any regulation or subregulation set forth in Column 1 of the Schedule, the person or persons required to perform or discharge, or to ensure the performance or discharge of the duty or responsibility created and defined by the regulation or subregulation, shall be guilty, or (as the case may be) jointly and severally guilty, of an offence.

(6) (i) Where an act or default committed by some person, other than an owner, manager or contractor, constitutes a contravention of, or failure to observe, or perform, or comply with, any regulation, such person shall be guilty of an offence against that regulation, whether or not an owner, manager, or contractor is also, by virtue of subregulation (5), guilty of an offence against the same regulation.

(ii) An owner or manager who knowingly suffers or permits a contractor to commit an offence against the regulations of this Part shall be guilty of the same offence as that committed by the contractor.

(7) Nothing in the regulations of this Part shall take away or restrict any liability of any person, whether under the *Justices Act, 1921-1960*, or at common law, for aiding, abetting, counselling, procuring or otherwise being a party to the commission of an offence.

(8) The words "owner" "manager" and "contractor" (or any one or two of them), appearing in square brackets after the regulations or subregulations whose numbers appear in the left hand column of the Schedule, are placed there for the purpose of convenient reference only, and do not form part of the regulations of this Part.

(9) Where any regulation in this Part refers to the number of persons working in a mine, the number of those persons, for the purpose of each such regulation, shall be computed by excluding the owner but including the manager or contractor or both (as the case may require) if working therein.

SCHEDULE TO REGULATION 7

Number of Regulation or Subregulation	Title or Description of Person or Persons
10(1) (3)	Owner
10(5)	Owner, manager
11(1) (2)	Owner, manager
12	Owner
13	Owner
14	Owner, manager, contractor
15	Manager, contractor
16	Owner, manager, contractor
17(2) (3) (6)	Owner
20	Manager, contractor
22	Manager, contractor
23	Manager, contractor
24	Owner
25	Owner, manager, contractor

27	Owner, manager, contractor
28(a) to (e)	Owner
28(f) to (h)	Owner, manager, contractor
30	Owner, manager, contractor
31(1)	Owner
31(2)	Owner, manager, contractor
31(3)	Manager, contractor
32	Owner
33	Manager, contractor
34	Owner
35(1)	Owner
35(2)	Manager, contractor
37	Owner, manager, contractor
38	Manager, contractor
39(1)	Owner
39(2)	Manager, contractor
40	Owner, manager
41	Owner
42(1)	Owner
42(2)	Manager, contractor
43	Owner, manager, contractor
44	Owner, manager, contractor
45	Owner, manager, contractor
46	Manager, contractor
47	Owner, manager, contractor
48	Manager, contractor
49	Owner, manager, contractor
50	Owner, manager, contractor
51	Owner, manager, contractor
52	Owner, manager, contractor
53	Owner, manager, contractor
54	Manager, contractor
55(1) (3) (4)	Manager, contractor
55(2)	Owner, manager, contractor
56	Owner, manager, contractor
57	Manager, contractor
58(1) (2)	Owner, manager, contractor
58(3)	Manager, contractor
59	Owner, manager, contractor
60	Owner, manager, contractor
61(1)	Owner, manager, contractor
61(2) (3)	Owner
62	Manager, contractor
63	Manager, contractor
64	Owner
65	Owner, manager, contractor
66	Owner, manager, contractor
67	Manager, contractor
68	Owner, manager, contractor
69	Owner, manager, contractor
70	Manager, contractor

71	.....	Manager, contractor
72	.....	Manager, contractor
73	.....	Manager, contractor
74	.....	Manager, contractor
75	.....	Owner, manager, contractor
76	.....	Manager, contractor
77	.....	Manager, contractor
78	.....	Manager, contractor
79	.....	Manager, contractor
80	.....	Owner, manager, contractor
81	.....	Owner
82	.....	Owner
83	.....	Owner
84	.....	Manager, contractor
85	.....	Manager, contractor
86(1)	.....	Owner
86(2)	.....	Manager, contractor
86(3)	.....	Owner, manager, contractor
87	.....	Manager, contractor
88	.....	Manager, contractor
89	.....	Manager, contractor
90	.....	Manager, contractor
91	.....	Manager, contractor
92	.....	Manager, contractor
93(1) (2)	.....	Owner, manager, contractor
93(4)	.....	Owner, manager, contractor
94	.....	Owner, manager, contractor
95	.....	Manager, contractor
96	.....	Manager, contractor
97	.....	Manager, contractor
98	.....	Manager, contractor
99	.....	Owner, manager, contractor
100	.....	Manager, contractor
102	.....	Owner, manager, contractor
103	.....	Owner, manager, contractor
104	.....	Owner, manager, contractor
105(1)	.....	Owner, manager, contractor
105(2)	.....	Manager, contractor
106	.....	Owner, manager, contractor
107	.....	Owner, manager, contractor
108	.....	Manager, contractor
109	.....	Owner, manager, contractor
110	.....	Manager, contractor
111	.....	Manager, contractor
112	.....	Manager, contractor
113	.....	Owner, manager, contractor
114	.....	Manager, contractor
115	.....	Manager, contractor
116	.....	Manager, contractor
117	.....	Owner, manager, contractor
118	.....	Manager, contractor

119(1) (2) .....	Manager, contractor
119(3) .....	Owner
121(1) (4) .....	Owner, manager, contractor
121(5) (6) .....	Manager, contractor
122(1) .....	Owner
122(2) (3) .....	Manager, contractor
123 .....	Manager, contractor
124(a) (b) (c) .....	Manager, contractor
125(1), (2), (3), (5), (6), (7), (8), (9 ), (10), (11), (12)	Manager, contractor
125(4) .....	Owner
126 .....	Manager, contractor
127 .....	Manager, contractor
128 .....	Manager, contractor
129 .....	Manager, contractor
130 .....	Manager, contractor
131 .....	Manager, contractor
132 .....	Manager, contractor
136(1), (2), (3), (5), (6), (7), (8), (9), (10), (11) . . .	Manager, contractor
136(4) .....	Owner
137(1)(a) (b) (d) .....	Owner
137(1)(c) .....	Owner, manager, contractor
137(2), (3), (4) .....	Manager, contractor
138(1) .....	Owner, manager, contractor
138(2), (3), (4), (5) .....	Manager, contractor
139 .....	Manager, contractor
140 .....	Owner, manager, contractor
141 .....	Owner, manager, contractor
142 .....	Owner, manager, contractor
143 .....	Owner, manager, contractor
144 .....	Owner, manager, contractor
145(1), (5), (7) .....	Owner, manager, contractor
146(1) (2) .....	Manager, contractor
147(1), (2), (4), (7) .....	Owner, manager, contractor
147(3), (5), (6) .....	Manager, contractor
148 .....	Owner, manager, contractor
149 .....	Owner, manager, contractor
150 .....	Owner, manager, contractor
151 .....	Owner, manager, contractor
153(1) (6) .....	Owner, manager, contractor
153(4) .....	Manager, contractor
155 .....	Owner, manager, contractor
156(1) (2) .....	Manager, contractor
157(a) .....	Owner, manager, contractor
157(b) .....	Owner
157(1)(c) (d) .....	Owner, manager, contractor
157(2) .....	Manager, contractor
158 .....	Manager, contractor
159 .....	Manager, contractor
160 .....	Manager, contractor
161 .....	Owner, manager, contractor
162 .....	Manager, contractor

166	.....	Owner, manager, contractor
167	.....	Owner, manager, contractor
168	.....	Owner
169	.....	Manager, contractor
170	.....	Owner
171(1)	.....	Owner
171(2)	.....	Manager, contractor
172	.....	Owner
173	.....	Owner
174	.....	Owner
175	.....	Owner
176	.....	Manager, contractor
177	.....	Owner
178	.....	Owner
179(1) (2)	.....	Owner
179(3)	.....	Manager, contractor
180	.....	Owner, manager, contractor
181	.....	Owner
182	.....	Owner
183	.....	Owner
184	.....	Owner
185	.....	Owner
186	.....	Owner
187	.....	Manager, contractor
188	.....	Owner
189	.....	Owner
190	.....	Manager, contractor
191	.....	Owner, manager, contractor
192	.....	Manager, contractor
193	.....	Owner
194	.....	Manager, contractor
195	.....	Manager, contractor
196	.....	Owner
197	.....	Owner
198	.....	Owner, manager, contractor
199	.....	Owner, manager, contractor
200	.....	Owner, manager, contractor
201	.....	Owner
202	.....	Owner
203	.....	Owner
204	.....	Owner, manager, contractor
205	.....	Owner, manager, contractor
207	.....	Manager, contractor
222	.....	Owner, manager, contractor
226(2)	.....	Owner
226(4) (6)	.....	Manager, contractor

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*Penalty*

8. The penalty for a breach of any provision of these regulations shall be a fine not exceeding one thousand dollars.

*Summary Procedure*

9. Proceedings for offences against these regulations shall be taken and determined in a summary way.

*Appointment of Manager*

10. (1) No more than nine persons shall work in a mine in any period of 24 hours unless—

- (a) the owner has appointed a person holding a certificate as required by Division 11 of this Part to be the manager of the mine; and
- (b) the owner has given to the Chief Inspector a written notice stating the name and address of the manager so appointed and particulars of the certificate held by him; and
- (c) the manager so appointed is (except in the case of his temporary absence) supervising the working of the mine. **[Owner]**

(2) The Chief Inspector may at any time by written notice to the owner of any mine, irrespective of the number of persons employed thereat, require him to appoint a manager holding a certificate or permit issued under Division 11 of this Part.

(3) Where a notice under the previous subregulation has been given to an owner, no work shall be done in the mine unless—

- (a) the owner has appointed a person holding a certificate or permit as required by Division 11 of this Part to be the manager of the mine; and
- (b) the owner has given to the Chief Inspector a written notice of the name and address of the manager so appointed and the particulars of the certificate or permit held by him; and
- (c) the manager so appointed is (except in the case of his temporary absence) supervising the working of the mine. **[Owner]**

(4) Where an individual person is the owner, or one of the co-owners of a mine, and holds a certificate or permit as required by these regulations, he may appoint himself, or join in appointing himself, as manager of that mine.

(5) No person shall accept appointment or act as manager of more than one mine. **[Owner, manager]**

(6) If no manager has been appointed for a time, the owner, or, if the mine is jointly owned, each of the owners shall, without affecting his duties or responsibilities as owner, be deemed to be the manager of the mine within the meaning of all provisions of these regulations which impose duties or responsibilities on the manager.

(7) What may be "temporary absence" within the meaning of this regulation shall depend on all the circumstances of the case, but shall in no case exceed forty-eight hours.

#### *Temporary Manager*

**11.** (1) Whenever the manager is absent from the mine for any length of time while it is working, the owner, or some person authorised by him in writing, shall appoint a competent person to act as temporary manager during the absence of the manager. **[Owner, manager]**

(2) If the manager is absent or intends to be absent for seven days or more, the owner shall as soon as practicable give to the Chief Inspector written notice of the appointment of a temporary manager specifying the name, address and certificate or permit of the person appointed and the period (if any) for which he is appointed. **[Owner, manager]**

(3) Where by these regulations a duty or responsibility is imposed on the manager, the same duty or responsibility shall be deemed to be imposed on a temporary manager whilst acting as such.

#### *Appointment of Agents by Owners*

**12.** (1) Where the owner is a person whose usual residence, or whose place of incorporation, is outside the State, the mine shall not be worked unless—

- (a) the owner has appointed a natural person ordinarily resident in the State, or a company incorporated in the State, or a company registered in the State as a foreign company, to be his or its agent; and
- (b) notice in writing of such appointment has been given to the Chief Inspector; and
- (c) such appointment is still in force.

(2) Any process or notice required or permitted to be served on the owner shall be sufficiently served if delivered by post or otherwise to the agent appointed by the owner under this regulation at his place of business or his usual or last known place of residence. **[Owner]**

#### *Commencement and Cessation of Mining*

**13.** (1) The owner of a mine shall, within three days from and after the commencement of work, or his assumption of ownership in the case of a working mine, send notice in writing to the Chief Inspector setting out—

- (a) the full name and address of the owner and the name and address of the manager of the mine and particulars of the certificate or permit held by him;
- (b) the situation of the mine;

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- (c) the mineral or other substance being mined, or worked; and
- (d) the estimated number of persons to be employed at the mine.

(2) The owner shall, within three days from and after the cessation of work at the mine, and three days from and after the recommencement of work after any such cessation, send notice in writing to the Chief Inspector of such cessation or re-commencement.

(3) In this regulation "cessation of work" does not include a cessation for holidays, repairs or on account of strikes or other industrial troubles. **[Owner]**

#### *Inspection Record Books*

**14.** (1) The owner shall in all respects in accordance with these regulations keep, at the office on the mine, books to be labelled respectively the "Inspection Record Book", and the "Machinery Record Book".

(2) The information recorded in the said books shall be accurate and shall include all relevant dates and times.

(3) The entries in the said books shall be written clearly and legibly in ink.

(4) The owner, the manager and all persons having custody and control of either of the said books shall on demand by an inspector produce it to him for inspection and perusal, and the inspector may make entries and give written instructions in such books.

(5) Where an owner or manager is charged with an offence against any of these regulations, he shall produce the said books at the hearing of the charge.

**[Owner, manager, contractor]**

#### *Periodical Inspections*

**15.** (1) (a) Once at least in each working day the mine shall be examined by the manager or a competent person to ascertain the state of all safety appliances, winding ropes, gear connected with cages or shafts, and places where mining excavations are being made; and

(b) once in each week the buildings, machinery, equipment, appliances, apparatus, shafts, levels and all places used in the working of the mine shall be examined by the manager or a competent person.

(2) The person making such an inspection shall record in writing in the Inspection Record Book his opinion as to the condition and safety of the things examined and whether any alterations or repairs are necessary or desirable in the interests of safety; and if the inspection is made by a person other than the manager, that person shall, after making the entries forthwith inform the manager that the entries in the said book have been made, and the said entries shall thereupon be signed by the manager. **[Manager, contractor]**

*Duty to Exhibit Regulations*

**16.** A legible copy of these regulations, or a poster containing such of these regulations as the Chief Inspector deems it necessary to exhibit, shall be kept posted in a conspicuous position on the mine. **[Owner, manager, contractor]**

*Duty to Furnish Plans*

**17.** (1) Any inspector may, by a notice in writing addressed to the owner, order that accurate plans, or sections, or plans and sections, of the workings of the mine be made, and copies thereof delivered to the office of the Chief Inspector, not later than a day specified in the notice.

(2) The owner to whom such a notice has been given shall—

- (a) cause plans or sections or both to be prepared in accordance with the notice; and
- (b) deliver copies thereof in accordance with the notice; and
- (c) keep the original plans or sections or both, as the case may be, or correct copies thereof at the mine office. **[Owner]**

(3) When any plans, sections or both have been prepared under this regulation, the owner shall at intervals of not more than six months and also immediately before the abandonment of the mine cause all alterations of and additions to the workings of the mine to be correctly delineated on the original plans and sections, and on any copies kept at the mine office, and shall deposit a copy of any such alterations or additions at the Chief Inspector's office. **[Owner]**

(4) If the owner fails to deliver any plan or section as required by this regulation, the Minister may cause such plan or section to be prepared, and for that purpose may cause a survey of the mine to be made, and the cost of such plan or section and survey shall thereupon become a debt owed by the owner to the Minister, and be recoverable as such in a Local Court of competent jurisdiction.

(5) If the Chief Inspector has reason to believe that any plan or section furnished under this regulation is incorrect or incomplete, the Minister may cause a check survey to be made of the workings of the mine. If the check survey proves the plan or section to be incorrect or incomplete, the cost of the check survey shall thereupon become a debt owed by the owner to the Minister.

(6) All plans and sections prepared under this regulation shall be drawn to a scale of not less than forty and not more than one hundred feet to one inch. **[Owner]**

*Inspection of Plans*

**18.** (1) Any inspector or authorised person may, with or without assistants, inspect and examine any plans and sections of a mine kept at the mine.

(2) Any person having in his possession or in his custody and control any such plans and sections shall upon the request of any inspector or authorised person produce them to such inspector or person for his examination.

*Complaints*

**19.** If a person working in a mine gives information to an inspector from which it appears to the inspector that a breach of the Act or of these regulations (other than a trivial breach) may have occurred, the inspector shall make or cause to be made an investigation into the matter so alleged.

*Inspections*

**20.** The manager shall forthwith on the request of an authorised person desiring to inspect a mine pursuant to the Act or these regulations—

- (a) cause such person to be lowered into and raised from the shaft or workings;
- (b) give such person access to all parts of the mine and all plant and machinery thereat;
- (c) do all things necessary to enable the inspection to be made. **[Manager, contractor]**

*Duty of Owners to Provide Material and Equipment*

**21.** (1) (a) Except where these regulations expressly provide otherwise, the owner shall provide and install all such material and equipment as is necessary to enable these regulations to be complied with.

(b) Where a contractor is operating in a mine, he shall, except where these regulations expressly provide otherwise, be under the same duties to provide and install material and equipment as the owner in that part, or those parts, of the mine, and to or for those persons to which or to whom the contractor's power and authority extends.

(2) The fact that these regulations mention specific cases in which the owner is required to provide material or equipment shall not be deemed to restrict the general duty imposed on owners by this regulation.

(3) In this regulation, "equipment" includes machinery, plant appliances, tools, materials and articles of all kinds.

*Reports of Accidents*

**22.** (1) Where at or in a mine an accident occurs as the result of which any person suffers injury likely to cause him to be absent from work on three or more working days, or is killed, a written report shall, within twenty-four hours after the accident, be sent to the Chief Inspector stating the nature of the accident and the number of persons killed and persons injured.

(2) Where an accident has been reported under this regulation and a person subsequently dies as the result of the accident, a report shall be sent in writing to the Chief Inspector within twenty-four hours after the death becomes known to the manager.

(3) If an accident report form has been supplied by the Chief Inspector to the owner, manager or contractor, the said report shall be furnished on the form, but if no form has been so supplied, the report shall contain all such particulars as are necessary for giving reasonable information as to the nature and cause of the accident (including the number of persons killed or injured or both). **[Manager, contractor]**

*Interference with Wreckage at Accidents*

**23.** (1) When a fatal accident or an accident arising out of the use of explosives or of winding equipment occurs, no person shall, except with the consent of an Inspector or for the purpose of saving human life or relieving human suffering—

- (a) move, interfere with, destroy or carry away any wreckage, article or thing at the place of or connected with the accident; or
- (b) interfere with or alter the state and condition of any hole, shaft, tunnel or excavation at the place of or connected with the accident.

(2) In giving consent under the previous subregulation the Inspector may impose any conditions or restrictions he thinks fit.

(3) Any person who knowingly contravenes, or fails to comply with, this regulation or any condition or restriction imposed under subregulation (2) of this regulation shall be guilty of an offence. **[Manager, contractor]**

*Statistical Returns*

**24.** (1) Except as provided in subregulation (2) of this regulation the owner of a mine shall in the months of January and July in each year furnish to the Mining Warden a full and true return, showing—

- (a) the quantity of stone or ore treated, and the quantity of metals, precious stones, minerals, shale, coal, salt or gypsum taken from such mine during the preceding half year;
- (b) particulars of the working expenses incurred in and the gross proceeds received from the occupation and working of the mine, the sale of all stone, ores, metals, minerals, precious stones, coal, shale, salt or gypsum won therefrom and on hand at the end of the preceding half-year, the number of men, horses and horsepower of machinery employed or used thereon, and the nature and value of all machinery and plant thereon.

(2) The holder of a claim (not being an alluvial claim) or of a mining lease, who is required to furnish returns relating to the mine of which he is the owner under section 113 of the *Mining Act, 1930-1962*, shall not be required to furnish returns under this regulation with respect to that mine.

**DIVISION 2—SANITATION AND HYGIENE**

*First-Aid Requirements*

**25.** (1) Where more than nine men are working on or in a mine in any one shift—

- (a) a person trained in first-aid to the injured shall, at all times during working hours, be on the mine and ready to attend to sick or injured persons; and
- (b) there shall be provided and maintained in good condition a room for affording first-aid to sick or injured persons; and
- (c) there shall be kept at the mine a motor vehicle capable of transporting a sick or injured person in reasonable comfort and readily available for that purpose at any time; and
- (d) there shall be kept in the first-aid room an adequate supply of splints, bandages, and other requirements, for first-aid to the sick or injured, and in the case of an underground mine, sufficient oxygen gas for the treatment of persons suffering from fumes of explosives or other noxious gases, and appliances for the administration of such oxygen gas and instructions for the use of such appliances.

(2) So long as any men (irrespective of the number thereof) are working on or in a mine there shall be kept at the mine an adequate supply of splints, bandages, and other reasonable requirements for first-aid to the sick or injured, sufficient for the number of men working on or in a mine. **[Owner, manager, contractor]**

*Use of Rubbish for Filling*

**26.** No person shall for any purpose place in a mine (whether in use or abandoned) any debris, refuse, or other material likely to be injurious to the health of human beings, or to endanger the life or limb of any human being.

*Mines to be Clean and Free from Vermin*

**27.** A mine is at all times to be kept clean and sanitary and free from vermin. **[Owner, manager, contractor]**

*Sanitary Convenience*

**28.** The following requirements shall at all times be complied with in respect of privies on a mine for the use of persons working at or in the mine:—

- (a) There shall be one privy on the surface for each twenty men working there at any one time, and an additional privy for any fractional part of twenty men so working; such privies shall be near the working place. **[Owner]**
- (b) There shall be one privy underground for each twenty men working there at any one time, and an additional privy for any fractional part of twenty men so working. **[Owner]**

17.

- (c) If a level is not provided with facilities for communication by cage or bucket with the surface or some other level where a privy is situated, there shall be on that level one privy for each twenty men working there at any one time and an additional privy for any fractional part of twenty men so working. **[Owner]**
- (d) Every privy shall have a floor of concrete or other hard and impervious material. **[Owner]**
- (e) Where a pan is used in a privy, it shall be furnished with a stool. **[Owner]**
- (f) Every pan shall be emptied, thoroughly cleaned and washed inside and outside and disinfected at least once a week. **[Owner, manager, contractor]**
- (g) Every privy shall be adequately ventilated, screened from observation and, where possible, placed in a return airway and kept in a clean and hygienic condition. **[Owner, manager, contractor]**
- (h) Where a pan is used an adequate supply of deodorant and disinfectant shall be kept at each privy with a scoop for application. **[Owner, manager, contractor]**

#### *Pollution of Workings*

**29.** No person shall pollute the workings of a mine or foul or misuse any sanitary convenience thereon.

#### *Water*

**30.** (1) The floor of every level which is in use shall be efficiently drained so as to remove the water into sumps.

(2) Where water is being drained from a winze, other parts shall be so ventilated that the air therein does not become a danger to health by reason of noxious gases from such water.

**[Manager, contractor]**

#### *Underground Crib Places*

**31.** (1) At least one crib place on each working level of the mine shall be provided and each of the following requirements as regards every crib place shall be complied with:—

- (a) A crib place shall be in a dry and comfortable position:
- (b) A crib place shall be provided with a table and with chairs, seats, or benches for the men, boiling water, or effective means of boiling water, and a metal rubbish box with well-fitting cover for waste food and rubbish:
- (c) There shall be a supply of washing-water within fifty feet of a crib place. **[Owner]**

(2) Each crib place shall be kept clean and tidy and the rubbish box shall be emptied whenever necessary and cleaned at least once a week. **[Owner, manager, contractor]**

(3) No person shall—

- (a) take a meal in an underground part of a mine elsewhere than in a crib place provided for the purpose;
- (b) deposit waste food or other rubbish in an underground part of a mine elsewhere than in a rubbish box. **[Manager, contractor]**

*Drinking Water*

**32.** There shall be provided on the surface and on each level of the mine which is being worked a supply of wholesome drinking water sufficient for the men working on such surface or level. **[Owner]**

*Removal of Waste Timber*

**33.** All waste timber shall be removed from the underground workings of the mine as soon as practicable. **[Manager, contractor]**

*Covering Braces*

**34.** Every brace and pit-bank where men are working shall be sufficiently covered so as to protect the men against inclement weather. **[Owner]**

*Change-Houses*

**35.** (1) Where more than nine men are working in any one shift in a mine, a change-house shall be provided which shall comply with the following requirements:—

- (a) The change-house shall be as near to the workings as practicable but where the mine includes a haulage shaft or an adit then the change-house shall be as near as practicable to the entrance to the underground workings.
- (b) The floor space of the change-house shall be not less than six square feet for each person using the change-house in any one shift, in addition to the floor space required for passage-ways, heating pipes and drying-racks.
- (c) There shall be provided in the change-house an adequate supply of clean hot and cold water for the men to wash or bathe themselves, and not less than one washing basin for every ten men in any one shift and an additional washing basin for any fractional part of ten men in any one shift.
- (d) Showers shall be provided in the change-house at the rate of not less than one for every ten men in any one shift and an additional shower for any fractional part of ten men in any one shift. The showers shall be at least four feet apart, and the floor of the shower area shall have a smooth waterproof surface and shall be provided with impervious drainage to remove waste water.

(e) The change-house shall be well ventilated and lighted and shall be kept warm and free from draughts, and shall be furnished with sufficient appliances for drying wet clothes.

(f) Provision shall be made in the change-house for keeping street clothes and working clothes separate. [Owner]

(2) The floors of the change-house shall be washed daily, and all other parts of the change-house shall be kept clean. [Manager, contractor]

*Removal of Dirty Clothes from Change-House*

**36.** A person using a change-house shall, when requested by the manager, remove all his dirty clothes (other than safety helmets, belts or boots) from the change-house.

**DIVISION 3—VENTILATION AND CONTROL OF DUST AND FUMES**

*Standards of Ventilation*

**37.** (1) The mine shall be ventilated so that at all times the air in every part of the mine where men are working shall comply with the following requirements:—

(a) It shall contain at least 20 per cent by volume of oxygen.

(b) It shall not contain more than 0.5 per cent of carbon dioxide, or more than 0.005 per cent of carbon monoxide, or more than 0.0005 per cent of the higher oxides of nitrogen, or more than 0.002 per cent of sulphuretted hydrogen; all such percentages being calculated by volume.

(c) It shall not contain more than 300 particles per cubic centimetre of dust which is five microns or less in diameter.

(d) It shall not have a temperature of more than 83 degrees Fahrenheit, by wet-bulb thermometer.

(e) At least one hundred cubic feet of fresh air per minute for every man and horse working in any place shall be circulated through that place.

(2) For the purpose of this regulation 37, the number of dust particles per cubic centimetre shall be determined:

(a) by an efficient konimeter, taking the average of the numbers ascertained by six tests made at intervals of one minute; or

(b) by any other efficient instrument to the satisfaction of the Chief Inspector of Mines.

In either case, the number of such particles shall be counted under dark field illumination.

[Owner, manager, contractor]

*Work in Places Inadequately Ventilated*

**38.** No person shall do any work in a part of the mine where the ventilation does not comply with these regulations, unless such work is necessary to make the ventilation so comply, or for rescue or fire-fighting work. **[Manager, contractor]**

*Equipment, Stoppings and Doors*

**39.** (1) Every air-door provided to ensure compliance with the standards of ventilation prescribed by these regulations shall be so constructed, fitted, or equipped that it closes automatically after being opened, and remains closed when not held open. **[Owner]**

(2) Any air-door not required as part of the ventilating system shall forthwith be removed, or taken off its hinges. **[Manager, contractor]**

*Ventilation Plans*

**40.** If so directed by an inspector, the course and volume of the air currents and the position of all air-doors, stoppings, cross-overs, brattices, fans, and ventilating devices in the mine shall be marked on the plans and sections kept at the mine. **[Owner, manager]**

*Other Requirements as to Ventilation*

**41.** (1) (a) The air in an air current shall not be recirculated so as to pass more than once through the same place unless such air has been purified before being re-circulated:

(b) The workings on each level in a mine shall be ventilated as far as practicable by a separate split of air from the main air intake. After passing through workings the air shall be led as directly as possible towards the return airway:

(c) All air forced or drawn into the workings by any machine or device shall be taken from the purest source available.

(2) Wherever the requirements of these regulations as to ventilation and air cannot be complied with without constructing one or more airways independent of the main shaft, one or more such airways of sufficient size to enable compliance with such regulations shall be constructed. **[Owner]**

*Traps and Receivers*

**42.** (1) There shall be provided on every air main leading from a compressor, and on every branch air main, efficient traps to remove accumulations of water. **[Owner]**

(2) (a) Every air receiver in use and all pipes connecting an air receiver in use with a compressor shall be blown out at least once a day;

(b) every water trap in use shall be blown off at least once in every shift;

(c) water from air receivers or mains shall not be blown through the working faces.

**[Manager, contractor]**

*Rock Drilling*

**43.** Whenever on a mine, holes are being bored in rock by machinery, sprays or jets of water or other effective methods for preventing the issue of dust or alternatively for laying or removing any dust issuing from the holes shall be provided and used so that the dust will not be a danger to or to the health of any persons. **[Owner, manager, contractor]**

*Other Operations Producing Dust*

**44.** Whenever in the course of mining operations dust is produced, sprays or jets of water or other effective means for laying or removing the dust so that it will not be a danger to or to the health of any persons shall be provided and used. **[Owner, manager, contractor]**

*Water Used for Laying Dust*

**45.** Water used for laying dust shall be free from matter harmful to the health of human beings. **[Owner, manager, contractor]**

*Times for Blasting*

**46.** (1) No blasting shall be carried out underground except at the following times, namely—

- (a) during crib time;
- (b) immediately before the end of a shift.

Provided that, with the consent of the manager, blasting may be carried out at any time for the purpose of sinking shafts or removing obstructions in ore passes or box holes, or making the workings safe, or blasting misfired holes in development faces.

(2) No person shall carry out blasting underground during crib time in any place from which smoke, dust, or fumes caused by the blasting will reach a crib place.

(3) No person shall carry out blasting underground during a shift including crib time if there is a reasonable possibility that as a result of such blasting the air in a place where men are working will not comply with regulation 37. **[Manager, contractor]**

*Entry After Blasting*

**47.** No person not wearing an effective respirator shall enter a working place where blasting has been carried out until the fumes, dust and toxic gases caused by the blasting have been dispersed, unless such entry is necessary for the purpose of making any ventilation comply with these regulations, or for rescue or firefighting work. **[Owner, manager, contractor]**

*Use of Cyanide Tailings for Filling*

**48.** (1) Tailings, containing more free cyanide than the chemical equivalent of an amount of potassium cyanide equal to 0.01 per cent of such tailings, shall not be deposited in worked-out ground.

(2) While any persons are working or passing in any parts of a mine where tailings containing cyanide are being deposited, a strong current of air shall be made to pass through those parts. **[Manager, contractor]**

*Airways in Filled Stopes*

**49.** Passes or rearings shall be constricted in every stope, which is being worked on a cut-and-fill or shrinkage system, so as to provide airways to ventilate working places. **[Owner, manager, contractor]**

*Provision of Self-contained Breathing Apparatus*

**50.** (1) No person shall work in a part of the mine where air dangerous to the health or safety of human beings has accumulated unless—

- (a) such work is necessary to improve the ventilation or for the rescue of any men or to fight or control a fire; and
- (b) the person so working is provided with an efficient self contained breathing apparatus and has been trained in the use thereof.

(2) There shall at all times be kept available and in good order sufficient sets of efficient self-contained breathing apparatus to enable the provisions of subregulation (1)(b) of this regulation to be complied with.

(3) In this regulation "self-contained breathing apparatus" means apparatus capable of being carried or worn by men while working and from or through which pure air can be breathed during the whole of the work. **[Owner, manager, contractor]**

*Disposal of Dangerous Fumes and Gases*

**51.** All fumes and gases which are generated in any furnace or plant at the mine and which are dangerous to human life or health, shall be disposed of or treated so that there is no reasonable possibility that any person will be injured by them. **[Owner, manager, contractor]**

**DIVISION 4—SAFETY AND PROTECTION**

*Machinery to be in Good Condition*

**52.** (1) All machinery which is in use in or at a mine shall be kept at all times in good order and in safe condition.

(2) In this regulation "machinery" includes engines, plant, gear, and equipment of all kinds. **[Owner, manager, contractor]**

*Construction and Maintenance*

**53.** (1) All material and equipment installed or used in or at a mine shall be sound and of adequate strength for the purpose for which it is to be used.

(2) Every working part of a mine and every structure and item of equipment which is in use in or at the mine shall be maintained in good order and in a safe condition.

**[Owner, manager, contractor]**

*Interference with Structures, Plant or Equipment*

**54.** (1) No person shall, except in the course of duties in which he is engaged or authorised to carry out, interfere with or remove any structure or part of a structure or any machinery, plant or equipment or open a gate or door at or in a mine.

(2) Where a person opens a gate or removes or displaces any fence guard or other like structure provided at or in a mine, he shall shut the gate or restore the fence guard or structure to its usual place as soon as the necessity for the opening, removal, or displacement has ceased.

**[Manager, contractor]**

*Procedure in Case of Danger*

**55.** (1) If the manager or a person for the time being in charge of any part of a mine is of the opinion that dangerous conditions exist in the mine or part thereof respectively he shall—

- (a) forthwith order the immediate withdrawal of every workman from such mine or part, and every workman so ordered shall be withdrawn accordingly; and
- (b) cause such mine or part to be inspected by a competent person; and
- (c) not permit any person to enter such mine or part while in his opinion it remains dangerous, except for the purpose of making an inspection thereof or doing work to make it safe.

**[Manager, contractor]**

(2) During the making of an inspection under subregulation (1) of this regulation—

- (a) if it appears reasonably possible to the person making the inspection that there is danger arising from inflammable gas, no lamp other than a locked safety lamp shall be used;
- (b) if it appears reasonably possible to the person making the inspection that there is danger arising from noxious gas, self-contained breathing apparatus shall be used by him and all the persons making the inspection. **[Owner, manager, contractor]**

(3) Forthwith after making the inspection, the person making the same shall enter in the Inspection Record Book a record of the inspection specifying the nature of any dangerous conditions found by him and of any action recommended to remedy them. **[Manager, contractor]**

(4) When any action is taken under this regulation the particulars thereof shall forthwith be entered in the Inspection Record Book and a written report specifying the nature of the dangerous conditions and the action taken to remedy them shall be transmitted to an inspector. The said record and the said report shall be signed by the Manager. **[Owner, manager, contractor]**

*Provisions for Escape from Mines Liable to Flooding*

**56.** (a) There shall be constructed in every mine such rises, chambers, drives and other workings as are necessary to maintain the ventilation of the mine and permit the escape of workmen from the lower workings if flooding should occur;

(b) There shall be posted in a prominent place at the foot of each rise, chamber, drive or other working a clearly legible notice indicating that such rise, chamber, drive or working is a means of escape in the event of flooding. **[Owner, manager, contractor]**

*Men Working Alone*

**57.** (1) Whenever a person is working underground in a mine in a place where he is not in frequent communication with, or within speaking distance of, some other person such first mentioned person shall be—

- (a) visited by a competent person at intervals of not more than two hours; or
- (b) communicated with by telephone every hour and visited as aforesaid every half-shift.

(2) No person shall work in a dangerous place unless such person is within constant view of some other person working in the mine. **[Manager, contractor]**

*Safety Helmets*

**58.** (1) A safety helmet shall be supplied to every person working underground, or in a crushing or screening plant, or in any place where he may be hit by a falling object. **[Owner, manager, contractor]**

(2) Whenever a helmet supplied pursuant to this regulation is lost or destroyed, or becomes unserviceable, the owner shall, at his own cost, replace the helmet. Provided that if the replacement is necessary because of negligence or wilful wrongdoing by the person to whom the same was supplied, that person shall be liable to pay to the owner the cost of the helmet supplied by way of replacement. **[Owner, manager, contractor]**

(3) A person in a mine shall, except in an appointed crib-place, wear a safety helmet at all times while he is underground or in a crushing or screening plant or while he is working in any place where he may be hit by a falling object. **[Manager, contractor]**

(4) A helmet supplied pursuant to this regulation shall, unless otherwise agreed, remain the property of the owner who supplied it.

*Pent-Houses*

**59.** When a shaft is being sunk below levels which are being worked, it shall be protected below such levels by one or more pent-houses of sufficient strength to protect workmen against falling cages, skips or materials. **[Owner, manager, contractor]**

*Fencing Shaft*

**60.** (1) (a) Every brace, plat, and opening to a shaft, whether on the surface or underground, shall be securely covered or fenced so as to prevent persons from falling into the shaft;

(b) every fence at the entrance to a shaft shall be provided with gates;

(c) every elevated platform erected in a head frame above a shaft shall be covered or fenced so as to prevent persons from falling from such platform.

(2) Notwithstanding subregulation (1) of this regulation, a fence, gate or cover may be temporarily removed for the purpose of making repairs or alterations or for any other temporary purpose expressly approved by the manager.

(3) While a fence or gate is temporarily removed from an opening or an entrance to a shaft, a strong horizontal bar not less than three and not more than four feet above the ground shall be kept securely fixed across the opening from which the fence or gate has been removed, except when the cage is actually being loaded or unloaded. **[Owner, manager, contractor]**

*Cessation of Mining Operations*

**61.** (1) On the cessation of mining operations in a mine or part of a mine all workings in such mine or part shall be closed off or made safe so as to prevent the possibility of accident to any person. **[Owner, manager, contractor]**

(2) An abandoned or disused shaft or dangerous excavation shall be kept securely fenced or covered, and its position shall be indicated by posts. **[Owner]**

(3) When a shaft or tunnel has ceased to be used for mining no person shall, without the written consent of the Chief Inspector—

(a) fill in such shaft or tunnel or any part thereof;

(b) remove any fencing, covering, casing, lining, ladder, platform or other structure in or about such shaft or tunnel;

(c) destroy or injure such shaft or tunnel. **[Owner]**

(4) In this regulation "cessation of mining operations" means a cessation of mining operations other than a cessation for weekends, or for a short period for repairs or holidays, or on account of strikes or other industrial disputes.

*Minors Not to be in Charge of Steam Engines or Boilers*

**62.** No person under 21 years of age shall be in charge of or have control of a steam engine or steam boiler used on a mine. **[Manager, contractor]**

*Duty of Drivers of Machinery to Remain*

**63.** No person having charge or control of a steam boiler, steam engine, or winding engine, which is used on a mine for the working thereof, or of a winch used on a mine for raising or lowering men, shall absent himself from or cease to have effective charge or control (as the case may be) of such boiler, steam engine, winding engine, or winch while it is required to be used, unless relieved by a person qualified to replace him. **[Manager, contractor]**

*Certificates of Registration of Boilers*

**64.** A person having the possession, custody, or control of any certificate relating to the registration, inspection, or testing of a boiler or air receiver used at a mine shall, on the request of an inspector, produce such certificate to him for inspection. **[Owner]**

*Protection of Machinery, Platforms, Vats, and Ladders*

**65.** (1) In or at a mine—

- (a) all exposed dangerous parts of machinery in operation;
- (b) every flywheel, pulley, drive wheel, drive belt;
- (c) every tramway constructed on an elevated platform;
- (d) all steps, ladders, elevated gangways and elevated platforms; and
- (e) every vat used in connection with the cyanide process;

shall be securely fenced and guarded, and every fence and guard shall be kept in good order.

(2) Adequate precautions shall be taken at all ash pits, ash heaps and other places where there are hot or molten materials to ensure that no person is endangered by these materials. A notice shall be posted in a conspicuous position warning people of danger.

**[Owner, manager, contractor]**

*Vats Containing Cyanide*

**66.** The word "poison" shall be painted on each vat containing cyanide in clear letters not less than twelve inches high. **[Owner, manager, contractor]**

*Garments for Oilers and Machinery Attendants*

**67.** No person shall work in the immediate vicinity of moving machinery in or about a mine unless he is wearing close-fitting and close-fastened garments. **[Manager, contractor]**

*Lights in Working Places*

- 68.** (1) (a) every underground working plat, and
- (b) the upper entrance to every winze, rise or jump-up while uncovered or unfenced,

shall be illuminated at all times while men are in the mine.

(2) Every working place on the surface shall be illuminated at all times when men are working in or passing through it between half-an-hour after sunset and half-an-hour before sunrise.

(3) The illumination required under subregulation (2) shall be sufficient for the safety of the persons working in or passing through the plat entrance or place, and shall be provided by fixed lamps.

(4) A person shall not enter an unlighted part of a mine unless he carries a light adequate to ensure his own safety and the safety of those accompanying him.

(5) In this regulation "fixed lamp" means a lamp not being carried by a person.

**[Owner, manager, contractor]**

#### *Safety Ropes and Belts*

**69.** (1) Where a winding rope is used for raising or lowering men in a shaft or winze, and the conveyance attached to the rope is not a cage or man-skip, safety belts or other fastenings for staying men to the winding rope shall be provided.

(2) A person shall not ascend or descend a shaft or winze by a winding rope, where the conveyance is not a cage or man-skip, unless he is stayed to the rope by means of a safety belt or other fastening.

(3) (a) Safety ropes and safety belts shall be provided for use on all precipitous slopes, steep rock piles and places where there is a danger of falling from a height, and in chutes, passes or bins.

(b) Every such safety rope when in use shall be kept securely anchored.

(4) (a) No person shall work on or move across a precipitous slope, steep rock pile, or place where there is a danger of falling from a height unless he is using a safety rope secured to a substantial anchorage.

(b) A person shall not work in a fixed position on such slope, rock pile or place unless he is wearing a safety belt, attached to securely anchored safety rope, whereby he is enabled to work with both hands free.

(5) No person shall enter or remain in a chute, pass, or bin unless—

(a) he is wearing a safety belt attached to a securely anchored safety rope; and

(b) at least one other person is within hearing distance of him at all times whilst he is within such chute, pass or bin.

**[Owner, manager, contractor]**

*Hung-up Passes*

70. When a pass, chute or opening is jammed or obstructed with material hung up in it, a person shall not go into the pass, chute or opening beneath the obstruction or do any work in it from beneath the obstruction except in accordance with the instructions of the manager or the person for the time being in charge of the work. No person shall give such instructions until all other practical means have been exhausted for causing the material to run or become free.

[Manager, contractor]

*Warning to Men in Shrinkage Stopes*

71. No person shall draw off any ore from a stope being worked on the shrinkage system unless he has informed the men working in the stope of his intention to do so, and the person in charge of the stope has given his approval.

[Manager, contractor]

*Rises*

72. No rise inclined at 45 degrees or more from the horizontal shall be put up to a greater height than thirty feet measured on the plane of the rise from the roof or back of a working, except with the written permission of an inspector.

[Manager, contractor]

*Winzes*

73. No winze shall be sunk in a travelling-way if there is any practicable alternative place.

[Manager, contractor]

*Raising or Lowering Tools in Winzes*

74. No person shall knowingly raise or lower, or knowingly cause or permit a person to raise or lower, tools in a winze or other confined place unless—

- (a) such tools are in a bucket or other receptacle; and
- (b) any tool projecting from the bucket or receptacle is secured so that it will not fall out or foul any part of the winze or place.

[Manager, contractor]

*Precautions Against Fire*

75. (1) Adequate precautions shall be taken, both underground and on the surface, to prevent the outbreak of fire.

(2) Adequate provision both underground and on the surface, shall be made for the prompt suppression of any outbreak of fire.

(3) Without affecting the generality of subregulations (1) and (2) of this regulation, the following rules shall be complied with—

- (a) In the event of an outbreak of fire at or in a mine an effective warning of the fire shall be given first to persons in the mine likely to be affected by the fire or the products of combustion, and secondly to all other persons in the mine; and all men working underground shall be brought to the surface without delay.

- (b) At all times all necessary arrangements shall have been made and be thoroughly understood by all concerned, for the purpose of ensuring compliance with this subregulation (3)(a).
- (c) No person shall—
  - (i) without the consent of the manager fire a charge which is inside or in contact with a piece of timber underground in a mine; or
  - (ii) leave a naked light close to timber in any place in a mine.
- (d) Every underground chamber in which machinery, except machinery operated by compressed air, is placed shall be so constructed and maintained as to be fire-proof.
- (e)
  - (i) All oil, grease and oily cotton-waste or rags; underground in the mine, shall be kept in securely covered metal containers.
  - (ii) Chips, shavings, waste, wood, paper, or other inflammable material shall not be left lying about in the mine, or be thrown into passes.

**[Owner, manager, contractor]**

#### *Height of Filling in Stopes*

**76.** When stoping is being carried on and the excavated space is being filled with waste rock, sand, earth, or broken ore as the support of persons working the stope, the back or roof of the excavation measured at right angles from the mean surface of the filling shall be at no time more than twelve feet from the filling.

**[Manager, contractor]**

#### *Duty of Employees as to Safety*

**77.** (1) A person working in a mine—

- (a) shall at all times carefully observe the condition of the place where he is working or is about to work and of the plant and equipment therein;
- (b) shall take all steps within his power to make his working place safe and to remedy any defects apparent in equipment;
- (c) shall report to the person under whose immediate direction or control he is working any defect or danger which comes to his notice;
- (d) shall not work with any defective plant or equipment;
- (e) shall not work in an unsafe place except for the purpose of making it safe.

(2) Every foreman and every shift boss in a mine and every person in charge of a portion of a mine shall on changing his shift inform the person who relieves him of the state of the workings, plant, and equipment in the part of the mine for which he is immediately responsible in his character as such.

**[Manager, contractor]**

*Places Forbidden to Intoxicated Persons*

**78.** No person under the influence of liquor shall be in any of the following places in or at a mine—

- (a) underground; or
- (b) in any room or building in which an engine, machinery, or plant is kept; or
- (c) in any magazine for the storage of any explosive; or
- (d) within fifty feet of any excavation or surface workings. **[Manager, contractor]**

**DIVISION 5—WINDING AND SIGNALS***Winding Engines to be Kept Ready for Use*

**79.** Where egress from a mine is usually effected by means of a winding engine, that engine shall be kept ready for use and a driver shall be in charge of it at all times when any person is underground in the mine. **[Manager, contractor]**

*Duty to Provide Cages*

**80.** Where a shaft is more than two hundred feet deep and an engine is used for lowering, the requirements of the next following regulation shall be provided for the transport of such men: Provided that this regulation shall not be deemed to prohibit the use of buckets for raising or lowering men in shafts or winzes which are in course of being sunk, or for raising or lowering mine products, debris, or materials or tools used for mining, or prohibit the raising or lowering of skipmen in their skips. **[Owner, manager, contractor]**

*Requirements as to Cages*

**81.** Every cage in use for raising or lowering men shall comply with the following requirements:—

- (a) In a single-deck cage and in the top deck of a multiple-deck cage there shall be a clear height of at least six feet six inches between the floor and the underside of the moving parts of the safety gearing, or if that is outside the cage, between the floor and the cover of the cage:
- (b) In every deck other than the top deck of a multiple-deck cage there shall be a clear height of at least six feet six inches between the floor of that deck and the floor of the deck immediately above:
- (c) The cover of the cage shall be of metal not less than three sixteenths of an inch thick, and shall be securely hung on hinges and fitted in a sloping position so as to be readily lifted upwards by persons within the cage:
- (d) If the cage is multiple decked, portion of each intermediate floor shall be hinged so as to allow persons below to raise that portion and have access to the deck above:

- (e) The sides of the cage shall be fitted with suitable covering to protect the persons therein;
- (f) The cage shall have a gate and a drop-bar fitted to each entrance thereto;
- (g) The cage shall be fitted with safety-grippers to prevent its sudden fall down the shaft. [Owner]

*Overwind Catches*

**82.** (a) Every cage and skip used on the mine shall be fitted with detaching-hooks to prevent it from coming into contact with the poppet-head;

(b) Automatic overwind disengaging-bells or catch-plates shall be fixed below the winding sheaves of every shaft in which a cage or skip is used, so as to prevent the cage or skip from coming into contact with the poppet-head and from falling down the shaft when detached from the rope by overwinding;

(c) An access platform shall be constructed at such bells or catch-plates above each shaft. [Owner]

*Detaching-Hooks*

**83.** (a) A test hole of three-eighths of an inch shall be bored through the plates of each detaching-hook when the copper rivet is in position, and such test hole shall be kept clear;

(b) A clearance of at least ten feet shall be provided between the detaching-hooks of a cage or skip when the cage or skip is at the highest working landing, and the point of detachment in the event of overwinding. [Owner]

*Cleaning of Safety Appliances*

**84.** (a) Every detaching-hook and every safety-catch shall be taken to pieces, examined, cleaned, and oiled at least once a month by a competent person;

(b) A record of all action taken pursuant to paragraph (a) of this regulation shall be entered forthwith in the Machinery Record Book. [Manager, contractor]

*Duty to Test Cages*

**85.** (a) The safety-grippers of every cage and skip shall be tested from the drum at least once a month with a maximum load on the cage or skip;

(b) The result of the tests shall be entered forthwith in the Machinery Record Book;

(c) No cage or skip which is not in good order shall be used. [Manager, contractor]

*Requirements as to Winding Engines*

**86.** (1) Every winding engine used at the mine shall comply with the following requirements:—

- (a) Each drum shall be provided with effective brakes capable of being applied by the driver without leaving his driving position:
- (b) The engine shall be fitted with a dial or indicator which enables the engine-driver to determine the position in the shaft of each cage or other conveyance being operated by the engine:
- (c) The engine shall be fitted with apparatus to ensure that a drum which is out of gear will not revolve:
- (d) Each drum shall be fitted with horns or flanges and any other necessary appliances to ensure that the rope will not slip off the drum. **[Owner]**

(2) No person shall use or cause or permit to be used in a mine a winding engine which in any respect does not comply with this regulation or is in any other respect unsafe for immediate use. **[Manager, contractor]**

(3) Notwithstanding anything contained in this Division, no winding engine of the type known as "Koepe" or "Friction Winder" shall be installed in or about any mine without the prior approval of the Chief Inspector in writing. **[Owner, manager, contractor]**

#### *Travelling in Cage with Tools*

**87.** No person shall knowingly raise or lower tools (other than small tools in containers) or mining materials in a mine shaft in the same cage as men: Provided that this regulation shall not apply to surveyors, electricians, platmen, fitters or shaft-repairers with their assistants travelling with tools required for their work, nor to any person having custody of explosives in the cage nor to any employees specially authorised by the manager to travel with tools in cases of emergency. **[Manager, contractor]**

#### *Covers of Cage to be Closed*

**88.** No person shall give the signal for a cage containing persons to be raised or lowered unless the covers, gates and dropbars of the cage are closed: Provided that the foregoing provision shall not apply to covers if the cage is being used for inspection or repair of the shaft and covers are open for that purpose. **[Manager, contractor]**

#### *Winding in Single Gear*

**89.** (1) Except in case of emergency, no person shall operate or cause or permit any person to operate, for the purpose of raising or lowering men in a cage, a winding engine having two drums while one of the drums is out of gear and loose on the shaft which operates it.

(2) If in an emergency men are raised or lowered in a cage by a winding engine having two drums while one of the drums is out of gear on the shaft that operates it, the manager shall within twenty-four hours thereafter notify an inspector in writing of that fact, and of the circumstances of the emergency. **[Manager, contractor]**

*Cages to be Disconnected or Supported During Repairs to  
Clutch or Brake*

**90.** No person shall carry out repairs to the clutch or brakes of a winding engine while ropes are attached to the drums of such engine unless the cages or skips are detached from the ropes, or are firmly supported by some means other than the ropes. **[Manager, contractor]**

*Use of Winches*

**91.** (1) No person shall use a friction winch for the purpose of raising or lowering persons in a mine.

(2) No person shall lower any person in a mine by means of a winch which, at the time, is controlled by the brake alone. **[Manager, contractor]**

*Speed of Winding*

**92.** The person driving the winding engine shall so control the engine that a cage, skip or bucket is not raised or lowered at a speed exceeding five hundred feet per minute while it is within two hundred feet of the surface or of the bottom stopping place. **[Manager, contractor]**

*Test Certificates of Winding and Haulage Ropes*

**93.** (1) Before a new winding or haulage rope is used in a mine a true copy of the maker's certificate stating—

- (a) details of the construction of the rope;
- (b) the class of steel of which it is made;
- (c) the breaking strain of the rope;

shall be deposited with an inspector. **[Owner, manager, contractor]**

(2) No person shall use as a winding or haulage rope any rope which has been previously used for any other purpose, or on a different winding engine or drum, or in a different shaft, unless—

- (a) a complete record of the previous use of the rope and the purpose for which it is to be used has been furnished to an inspector; and
- (b) the approval of the inspector has been obtained for the proposed use.

**[Owner, manager, contractor]**

(3) An inspector may request the owner to obtain a certificate of the breaking strain of any rope in use or about to be used in a mine from the Engineering School of the University of Adelaide, or from any other testing station indicated by the inspector and approved by the Chief Inspector, and to produce such certificate to the inspector. The owner shall comply with any such request.

(4) No spliced rope shall be installed on a mine for the purpose of raising or lowering men or material, but this shall not prevent the splicing of "eyes" in the ends of winding ropes or haulage ropes. **[Owner, manager, contractor]**

*Strength of Winding Ropes*

**94.** Every rope—

- (a) used for raising or lowering persons shall have a breaking strain of at least eight times the working load;
- (b) used for raising or lowering materials shall have a breaking strain of at least six times the working load;
- (c) whether used for raising or lowering men or materials shall have a breaking strain of at least three-quarters of its breaking strain when new;
- (d) used in a mine shall have no defect rendering its use unsafe in the circumstances.

**[Owner, manager, contractor]**

*Examination of Winding Ropes, Plant and Equipment*

**95.** The following examinations of ropes, plant and equipment on the mine shall be carried out by a competent person:—

- (a) Each winding rope and the chains, shackles and other couplings by which it is attached to the cage, the brakes and depth indicators on the winding engines, each cage and its safety catches, the head sheaves and every external part of the winding arrangements shall be examined at least once a day:
- (b) The shaft guides, the winding compartments and the signalling arrangements shall be examined at least once a week:
- (c) Each rope shall be examined at least once a month in order to discover the amount of deterioration. In this examination the rope shall be thoroughly cleaned at places not more than one hundred feet apart, and the person making the examination shall note the conditions of the external parts of the rope and, as far as possible, the conditions of the internal parts, and any significant reduction in the diameter of the rope; and shall estimate the reduction in the strength of the rope due to wear.

The person making an examination under this paragraph shall forthwith after the examination record the condition of the rope in the Machinery Record Book.

- (d) Every winding engine shall be examined internally and externally at least once a year. The person making the examination shall record the condition of the engine in the Machinery Record Book. **[Manager, contractor]**

*Rope Cleaning and Lubrication*

**96.** Each winding rope shall be cleaned and treated with rust-preventing and lubricating compound at least once in each month. **[Manager, contractor]**

*Periodic Tests of Rope*

**97.** Winding ropes shall be periodically tested in the following way:—

- (a) At intervals of not more than six months at least six feet shall be cut from each winding rope at the end attached to the cage or skip and tested:
- (b) In the thirteenth month after a new winding rope has been installed, sufficient rope shall be cut from the end of such rope attached to the cage or skip to allow a test to be made of six feet of rope which has repeatedly passed over the head-frame sheave, and such six feet of rope shall be tested.
- (c) Where there are more than two layers of rope wound on the drum of a winding engine, the rope shall be cropped at the drum at least once in each year, and six feet of rope taken from the end fixed to the drum shall be tested:
- (d) Every test under this regulation shall be for breaking strain and shall be made at the Engineering School of the University of Adelaide or a testing station approved by the Chief Inspector:
- (e) The manager shall forthwith after receiving the certificate of the results of a test forward to the Chief Inspector either the original certificate, or a copy of it certified as correct by the manager. **[Manager, contractor]**

*Record of Ropes*

**98.** A record of each winding rope used on the mine, setting out the following particulars concerning the rope, shall be entered in the Machinery Records Book:—

- (a) the shaft and compartment in which it was used;
- (b) the date on which it was first used;
- (c) the dates when it was shortened;
- (d) the dates when it was reshod;
- (e) the dates, nature and results of tests;
- (f) the dates when it was examined, cleaned or oiled;
- (g) the date when it was taken off. **[Manager, contractor]**

*Chains and Couplings*

**99.** (1) No chain shall be installed or used for raising or lowering a cage or skip in a shaft: Provided that a winding rope may be joined to a cage or skip by a coupling consisting of two separate chains of uniform size, each having a breaking strength of at least eight times the working load where the cage or skip is used for raising or lowering persons, or at least six times the working load where the cage or skip is used for raising or lowering material.

(2) At intervals of not more than six months all chains, shackles and other couplings and connections between a hoisting rope and the conveyance or load attached to it shall be annealed or otherwise treated so as to remove fatigue. **[Owner, manager, contractor]**

*Record of Chains and Couplings*

**100.** A record shall be entered in the Machinery Record Book of each chain, shackle and other coupling or connection used on a hoisting rope on the mine setting out the following particulars with respect to each such item:—

- (a) the date when it was first used;
- (b) its size and breaking strength;
- (c) its maximum working load;
- (d) dates of annealing or other treatment to remove fatigue;
- (e) its condition when examined.

**[Manager, contractor]**

*Definition of Working Load*

**101.** (1) For the purpose of those regulations working loads shall be calculated as follows:—

- (a) The working load of a hoisting rope shall be the sum of—
  - (i) the weight of the rope below the head sheave when the cage is at its lowest point; and
  - (ii) the weight of all chains, shackles and other couplings and connections between the hoisting rope and the cage; and
  - (iii) the weight of the cage; and
  - (iv) the maximum load at any time carried in the cage.
- (b) The working load of a chain, shackle or other coupling or connection between a hoisting rope and a cage shall be the sum of—
  - (i) the weight of all chains, shackles and other couplings and connections between the cage and the chains, shackle coupling or connection whose load is being computed; and

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- (ii) the weight of the cage; and
- (iii) the maximum load at any time carried in the cage;

(2) In the foregoing definition the word "cage" includes cage, skip, bucket or other like conveyance.

(3) In computing the maximum load carried in a cage, every person so carried shall be deemed to weigh one hundred and fifty pounds.

#### *Chairs at Plats*

**102.** (a) At every plat from which hauling operations are carried on, chairs, bearers or some other appliance to support the cage while at rest shall be installed; and

(b) At every plat where chairs or bearers are provided, a lever or handle by which a person can lower or raise the chairs or bearers without danger to himself shall be installed.

[Owner, manager, contractor]

#### *Numbering of Cages and Skips*

**103.** A distinguishing number shall be assigned to every cage or skip in a mine and that number shall be clearly painted or marked on the cage or skip. [Owner, manager, contractor]

#### *Number of Men to Ride in Cages*

**104.** (1) At each brace and stopping place in a shaft a notice shall be posted up clearly stating the maximum number of persons permitted to ride at one time in the cage or other conveyance used in that shaft.

(2) The number so stated shall be fixed by an inspector in consultation with the manager.

(3) No person shall give a signal for raising or lowering a cage containing more than the number of persons permitted to ride in the cage under this regulation.

[Owner, manager, contractor]

#### *Riding on Outside of Cages and in Skips*

**105.** (1) No person shall ride on the outside of a cage: Provided that the foregoing provision shall not apply where a person rides on a properly constructed platform on the outside of a cage when it is necessary to do so for the performance of some special duty.

[Owner, manager, contractor]

(2) A person being lowered or raised in an ore-skip in a vertical shaft shall stand on the bottom of the skip or on a platform provided for the purpose. [Manager, contractor]

*Guides in Shafts*

**106.** In every vertical shaft in which men are raised or lowered by machinery other than machinery operated by hand-labour, and in every division of any such shaft, guides and other necessary appliances shall be provided for steadying the load to all working levels and, where the shaft is in course of being sunk, to a point not more than sixty feet from the bottom of the shaft.

**[Owner, manager, contractor]**

*Knocker Lines*

**107.** (1) Where a cage, skip or bucket is used in a working shaft, division of a working shaft, or winze, a knocker line shall be installed capable of being worked by hand without levers and by which signals may be communicated from any part of such shaft, division or winze to the engine-driver.

(2) Every such knocker line shall be kept in good working order.

**[Owner, manager, contractor]**

*Code of Signals*

**108.** (1) A person giving a signal in a mine to indicate any of the matters mentioned in this regulation shall give it by knocks, rings, buzzes or other sounds (all of which are in this regulation called bells) and in accordance with the following table:—

- 1 bell—Stop
- 2 bells—Lower
- 3 bells—Hoist
- 4 bells—Men on
- 5 bells—Throw in or out of gear
- 7 bells—Firing signal
- 12 bells—Accident (to be followed by the signal for the level)
- 1 bell pause 1 bell—No. 1 level
- 1 bell pause 2 bells—No. 2 level
- 1 bell pause 3 bells—No. 3 level
- 1 bell pause 4 bells—No. 4 level
- 1 bell pause 5 bells—No. 5 level
- 2 bells pause 1 bell—No. 6 level
- 2 bells pause 2 bells—No. 7 level
- 2 bells pause 3 bells—No. 8 level
- 2 bells pause 4 bells—No. 9 level
- 2 bells pause 5 bells—No. 10 level
- 3 bells pause 1 bell—No. 11 level
- 3 bells pause 2 bells—No. 12 level
- 3 bells pause 3 bells—No. 13 level
- 3 bells pause 4 bells—No. 14 level
- 3 bells pause 5 bells—No. 15 level
- 4 bells pause 1 bell—No. 16 level
- 4 bells pause 2 bells—No. 17 level
- 4 bells pause 3 bells—No. 18 level
- 4 bells pause 4 bells—No. 19 level
- 4 bells pause 5 bells—No. 20 level

All bells shall be clear and audible to the person to whom they are signalled.

(2) No person in a mine shall use any of the signals mentioned in subregulation (1) of this regulation to indicate a meaning other than that specified in that subregulation.

(3) When men about to be raised or lowered are in the cage or other conveyance, the braceman or platman shall before giving any other signal give four bells indicating "men on": Provided that such signal of four bells need not be given when the firing signal has been given as mentioned in the next following subregulation.

(4) When it is necessary for men lighting charges in a shaft or winze to be raised in a cage or other conveyance, the following procedure shall be adopted:—

- (a) The person lighting the charges shall give the firing signal of 7 bells before any charges are lighted:
- (b) On receiving the firing signal the engine-driver shall raise the cage or other conveyance by giving the engine at least one complete revolution, and shall then lower it as a signal that he is ready to hoist:
- (c) The engine-driver shall then stand at his engine:
- (d) The charges may then be lit:
- (e) Upon receiving the hoisting signal of three bells the engine-driver shall hoist carefully. **[Manager, contractor]**

#### *Posting Code of Signals*

**109.** A metal plate with the code of signals clearly and conspicuously printed or painted thereon shall be posted in full view of the enginedriver, and at each working plat and at the brace.

**[Owner, manager, contractor]**

#### *Knowledge of Signals and Duties*

**110.** (1) No person shall act in a mine as platman, braceman, skipman or lander unless the person so acting is at least eighteen years of age, knows the prescribed code of signals and is competent to perform the duties belonging to his position.

(2) Every person working underground in a mine shall know the prescribed code of signals. **[Manager, contractor]**

#### *Oral Instructions in Shaft or Winze*

**111.** No person shall give any instructions by word of mouth to any person more than fifty feet above or below him in a shaft or winze, except through a telephone or speaking tube properly fitted in a compartment of the shaft or winze, being a compartment not used for hoisting.

**[Manager, contractor]**

*Speaking to Driver*

**112.** While a winding engine at a mine is in motion no person shall speak to the driver thereof, except for the purpose of giving him instructions in an emergency. **[Manager, contractor]**

*Gauges on Winches and Winding Engines*

**113.** Every winch or winding engine operated by power (other than human power) and used for hoisting shall be fitted with an accurate gauge or other effective device to indicate to the person in charge whether sufficient power is available. **[Owner, manager, contractor]**

*Cutting off Motive Power*

**114.** No person shall cut off the motive power from a winch or winding engine being used for hoisting at a mine unless it can be cut off without causing danger to any person. **[Manager, contractor]**

*Testing Engines After Stops*

**115.** When a winding engine has stopped working—

- (a) to enable repairs to be made; or
- (b) for more than four hours,

a person shall not use the winding engine for raising or lowering persons until the cage, skip or other conveyance operated by such engine has been run at least one complete journey up and down the working portion of the shaft. **[Manager, contractor]**

*Open Hooks*

**116.** No person shall hoist in a shaft or winze of a mine any bucket attached to the winding rope by an open hook. **[Manager, contractor]**

*Size of Skip or Man-Truck in Underlie Shafts*

**117.** Every skip or man-truck used in an underlie shaft shall have not less than four inches of clear space between the sides and top of the skip or man-truck and the sides and top of the shaft. **[Owner, manager, contractor]**

*Accident Connected with Winding Arrangements*

**118.** If in a mine, whether above or below ground there occurs—

- (a) any breakage of a rope or of any essential part of the winding machinery; or
- (b) any overwind; or
- (c) any accident in connection with the winding arrangements in any shaft through which men are raised or lowered,

the manager shall send a written report thereof to the Chief Inspector setting out the circumstances of the breakage, overwind, or accident, the cause thereof, the extent of the damage and the behaviour of any safety device involved in the accident. **[Manager, contractor]**

*Cranes*

**119.** (1) No person shall use a crane on a mine unless all the parts of the crane have sufficient strength for the work and are in safe working order. **[Manager, contractor]**

(2) All cranes shall be operated, maintained, and inspected in accordance with the rules governing the operation, maintenance and inspection of cranes as set out in the Code of the Standards Association of Australia known as the "Crane and Hoist Code A.S. No. C.B. 2/1960", and any amendments thereto. **[Manager, contractor]**

(3) No person shall install on a mine a new crane or service hoist unless it conforms in design, construction, erection and testing to the requirements of the Code of the Standards Association of Australia known as the "Crane and Hoist Code A.S. No. C.B. 2/1960", and any amendments thereto. **[Owner]**

**DIVISION 6—EXPLOSIVES**

*Interpretation of this Part*

**120.** In this Division—

"butt" means the bottom portion of a hole bored to take a charge of explosives, which portion remains in existence after the charge of explosives has been fired:

"high explosive" means an explosive which is not effective unless fired by a detonator:

"ramming" means to force vigorously into position:

"stemming" means sand or other inert material placed over explosives in the hole prepared for them:

"tamp" means to press into position by some means not amounting to ramming.

*Storage of Explosives*

**121.** (1) No explosives shall be kept in or on a mine in any place other than—

- (a) a Government magazine; or
- (b) a magazine or premises licensed under the *Explosives Act, 1936-1958*; or
- (c) a magazine approved in writing by an inspector. **[Owner, manager, contractor]**

(2) No inspector shall approve of a magazine or proposed magazine unless he is satisfied with the situation, construction, lighting, ventilation and safety thereof.

(3) An inspector may withdraw the approval of a magazine if he is satisfied that explosives can no longer be safely kept therein.

(4) No detonators shall be stored in the same magazine as other explosives.

[Owner, manager, contractor]

(5) (a) No person shall enter a magazine containing explosives, without the Manager's consent;

(b) All explosives in or on the mine shall be stored safely and handled with care.

[Manager, contractor]

(6) If a mine or part of a mine is abandoned all explosives shall be removed from it.

[Manager, contractor]

#### *Cutting of Fuses*

**122.** (1) Sufficient sharp knives suitable for cutting fuses to the lengths required, and crimpers to crimp detonators on to fuses shall be provided. [Owner]

(2) No person shall sever any fuse except with a sharp knife or cutting instrument.

[Manager, contractor]

(3) No person shall fix a detonator to a fuse except by crimping with a crimper supplied for that purpose. [Manager, contractor]

#### *Lights and Smoking*

**123.** (1) No person entering or being in a magazine in which explosives are stored shall have in his possession any exposed burning or incandescent substance.

(2) No person shall smoke while carrying, handling, or using explosives or while being within twenty feet of any explosives (whether being carried, handled, or used by another person or not). [Manager, contractor]

#### *Opening Cases of Explosives*

**124.** No person shall open a wooden case containing explosives—

(a) in any storage magazine; or

(b) within twenty feet of a storage magazine; or

(c) with any implement not made of wood, brass or copper. [Manager, contractor]

#### *Use of Explosives*

**125.** (1) No person shall take more explosives from a magazine than he reasonably expects to use on the day on which they are so taken. [Manager, contractor]

(2) When explosives taken from a magazine are not used on the day on which they are so taken, the person who took them from the magazine shall return them to the magazine on that day: Provided that a contractor working underground need not return explosives to the magazine as mentioned above if they are kept in a place of storage approved by an inspector.

[Manager, contractor]

(3) No person shall convey explosives from a magazine to the workings except in a securely covered container; and shall not convey detonators in the same container as other explosives.

[Manager, contractor]

(4) Sufficient securely covered containers for the purpose of conveying explosives from magazines to the workings of a mine shall be provided.

[Owner]

(5) No person who is under the age of twenty-one years or who does not understand the English language shall charge, or fire explosives.

[Manager, contractor]

(6) No person shall remove the wrappers from, or break the cartridges of, high explosive used in charging a hole: Provided that this subregulation shall not apply to primer cartridges, free-running explosives, or popping charges.

[Manager, contractor]

(7) No person shall—

(a) sink a detonator into the compound of a primer cartridge to a depth exceeding the length of the detonator;

(b) forcibly press a cartridge of high explosive into a hole of insufficient size.

[Manager, contractor]

(8) No person shall use a safety fuse for firing a charge unless the fuse is at least six feet long.

[Manager, contractor]

(9) No person shall charge a hole or cavity with explosives while any iron or steel tools are within twenty feet of such hole or cavity: Provided that a brass or copper tube may be used to assist in charging a hole, but not as a tamping stick.

[Manager, contractor]

(10) No person shall use any implement except a wooden tamping stick for tamping charges of explosives into the holes prepared for them.

[Manager, contractor]

(11) No person shall tamp explosive or stemming into a hole by ramming.

[Manager, contractor]

(12) No person shall fire a charge of explosives except a bulling charge unless stemming has been used to confine such charge.

[Manager, contractor]

#### *Boring Holes Underground*

**126.** No person shall bore a hole underground—

(a) in any face unless the whole of the face has been cleaned and examined for butts and misfires; or

- (b) in or within six inches of a butt. **[Manager, contractor]**

*Firing Explosives*

**127.** (1) Whenever blasting is done at any working face the person in charge of such blasting shall cause all holes then charged at that face to be fired.

If when blasting is done any charge at the working face is not fired or is not exploded, such charge shall be treated as a misfire in accordance with these regulations.

(2) The person in charge of blasting shall before a charge is fired—

- (a) cause all persons who are in places (herein called "the danger zone") where they might be injured by the blasting to be warned of the intended blasting, and of the locality thereof, and of the number of charges to be fired;
- (b) ensure that persons are stationed at suitable places for the purpose of giving warning of the intended blasting to persons approaching the danger zone;
- (c) wait until all persons in the danger zone have taken shelter or left such zone.

(3) Where two or more parties working near each other have firing to do, the persons in charge of the parties shall arrange between themselves the order of the firing so as to avoid confusion in counting the explosions at each working place.

(4) A person lighting more than one fuse at one lighting shall do so with an igniter specially made for lighting fuses.

(5) No person shall light more than fifteen fuses at one lighting.

(6) Where no more than eight charges are to be fired together, and the firing is not done by electricity or a detonating fuse, the person firing the charges shall use a multiple fuse cartridge: Provided that this subregulation shall not apply to "popping", or cutting of hitches.

(7) Where more than three fuses are to be ignited at one time in the same working face—

- (a) at least two persons shall be present; and
- (b) no person shall ignite a fuse unless another person is sufficiently near him to be able to assist him in case of accident or emergency.

(8) When charges are fired by safety fuses, the person in charge of the blasting shall count the number of explosions, and if he has any doubt whether all the charges have been exploded he shall proceed, in accordance with these regulations, as though each charge had misfired.

**[Manager, contractor]**

*Misfires*

**128.** (1) Where a charge prepared for firing by safety fuse has misfired, no person shall approach the charge within thirty minutes after lighting of the fuse.

(2) Where a charge prepared for firing by electric current has misfired, a person shall not approach the charge unless—

- (a) ten minutes have elapsed since the attempted firing; and
- (b) the conducting wires have been disconnected and short circuited.

(3) Where a charge of high explosive has misfired no person shall attempt to withdraw it from the hole, but the following actions shall be taken:—

- (a) The stemming shall be removed by water under pressure or compressed air and water, applied through a copper tube or a rubber hose with no ferrous metal at its free end. Provided that where a charge of gunpowder has misfired, the stemming may be withdrawn with a copper pricker:
- (b) Another priming charge shall be fired in the hole to explode the original charge:
- (c) If the second priming charge fails to explode the original charge, one or more additional holes shall be bored and fired. The position of any additional hole shall be determined by a shift boss or foreman or the manager after consultation with the person who bored the original hole. No additional hole shall be closer than twelve inches at any point to the original hole. **[Manager, contractor]**

#### *Treatment of Butts*

**129.** (1) If the butt of a hole in which a charge has been exploded remains after the explosion, no person shall do any work in a place where he might be injured by an explosion in the butt unless—

- (a) the work is solely for the purpose of making the butt safe; or
- (b) at least two competent persons working in the mine have inspected the butt and reported that there is no explosive in it.

(2) A person inspecting a butt for explosive shall first thoroughly clean it out with water.

(3) Where any explosive remains in a butt after firing, a misfire shall be deemed to have taken place. **[Manager, contractor]**

#### *Misfires Not Cleared Before End of Shift*

**130.** When a misfire occurs and the hole is not cleared of explosives before the end of the shift the person in charge of the firing shall—

- (a) report the misfire to his shift boss or the foreman or manager and to the man relieving him;
- (b) forthwith cause a barricade or other obstruction to be erected so as to prevent persons from approaching the misfire; and

- (c) forthwith cause a notice to be erected near the misfire containing the word "danger". **[Manager, contractor]**

*Inspection After Firing at End of Shift*

**131.** After charges of explosives have been fired in a working place at the end of a shift, no person shall commence work in that place until it has been carefully inspected by a competent person. **[Manager, contractor]**

*Procedure Where Explosive Burns Without Exploding*

**132.** When in an attempt to fire a charge of explosives, the charge burns without exploding—

- (a) no person shall approach the hole until one hour has elapsed from the time when the attempt was made;
- (b) no person shall place another charge in the same hole unless—
- (i) the hole has been filled with water, or a copper rod has been inserted in the hole for at least five minutes and upon withdrawal has been found sufficiently cool to enable the back of the hand to be held against it; and
- (ii) the hole has been tested with a wooden tamping stick and found clear and free of obstruction;
- (c) If the hole is not free from obstruction it shall be dealt with as a misfire. **[Manager, contractor]**

*Ammonium Nitrate*

In addition to the general regulations in this Division the two following special regulations Nos. 133 and 134 shall apply to the handling and use of ammonium nitrate mixtures.

*Transport and Charging*

- 133.(1)** (a) All cartridges, bags and other containers of ammonium nitrate mixtures shall be labelled to indicate their contents. **[Owner]**
- (b) Ammonium nitrate mixtures shall be conveyed in covered containers. The lid of the container shall be fitted with a suitable fastening device to prevent as far as possible the mixture becoming damp or the accidental opening of the lid and the spillage or contamination of the contents. The container and lid shall be constructed of non-absorptive and non-corrodable material. The use of galvanized iron, zinc or copper shall not be permitted. Alternatively, explosives of this type may be conveyed in closed polythene bags of adequate thickness and strength. The contents of either type of container shall not exceed 50 lb. Provided that this requirement shall not prevent the conveyance of ammonium nitrate mixtures in bulk containers approved by the Chief Inspector of Mines. **[Owner]**

47.

(c) No mixing of ammonium nitrate with fuel oil or other approved materials shall be done underground. **[Manager, contractor]**

(d) Any spilt material shall be cleaned up promptly and disposed of either by introduction into the drill hole or by immersing in water. **[Manager, contractor]**

(2) (a) Pneumatic loading of ammonium nitrate mixtures shall not be used unless the loader is safe and efficient to the satisfaction of an Inspector of Mines.

**[Owner, manager, contractor]**

(b) The ammonium nitrate mixture shall be loaded through conductive tubing to the satisfaction of an Inspector of Mines. **[Owner, manager, contractor]**

(c) The loader and associated equipment shall be earthed by means of a flexible wire connected to a spike driven into the rock in a suitable location. No water lines, compressed air lines, rails, wire countered hoses or permanent electrical earthing systems shall be used as a means of earthing. **[Owner, manager, contractor]**

#### *Misfires*

**134.** When a misfire occurs with an ammonium nitrate mixture the following procedure shall be adopted:

(a) An attempt shall be made to wash out the stemming and explosive from the hole.

(b) If the attempt to wash out the hole is successful, the hole may be recharged and fired.

(c) If the attempt to wash out the hole is unsuccessful, and electric firing has been used, the hole shall be reprimed and an attempt made to explode the original charge.

(d) If the attempt to wash out the hole is unsuccessful and fuse firing has been used, or if the attempt made in (c) fails, the foreman or manager after consultation with the person who bored the original hole shall determine the steps to be taken to clean up the misfire and shall take those steps. **[Manager, contractor]**

#### *Firing in Hot Holes*

**135.** Notwithstanding anything contained in this Division, holes in hot ground shall be charged with explosives and fired in a manner approved by the Chief Inspector of Mines in writing. Rock in which the temperature exceeds 135°F. shall be considered hot ground.

**[Manager, contractor]**

#### *Electrical Firing*

**136.** (1) During an electric storm a person shall not do any work in connection with the electric firing of charges above ground or below ground where the firing is done from the surface.

**[Manager, contractor]**

(2) No person shall fire a charge of explosives electrically unless he is authorised to do so by the manager. **[Manager, contractor]**

(3) The name of every person who is authorised by the Manager to fire charges of explosives electrically shall be recorded in the Inspection Record Book. **[Manager, contractor]**

(4) For the purpose of electric firing suitable and efficient circuit testers, exploders, switches, fuses, conductors and other necessary apparatus shall be provided. **[Owner]**

(5) All such articles of equipment and apparatus shall be maintained in good working order and shall be tested at such intervals as are necessary to ensure their constant efficiency. If any such article is found to be inefficient or unsuitable it shall immediately be withdrawn from use. **[Manager, contractor]**

(6) Where electric firing conductors are used in the vicinity of other electric conductors, the firing conductors shall be prevented from coming into contact with other electric conductors or being affected by leakage of current from other conductors. **[Manager, contractor]**

(7) A blaster shall prevent firing conductors used by him from making electric connection with firing conductors in another circuit. **[Manager, contractor]**

(8) Before using an electric detonator a blaster shall test it for continuity and while testing it shall keep it covered so as to protect himself. **[Manager, contractor]**

(9) No person shall connect the leads from the detonators to the firing conductors leading to the face, unless the firing conductors are short circuited by joining the ends of the wires together at a place so located that a premature explosion would be harmless to men opening that short circuit later. **[Manager, contractor]**

(10) Immediately before firing a charge of explosives electrically the blaster shall open the short circuit and shall test the complete circuit of conductors and electric detonators for continuity. **[Manager, contractor]**

(11) Immediately after firing a charge of explosives electrically the blaster shall disconnect the conductors from the blasting machine, and shall replace the short circuit on the conductors by joining the wires together. **[Manager, contractor]**

*Use of Power and Lighting Circuits for Firing*

**137.** (1) Where electricity from a power or lighting circuit is used for firing charges the following requirements shall be complied with:—

(a) A special firing-switch shall be installed between the source of power and the firing conductors, and shall be so constructed and protected as to ensure that electric currents will not leak into the firing conductors: **[Owner]**

(b) The switch shall be placed in a switch-box so constructed that it cannot be shut unless the switch is in the off position: **[Owner]**

(c) There shall be only one key for each switch-box. The key of each switch-box shall be in the personal custody of an authorised blaster, who shall retain the key in his personal custody at all times while he is on duty as a blaster:  
**[Owner, manager, contractor]**

(d) Firing conductors shall be provided which are fitted with plugs capable of connecting them to appropriate bases in the switching apparatus. **[Owner]**

(2) No person shall connect firing conductors to the switching apparatus for the purpose of firing charges by electricity from a power or lighting circuit until—

(a) all persons have been removed from places where they may be injured by the explosion; and

(b) all preparations for firing have been made. **[Manager, contractor]**

(3) When firing conductors have been connected to the switching apparatus after compliance with the foregoing provisions of this regulation, the blaster shall immediately fire the charge. **[Manager, contractor]**

(4) Immediately after firing, the blaster shall disconnect such firing conductors from the switching apparatus, short circuit them by twisting the wires together, lock the switch-box and place the key in his pocket. **[Manager, contractor]**

#### *Use of Exploders for Firing*

**138.** (1) No person shall use an exploder, unless it is fitted with a locking device having a detachable handle, connection or key, without which the firing circuit cannot be completed. **[Owner, manager, contractor]**

(2) The handle, connection, or key of the exploder shall be placed in the personal custody of an authorised blaster, who shall retain it in his personal custody at all times while he is on duty as a blaster. **[Manager, contractor]**

(3) No person shall connect an exploder to firing conductors until—

(a) all persons have been removed from places where they are likely to be injured by the explosion; and

(b) all other preparations for firing have been made. **[Manager, contractor]**

(4) When the exploder has been connected to firing conductors after the foregoing provisions of this regulation have been complied with, the blaster shall immediately fire the charge. **[Manager, contractor]**

(5) Immediately after a charge has been fired by an exploder the blaster shall disconnect the firing conductors from the exploder, short circuit them by twisting the wires together, remove the handle or lock the mechanism, and place the handle or key in his pocket or otherwise secure it about his person. **[Manager, contractor]**

*Batteries Not to be Used for Firing*

**139.** No person shall use a primary or secondary battery for firing. **[Manager, contractor]**

**DIVISION 7—LADDERS AND TRAVELLING WAYS**

*Clearances and Manholes in Travelling Ways*

**140.** (1) The following requirements shall be complied with as regards every underground travelling way on which ore or materials are transported by a conveyance:—

- (a) A clearance of at least eighteen inches shall be maintained between each side of the conveyance and the wall of the travelling way: or
- (b) A clearance of at least twenty-four inches shall be maintained between one side of the conveyance and the wall of the travelling way: or
- (c) Manholes shall be cut in the walls of the travelling way at distances of not more than one hundred feet from each other and kept clear.

(2) No person shall transport ore or materials on an underground travelling way by a conveyance if any of the requirements of subregulations (1) have not been complied with.

(3) In this regulation "conveyance" includes any locomotive by which a conveyance is drawn.

(4) Nothing shall be transported in a conveyance which, when loaded or being so transported, extends on either side beyond the greatest width of the conveyance.

**[Owner, manager, contractor]**

*Securing of Shafts*

**141.** Where the natural strata through which a ladder shaft, working shaft, or pumping shaft passes are not safe, the shaft shall be securely timbered, lined or otherwise made secure.

**[Owner, manager, contractor]**

*Division of Shaft*

**142.** (1) When a shaft is used both for the ascent and descent of persons by ladders, and for raising or lowering men or material by hoisting, the portion used for hoisting shall be cased or otherwise separated by a partition from the portion containing ladders.

(2) No person shall ascend or descend in a shaft by ladder, while men or materials are being raised or lowered in the same shaft by hoisting, unless the portion of the shaft used for hoisting is cased or otherwise separated by a partition from the portion containing ladders.

(3) In this regulation "partition" means a partition adequate for the purpose of preventing persons in the portion containing ladders from being injured by materials and articles falling from the portion used for hoisting.

**[Owner, manager, contractor]**

*Ladderways*

**143.** (1) In every underground mine (whether any other means of ingress or egress is provided or not) there shall be provided—

- (a) at least one proper ladderway or footway leading from the surface to the workings;
- (b) suitable ladders or footways connecting floors in stopes, and connecting other places between which communication is necessary or usual; and
- (c) a proper ladderway or footway to the working face in every shaft, winze and rise which is in course of being sunk or risen: Provided that a chain ladder not longer than twenty feet may be used in sinking operations between the bottom of the permanent ladder and the bottom of the excavation.

(2) In this regulation "a proper ladder" means a ladder which is of sufficient strength to bear the weight of all persons likely to be on it at the same time, and which is firmly fixed to the timbering or wall of the shaft, stope, winze, rise or other place in which it is located; and "a proper ladderway" means a system of proper ladders. **[Owner, manager, contractor]**

*Provisions as to Ladders*

**144.** (1) The following provisions shall be complied with in relation to every ladder used in the mine for the ascent or descent of persons (other than a ladder not required by regulation 141 to be fixed to timbering or a wall):—

- (a) The ladder shall not be fixed in an overhanging position:
- (b) The ladder shall be inclined at the most convenient angle which the space in which the ladder is fixed allows:
- (c) The ladder shall have substantial platforms at intervals of not more than thirty feet:
- (d) Unless the ladder extends above the top of the opening so as to enable persons to hold on to it while stepping on to or off the ladder, hand grips shall be fixed in suitable positions above the ladder for that purpose:
- (e) There shall be at least five inches of space between the rungs of the ladder and the wall against which they are placed: and
- (f) The rungs shall be spaced at intervals not exceeding twelve inches between centres.

(2) Every ladder in a mine, whether governed by regulation 141 or not, shall comply with the requirements of subregulation 1(a), 1(b), 1(e) and 1(f) of this regulation 144.

**[Owner, manager, contractor]**

**DIVISION 8—INTERNAL-COMBUSTION ENGINES UNDERGROUND.***Permission to Use Engines Underground*

**145.** (1) Before an internal-combustion engine is installed underground in a mine, permission in writing shall be obtained from the Chief Inspector of Mines for the engine to be used underground. **[Owner, manager, contractor]**

(2) The Chief Inspector shall not give such permission unless he is satisfied that the engine complies with these regulations and can be used in the mine without danger to the men working therein.

(3) The Chief Inspector shall not give permission for the use underground in a mine of an internal combustion engine forming the prime mover of a locomotive or vehicle, unless it is a diesel engine.

(4) Any permission so given may be subject to any conditions which the Chief Inspector considers necessary as to the place where the engine may be used, inspections, and any other matters relative to the safety of those working in the mine.

(5) A person installing or using an internal combustion engine underground in a mine shall comply with every condition specified in the permission given by the Chief Inspector. **[Owner, manager, contractor]**

(6) Upon giving permission for the use of an engine underground the Chief Inspector shall assign a number to the engine and keep a record of such number in his office.

(7) The number assigned by the Chief Inspector to each engine shall be clearly painted on such engine. **[Owner, manager, contractor]**

*Examination of Internal Combustion Engines*

**146.** (1) All internal combustion engines used underground shall be examined daily by a competent person and at least once a week by a competent diesel engineer or mechanic, and the result of such weekly examination and the action taken to remedy defects (if any) shall be recorded in the Machinery Record Book.

(2) No person shall use an internal-combustion engine underground in a mine if the engine has any defect. **[Manager, contractor]**

*Fuel for Underground Diesel Engines*

**147.** (1) No person shall use in a diesel engine underground any fuel-oil having a flash-point of less than 150 degrees Fahrenheit, as determined by the Abel Apparatus or the Pensky-Martens closed cup method, or having more than 0.5 per cent sulphur by weight. **[Owner, manager, contractor]**

(2) Strong securely capped containers, free from leaks, shall be provided for the conveyance of fuel-oil to the underground workings. **[Owner, manager, contractor]**

(3) No person shall convey fuel-oil into the underground workings except in such containers. **[Manager, contractor]**

(4) All fuel-oil or lubricants underground in a mine, except those required for immediate use, shall be stored in a fuel-room complying with the following requirements:—

(a) The fuel-room shall be constructed of non-inflammable material:

(b) It shall be adequately ventilated:

(c) It shall be at least twenty feet from any point on a travelling way:

(d) It shall have a silled floor draining into a covered sump of sufficient size to hold one and a half times the maximum quantity of fuel and lubricants stored.

**[Owner, manager, contractor]**

(5) No person shall service any vehicle in a fuel-room.

**[Manager, contractor]**

(6) No person shall smoke in a fuel-room or cause or permit any naked light to be in a fuel-room. **[Manager, contractor]**

(7) A notice shall be posted up in the fuel-room stating in clearly legible words that smoking and naked lights are prohibited in the fuel-room. **[Owner, manager, contractor]**

#### *Underground Service Stations*

**148.** (1) No person shall fuel or service any diesel-engined vehicles underground in a mine except in a service station which—

(a) is constructed of non-inflammable material;

(b) has a concrete floor; and

(c) is adequately ventilated.

(2) No person shall fuel a diesel-engined vehicle except by means of a pump and hose.

(3) While a vehicle is being fuelled or serviced in a service station no person shall smoke in that station, or cause or permit any naked light to be therein.

(4) A notice shall be posted up in each service station stating in clearly legible words that smoking and naked lights are prohibited in the service station while vehicles are being fuelled or serviced therein.

(5) If any oil is spilt in a service station, the person in charge of the station shall immediately cause it to be taken up by dry sand which shall then be deposited in a receptacle and removed to the surface of the mine. **[Owner, manager, contractor]**

*Fire Extinguishers and Sand*

**149.** There shall be provided—

- (a) an effective fire-extinguisher on every diesel-engined vehicle used underground and in every underground fuel-room and service station; and
- (b) an adequate supply of dry sand in buckets in every underground fuel-room and service station for the purpose of taking up spilled oil, and for use in extinguishing fires. **[Owner, manager, contractor]**

*Exhaust-Gas*

**150.** (1) Every diesel engine used underground in a mine shall be fitted with exhaust-gas scrubbers or other apparatus to render toxic exhaust-gases harmless, or reduce the toxic content of such gases to the extent required by these regulations.

(2) All such scrubbers or other apparatus shall be kept clean and efficient, and the tanks of any such scrubbers shall be cleaned and filled with fresh water daily.

(3) The following requirements shall be complied with in relation to every diesel engine used underground in a mine:—

- (a) The exhaust-gases shall be discharged at a place remote from the operator.
- (b) The exhaust-gases shall contain not more than 1 500 parts per million of carbon monoxide nor more than 1 000 parts per million of oxides of nitrogen.
- (c) The quantity of air passing each minute through the place where the engine is being used shall be not less than fifty cubic feet per brake-horse-power or 5 000 cubic feet whichever is the greater. The brake-horsepower to be taken into account in computing the amount of air shall be the total horsepower of all the engines working in the said place at the same time.

The said quantity of air shall be in addition to the quantity prescribed by these regulations for any other purpose.

(4) At intervals not exceeding four weeks, samples of the air in places where diesel engines are used underground, and of the exhaust-gases of such engines, shall be taken and such samples shall forthwith be analysed and the results of the analyses entered in the Machinery Record Book. **[Owner, manager, contractor]**

*Duty to Post Up Regulations in this Division*

**151.** A legible copy of this Division of these regulations shall be kept posted in a conspicuous place at each underground service station and each underground fuel-room. **[Owner, manager, contractor]**

### DIVISION 9—UNDERGROUND LOCOMOTIVES

**152.** (1) In this Division "locomotive" means a vehicle with motive power used for drawing other vehicles and includes a shuttlecar.

(2) Where a locomotive is propelled by a diesel engine, the locomotive shall be deemed also to be an "internal combustion engine" and an "underground diesel engine" and Division 8 of this Part shall apply accordingly.

#### *Permission to Use Locomotives*

**153.** (1) No person shall use a locomotive underground in a mine unless the Chief Inspector has given permission in writing for that locomotive to be so used.

**[Owner, manager, contractor]**

(2) The Chief Inspector shall not give such permission unless he is satisfied that the locomotive complies with these regulations and can be used in the mine without danger to the men working therein.

(3) Any permission so given may be subject to any conditions which the Chief Inspector considers necessary as to the place where the locomotive may be used, inspections, and other matters relative to the safety of those working in the mine.

(4) A person using a locomotive underground in a mine shall comply with every condition in the permission given by the Chief Inspector.

**[Manager, contractor]**

(5) Upon giving permission for the use of a locomotive underground the Chief Inspector shall assign a number to the locomotive and keep a record of such number in his office.

(6) The number assigned by the Chief Inspector to each locomotive shall be at all times kept clearly painted on such locomotive.

**[Owner, manager, contractor]**

#### *Storage-Battery Locomotives*

**154.** The Chief Inspector shall not give permission for a storage-battery locomotive to be used underground unless (in addition to the requirements of regulation 153(2))—

- (a) it is constructed as far as possible of non-inflammable material; and
- (b) any inflammable material used in its construction is covered by a substantial metal covering; and
- (c) the electrical equipment is contained in substantial enclosures designed to resist rough usage; and
- (d) all battery enclosures are fitted with efficient ventilators to disperse the gases generated by the batteries; and
- (e) no part of the structure of the locomotive is part of the electrical circuit; and
- (f) the voltage does not exceed 150 volts.

*Battery-Charging Stations Underground*

**155.** No person shall charge a battery underground except in a charging station complying with the following requirements:—

- (a) The station shall be constructed wholly of non-inflammable material:
- (b) The station shall be ventilated sufficiently to prevent any harmful accumulation of gases:
- (c) The charging apparatus shall be installed on that side of the racks towards which the air is drawn: and
- (d) An effective and suitable fire extinguisher, and a sufficient supply of dry sand in buckets for extinguishing fires shall be kept at the station.

**[Owner, manager, contractor]**

*Smoking and Having Burning Materials Near Charging Stations*

**156.** (1) No person shall—

- (a) smoke inside an underground battery-charging station or within ten yards thereof;
- (b) cause or permit any burning material to be in or within ten yards of any such charging station.

**[Manager, contractor]**

(2) A notice shall be kept posted in each charging station stating in clearly legible words the effect of the foregoing subregulation.

**[Owner, manager, contractor]**

*Safety Provisions for Locomotives*

**157.** (1) Every locomotive used underground in a mine shall comply with the following requirements:—

- (a) The locomotive shall be equipped with—
  - (i) efficient brakes;
  - (ii) an efficient headlight;
  - (iii) means for giving an audible warning signal of the approach of the locomotive, and the same shall be kept in efficient working order.

**[Owner, manager, contractor]**

- (b) The locomotive shall be designed so that the controls cannot be operated unless the driver is seated in the locomotive;

**[Owner]**

- (c) An effective and suitable portable fire-extinguisher shall be carried on the locomotive within easy reach of the driver;

**[Owner, manager, contractor]**

- (d) If the locomotive is pushing one or more trucks an efficient headlight shall be affixed on the front of the leading truck. **[Owner, manager, contractor]**

(2) The diesel engines of locomotives used underground shall not be left running for long periods unnecessarily while the vehicles are stationary. **[Manager, contractor]**

*Inspection of Locomotives*

**158.** (1) The manager shall by writing in the Machinery Record Book appoint one or more competent persons to make daily inspections of locomotives and shall allot to each person so appointed the locomotives which he is to inspect.

(2) Every person so appointed shall—

- (a) at least once in every working day inspect each locomotive in use allotted to him for the purpose of ascertaining whether it is safe and in good working order;
- (b) immediately report to the manager any defects in any such locomotive;
- (c) record in the Machinery Record Book whether each locomotive inspected by him is or is not safe and in good working order, and if not, enter in the said book particulars of the defects. **[Manager, contractor]**

*Inspection of Roads*

**159.** (1) Every road on which locomotives are used underground in a mine shall be inspected each day by a competent person, and the names of all persons appointed to make such inspections shall be entered in the Machinery Record Book.

(2) The person appointed to inspect any such road shall—

- (a) at least once in every working day inspect so much of the road as is used, for the purpose of ascertaining whether it is free from obstruction and otherwise safe, whether the ventilation complies with these regulations, and whether there is sufficient clearance for the locomotives used therein and for any vehicles drawn by any such locomotive;
- (b) report any defect or unsafe condition in writing to the manager. **[Manager, contractor]**

*Unsafe or Defective Locomotives or Roads*

**160.** No locomotive shall be used underground in a mine if the locomotive or the road on which it runs is unsafe or defective in any way. **[Manager, contractor]**

*Load, Speed and Regulations*

**161.** (a) An accurate record shall be kept in the Machinery Record Book of the maximum load which each locomotive used underground in a mine can safely carry and the maximum speed at which it can safely be driven:

(b) A notice, clearly visible to the driver shall be affixed to each such locomotive stating in clearly legible letters and figures the maximum load and maximum speed recorded as aforesaid:

(c) Notices shall be posted in the roadway so as to be clearly visible to drivers of locomotives thereon, setting out any special precautions necessary to be observed by drivers to ensure safe running. **[Owner, manager, contractor]**

*Riding on Locomotives*

**162.** No person other than the driver or a shunter shall ride on a locomotive underground in a mine except with the permission of the manager. **[Manager, contractor]**

**DIVISION 10—USE OF ELECTRICITY**

*Interpretation*

**163.** In this Division—

"aerial conductor" means a conductor which is supported by insulators above the ground and is directly exposed to the weather:

"approved" means approved by an Inspector of Mines:

"cable" means an insulated conductor or two or more insulated conductors laid up together, whether provided with an overall protective covering or not:

"conductor" means a wire, cable, or other form of metal suitable for carrying current, but does not include a wire, cable or other metallic part directly employed in converting electrical energy into another form of energy:

"damp place" means a place where moisture is either permanently or intermittently present to such an extent as to be likely to impair the effectiveness or safety of an installation which otherwise complies with the requirements of these regulations:

"earthing system" means all conductors, clamps, earth clips and earth plates or pipes (including any metallic-piping system to which such cables and other conductors, clamps or clips are attached) used to maintain any portion of an installation at earth potential or necessary to ensure that an installation is effectively earthed:

"voltage" means the difference of electrical potential under normal conditions between any two conductors through which a supply of energy is given, or between any part of either conductor and earth:

"system" means an electrical system in which all the conductors and apparatus are electrically connected to a common source of supply: and

"trailing cable" means a cable suitably insulated and protected for the supply of electric power to portable electrical apparatus.

*Application*

**164.** The regulations in this Division shall apply to electrical installations and apparatus at or in mines.

*Wiring Methods and Materials*

**165.** Where these regulations do not prescribe the wiring method or materials to be employed, Parts I and II of the Wiring Rules of the Standards Association of Australia, 1961 and any amendments thereto shall be observed.

*Conductors and Appliances to be Efficient*

**166.** All electrical apparatus and conductors shall be sufficient in size and power for the work they may be called upon to do, and efficiently covered or safe-guarded, and so installed, worked, and maintained as to prevent as far as reasonably possible any danger of shock, fire or overheating, and shall be so constructed and proportioned that there shall be no appreciable rise in temperature when the current is passing through. **[Owner, manager, contractor]**

*Danger Notices to be Erected*

**167.** Conspicuous danger notices shall be erected and permanently maintained in a legible condition in the vicinity of all apparatus carrying electricity at more than six hundred and fifty volts. Every such notice shall contain the word "DANGER" in bold letters not less than one and half inches high, and shall state the voltages at which the apparatus operates. **[Owner, manager, contractor]**

*Earthing Frames, Etc.*

**168.** The armouring of conductors, and the frames, bed-plates and metallic coverings of generators, transformers, rheostats, liquid switches, motors and other apparatus, including portable devices, shall be properly and efficiently connected to earth. Earthing conductors shall be of stranded copper of a cross-sectional area not less than that of a 7/.036 (7/20 S.W.G.) conductor, except that for circuits up to twelve amperes, a 7/.029 (7/22 S.W.G.) conductor may be used. Where the cross-sectional area of portable leads is less than that of a 7/.036 (7/20 S.W.G.) conductor, the earthing conductor may be equal in cross-sectional area to the live conductor. Earthing conductors must be suitably protected from mechanical injury, and efficiently and permanently earthed. The connection of an earthing conductor shall be visible and accessible. The sectional area of an earthing conductor shall in no case be less than half of that of the conductor necessary to supply the connected load. Where an efficient earth or earths, such as water-pipe, cannot be obtained from the direct earthing system, the earthing shall be installed in accordance with the multiple-earth neutral system or the earth leakage protective system as outlined in rules Nos. 501-558 of the Wiring Rules of the Standards Association of Australia, 1961 and any amendments thereto. **[Owner]**

*Instruction in Duty and Competence*

**169.** No person shall work an electric motor or other apparatus unless he has been properly instructed in his duty and is competent for the work that he is set to do. **[Manager, contractor]**

*Switchboards*

**170.** Every switchboard shall be either—

- (a) placed in a dry well-ventilated place, or
- (b) effectively protected against moisture.

Except where a switchboard is a combination fuse switchboard with no live contacts at the back, there shall be a clearance of at least four inches between the wall upon which it is fixed and the back of the board. Where the area of a switchboard exceeds four square feet the distance from the wall shall be not less than twelve inches. A switchboard exceeding ten square feet in area shall be mounted on standards supported by the floor, and shall have a clear space of two feet six inches between the wall and any live metal. All stays and conductors shall be so arranged as to allow of head room of not less than six feet six inches. Every switchboard shall be provided either with a main no-volt release attachment, which will ensure the simultaneous opening of all poles of the supply, or alternatively, each motor shall be provided with a no-volt attachment operating in a similar manner. Ample space shall be maintained in front of a switchboard for safe operation of switch gear. **[Owner]**

*Space at Back of Switchboards*

**171.** (1) The space at the back of a switchboard exceeding ten square feet in area shall be floored, and except in the case of a switchboard for a supply not exceeding two hundred and fifty volts, shall be closed by a self-closing door with a warning notice containing the word "DANGER" and setting out the voltage of the supply in a prominent position upon it. The floor at the back and front shall be firm and even, and insulating hardwood boards or mats shall be provided. **[Owner]**

(2) The space at the back of a switchboard shall not be used for the storage of any article.

**[Manager, contractor]**

*Provisions Where Voltage Exceeds Six Hundred and Fifty*

**172.** Where the electricity is at a voltage exceeding six hundred and fifty volts:—

- (a) there shall be no live metal work on the front of a switchboard within eight feet of a floor or platform, and the space between the back of a switchboard and the wall shall be not less than four feet in the clear; and
- (b) all terminals and live metal on machines shall be protected where practicable, with insulating covers or with metal covers connected to earth in a skilful and efficient manner. **[Owner]**

*Leakage Detection*

**173.** Efficient means shall be provided for indicating any defect in the insulation of a system, unless the multiple-earth neutral system used. **[Owner]**

*Live Parts of Fittings*

**174.** All live metal on main and distribution switches and fuse boards shall be mounted on incombustible and insulating material, and shall be fixed in as dry a situation as practicable.

[Owner]

*Fuses or Cutouts*

**175.** Every sub-main circuit or motor circuit shall be protected at its origin by an efficient fuse or other automatic cut-off on each active pole, but where the rated full-load current of a motor connected in the circuit exceeds sixty amperes, automatic maximum-current circuit-breakers shall be used: Provided that with high-rupturing capacity fuse a circuit breaker need not be used until the rated full load current exceeds eighty amperes. Every circuit breaker shall be provided with an overload trip-coil on each active pole. Fuses shall be of approved safe-replacement type and marked with the rated voltage and capacity.

[Owner]

*Replacing Fuses*

**176.** No person other than a person authorised by the manager or by some person appointed by the manager shall adjust or replace a fuse.

[Manager, contractor]

*Circuit Breakers*

**177.** Every automatic maximum-current circuit-breaker shall be so constructed and arranged that it opens the circuit without danger to any person and interrupts the current effectively in the circuit before it so exceeds the working rate as to involve danger.

[Owner]

*Switch Near Mine Entrance*

**178.** Where electric conductors go into a shaft-mouth or mine entrance from a generating or transformer station situated more than four hundred yards from the shaft-mouth or mine entrance, a main switch for cutting off the supply of electricity to the underground workings of the mine shall be placed in a box efficiently enclosed or protected or in a small switch-house near the shaft-mouth or mine entrance.

[Owner]

*Emergency Switches for Supply Outside Mine*

**179.** (1) Where conductors carry current to the mine from an outside source, a main switch shall be provided in a convenient position near the point of entry of such supply and shall be protected so as to prevent damage thereto.

[Owner]

(2) This switch shall be so placed that it can be operated without danger by a person unfamiliar with the operation of such switch-gear.

[Owner]

(3) In the event of this switch being locked up, the keys for obtaining access to it shall be kept in such places as to be immediately available at any time, day or night, to officials of the mine.

[Manager, contractor]

*Emergency Lamps*

**180.** In all machine rooms and places underground or on the surface where a failure of electric light may cause danger, suitable lamps or other proper lights shall be kept ready for use in the event of such failure. **[Owner, manager, contractor]**

*No Conductors Near Mine Hoist*

**181.** No electric conductor of any kind shall cross over, or be placed in such a position that it could fall on or foul, any mine hoisting rope. **[Owner]**

*Lightning Arresters on Overhead Lines*

**182.** All overhead transmission lines and feeders to the shaft or mine entrance shall be provided with effective lightning arresters connected to earth in a workmanlike manner. **[Owner]**

*Conductors in Shafts*

**183.** All conductors used in shafts shall be thoroughly insulated and substantially fixed. Shaft conductors not capable of sustaining their own weight shall be properly supported at intervals varying according to the weight of the conductor. **[Owner]**

*Conductors in Ladderways*

**184.** Conductors in ladderways shall be so installed as to prevent any person using the ladderway from receiving a shock. **[Owner]**

*Conductors in Haulage Ways*

**185.** Where the conductors in a main haulage way cannot be kept at least one foot from any part of the cage, skip, tub, or truck, they shall be specially protected. Where separate conductors are used they shall be fixed as far apart as possible. **[Owner]**

*Trailing Cables Protection*

**186.** Trailing cables for portable apparatus shall be flexible, heavily insulated and protected from mechanical injury by a suitable sheathing or the equivalent. If a flexible metallic covering is used as a means of protection against mechanical injury, it shall not alone be used to form an earth conductor for the portable apparatus. **[Owner]**

*Trailing Cable Inspection*

**187.** Each trailing cable in use on a mine shall be examined daily for abrasions and other defects by a person or persons appointed by the manager. Such person or persons shall record daily the result of such examination in the Inspection Record Book. **[Manager, contractor]**

*Trailing Cables—How to be Connected*

**188.** The conductors of a trailing cable shall be divided at the apparatus end only for such a length as is necessary for the making of connection to the apparatus, and the cable with its outer covering complete shall be held by a suitable clamp on the motor frame of the apparatus 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 connection with the apparatus. **[Owner]**

*Trailing Cables—Terminal Boxes*

**189.** At points where a trailing cable is joined to a main cable, an efficient type of switch and a plug outlet with earthing device shall be installed capable of entirely cutting off the electricity from the trailing cable. **[Owner]**

*Machines Not to be Left with Current On*

**190.** No person in charge of a portable machine shall leave the machine while it is working, nor shall he allow the trailing cables to be dragged along by the machine. A person in charge of a portable machine shall, before leaving the working place, see that the electricity is cut off from the cables. No person shall make repairs to a portable machine until the electricity has been cut off from the trailing cables. **[Manager, contractor]**

*Poles to be Kept in Good Condition*

**191.** All poles carrying electric conductors shall be maintained in good condition and shall be of sufficient strength to support the conductors, and shall be examined at least once every six months by a competent person in such a way as to discover any deterioration. **[Owner, manager, contractor]**

*Cross Fittings to be Kept in Good Condition*

**192.** All cross-arms, insulators and attachments of conductors shall be examined for deterioration by a competent person at least once every six months, and all defective crossarms, insulators and attachments shall be removed and replaced, and the conductors restrained if required. **[Owner, manager, contractor]**

*High and Low Voltage Conductors*

**193.** Overhead conductors carrying electricity at a voltage exceeding six hundred and fifty volts shall be erected so that any other conductors carrying a lower voltage are below them, and at the points of support and also between supports, at least three feet space in any direction shall be allowed between conductors carrying different voltages. **[Owner]**

*Disused Conductors*

**194.** All electric conductors, whether inside or outside a building, which are permanently out of use, shall be disconnected from the mains and removed. **[Manager, contractor]**

*Conductors Not to Lie About*

**195.** Conductors which are temporarily out of use shall, where practicable, be disconnected from the supply and coiled up, except those on "standby-plant", kept in working order for emergencies. Dead and disused conductors shall not touch or make contact with live conductors.

[Manager, contractor]

*Motor Protection*

**196.** Every motor, together with its starting resistances, shall be protected by switches which are capable of entirely cutting off the supply and fixed in a convenient position as near the motor as practicable. Where the starting switch is remote or not visible from the motor, an efficient cut-off switch for isolation purposes shall be placed adjacent to the motor so as to be readily handled in case of emergency.

[Owner]

*Remote Control*

**197.** (1) Remote-control haulage or conveyor systems underground shall be provided with convenient means of stoppage at any point along the system.

(2) Where a motor is operated by remote control the circuit shall be so arranged that such a motor after being stopped at any point cannot be operated again until released at that point.

[Owner]

*Adjustments to Live Parts*

**198.** Where the live parts of electrical apparatus, switches or machines working at a voltage above two hundred and fifty volts have to be handled for the purpose of testing or adjustment, gloves, mats and shoes of india rubber or other insulating material for the use of the person handling the apparatus, switches or machines shall be supplied to and used by every such person.

[Owner, manager, contractor]

*Live Parts to be Guarded*

**199.** Every switch (except an oil or enclosed switch), circuit breaker and fuse shall be mounted on an incombustible and insulating base. All live parts of a switch, contact-breaker or fuse which it is necessary to handle in replacing or removing, and which are not in a switch-room or a compartment specially arranged for the purpose, shall be in a box or protected by a cover or guard. Every such box, cover or guard shall be of incombustible material, and shall be either non-conducting or of rigid metal, efficiently earthed and, as far as practicable, clear of all internal mechanism. No such box or cover shall be used for storing articles of any description.

[Owner, manager, contractor]

*Makeshift Not Allowed*

**200.** All points at which a circuit (other than a circuit for signals) has to be made or broken shall be fitted with proper switches.

[Owner, manager, contractor]

*Switches and Fittings to be Protected*

**201.** All open-type switch-gear such as main switches and fittings controlling an installation in a building, or electrical machinery, shall be so placed or protected as to prevent any person accidentally coming in contact with the live parts of the switches or apparatus, and switches shall be so arranged that their blades or moving parts are disconnected from supply in the "off" position. **[Owner]**

*Damp Places*

**202.** Electrical plant or gear in damp places shall be protected in an efficient manner to obviate the risk of shock to any person. **[Owner]**

*Knife Switches*

**203.** Every switch of the "knife" type shall be so constructed or arranged that the contacts cannot accidentally close when left open. **[Owner]**

*Posting of Regulations and Notices—Accidents and Fire Protection*

**204.** There shall be exhibited in conspicuous places throughout the mine or works—

- (a) legible copies of this Division;
- (b) legible notices warning unauthorised persons not to touch or interfere with any fallen or broken electric conductor, but to report it at once to the manager or electrician;
- (c) legible copies of proper instructions for the treatment of persons suffering from electric accidents, and all persons concerned shall comply with the notices and instructions. **[Owner, manager, contractor]**

*Fire Buckets and Sand and Extinguishers*

**205.** An adequate supply of clean dry sand in buckets or suitable chemical fire extinguishers as approved by the Fire Underwriters Association shall be kept near each main switchboard, ready for immediate use in extinguishing fires. **[Owner, manager, contractor]**

*Signalling, Firing Etc.*

**206.** The previous regulations in this Division shall not apply to apparatus used for telephone, telegraph or signal purposes or for the purpose of firing explosive charges. **[Owner, manager, contractor]**

*Signal Wires Protection*

**207.** No person shall cause or permit electric signal or telephone wires to come into contact with other electric conductors whether insulated or not. **[Manager, contractor]**

Notwithstanding anything contained in this Division, any electrical plant or apparatus installed, or in use, or contracted to be bought, before the coming into force of this regulation, may be continued in use or used subject to any reasonable conditions affecting safety that the Chief Inspector may prescribe.

## DIVISION 11—MANAGERS CERTIFICATES AND PERMITS

### *Qualifications for Mine Managers*

**208.** (1) No person shall act as the manager of a mine unless he holds an appropriate qualification in accordance with this regulation.

(2) For the manager of a mine, the appropriate qualifications shall be:

- (a) if twenty or more men are working at the mine—a first-class mine-manager's certificate;
- (b) if more than nine and not more than nineteen men are working at the mine—a first class or second-class mine-manager's certificate;
- (c) if not more than nine men are working at the mine and the owner has received a direction from the Chief Inspector that a qualified manager be employed thereat—a first-class or second-class mine-manager's certificate, or a special permit.

(3) No person shall employ as manager of a mine any person who does not hold a qualification required by this regulation to be held by the manager of such mine.

### *Board of Examiners*

**209.** (1) For the purposes of this Division there shall be a board to be called "The Board of Examiners for Mine Managers" consisting of the Chief Inspector of Mines and such number of appointed members, not less than two, as the Governor determines.

(2) The Governor shall make such appointments as are necessary from time to time to keep the board at its appointed strength; but a decision of the board made at a meeting at which a quorum is present shall not be invalid solely on the ground that there is a vacancy in the office of any member.

(3) The Chief Inspector of Mines shall be the chairman of the board, and shall have a deliberative vote, and in the event of equality of votes on any question, a casting vote also.

(4) Three members of the board shall form a quorum, and a decision concurred by a majority of the members of the board present at a meeting at which a quorum is present shall be deemed to be a decision of the board.

(5) The Governor may dismiss any appointed member of the board from his office for incapacity to perform his duties, neglect of duty, or any misconduct which in the Governor's opinion shows him to be unfit to be a member of the board.

(6) Every appointed member of the board other than a member appointed to a casual vacancy shall hold office until the thirtieth day of September in the third year after his appointment. A person appointed to a casual vacancy on the board shall hold office for the balance of the term of the member in whose place he was appointed.

(7) If for any reason the Chief Inspector of Mines is unable to act as chairman of the board, or there is a vacancy in the office of Chief Inspector, the Governor may appoint a person to act as chairman of the board until the Chief Inspector is able to act, or (as the case may be) a new Chief Inspector is appointed: provided that where a Chief Inspector is unable to act for a particular meeting the Director of Mines may appoint an inspector to act as chairman in his absence.

*Grant of First-Class Mine-Manager's Certificate*

**210.** Subject to these regulations the board may grant a first-class mine-manager's certificate to any of the following persons:—

- (a) Any person who has had practical experience in mining or quarrying for not less than three years and who has passed the examination conducted by the board for candidates for first-class mine-managers' certificates:
- (b) Any person who has had experience and holds qualifications accepted by the board as equivalent to the experience and qualifications required under paragraph (a) of this regulation.

*Grant of First-Class Mine-Manager's Certificate*

**211.** Subject to these regulations the board may grant a second-class mine-manager's certificate to any of the following persons:—

- (a) Any person who has had practical experience in mining or quarrying for not less than three years and who has passed the examination conducted by the board for candidates for second-class mine-managers' certificates:
- (b) Any person who has had experience and holds qualifications accepted by the board as equivalent to the experience and qualifications required under paragraph (a) of this regulation.

*Restricted Certificates*

**212.** (1) Where an applicant for a mine-manager's certificate satisfies the board that he is qualified by experience and knowledge to manage a mine at which he is or will be employed, or mines of any specified class, but the board is not satisfied that he is entitled to an ordinary mine-manager's certificate, the board may issue to him a restricted mine-manager's certificate of the first- or second-class.

(2) A restricted certificate shall contain therein a statement of the particular mine or particular class of mines which the holder of the certificate is entitled to manage.

(3) A restricted certificate shall not entitle the holder of it to be a manager of any mine other than a mine indicated in the certificate.

*Issue of Temporary Certificates*

**213.** (1) The board may if it deems it expedient to do so issue to any person (whether qualified for a permanent certificate under these regulations or not) a temporary first-class or second-class mine manager's certificate.

(2) A temporary certificate—

- (a) shall be in force for such period as the board specifies therein;
- (b) shall, while in force, have effect as an ordinary certificate of the same kind;
- (c) may contain any terms and conditions which the board thinks necessary in the public interest; and
- (d) may be cancelled by the board if any of the terms and conditions are broken.

*General Requirements for Certificates*

**214.** A certificate shall not be granted to any person unless—

- (a) he applies therefor on the form supplied by the board and satisfies the board of the facts giving him the right to be granted a certificate;
- (b) he satisfies the board either by passing a special examination set by the board or otherwise that he has an adequate knowledge of the law of South Australia relating to mining;
- (c) he is of good character and sober habits;
- (d) he is at least twenty-five years of age;
- (e) he has paid the fee prescribed in the Second Schedule hereto.

*Forms and Contents of Certificates*

**215.** The board shall fix the forms of certificates, and may include in any certificate a statement of any restrictions or limitations of the effect of the certificate and a statement of any qualifications of the holder which were taken into account by the board in granting the certificate.

*Examinations*

**216.** (1) The board shall hold examinations for each class of certificate not less frequently than once in every two years unless there are no candidates.

(2) The subjects of the examinations held by the board shall be as follows:—

FIRST- AND SECOND-CLASS MINE-MANAGERS' CERTIFICATES

1. Mining.

2. Ore-dressing and sampling.
3. Ventilation and hygiene.
4. Arithmetic and mensuration.
5. Mine surveying.
6. General and mining geology.
7. Mechanics and mining machinery.
8. Explosives.
9. Mining law.

*Credit for Passing Examinations*

**217.** The board may exempt any candidate for a certificate from the obligation to pass any examination conducted by the board, if the candidate satisfies the board that he is sufficiently qualified in the subject of that examination.

*Issue of Permits*

**218.** (1) The Chief Inspector may grant a permit to act as manager of a mine where less than ten men employed to any person who, in the Chief Inspector's opinion, has had sufficient practical experience and has a sufficient knowledge of these regulations.

(2) Every such permit—

- (a) shall authorise the holder to act as manager only of the mine mentioned in the permit;
- (b) shall remain in force for the period mentioned in the permit which shall not be longer than twelve months;
- (c) may contain any terms and conditions which the Chief Inspector deems necessary in the public interest; and
- (d) may be revoked by the Chief Inspector for a breach of any term of condition.

*Cancellation or Suspension of Certificates and Permits*

**219.** (1) If at any time it is proved to the board that the holder of a certificate, temporary certificate or permit, granted under these regulations, has been convicted or has been guilty of an offence against these regulations, or has been guilty of misconduct or negligence in or in connection with his work as a manager, the board may suspend or cancel his certificate or permit.

(2) If the board has reason to believe that any such holder has been guilty of any such offence, misconduct or negligence, it may hold an enquiry.

(3) The board shall hear and determine the matter of any alleged offence, misconduct or negligence, and section 41 of the *Acts Interpretation Act, 1915-1951* shall apply to such hearing and determination.

(4) The holder of a certificate or permit which is suspended or cancelled by the board under this regulation may within fourteen days after the decision of the board is made known to him make a written request to the Minister asking that the decision of the board shall be referred to a special magistrate for review.

- (a) The person making such a request shall deliver a copy of the request to the chairman or secretary of the board within seven days from the making thereof.
- (b) The board may on receipt of such a copy suspend the operation of its decision for a specified time, or until further order.
- (c) Upon receipt of any such request the Minister shall notify the Attorney-General thereof. The Attorney-General shall thereupon nominate a special magistrate to review the decision, and the magistrate so nominated shall review it accordingly.
- (d) The special magistrate shall give the board and the aggrieved person an opportunity of submitting to him any relevant evidence, information and arguments as to the matters in issue. The magistrate shall not be bound by rules of evidence but may inform his mind in any way which he deems appropriate, and may fix the procedure to be followed as regards the hearing.
- (e) After considering all the information, evidence and arguments, the special magistrate shall decide the question at issue, and make such orders as he deems just confirming quashing or varying the decision of the board or substituting any other decision which in his opinion should be given in lieu of the decision of the board.
- (f) The decision of the special magistrate shall not be subject to appeal.

**220.** The board shall keep a register of all certificates and permits issued under this Division.

## **DIVISION 12—MINERS' INSPECTORS**

### *Application of this Division*

**221.** The regulations in this Division shall apply to the appointment of miners' inspectors under section 12 of the Act and inspections to be made by them.

### *Notice of Meeting*

**222.** (1) Any five or more miners employed in a mine may by notice call a meeting for the purpose of electing miners' inspectors under section 12 of the Act.

(2) The notice shall be signed by not less than five miners employed at the mine, and shall be prominently exhibited at the mine, for at least three clear days before the day fixed for the meeting.

(3) The owner and the manager of the mine shall allow a notice of meeting in proper form to be exhibited at the mine as required by this regulation. **[Owner, manager, contractor]**

*Nominations*

**223.** Every candidate for appointment shall be nominated in writing by a miner employed in the mine at the time of nomination.

*Meetings and Elections*

**224.** (1) The miners present at the meeting shall elect a chairman who shall conduct the election in an orderly manner and shall arrange for a secret ballot to be held at the meeting if there are more candidates than the number of vacancies to be filled. A candidate for election shall not act as chairman.

(2) Only miners employed in the mine at the time of the meeting shall be eligible to vote at the election of miners' inspectors.

(3) At a ballot votes shall be indicated by crosses on the ballot paper. Each miner voting shall place a cross against the name of each candidate for whom he votes. A ballot paper shall be informal if it contains more crosses than the number of inspectors to be elected.

(4) If the number of candidates nominated does not exceed the number of inspectors to be elected, the chairman shall declare the nominees duly elected.

(5) The chairman of the meeting shall, as soon as possible after the election—

- (a) notify the Chief Inspector and the manager of the mine of the full names and addresses and occupations of the persons appointed and the date of the election; and
- (b) forward to the Chief Inspector a statutory declaration, signed by himself as chairman, that the regulations relating to the elections have been properly complied with in every particular; and
- (c) forward to the Chief Inspector signed and dated copies of the notice calling the meeting, and of the nomination paper or papers of the candidate or candidates.

(6) The Chief Inspector of Mines on being satisfied that the appointments have been made in accordance with these regulations shall record them and notify the fact of such recording in writing to the persons appointed and the manager of the mine.

*Duration of Appointment*

**225.** Every miners' inspector shall hold office for one year from the date of his election.

*Inspection by Miners' Inspectors*

**226.** (1) Miners' inspectors shall not be entitled to commence an inspection unless they have previously notified the manager of their intention to inspect, and arranged a time with the manager.

(2) The owner shall provide a record book for the purpose of recording every report made by miners' inspectors pursuant to the Act and the regulations.

(3) Miners' inspectors shall not inspect any mine other than that for which they have been appointed.

(4) No person shall wilfully prevent or hinder a lawful inspection of the mine by the miners' inspectors.

(5) No miners' inspector shall use the right of inspection of a mine for any purpose other than that of ascertaining and reporting whether the mine and its machinery are safe.

(6) Two miners' inspectors shall carry out inspections. One miners' inspector cannot act alone. If only one miners' inspector is available and he desires to make an inspection, the miners concerned may, after due notice to the manager, and approval by him to hold a meeting, elect a deputy to act only for the specific inspection. No manager shall capriciously refuse his approval to hold such a meeting. **[Manager, contractor]**

### **DIVISION 13—AMENITY OF MINE AREA AND ENVIRONMENTS**

#### *Interpretation*

**227.** In this Division, unless the context requires or some other meaning is clearly intended:—

"Top soil" means the surface soil of land in its natural state and exceeding 2 inches in depth, distinguishable from overburden, and capable of growing protective vegetation when spread over the soil parent or reclamation material.

"Approved" means approved by the Chief Inspector.

**228.** (1) Mining operations or practices or any operation or practice incidental or ancillary thereto shall interfere as little as possible with the amenity of the area or place.

(2) A person shall not cut, damage or interfere with trees or shrubs except those directly obstructing or preventing mining operations.

(3) A person shall not create a nuisance by conducting operations in such a manner that undue or excessive noise or dust is produced.

(4) A person shall not create or permit or suffer to be created a nuisance by conducting operations in a manner whereby any river, the sea or any river, dam, watercourse, billabong, anabranch or tributary becomes polluted.

**229.** A person shall take the topsoil from the site of any proposed excavation, dam or stockpile area and shall store it adjacent thereto for rehabilitation purposes or in an approved site and protected as far as is practicable from undue wind and water erosion.

**230.** A person shall not place products, overburden, waste material, dams or material of any kind in a position—

- (a) where they interfere with or could interfere with natural drainage;
- (b) where they cause or may cause damage to property; or
- (c) where they unduly interfere with the amenity of an area;
- (d) where they permit the pollution of the sea or any river, dam, watercourse, billabong, anabranch or tributary.

**231.** (1) Where practicable an owner of land upon which there is an excavation or from which top soil has been removed shall cause any excavation on that land to be drained and shall provide for a run-off that will not cause undue wind erosion or water erosion.

(2) The drainage constructed or permitted pursuant to subregulation (1) hereof shall not cause pollution of the sea or any river, dam, water course, billabong, anabranch or tributary.

**[Owner]**

**232.** (1) An owner shall—

- (a) give notice to the Chief Inspector when mining operations are complete;
- (b) a further notice when plant, machinery and materials are removed from that land; and
- (c) a further notice when the land has (in the opinion of the owner) been rehabilitated.

(2) An owner shall leave an area in a clean and tidy condition. **[Owner/Contractor]**

**233.** An owner shall within the period of two years after the day of cessation of mining operations on land, carry out or ensure the proper rehabilitation of the area in accordance with the directions given to him in respect of that area by the Chief Inspector.

**234.** A person shall not open up or rework an old mine or a previously worked deposit or develop or prepare a new deposit for the extraction of any metal or metalliferous ores and non-metallic minerals, excepting precious stones on proclaimed opal fields and petroleum, but including sand, gravel, shell, shale, clay, stone and earthy substances or erect buildings or plant for the treatment of such substances, unless he has given to the Chief Inspector of Mines notice, in writing, of his intention to do so at least 21 days prior to commencing such work or such working and has received the approval, in writing, of the Chief Inspector thereto. **[Owner]**

**235.** (1) The Chief Inspector may, by notice in writing, containing *inter alia*, the matters set out in the schedule to these regulations and addressed to the owner, order that any one or more of the following acts, matters and things be done or made within a time to be set out in that notice—

- (a) accurate surface maps, plans and sections of the mine and its immediate environs; and
- (b) developmental programmes for all surface works of the mine area.

(2) An owner to whom such a notice has been given under this regulation shall—

- (a) cause maps, plans, sections, programmes or any of these requirements to be prepared in accordance with the notice;
  - (b) deliver three copies thereof within the time set out in the notice to the office of the Chief Inspector of Mines at the Mines Department at Adelaide; and
  - (c) keep the original maps, plans, sections, developmental programmes or any of these requirements as the case may be, or correct copies thereof, at the mine office.
- (3) (a) The owner shall, at intervals of not more than 12 months, and also immediately before the abandonment of a mine cause all alterations of and additions to the workings of the mine to be correctly delineated on the current working maps plans and sections and on any copies kept at the mine office, and shall lodge three copies of any plan of these alterations, or additions at the office of the Chief Inspector of Mines at the Mines Department at Adelaide.
- (b) The owner shall at intervals of not more than 12 months lodge details of the developmental programme and submit them to the Chief Inspector for further approval.

(4) All maps, plans and sections prepared under this regulation shall be drawn to scales approved by the Chief Inspector and sufficient to show clearly all relevant detail.

(5) An owner to whom a notice has been given under this regulation to make and deliver developmental programmes may carry on extraction work but he shall not do any work or allow any work to be done that adversely affects or is likely to adversely affect amenities until approval has been given to those programmes or amended programmes as the case may be or unless he has received approval, in writing, of the Chief Inspector to those programmes or amended programmes as the case may be. **[Owner]**

**236.** The forms set out in the schedules to these regulations shall apply to the supply of particulars to the Chief Inspector pursuant to the regulations under this Division.

**PART II  
QUARRIES**

**DIVISION 1—GENERAL**

*Interpretation*

**300.** In these regulations unless the context otherwise requires or some other meaning is clearly intended—

"the Act" means the *Mines and Works Inspection Act, 1920-1964*:

"authorised person" means a person authorised pursuant to Section 7 of the Act to inspect a quarry:

"high explosive" means an explosive which is not effective unless fired by a detonator:

"inspector" means the Chief Inspector of Mines and any Inspector of Mines and Quarries appointed under the Act:

"machinery" means steam or other engines, boilers, furnaces, air receivers, crushing apparatus, ore-reduction or concentrating or treatment plants, winding or pumping gear, trucks and tramways, and includes all chains, straps, bands, belts, wires, rope cables, tackle, blocks, tools and all appliances of what-so-ever kind used in or about or in connection with a quarry:

"manager" means the person for the time being having the immediate charge or direction of the quarrying operations on a quarry:

"owner" means any person who, either in his own name and on his own account, or jointly, or jointly and severally, or concurrently with any other person or persons, is the immediate proprietor or lessee or occupier of a mine or any part thereof, but does not include a person—

- (a) who merely receives a royalty, rent, or fine from a mine; or
- (b) who is merely the proprietor of a mine which is subject to a lease, grant, or licence for the working thereof; or
- (c) who is merely the owner of the soil and not interested directly or indirectly in the products of the mine:

"quarry" means any quarry, open cut, gravel pit, sand pit, clay pit, borrow pit or any other excavation (not being a mine) made for the purpose of obtaining metal, mineral, coal, guano, precious stones, salt, gypsum, shale or other mineral substances, and includes crushing and treatment works on the site or elsewhere in the State:

"works" means any crushing plant, ore concentrating works, cyanide works, leaching plant or other works wherein operations are carried on for the treatment of the products of a quarry.

*Exemptions*

**301.** If the Chief Inspector is satisfied that compliance with a provision of this Part is unnecessary, impractical, or undesirable in any particular circumstances, or that a satisfactory alternative procedure, action, or installation will be adopted, taken or installed, he may, in his discretion, exempt any person or class of persons from the duty to comply with that provision.

Any such exemption may be granted subject to any conditions and limitations which the Chief Inspector deems necessary.

The Chief Inspector may cancel any such exemptions, if any condition thereof is contravened or not complied with, or if the circumstances under which the exemption was granted have altered.

*Duties and Responsibilities*

**302.** (1) The duties and responsibilities created and defined by the regulations and subregulations set forth in Column 1 of the schedule to this regulation shall be performed and discharged according to their tenor as hereinafter provided in this regulation.

(2) Subject to regulation 314 the persons whose respective titles or descriptions appear in Column 2 of the Schedule shall perform and discharge, or (as the case may require) ensure the performance and discharge of, the duties and responsibilities created and defined by those regulations and subregulations opposite which the titles or descriptions respectively appear, in all respects according to the tenor thereof: provided that where the title or description "Contractor" appears in Column 2 of the Schedule, the provisions of this subregulation and of subregulation (3) shall with respect to a contractor apply to the extent only that the duties or responsibilities, created or defined by the regulation or subregulation appearing in Column 1 opposite such title or description, touch and concern that part, or those parts, of the quarry and those persons to which or to whom a Contractor's power and authority extends.

(3) Where the titles or descriptions of two or more persons appear opposite any regulation or subregulation in Column 1 of the Schedule, subregulation (2) of this regulation shall apply to those persons jointly and severally.

(4) Where the performance or discharge, or (as the case may require) the ensuring of the performance or discharge, of a duty or responsibility created and defined by these regulations, is, in any particular case, delegated by a person or persons specified by Column 2 of the said Schedule, such delegation shall not, in any respect, excuse non-compliance with the provisions of subregulation (2) and subregulation (3) of this regulation.

(5) Where there has been a contravention of, or failure to observe, or perform, or comply with, any regulation or subregulation set forth in Column 1 of the Schedule, the person or persons required to perform or discharge, or to ensure the performance or discharge of, the duty or responsibility created and defined by the regulation or subregulation shall be guilty, or (as the case may be) jointly and severally guilty, of an offence.

(6) (i) Where an act or default committed by some person, other than an owner, manager or contractor, constitutes a contravention of, or failure to observe, or perform, or comply with, any regulation, such person shall be guilty of an offence against that regulation, whether or not an owner, manager or contractor is also, by virtue of subregulation (5), guilty of an offence against the same regulation.

(ii) An owner or manager who knowingly suffers or permits a contractor to commit an offence against the regulation of this Part shall be guilty of the same offence committed by the contractor.

(7) Nothing in the regulation of this Part shall take away or restrict any liability of any person, whether under the *Justices Act, 1921-1960* or at common law, for aiding, abetting, counselling, procuring or otherwise being a party to the commission of an offence.

(8) The words "owner" "manager" and "contractor" (or any one or two of them) appearing in square brackets after the regulations or subregulations whose numbers appear in the left hand column of the Schedule are placed there for the purpose of convenient reference only and do not form part of the regulations of this Part.

(9) Where any regulation in this Part refers to the number of persons working in a quarry, the number of those persons, for the purpose of each such regulation, shall be computed by excluding the owner but, including the manager or contractor or both (as the case may require) if working therein.

## SCHEDULE TO REGULATION 302

Number of Regulation or Subregulation	Title or Description of Person or Persons
305(1) (3)	Owner
305(5)	Owner, manager
306(1) (2)	Owner, manager
307(1)	Owner
308(1)	Owner
309	Owner, manager, contractor
310	Manager, contractor
311	Owner, manager, contractor
313	Manager, contractor
315	Manager, contractor
316	Manager, contractor
317	Owner
318	Owner, manager, contractor
320	Owner, manager, contractor
321(a), (b), (c), (d), and (e)	Owner
321(f)	Owner, manager, contractor
323	Owner
324	Owner
325(1)	Owner
325(2)	Manager, contractor
327	Owner, manager, contractor
328	Manager, contractor
329(1)	Owner
329(2)	Manager, contractor
330	Owner, manager, contractor
331	Owner, manager, contractor
332	Owner, manager, contractor
333	Owner, manager, contractor
334	Owner, manager, contractor
335	Manager, contractor
336(1) (2) (3)	Manager, contractor
337(1), (2)	Owner, manager, contractor
337(3)	Manager, contractor
338	Manager, contractor
339	Owner
340	Owner, manager, contractor
341	Manager, contractor
342	Owner, manager, contractor
343	Owner, manager, contractor
344	Manager, contractor
345	Owner, manager, contractor
346	Owner, manager, contractor
347	Owner, manager, contractor
348	Manager, contractor
349	Manager, contractor

350(1) (2) .....	Manager, contractor
350(3) .....	Owner
352(1) (3) .....	Owner, manager, contractor
352(5) (6) .....	Manager, contractor
353(1) .....	Owner
353(2), (3) .....	Manager, contractor
354 .....	Manager, contractor
355 .....	Manager, contractor
356(1), (2), (3) .....	Manager, contractor
356(4) .....	Owner
356(5), (6), (7), (8), (9), (10), (11), (12), (13) .....	Manager, contractor
357(1), (2) .....	Manager, contractor
357(3) .....	Owner
357(4), (5), (6), (7) .....	Manager, contractor
358 .....	Manager, contractor
359 .....	Manager, contractor
360 .....	Manager, contractor
361 .....	Manager, contractor
362 .....	Manager, contractor
363 .....	Manager, contractor
367(1), (2), (3) .....	Manager, contractor
367(4) .....	Owner
367(5), (6), (7), (8), (9), (10), (11) .....	Manager, contractor
368(1)(a) (b) (d) .....	Owner
368(1)(c) .....	Owner, manager, contractor
368(2) .....	Manager, contractor
369(1) .....	Owner, manager, contractor
369(2), (3), (4), (5) .....	Manager, contractor
370 .....	Manager, contractor
374 .....	Owner, manager, contractor
375 .....	Owner, manager, contractor
376 .....	Owner
377 .....	Manager, contractor
378 .....	Owner
379(1) .....	Owner
379(2) .....	Manager, contractor
380 .....	Owner
381 .....	Owner
382 .....	Owner
383 .....	Owner
384 .....	Manager, contractor
385 .....	Owner
386(1), (2) .....	Owner
386(3) .....	Manager, contractor
387 .....	Owner, manager, contractor
388 .....	Owner
389 .....	Owner
390 .....	Manager, contractor
391 .....	Owner
392 .....	Owner
393 .....	Manager, contractor

394	.....	Owner, manager, contractor
395	.....	Owner, manager, contractor
396	.....	Owner
397	.....	Manager, contractor
398	.....	Manager, contractor
399	.....	Owner
400	.....	Owner
401	.....	Owner, manager, contractor
402	.....	Owner, manager, contractor
403	.....	Owner, manager, contractor
404	.....	Owner
405	.....	Owner
406	.....	Owner
407	.....	Owner, manager, contractor
408	.....	Owner, manager, contractor
410	.....	Owner, manager, contractor
426	.....	Owner, manager, contractor
430(2)	.....	Owner
430(4) (6)	.....	Manager, contractor

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*Penalty*

**303.** The penalty for a breach of any provision of these regulations shall be a fine not exceeding one thousand dollars.

*Summary Procedure*

**304.** Proceedings for offences against these regulations shall be taken and determined in a summary way.

*Appointment of Manager*

**305.** (1) No more than nine persons shall work in a quarry in a period of twenty-four hours unless—

- (a) the owner has appointed a person, holding a certificate as required by Division 7 of this Part, to be the manager of the quarry; and
- (b) the owner has given to the Chief Inspector a written notice stating the name and address of the manager so appointed and particulars of the certificate held by him; and
- (c) the manager so appointed is (except in the case of his temporary absence) supervising the working of the quarry. **[Owner]**

(2) The Chief Inspector may at any time, by written notice to the owner of any quarry, irrespective of the number of persons employed thereat, require him to appoint a manager holding a certificate or permit issued under Division 7 of this Part.

(3) Where a notice under the previous subregulation has been given to an owner, no work shall be done in the quarry unless—

- (a) the owner has appointed a person holding a certificate or permit as required by Division 7 of this Part to be the manager of the quarry; and
- (b) the owner has given to the Chief Inspector a written notice of the name and address of the manager so appointed and the particulars of the certificate or permit held by him; and
- (c) the manager so appointed is (except in the case of his temporary absence) supervising the working of the quarry. **[Owner]**

(4) Where an individual person is the owner, or one of the co-owners of a quarry, and holds a certificate or permit as required by these regulations, he may appoint himself, or join in appointing himself, as manager of that quarry.

(5) No person shall accept appointment or act as manager of more than one quarry. **[Owner, manager]**

(6) If no manager has been appointed for a quarry, the owner, or if the quarry is jointly owned, each of the owners, shall without affecting his duties or responsibilities as owner be deemed to be the manager of the quarry within the meaning of all provisions of these regulations which impose duties or responsibilities on the manager.

(7) What may be "temporary absence" within the meaning of this regulation shall depend on all the circumstances of the case, but shall in no case exceed 48 hours.

#### *Temporary Manager*

**306.** (1) Whenever the manager is absent from the quarry for any length of time while it is working, the owner or some person authorised by him in writing shall appoint a competent person to act as temporary manager during the absence of the manager. **[Owner, manager]**

(2) If the manager is absent or intends to be absent for seven days or more, the owner shall as soon as practicable give the Chief Inspector written notice of the appointment of a temporary manager specifying the name, address and certificate or permit of the person appointed and the period (if any) for which he is appointed. **[Owner, manager]**

(3) Where by these regulations a duty or responsibility is imposed on the manager, the same duty or responsibility shall be deemed to be imposed on the temporary manager whilst acting as such.

#### *Appointment of Agents by Owners*

**307.** (1) Where the owner is an individual person whose usual residence, or whose place of incorporation is outside the State, the quarry shall not be worked unless—

- (a) the owner has appointed an individual person ordinarily resident in the State, or a company incorporated in the State, or a company registered in the State as a foreign company, to be his or its agent; and

(b) notice in writing of such appointment has been given to the Chief Inspector; and

(c) such appointment is still in force. **[Owner]**

(2) Any process or notice required or permitted to be served on the owner shall be sufficiently served if delivered by post or otherwise to the agent appointed by the owner under this regulation at his place of business or his usual or last known place of residence.

*Commencement and Cessation of Quarrying*

**308.** (1) The owner of a quarry shall, within three days from and after the commencement of work or his assumption of ownership in the case of a working quarry, send notice in writing to the Chief Inspector setting out—

(a) the full name and address of the owner and the name and address of the manager of the quarry and particulars of the certificate or permit held by him;

(b) the situation of the quarry;

(c) the mineral or other substance being quarried, or worked; and

(d) the estimated number of persons to be employed at the quarry. **[Owner]**

(2) The owner shall, within three days from and after the cessation of work at the quarry, and within three days from and after the recommencement of work after any such cessation, send notice in writing to the Chief Inspector of such cessation or re-commencement.

(3) In this regulation "cessation of work" does not include cessation for holidays, repairs, or on account of strikes or other industrial troubles.

*Inspection Record Books*

**309.** (1) The owner shall in all respects in accordance with these regulations keep at an office on the quarry a book to be labelled the "Inspection Record Book".

(2) The information recorded in the said book shall be accurate and shall include all relevant dates and times.

(3) The entries in the said book shall be written clearly and legibly in ink.

(4) The owner, the manager and all persons having custody and control of the said book shall on demand by an inspector produce it to him for inspection and perusal, and the inspector may make entries and give written instructions in such book.

(5) Where an owner or manager is charged with an offence against any of these regulations, he shall produce the said book at the hearing of the charge.

**[Owner, manager, contractor]**

*Periodical Inspections*

**310.** (1) (a) Once at least in each working day the quarry shall be examined by the manager or a competent person to ascertain the state of all safety appliances, quarry faces and places where excavations are being made; and

(b) once in each week the buildings, machinery, equipment, appliances, apparatus and all places used in the working of the quarry shall be examined by the manager or a competent person.

(2) The person making such an inspection shall record in writing in the Inspection Record Book his opinion as to the conditions and safety of the things examined and whether any alterations or repairs are necessary or desirable in the interests of safety, and if the inspection is made by a person other than the manager, that person shall, after making the entries, forthwith inform the manager that the entries in the said book have been made, and the said entries shall thereupon be signed by the manager. **[Manager, contractor]**

*Duty to Exhibit Regulations*

**311.** A legible copy of these regulations or a poster containing such of these regulations as the Chief Inspector deems it necessary to exhibit shall be kept posted in a conspicuous position on the quarry. **[Owner, manager, contractor]**

*Complaints*

**312.** If a person working in a quarry gives information to an Inspector from which it appears to the inspector that a breach of the Act or these regulations (other than a trivial breach) may have occurred, the inspector shall make or cause to be made an investigation into the matter so alleged.

*Inspections*

**313.** The manager shall forthwith on the request of an authorised person desiring to inspect a quarry pursuant to the Act or these regulations—

- (a) give such person access to all parts of the quarry and all plant and machinery thereat;
- (b) do all things necessary to enable the inspection to be made. **[Manager, contractor]**

*Duty of Owners to Provide Material and Equipment*

**314.** (1) Except where these regulations expressly provide otherwise, the owner shall provide and install all such material and equipment as is necessary to enable these regulations to be complied with.

(2) Where a contractor is operating in a quarry he shall, except where these regulations expressly provide otherwise, be under the same duties as the owner to provide and install equipment in that part or those parts of a quarry and to or for those persons to which or to whom the contractor's power and authority extends.

(3) The fact that these regulations mention specific cases in which the owner is required to provide material or equipment shall not be deemed to restrict the general duty imposed on owners by this regulation.

(4) In this regulation "equipment" includes machinery, plant, appliances, tools, materials, and articles of all kinds.

#### *Reports of Accidents*

**315.** (1) Where at or in a quarry, an accident occurs as the result of which any person suffers injury likely to cause him to be absent from work on three or more working days, or is killed, a written report shall, within 24 hours after the accident, be sent to the Chief Inspector stating the nature of the accident and the number of persons killed and persons injured.

(2) Where an accident has been reported under this regulation and a person subsequently dies as the result of the accident, a report shall be sent in writing to the Chief Inspector within twenty-four hours after the death becomes known to the manager.

(3) If an accident report form has been supplied by the Chief Inspector to the owner or manager or contractor, the said report shall be furnished on the form, but if no form has been supplied the report shall contain all such particulars as are necessary for giving reasonable information as to the nature and cause of the accident (including the number of persons killed or injured or both). **[Manager, contractor]**

#### *Interference with Wreckage at Accidents*

**316.** (1) When a fatal accident or an accident arising out of the use of explosives or of winding equipment occurs no person shall except with the consent of the Inspector, or for the purpose of saving human life or relieving human suffering—

- (a) move, interfere with, destroy or carry away any wreckage, article or thing at the place of or connected with the accident; or
- (b) interfere with or alter the state and condition of any hole, shaft, tunnel or excavation at the place of or connected with the accident.

(2) In giving consent under the previous subregulation the Inspector may impose any conditions or restrictions he thinks fit.

(3) Any person who knowingly contravenes or fails to comply with this regulation or any condition or restriction imposed under subregulation (2) of this regulation shall be guilty of an offence. **[Manager]**

#### *Statistical Returns*

**317.** (1) Except as provided in subregulation (2) of this regulation the owner of a quarry shall in the months of January and July in each year furnish to the Mining Warden a full and true return, showing

- (a) the quantity of metals, precious stones, minerals, shale, coal, salt or gypsum taken from such quarry during the preceding half year;

- (b) particulars of the working expenses incurred in and the gross proceeds received from land comprised in the occupation and working of the quarry, the sale of all stone, ores, metals, minerals, precious stones, coal, shale, salt or gypsum obtained therefrom, the quantities and values of stocks of stone, ores, metals, minerals, precious stones, coal, shale, salt or gypsum won therefrom and on hand at the end of the preceding half year, the number of men, horses and the horsepower of machinery employed or used thereon, and the nature and value of all machinery and plant thereon.

(2) The holder of a claim (not being an alluvial claim) or of a mining lease who is required to furnish returns under section 113 of the *Mining Act, 1930-1962*, shall not be required to furnish returns under this regulation with respect to that quarry. **[Owner]**

## DIVISION 2—SANITATION AND HYGIENE

### *First-Aid Requirements*

**318.** (1) Where more than nine men are working on a quarry in any one shift—

- (a) a person trained in first-aid to the injured shall, at all times during working hours, be on the quarry and ready to attend to sick or injured persons; and
- (b) there shall be provided and maintained in good condition a room for affording first-aid to sick or injured persons; and
- (c) there shall be kept at the quarry a motor vehicle capable of transporting a sick or injured person in reasonable comfort and readily available for the purpose at any time; and
- (d) there shall be kept in the first-aid room an adequate supply of splints, bandages, and other requirements for first-aid to the sick or injured.

(2) So long as any men (irrespective of the number thereof) are working on a quarry the owner shall keep at the quarry an adequate supply of splints, bandages and other requirements for first-aid to the sick or injured sufficient for the number of men working on the quarry.

**[Owner, manager, contractor]**

### *Use of Rubbish for Filling*

**319.** No person shall for any purpose place in a quarry (whether in use or abandoned) any debris, refuse, or other material likely to be injurious to the health of human beings, or to endanger the life or limb of any human being.

### *Quarries to be Clean and Free From Vermin*

**320.** A quarry is at all times to be kept clean and sanitary and free from vermin.

**[Owner, manager, contractor]**

*Sanitary Conveniences*

**321.** The following requirements shall at all times be complied with in respect of privies on a quarry for the use of persons working at or in the quarry:—

- (a) There shall be one privy for each twenty men working there at any one time, and an additional privy for any fractional part of twenty men so working; such privies shall be near the working place: **[Owner]**
- (b) Every privy shall have a floor of concrete or other hard and impervious material: **[Owner]**
- (c) Where a pan is used in a privy, it shall be furnished with a stool: **[Owner]**
- (d) Every pan shall be emptied, thoroughly cleaned and washed inside and outside and disinfected at least once a week: **[Owner]**
- (e) Every privy shall be adequately ventilated and screened from observation and kept in a clean and hygienic condition: **[Owner]**
- (f) where a pan is used an adequate supply of deodorant and disinfectant shall be kept at each privy with a scoop for application. **[Owner, manager, contractor]**

*Pollution of Workings*

**322.** No person shall pollute the workings of a quarry or foul or misuse any sanitary convenience thereon.

*Drinking Water*

**323.** There shall be provided at every quarry which is being worked a supply of wholesome drinking water sufficient for the men working in or about such quarry. **[Owner]**

*Shelter*

**324.** (a) Every feeding platform in a crushing plant where men are working shall be covered so as to protect the men against inclement weather.

(b) Where a man is working in a fixed exposed place in a quarry he shall be supplied with a shelter close at hand for protection against inclement weather. **[Owner]**

*Change-Houses*

**325.** (1) Where more than nine men are working in any one shift in a quarry, a change-house shall be provided which shall comply with the following requirements:—

- (a) The change-house shall be as near to the workings as practicable:
- (b) The floor space of the change-house shall not be less than six square feet for each person using the change-house in any one shift, in addition to the floor space required for passage-ways, heating-pipes and drying-racks:

- (c) There shall be provided in the change-house an adequate supply of clean hot and cold water for the men to wash and bathe themselves, and not less than one washing basin for every ten men in any one shift, and an additional wash basin for any fractional part of ten men in any one shift:
- (d) Showers shall be provided in the change-house at the rate of not less than one for every ten men in any one shift and an additional shower for any fractional part of ten men in any one shift. The showers shall be at least four feet apart, and the floor of the shower area shall have a smooth impervious surface and shall be provided with drainage to remove waste water:
- (e) Provision shall be made in the change-house for keeping street clothes and working clothes separate. [Owner]

(2) The floors of the change-house shall be washed daily, and all other parts of the change-house shall be kept clean. [Manager, contractor]

*Removal of Dirty Clothes from Change-House*

**326.** A person using a change-house shall, when requested by the manager, remove all his dirty clothes (other than safety helmets, belts, or boots) from the change-house.

**DIVISION 3—VENTILATION AND CONTROL OF DUST AND FUMES**

*Standards of Ventilation*

**327.** (1) The owner shall ensure that the air in every part of the quarry and crushing plant where men are working shall not contain more than 300 particles per cubic centimetre of dust which is five microns or less in diameter.

(2) The number of dust particles per cubic centimetre shall be determined—

- (a) by a konimeter, taking the average of the numbers ascertained by six tests made at intervals of one minute; or
- (b) by any other instrument approved by the Chief Inspector of Mines. In either case, the number of such particles shall be counted under dark field illumination.

[Owner, manager, contractor]

*Work in Places Inadequately Ventilated*

**328.** No person shall do any work in a part of the quarry or crushing plant where the ventilation does not comply with these regulations, unless such work is necessary to make the ventilation so comply or for rescue or fire-fighting work. [Manager, contractor]

*Traps and Receivers*

**329.** (1) All compressed air systems shall be kept effectively drained to prevent the accumulation of water. [Owner]

(2) All devices used for this purpose shall be blown off or checked for operation at least once each day while they are in use. **[Manager, contractor]**

*Rock Drilling*

**330.** Whenever on a quarry holes are being bored in rock by machinery, sprays or jets of water or other effective methods for preventing the issue of dust, or, alternatively, for laying or removing any dust issuing from the holes shall be provided and used so that it will not be a danger to or to the health of any persons. **[Owner, manager, contractor]**

*Other Operations Producing Dust*

**331.** Whenever in the course of quarrying operations, dust is produced, sprays or jets of water or other effective means for laying or removing the dust shall be provided and used so that it will not be a danger to or to the health of any persons. **[Owner, manager, contractor]**

*Water Used for Laying Dust*

**332.** Water used for laying dust shall be free from matter harmful to the health of human beings. **[Owner, manager, contractor]**

**DIVISION 4—SAFETY AND PROTECTION**

*Machinery to be in Good Condition*

**333.** (1) All machinery which is in use in or at a quarry shall be kept at all times in good order and in safe condition.

(2) In this regulation "machinery" includes machinery, engines, plant, gear and equipment of all kinds. **[Owner, manager, contractor]**

*Construction and Maintenance*

**334.** (1) All material and equipment installed or used in a quarry shall be sound and of adequate strength for the purpose for which it is to be used.

(2) Every working part of a quarry and every structure and item of equipment which is in use or at a quarry shall be maintained in good order and in a safe condition. **[Owner, manager, contractor]**

*Interference with Structures, Plant or Equipment*

**335.** (1) No person shall, except in the course of duties in which he is engaged, or which he is authorised to carry out, interfere with or remove any structure or part of a structure or any machinery, plant or equipment at or in a quarry.

(2) Where a person removes or displaces any fence guard or other like structure provided at or in a quarry for safety purposes, he shall restore the fence guard or structure to its usual place as soon as the necessity for the removal, or displacement has ceased. **[Manager, contractor]**

*Procedure in Case of Danger*

**336.** (1) If the manager or a person for the time being in charge of any part of a quarry is of the opinion that dangerous conditions exist in the quarry or part thereof respectively, he shall—

- (a) forthwith order the immediate withdrawal of every workman from such quarry or part, and every workman so ordered shall withdraw accordingly; and
- (b) cause such quarry or part to be inspected by a competent person; and
- (c) not permit any person to enter such quarry or part while in his opinion it remains dangerous, except for the purpose of making an inspection thereof or doing work to make it safe. **[Manager, contractor]**

(2) Forthwith after making the inspection the person making the same shall enter in the Inspection Record Book a record of the inspection specifying the nature of any dangerous conditions found by him and of any action recommended to remedy them. **[Manager, contractor]**

(3) When any action is taken under this regulation, the particulars thereof shall forthwith be entered in the Inspection Record Book and a written report specifying the nature of the dangerous conditions, and the action taken to remedy them, shall be transmitted to an Inspector. The said record and the said report shall be signed by the manager. **[Manager, contractor]**

*Safety Helmets*

**337.** (1) A safety helmet shall be supplied to every person working on or in a quarry, crushing or screening plant, or in any other place where he may be hit by a falling object. **[Owner, manager, contractor]**

(2) Whenever a helmet supplied pursuant to this regulation is lost or destroyed or becomes unserviceable, the owner shall, at his own cost, replace the helmet: Provided that, if the replacement is necessary because of negligence or wilful wrongdoing by the person to whom the same was supplied, that person shall be liable to pay to the owner the cost of the helmet supplied by way of replacement. **[Owner, manager, contractor]**

(3) A person working in a quarry shall wear a safety helmet at all times while he is working on or in a quarry, crushing or screening plant, or in any other place where he may be hit by a falling object. **[Manager, contractor]**

(4) A helmet supplied pursuant to this regulation shall, unless otherwise agreed, remain the property of the owner who supplied it.

*Duties of Drivers of Machinery to Remain*

**338.** No person having charge or control of a steam boiler, steam engine, winch or crane, which is used on a quarry for the working thereof, shall absent himself from or cease to have effective charge or control (as the case may be) of such boiler, steam engine, winch or crane while it is required to be used, unless relieved by a person qualified to replace him. **[Manager, contractor]**

*Certificates of Registration of Boilers*

**339.** A person having the possession, custody, or control of any certificate relating to the registration, inspection, or testing of a boiler or air receiver used at a quarry shall, on the request of an inspector, produce such certificate to him for inspection. **[Owner]**

*Protection of Machinery, Platforms, Vats and Ladders*

**340.** At a quarry

- (a) all exposed dangerous parts of machinery in operation;
- (b) every flywheel, pulley, drive wheel, drive belt;
- (c) every tramway constructed on an elevated platform; and
- (d) all steps, ladders, elevated gangways, and elevated platforms;

shall be securely fenced and guarded, and every fence and guard shall be kept in good order.

**[Owner, manager, contractor]**

*Garments for Oilers and Machinery Attendants*

**341.** No person shall work in the immediate vicinity of moving machinery in or about a quarry unless he is wearing close-fitting and close-fastened garments. **[Manager, contractor]**

*Lights in Working Places*

**342.** (1) Every working place shall be illuminated at all times when men are working in or passing through it between half-an-hour after sunset and half-an-hour before sunrise.

(2) The illumination required under subregulation (1) shall be sufficient for the safety of the persons working in or passing through the place, and shall be provided by fixed lamps.

(3) No person shall enter an unlighted part of a quarry unless he carries a light adequate to ensure his own safety and the safety of those accompanying him.

(4) In this regulation "fixed lamp" means a lamp not being carried by a person.

**[Owner, manager, contractor]**

*Safety Ropes and Belts*

**343.** (1) (a) Safety ropes and safety belts shall be provided for use on quarry faces, precipitous slopes, steep rock piles, chutes, passes or bins, and places where there is a danger of falling from a height.

(b) Every such safety rope when in use shall be kept securely anchored.

(2) No person shall work on or move across a quarry face, precipitous slope, steep rock pile, or place where there is a danger of falling from a height unless he is using a safety rope secured to a substantial anchorage.

(3) No person shall work in a fixed position on a quarry face or such slope, rock pile or place, unless he is wearing a safety belt attached to a securely anchored safety rope, whereby he is enabled to work with both hands free.

(4) No person shall enter or remain in a chute, pass or bin unless—

- (a) he is wearing a safety belt attached to a securely anchored safety rope; and
- (b) at least one other person is within hearing distance of him at all times whilst he is within such chute, pass or bin. **[Owner, manager, contractor]**

#### *Hung-Up Passes*

**344.** When a pass, chute or opening is jammed or obstructed with material hung up in it, no person shall go up into the pass, chute, or opening beneath the obstruction or do any work in it from beneath the obstruction, except in accordance with the instructions of the manager or the person for the time being in charge of the work. No person shall give such instructions until all other practical means have been exhausted for causing the material to run or become free.

**[Manager, contractor]**

#### *Precautions Against Fire*

**345.** (1) Adequate precautions shall be taken to prevent the outbreak of fire in or about a quarry.

(2) Adequate provision shall be made for the prompt suppression of any outbreak of fire.

**[Owner, manager, contractor]**

#### *Mode of Working Quarries*

**346.** (1) In this regulation "height" in relation to a face of a quarry means the vertical height of that face, and the adjective "high" shall be construed in the same sense.

(2) The following rules shall be observed as regards a quarry:—

- (a) If the height of a quarry face exceeds sixty-five feet, such quarry face shall not be worked except as provided in this regulation, nor shall any work be done at the foot of such quarry face or within such distance of the foot that a man working within such distance may be injured by material falling from the face;
- (b) If the height of a quarry face exceeds six feet all work on such face shall be done down progressively from the top and all reasonable precautions shall be taken to prevent the creation of any overhang; provided that this subregulation shall not prevent the boring and firing of toe holes in conjunction with holes bored and fired on the upper part of the quarry face;
- (c) If the height of a quarry face exceeds six feet no undercut shall be made in such face;
- (d) If the height of a quarry face does not exceed six feet no undercut shall be made in such face to a greater depth than eighteen inches.

(3) Where a quarry, the nature of the material being mined, the method of working and the equipment used are such that a face higher than sixty-five feet may, in the opinion of the Chief Inspector, be safely worked, the Chief Inspector may grant a written permit allowing a face exceeding sixty-five feet in height, but not exceeding the height specified in the permit, to be worked at such quarry.

(4) This regulation shall not prevent a quarry from being worked at two or more benches if the face in every bench is less than sixty-five feet in height (measured from the foot of the face to the highest point of the face) and each bench has separate loading arrangements for the floor.

[Owner, manager, contractor]

#### *Dangerous Falls of Ground*

**347.** (1) No quarry shall be worked in such a way that there is a reasonable possibility that a dangerous fall of material will occur.

In this subregulation "quarry" includes every quarry as defined in regulation 300, of these regulations, and also every stack or dump of previously mined stone, mineral, salt, ore, mullock, slag, tailing, residue, coke or other material which has been or is being removed, dug or produced.

(2) (a) The face of every quarry shall be kept scaled of all loose material;

(b) No person shall resume work under a freshly blasted face of a quarry until all loose material is completely scaled off it.

[Owner, manager, contractor]

#### *Duty of Employees as to Safety*

**348.** (1) A person working in a quarry—

(a) shall at all times carefully observe the condition of the place where he is working or is about to work and of the plant and equipment therein;

(b) shall take all steps within his power to make his working place safe and to remedy any defects apparent in equipment;

(c) shall report to the person under whose immediate direction or control he is working any defect or danger which comes to his notice;

(d) shall not work with any defective plant or equipment;

(e) shall not work in an unsafe place except for the purpose of making it safe.

(2) Every foreman and every shift boss in a quarry and every person in charge of a portion of a quarry shall on changing his shift inform the person who relieved him of the state of the workings, plant and equipment in the part of the quarry for which he is immediately responsible in his character as such.

[Manager, contractor]

#### *Places Forbidden to Intoxicated Persons*

**349.** No person under the influence of liquor shall be in any of the following places in or at a quarry—

- (a) in any room or building in which an engine, machinery, or plant is kept; or
- (b) in any magazine for the storage of explosives; or
- (c) within fifty feet of any excavation or working. **[Manager, contractor]**

*Cranes*

**350.** (1) No person shall use a crane on a quarry unless all the parts of the crane have sufficient strength for the work and are in safe working order. **[Manager, contractor]**

(2) All cranes shall be operated, maintained and inspected in accordance with the rules governing the operation, maintenance and inspection of cranes set out in the Code of the Standards Association of Australia known as the "Crane and Hoist Code A.S. No. C.B. 2/1960", and any amendments thereto. **[Manager, contractor]**

(3) No person shall install on a quarry a new crane or service hoist unless it conforms in respect to design, construction, erection and testing with the requirements of the Code of the Standards Association of Australia known as the "Crane and Hoist Code A.S. No. C.B. 2/1960", and any amendments thereto. **[Owner]**

**DIVISION 5—EXPLOSIVES**

*Interpretation of this Part*

**351.** In this Division—

"butt" means the bottom portion of a hole bored to take a charge of explosives, which portion remains in existence after the charge of explosives has been fired:

"high explosive" means an explosive which is not effective unless fired by a detonator:

"ramming" means to force vigorously into position:

"stemming" means sand or other inert material placed over explosives in the hole prepared for them:

"tamp" means to press into position by some means not amounting to ramming.

*Storage of Explosives*

**352.** (1) No explosives shall be kept in or on a quarry in any place other than—

- (a) a Government magazine; or
- (b) a magazine or premises licensed under the *Explosives Act, 1936-1958*; or
- (c) a magazine approved in writing by an inspector. **[Owner, manager, contractor]**

(2) No inspector shall approve of a magazine or proposed magazine unless he is satisfied with the situation, construction, lighting, ventilation and safety thereof.

(3) An inspector may withdraw the approval of a magazine if he is satisfied that explosives can no longer be safely kept therein.

(4) No detonators shall be stored in the same magazine as other explosives.

[Owner, manager, contractor]

(5) (a) No person shall enter a magazine containing explosives without the manager's consent;

(b) all explosives in the quarry shall be stored safely and handled with care.

[Manager, contractor]

(6) If a quarry or part of a quarry is abandoned all explosives shall be removed from it.

[Manager, contractor]

#### *Cutting of Fuses*

**353.** (1) Sufficient sharp knives suitable for cutting fuses to the lengths required, and crimpers to crimp detonators on to fuses, shall be provided. [Owner]

(2) No person shall sever any fuse except with a sharp knife or cutting instrument.

[Manager, contractor]

(3) No person shall fix a detonator to a fuse except by crimping with a crimper supplied for that purpose. [Manager, contractor]

#### *Lights and Smoking*

**354.** (1) No person entering or being in a magazine in which explosives are stored shall have in his possession any exposed burning or incandescent substance.

(2) No person shall smoke while carrying, handling or using explosives or while being within twenty feet of any explosives (whether being carried, handled or used by another person, or not). [Manager, contractor]

#### *Opening Cases of Explosives*

**355.** No person shall open a case containing explosives—

(a) in any storage magazine; or

(b) within twenty feet of a storage magazine; or

(c) with any implement not made of wood, brass or copper. [Manager, contractor]

#### *Use of Explosives*

**356.** (1) No person shall take more explosives from a magazine than he reasonably expects to use on the day on which they are so taken. [Manager, contractor]

(2) When explosives taken from a magazine are not used on the day on which they are so taken, the person who took them from the magazine shall return them to the magazine on that day.

**[Manager, contractor]**

(3) No person shall convey explosives from a magazine to the workings except in a securely covered container; and shall not convey detonators in the same container as other explosives.

**[Manager, contractor]**

(4) Sufficient securely covered containers for the purpose of conveying explosives from magazines to the workings of a quarry shall be provided.

**[Owner]**

(5) (a) After the thirty-first day of December, 1967, no person shall act as a blaster in a quarry unless he has been appointed a blaster by the manager pursuant to this regulation, and his full name and address forwarded in writing to the Chief Inspector and his name recorded in the Inspection Record Book pursuant to subparagraph (6)(b) of this regulation.

(b) Subject to paragraph 5(c) a manager may appoint a person to act as a blaster in the quarry who holds a current blaster's certificate or a current blaster's permit.

(c) The manager shall not appoint a person to be a blaster unless he has satisfied himself that the person has had sufficient experience in the work he will be called upon to do and, where that person holds a blaster's permit, that the work is within the conditions and restrictions of the permit.

(d) No person who is under the age of twenty-one years and no person who does not speak and understand the English language shall charge or fire explosives.

**[Manager, contractor]**

(6) (a) After the thirty-first day of December, 1967, no person shall charge or fire explosives in a quarry unless he holds from the Chief Inspector a current blaster's certificate or a current blaster's permit: Provided that a person nominated in writing by the quarry manager and accepted by the Chief Inspector as a trainee blaster may charge holes with explosives under the personal supervision of a person holding a current blaster's certificate or a blaster's permit, and may fire such charges when the appointed blaster is alongside him: Provided also that persons properly instructed by the manager in the work may assist in loading holes with a free flowing ammonium nitrate fuel oil mixtures, or such other explosives as may be approved in writing by the Chief Inspector of Mines.

**[Manager, contractor]**

(b) The names of the appointed blasters, trainee blasters, and persons engaged in loading ammonium nitrate fuel oil mixtures shall be recorded in writing in the Inspection Record Book by the manager.

**[Manager, contractor]**

(c) An application for a blaster's certificate or a blaster's permit shall be made in the form prescribed in the first schedule hereto and accompanied by the prescribed fee.

(d) The Chief Inspector may issue to an applicant who is a fit and proper person a blaster's certificate or a blaster's permit (as the case may warrant) for a period up to, but not exceeding, two years. For the purpose of ascertaining whether to issue a certificate or a permit the Chief Inspector may require an applicant to be examined on the practice and theory of the use of explosives and his knowledge of Division V of Part II of these regulations. The Chief Inspector may renew any certificate or permit at the end of the period thereof for a further period of up to, but not exceeding, two years, or may, if he considers the applicant for renewal no longer to be a fit and proper person to hold a certificate or permit, refuse a renewal.

(e) the fees for a blaster's certificate or blaster's permit or renewal thereof shall be as prescribed in the Second Schedule hereto.

(f) A blaster's permit may contain and be subject to such conditions and restrictions as the Chief Inspector considers necessary to ensure the safety of any operations carried out pursuant thereto, and, in particular, maintain conditions and restrictions limiting the permit holder to a specified type of working, a specified type of blasting or a specified quarry.

(g) No holder of a blaster's permit shall charge or fire explosives except in accordance with the conditions and restrictions contained in his permit. **[Manager, contractor]**

(h) Where a trainee blaster is charging holes with explosives or firing the charges under the supervision of a holder of a blaster's permit pursuant to subparagraph (6)(a) of this regulation, the trainee blaster shall not do or be permitted or suffered by the holder of the permit to do any act which is contrary to or inconsistent with the conditions and restrictions of the permit. **[Manager, contractor]**

(i) If at any time the holder of a blaster's permit granted pursuant to subparagraph (6)(a) of this regulation has been convicted, or has been guilty of an offence against these regulations, or in the opinion of the Chief Inspector has been guilty of misconduct or negligence in or in connection with his work as a blaster, the Chief Inspector may cancel or suspend his permit. **[Manager, contractor]**

SOUTH AUSTRALIA

FIRST SCHEDULE

APPLICATION FOR { A } \* BLASTER'S
{ A RENEWAL OF }

PERMIT/CERTIFICATE\*

Application is made for the above permit/certificate\* under regulation 356(6)(a) of the Mines and Works Regulations, 1966 for which the fee of ... dollars ... cents is enclosed.

Full name (block letters) .....

Age.....years Date of birth .....

Address .....

Place of birth ..... Residence in Australia. .... years

Present employer ..... Period. .... years

Previous experience†:—

Table with 3 columns: Period, Company, Endorsement. Rows 1-4 with dotted lines for input.

† Give details in schedule I on back of form.

Statement by Employing Company or Letter by Past Employer (as to suitability of applicant to use explosives):—

.....

Type of work for which permit or certificate\* is required .....

Type of explosive and method expect to use .....

Date of application .....

Signature of Applicant

\*Delete those not required.

FOR OFFICE USE ONLY

Card made out .....

Initial permit or certificate issued: Date ..... No.....

Conditions and restrictions .....

For renewal give last two year's experience and number of permit or certificate held:—

	Period	Nature of Work
1		
2		
3		
4		
5		
6		
7		

(7) No person shall remove the wrappers from, or break the cartridges of, high explosive used in charging a hole: Provided that this subregulation shall not apply to primer cartridges, free-running explosives, or popping charges. **[Manager, contractor]**

(8) No person shall—

- (a) sink a detonator into the compound of a primer cartridge to a depth exceeding the length of the detonator;
- (b) forcibly press a cartridge of high explosive into a hole of insufficient size. **[Manager, contractor]**

(9) No person shall use a safety fuse—

- (a) for firing a charge other than a bulling charge, unless the fuse is at least six feet long;
- (b) for firing a bulling charge which can be dropped down the hole, unless the fuse is at least two feet long;
- (c) for firing a bulling charge which has to be placed in position by a tamping stick, unless the fuse is at least as long as the depth of the hole. **[Manager, contractor]**

(10) No person shall charge a hole or cavity with explosives while any iron or steel tools are within twenty feet of such hole or cavity: Provided that a brass or copper tube may be used to assist in charging a hole, but not as a tamping stick. **[Manager, contractor]**

(11) No person shall use any implement except a wooden tamping stick for tamping charges of explosives into the holes prepared for them. **[Manager, contractor]**

(12) No person shall tamp explosive or stemming into a hole by ramming. **[Manager, contractor]**

(13) No person shall fire a charge of explosives unless stemming has been used to confine such charge. **[Manager, contractor]**

#### *Firing Explosives*

**357.** (1) Whenever blasting is done at any working face the person in charge of such blasting shall cause all holes then charged at that face to be fired.

If when blasting is done any charge at the work face is not fired or is not exploded, such charge shall be treated as a misfire in accordance with these regulations. **[Manager, contractor]**

(2) The person in charge of blasting shall before a charge is fired—

- (a) cause all persons who are in places (herein called "the danger zone") where they might be injured by the blasting to be warned of the intended blasting, and of the locality thereof, and of the number of charges to be fired;

(b) ensure that persons are stationed at suitable places for the purpose of giving warning of the intended blasting to persons approaching the danger zone;

(c) wait until all persons in the danger zone have taken shelter or left such zone.

[Manager, contractor]

(3) In every quarry where blasting is carried on there shall be provided sufficient safe shelters for the workmen and other persons usually exposed to danger from such blasting. [Owner]

(4) A person lighting more than one fuse at one time shall do so with an igniter specially made for lighting fuses. [Manager, contractor]

(5) No person shall light more than fifteen fuses at one lighting. [Manager, contractor]

(6) Where more than three fuses are to be ignited at one time in the same working face—

(a) at least two persons shall be present; and

(b) no person shall ignite a fuse unless another person is sufficiently near him to be able to assist him in case of accident or emergency. [Manager, contractor]

(7) When charges are fired by safety fuses, the person in charge of the blasting shall, where possible, count the number of explosions, and if he has any doubt by reason of the count or otherwise whether all the charges have been exploded, he shall proceed in accordance with these regulations as though each charge has misfired. [Manager, contractor]

#### *Misfires*

**358.** (1) Where a charge prepared for firing by safety fuse has misfired, no person shall approach the charge within thirty minutes after the lighting of the fuse.

(2) Where a charge prepared for firing by electric current has misfired no person shall approach the charge unless—

(a) ten minutes have elapsed since the attempted firing; and

(b) the conducting wires have been disconnected and short circuited.

(3) Where a charge of high explosive has misfired no person shall attempt to withdraw it from the hole, but the following action shall be taken:—

(a) The stemming shall be removed by water under pressure, or compressed air and water, applied through a copper tube or a rubber hose with no ferrous metal at its free end; Provided that where a charge of gunpowder has misfired, the stemming may be withdrawn with a copper pricker.

(b) Another priming charge shall be fired in the hole to explode the original charge.

- (c) If the second charge fails to explode the original charge, the ground around the misfire shall be benched off and one or more additional holes shall be bored and fired. The position of any additional hole shall be determined by a shift boss or foreman or the manager after consultation with the person who bored the original hole. No additional hole shall be bored deeper than six feet or closer than three feet at any point to the hole in which the misfire occurred. **[Manager, contractor]**

*Treatment of Butts*

**359.** (1) If the butt of a hole in which a charge has been exploded remains after the explosion, no person shall do any work in a place where he might be injured by an explosion in the butt unless—

- (a) the work is solely for the purpose of making the butt safe; or
- (b) at least two competent persons working in the quarry have inspected the butt and reported that there is no explosive in it.

(2) A person inspecting a butt for explosive shall first thoroughly clean it out with water.

(3) Where any explosive remains in a butt after firing, a misfire shall be deemed to have taken place. **[Manager, contractor]**

*Time Between Bulling and Firing of Charges*

**360.** Where a bulling charge has fired no person shall load into the hole any further bulling or firing charge unless—

- (a) the bulled chamber has been filled with water; or
- (b) the bulled chamber has been allowed to stand unloaded for two hours and then swabbed out with water; or
- (c) the bulled chamber has been allowed to stand unloaded for thirty minutes and thereafter a copper rod has been inserted in the chamber for at least five minutes and on withdrawal has been found to be sufficiently cool to enable the back of the hand to be held against it. **[Manager, contractor]**

*Misfires Not Cleared Before End of Shift*

**361.** When a misfire occurs and the hole is not cleared of explosives before the end of the shift the person in charge of the firing shall:—

- (a) report the misfire to his shift boss or the foreman or manager and to the man relieving him;
- (b) forthwith cause a barricade or other obstruction to be erected so as to prevent persons from approaching the misfire; and

- (c) forthwith cause a notice to be erected near the misfire containing the word "danger". **[Manager, contractor]**

*Inspection After Firing at End of Shift*

**362.** After charges of explosives have been fired in a working place at the end of a shift, no person shall commence work in the place until it has been carefully inspected by a competent person. **[Manager, contractor]**

*Procedure Where Explosives Burn Without Exploding*

**363.** When on an attempt to fire a charge of explosives, the charge burns without exploding:—

- (a) no person shall approach the hole until one hour has elapsed from the time when the attempt was made;
- (b) no person shall place another charge in the same hole unless—
- (i) the hole has been filled with water, or a copper rod has been inserted in the hole for at least five minutes and upon withdrawal has been found sufficiently cool to enable the back of the hand to be held against it; and
- (ii) the hole has been tested with a wooden tamping stick and found clear and free of obstruction;
- (c) if the hole is not free from obstruction it shall be dealt with as a misfire. **[Manager, contractor]**

*Ammonium Nitrate*

In addition to the general regulations in this Division the three following special regulations Nos. 364, 365 and 366 shall apply to the handling and use of ammonium nitrate mixtures.

*Transport*

**364.** (1) All cartridges, bags and other containers of ammonium nitrate mixtures shall be labelled to indicate their contents. **[Owner]**

(2) Ammonium nitrate mixtures shall be conveyed in covered containers. The lid of the container shall be fitted with a suitable fastening device to prevent as far as possible the mixture becoming damp or the accidental opening of the lid and the spilling or contamination of the contents. The container and lid shall be constructed of non-absorptive and non-corrodable material. The use of galvanized iron, zinc or copper shall not be permitted. Alternatively, explosives of this type may be conveyed in closed polythene bags of adequate thickness and strength. The contents of either type of container shall not exceed 50lb. Provided that this requirement shall not prevent the conveyance of ammonium nitrate mixtures in bulk containers approved by the Chief Inspector of Mines. **[Owner]**

(3) Any spilt material shall be cleaned up promptly and thoroughly. **[Manager, contractor]**

*Charging*

**365.** (1) Pneumatic loading of ammonium nitrate mixtures shall not be used unless the loader is safe and efficient to the satisfaction of an Inspector of Mines.

[Owner, manager, contractor]

(2) The ammonium nitrate mixture shall be loaded through safe and efficient conductive tubing to the satisfaction of an Inspector of Mines.

[Owner, manager, contractor]

(3) The loader and associated equipment shall be earthed by means of a flexible wire connected to a spike driven into the rock in a suitable location. No water lines, compressed air lines, rails, wire covered hoses or permanent electrical earthing systems shall be used as a means of earthing.

[Owner, manager, contractor]

*Misfires*

**366.** When a misfire occurs with an ammonium nitrate mixture the following procedure shall be adopted.

(1) An attempt shall be made to wash out the stemming and explosive from the hole.

(2) If the attempt to wash out the hole is successful, the hole may be recharged and fired.

(3) If the attempt to wash out the hole is unsuccessful, and electric firing has been used, the hole shall be reprimed and an attempt made to explode the original charge.

(4) If the attempt to wash out the hole is unsuccessful and fuse firing has been used, or if the refiring as in subregulation (3) fails, then the foreman or manager after consultation with the person who bored the original hole shall determine the steps to be taken to clean up the misfire and shall take those steps.

[Manager, contractor]

*Electrical Firing*

**367.** (1) During an electric storm no person shall do any work in connection with the electric firing of charges.

(2) No person shall fire a charge of explosives electrically unless he is authorised to do so by the manager.

(3) The name of every person who is authorised by the manager to fire charges of explosives electrically shall be recorded in the Inspection Record Book.

[Manager, contractor]

(4) For the purpose of electric firing, suitable and efficient circuit testers, exploders, switches, fuses, conductors and other necessary apparatus shall be provided.

[Owner]

(5) All such articles of equipment and apparatus shall be maintained in good working order and shall be tested at such intervals as are necessary to ensure their constant efficiency. If any such article is found to be inefficient or unsuitable it shall immediately be withdrawn from use.

[Manager, contractor]

(6) Where electric firing conductors are used in the vicinity of other electric conductors, the firing conductors shall be prevented from coming into contact with other electric conductors or being affected by leakage of current from other conductors. **[Manager, contractor]**

(7) A blaster shall prevent firing conductors used by him from making electric connection with firing conductors in another circuit. **[Manager, contractor]**

(8) Before using an electric detonator a blaster shall test it for continuity and while testing it shall keep it covered so as to protect himself. **[Manager, contractor]**

(9) No person shall connect the leads from the detonators to the firing conductors leading to the face unless the firing conductors are short circuited by joining the ends of the wires together at a place so located that a premature explosion would be harmless to men opening that short circuit later. **[Manager, contractor]**

(10) Immediately before firing a charge of explosives electrically the blaster shall open the short circuit and shall test the complete circuit of conductors and electric detonators for continuity. **[Manager, contractor]**

(11) Immediately after firing a charge of explosives electrically the blaster shall disconnect the conductors from the blasting machine and shall replace the short circuit on the conductors by joining the wires together. **[Manager, contractor]**

*Use of Power and Lighting Circuits for Firing*

**368.** (1) Where electricity from a power or lighting circuit is used for firing charges the following requirements shall be complied with:—

- (a) A special firing-switch shall be installed between the source of power and the firing conductors and shall be so constructed and protected as to ensure that electric current will not leak into the firing conductors: **[Owner]**
- (b) The switch shall be placed in a switch-box so constructed that it cannot be shut unless the switch is in the "off" position: **[Owner]**
- (c) There shall be only one key for each switch-box. The key of each switch-box shall be in the personal custody of an authorised blaster, who shall retain the key in his personal custody at all times while he is on duty as a blaster: **[Owner, manager, contractor]**
- (d) Firing conductors shall be provided which are fitted with plugs capable of connecting them to appropriate bases in the switching apparatus. **[Owner]**

(2) No person shall connect firing conductors to the switching apparatus for the purpose of firing charges by electricity from a power or lighting circuit until—

- (a) all persons have been removed from places where they may be injured by the explosion; and
- (b) all preparations for firing have been made. **[Manager, contractor]**

(3) When firing conductors have been connected to the switching apparatus after compliance with the foregoing provisions of this regulation the blaster shall immediately fire the charge. **[Manager, contractor]**

(4) Immediately after firing, the blaster shall disconnect such firing conductors from the switching apparatus, short circuit them by twisting the wires together, lock the switch-box, and place the key in his pocket. **[Manager, contractor]**

*Use of Exploders for Firing*

**369.** (1) No person shall use an exploder, unless it is fitted with a locking device having a detachable handle, connection, or key, without which the firing circuit cannot be completed. **[Owner, manager, contractor]**

(2) The handle, connection or key of the exploder shall be placed in the personal custody of an authorised blaster, who shall retain it in his personal custody at all times while he is on duty as a blaster. **[Manager, contractor]**

(3) No person shall connect an exploder to firing conductors until—

(a) all persons have been removed from places where they may be injured by the explosion; and

(b) all other preparations for firing have been made. **[Manager, contractor]**

(4) When the exploder has been connected to firing conductors after the foregoing provisions of this regulation have been complied with, the blaster shall immediately fire the charge. **[Manager, contractor]**

(5) Immediately after a charge has been fired by an exploder, the blaster shall disconnect the firing conductors from the exploder, short circuit them by twisting the wires together, remove the handle or lock the mechanism and place the handle or key in his pocket or otherwise secure it on his person. **[Manager, contractor]**

*Batteries Not to be Used for Firing*

**370.** No person shall use a primary or secondary battery for firing. **[Manager, contractor]**

**DIVISION 6—USE OF ELECTRICITY**

*Interpretation*

**371.** In this Division—

"aerial conductor" means a conductor which is supported by insulators above the ground and is directly exposed to the weather:

"approved" means approved by an Inspector of Mines:

"cable" means an insulated conductor or two or more insulated conductors laid up together, whether provided with an overall protective covering or not:

"conductor" means a wire, cable or other form of metal suitable for carrying current, but does not include a wire, cable or other metallic part directly employed in converting electrical energy into another form of energy:

"damp place" means a place where moisture is either permanently or intermittently present to such an extent as to be likely to impair the effectiveness or safety of an installation which otherwise complies with the requirements of these regulations:

"earthing system" means all conductors, clamps, earth clips, and earth plates or pipes (including any metallic-piping system to which such cables and other conductors, clamps or clips are attached) used to maintain any portion of an installation at earth potential or necessary to ensure that an installation is effectively earthed:

"voltage" means the difference of electrical potential under normal conditions between any two conductors through which a supply of energy is given, or between any part of either conductor and earth:

"system" means an electrical system in which all the conductors and apparatus are electrically connected to a common source of supply:

and

"trailing cable" means a cable suitably insulated and protected for the supply of electric power to portable electrical apparatus.

#### *Application*

**372.** The regulations in this Division shall apply to electrical installations and apparatus at or in quarries.

#### *Wiring Methods and Materials*

**373.** Where these regulations do not prescribe the wiring method or materials to be employed, Parts I and II of the Wiring Rules of the Standards Association of Australia, 1961, and any amendments thereto, shall be observed.

#### *Conductors and Appliances to be Efficient*

**374.** All electrical apparatus and conductors shall be sufficient in size and power for the work they may be called upon to do, and efficiently covered or safeguarded, and so installed, worked, and maintained as to prevent as far as reasonably possible any danger of shock, fire or overheating, and shall be so constructed and proportioned that there shall be no appreciable rise in temperature when the current is passing through. **[Owner, manager, contractor]**

#### *Danger Notices to be Erected*

**375.** Conspicuous danger notices shall be erected and permanently maintained in a legible condition in the vicinity of all apparatus carrying electricity at more than six hundred and fifty volts. Every such notice shall contain the word "DANGER" in bold letters not less than one and a half inches high, and shall state the voltage at which the apparatus operates. **[Owner, manager, contractor]**

*Earthing Frames, Etc.*

**376.** The armouring of conductors, and the frames, bed-plates, and metallic coverings of generators, transformers, rheostats, liquid switches, motors and other apparatus, including portable devices, shall be properly and efficiently connected to earth. Earthing conductors shall be of stranded copper of a cross-sectional area not less than that of a 7/.036 (7/20 S.W.G.) conductor, except that for circuits up to twelve amperes, a 7/.029 (7/22 S.W.G.) conductor may be used. Where the cross-sectional area of portable leads is less than that of a 7/.036 (7/20 S.W.G.) conductor, the earthing conductor may be equal in cross-sectional area to the live conductor. Earthing conductors must be suitably protected from mechanical injury, and efficiently and permanently earthed. The connection of an earthing conductor shall be visible and accessible. The sectional area of an earthing conductor shall in no case be less than half of that of the conductor necessary to supply the connected load. Where an efficient earth or earths, such as water-pipe, cannot be obtained from the direct earthing system, the earthing shall be installed in accordance with the multiple-earth neutral system or the earth leakage protective system as outlined in rules Nos. 501-558 of the Wiring Rules of the Standards Association of Australia, 1961 and any amendments thereto. **[Owner]**

*Instruction in Duty and Competence*

**377.** No person shall work an electric motor or other apparatus unless he has been properly instructed in his duty, and is competent for the work he is set to do. **[Manager, contractor]**

*Switchboards*

**378.** Every switchboard shall be either—

- (a) placed in a dry well-ventilated place, or
- (b) effectively protected against moisture.

Except where a switchboard is a combination fuse switchboard with no live contacts at the back, there shall be a clearance of at least four inches between the wall upon which it is fixed and the back of the board. Where the area of a switchboard exceeds four square feet the distance from the wall shall be not less than twelve inches. A switchboard exceeding ten square feet in area shall be mounted on standards supported by the floor, and shall have a clear space of two feet six inches between the wall and any live metal. All stays and conductors shall be so arranged as to allow of head room of not less than six feet six inches. Every switchboard shall be provided either with a main no-volt release attachment, which will ensure the simultaneous opening of all poles of the supply, or alternatively, each motor shall be provided with a no-volt attachment operating in a similar manner. Ample space shall be maintained in front of a switchboard for safe operation of switch gear. **[Owner]**

*Space at Back of Switchboards*

**379.** (1) The space at the back of a switchboard exceeding ten square feet in area shall be floored, and except in the case of a switchboard for a supply not exceeding two hundred and fifty volts, shall be closed by a self-closing door with a warning notice, containing the word "DANGER" and setting out the voltage of the supply in a prominent position upon it. The floor at the back and front shall be firm and even, and insulating hardwood boards or mats shall be provided. **[Owner]**

- (2) The space at the back of a switchboard shall not be used for the storage of any article.  
[Manager, contractor]

*Provisions Where Voltage Exceeds Six Hundred and Fifty*

**380.** Where the electricity is at a voltage exceeding six hundred and fifty volts—

- (a) there shall be no live metal work on the front of a switchboard within eight feet of the floor or platform, and the space between the back of a switchboard and the wall shall be not less than four feet in the clear; and
- (b) all terminals and live metal on machines shall be protected, where practicable with insulating covers or with metal covers connected to earth in a skilful and efficient manner. [Owner]

*Leakage Detection*

**381.** Efficient means shall be provided for indicating any defect in the insulation of a system, unless the multiple-earth neutral system is used. [Owner]

*Live Parts of Fittings*

**382.** All live metal on main and distribution switches and fuse boards shall be mounted on incombustible and insulating material, and shall be fixed in as dry a situation as practicable. [Owner]

*Fuses or Cutouts*

**383.** Every sub-main circuit or motor circuit shall be protected at its origin by an efficient fuse or other automatic cut-off on each active pole, but where the rated full-load current of a motor connected in the circuit exceeds sixty amperes, automatic maximum-current circuit-breakers shall be used: Provided that with high-rupturing capacity fuse a circuit breaker need not be used until the rated full load current exceeds eighty amperes. Every circuit breaker shall be provided with an overload trip-coil on each active pole. Fuses shall be of approved safe-replacement type and marked with the rated voltage and capacity. [Owner]

*Replacing Fuses*

**384.** No person other than a person authorised by the manager or by some person appointed by the Manager shall adjust or replace a fuse. [Manager, contractor]

*Circuit Breakers*

**385.** Every automatic maximum-current circuit-breaker shall be so constructed and arranged that it opens the circuit without danger to any person and interrupts the current effectively in the circuit before it so exceeds the working rate as to involve danger. [Owner]

*Emergency Switches for Supply Outside Quarry*

**386.** (1) Where conductors carry current to the quarry from an outside source, a main switch shall be provided in a convenient position near the point of entry of such supply and shall be protected so as to prevent damage thereto. **[Owner]**

(2) This switch shall be so placed that it can be operated without danger by a person unfamiliar with the operation of such switch-gear. **[Owner]**

(3) In the event of this switch being locked up, the keys for obtaining access to it shall be kept in such places as to be immediately available at any time, day or night, to officials of the quarry. **[Manager, contractor]**

*Emergency Lamps*

**387.** In all machine rooms and places where a failure of electric light is likely to cause danger, suitable lamps or other proper lights shall be kept ready for use in the event of such failure. **[Owner, manager, contractor]**

*Lightning Arresters on Overhead Lines*

**388.** All overhead transmission lines shall be provided with effective lightning arresters connected to earth in a workmanlike manner. **[Owner]**

*Trailing Cables Protection*

**389.** Trailing cables for portable apparatus shall be flexible, heavily insulated and protected from mechanical injury by a suitable sheathing or the equivalent. If a flexible metallic covering is used as a means of protection against mechanical injury, it shall not alone be used to form an earth conductor for the portable apparatus. **[Owner]**

*Trailing Cable Inspection*

**390.** Each trailing cable in use on a quarry shall be examined daily for abrasions and other defects by a person or persons appointed by the manager. Such person or persons shall record daily the result of such examination in the Inspection Record Book. **[Manager, contractor]**

*Trailing Cables—How to be Connected*

**391.** The conductors of a trailing cable shall be divided at the apparatus end only for such a length as is necessary for the making of connection to the apparatus; and the cable with its outer covering complete shall be held by a suitable clamp on the motor frame of the apparatus 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 connection with the apparatus. **[Owner]**

*Trailing Cables—Terminal Boxes*

**392.** At points where a trailing cable is joined to a main cable, an efficient type of switch and a plug outlet with earthing device shall be provided, capable of entirely cutting off the electricity from the trailing cable. **[Owner]**

*Machines Not to be Left with Current On*

**393.** No person in charge of a portable machine shall leave the machine while it is working, nor shall he allow the trailing cables to be dragged along by the machine. A person in charge of a portable machine shall, before leaving the working place, see that the electricity is cut off from the cables. No person shall make repairs to a portable machine until the electricity has been cut off from the trailing cables. **[Manager, contractor]**

*Poles to be Kept in Good Condition*

**394.** All poles carrying electric conductors shall be maintained in good condition and shall be of sufficient strength to support the conductors, and shall be examined at least once every six months by a competent person in such a way as to discover any deterioration. **[Owner, manager, contractor]**

*Cross-Fittings to be Kept in Good Condition*

**395.** All cross-arms, insulators and attachments of conductors shall be examined for deterioration by a competent person at least once every six months, and all defective cross-arms, insulators, and attachments shall be removed and replaced, and the conductors re-strained if required. **[Owner, manager, contractor]**

*High and Low Voltage Conductors*

**396.** Overhead conductors carrying electricity at a voltage exceeding six hundred and fifty volts shall be erected so that any other conductors carrying a lower voltage are below them, and at the points of support and also between supports at least three feet space in any direction shall be allowed between conductors carrying different voltages. **[Owner]**

*Disused Conductors*

**397.** All electric conductors, whether inside or outside a building, which are permanently out of use, shall be disconnected from the mains and removed. **[Manager, contractor]**

*Conductors Not to Lie About*

**398.** Conductors which are temporarily out of use shall, where practicable, be disconnected from the supply and coiled up, except those on "standby plant", kept in working order for emergencies. Dead and disused conductors shall not touch or make contact with live conductors. **[Manager, contractor]**

*Motor Protection*

**399.** Every motor, together with its starting resistances, shall be protected by switches which are capable of entirely cutting off the supply and are fixed in a convenient position as near the motor as practicable. Where the starting switch is remote or not visible from the motor, an efficient cut-off switch for isolation purposes shall be placed adjacent to the motor so as to be readily handled in case of emergency. **[Owner]**

*Remote Control*

**400.** (1) Remote-control haulage or conveyor systems shall be provided with a convenient means of stoppage at any point along the system. **[Owner]**

(2) Where a motor is operated by remote control, the circuit shall be so arranged that such motor after being stopped at any point cannot be operated again until released at that point. **[Owner]**

*Adjustments to Live Parts*

**401.** Where the live parts of electrical apparatus, switches or machines working at a voltage above two hundred and fifty volts have to be handled for the purposes of testing or adjustment, gloves, mats and shoes of india rubber or other insulating material for use of the persons handling the apparatus, switches or machines, shall be supplied to and used by every such person. **[Owner, manager, contractor]**

*Live Parts to be Guarded*

**402.** Every switch (except an oil or enclosed switch), circuit breaker and fuse shall be mounted on an incombustible and insulating base. All live parts of a switch, contact-breaker or fuse which it is necessary to handle in replacing or removing, and which are not in a switch-room or a compartment specially arranged for the purpose, shall be in a box or protected by a cover or guard. Every such box, cover or guard shall be of incombustible material, and shall be either non-conducting, or rigid metal, efficiently earthed, and, as far as practicable, clear of all internal mechanism. No such box or cover shall be used for storing articles of any description. **[Owner, manager, contractor]**

*Makeshift Not Allowed*

**403.** All points at which a circuit (other than a circuit for signals) has to be made or broken shall be fitted with proper switches. **[Owner, manager, contractor]**

*Switches and Fittings to be Protected*

**404.** All open-type switch-gear such as main switches and fittings controlling an installation in a building, or electrical machinery, shall be so placed or protected as to prevent any person accidentally coming in contact with the live parts of the switch or apparatus, and switches shall be so arranged that their blades or moving parts are disconnected from supply in the "off" position. **[Owner]**

*Damp Places*

**405.** Electrical plant or gear in damp places shall be protected in an efficient manner to obviate the risk of shock to any person. **[Owner]**

*Knife Switches*

**406.** Every switch of the "knife" type shall be so constructed or arranged that the contact cannot accidentally close when left open. **[Owner]**

*Posting of Regulations and Notices—Accidents and  
Fire Protection*

**407.** There shall be exhibited in conspicuous places throughout any quarry where electricity is used—

- (a) legible copies of this Division;
- (b) legible notices warning unauthorized persons not to touch or interfere with any fallen or broken electric conductor, but to report it at once to the manager or electrician;
- (c) legible copies of proper instructions for the treatment of persons suffering from electric accidents,

and all persons concerned shall comply with the notices and instructions.

**[Owner, manager, contractor]**

*Fire Buckets and Sand and Extinguishers*

**408.** An adequate supply of clean dry sand in buckets or suitable chemical fire extinguishers as approved by the Fire Underwriters Association shall be kept near each main switchboard, ready for immediate use in extinguishing fires. **[Owner, manager, contractor]**

*Signalling, Firing, Etc.*

**409.** The previous regulations in this Division shall not apply to apparatus used for telephone, telegraph, or signal purposes or for the purpose of firing explosive charges.

*Signal Wires Protection*

**410.** No person shall cause or permit electric, signal or telephone wires to come into contact with other electric conductors whether insulated or not. **[Manager, contractor]**

Notwithstanding anything contained in this Division, any electrical plant or apparatus installed, or in use, or contracted to be bought, before the coming into force of these regulations, may be continued in use or used subject to any reasonable conditions affecting safety that the Chief Inspector may prescribe.

**DIVISION 7—MANAGERS CERTIFICATES AND PERMITS**

*Qualifications for Quarry Managers*

**411.** (1) No person shall act as the manager of a quarry unless he holds an appropriate qualification in accordance with this regulation.

(2) For the manager of a quarry the appropriate qualifications shall be:—

- (a) if more than nine men are working at the quarry—a first-class or second-class mine-manager's certificate or a quarry-manager's certificate;

- (b) if not more than nine men are working at the quarry and the Chief Inspector has given a direction that a qualified manager be employed thereat—a first-class or second-class mine-manager's certificate or a quarry-manager's certificate or a special permit.

(3) No person shall employ as manager of a quarry any person who does not hold a qualification required by this regulation to be held by the manager of such quarry.

*Board of Examiners*

**412.** (1) For the purposes of this Division there shall be a board to be called "The Board of Examiners for Mine Managers" consisting of the Chief Inspector of Mines and such number of appointed members, not less than two, as the Governor determines.

(2) The Governor shall make such appointments as are necessary from time to time to keep the board at its appointed strength; but a decision of the board made at a meeting at which a quorum is present shall not be invalid solely on the ground that there is a vacancy in the office of any member.

(3) The Chief Inspector of Mines shall be the chairman of the board, and shall have a deliberative vote, and in the event of equality of votes on any question, a casting vote also.

(4) Three members of the board shall form a quorum, and a decision concurred by a majority of the members of the board present at a meeting at which a quorum is present shall be deemed to be a decision of the board.

(5) The Governor may dismiss any appointed member of the board from his office for incapacity to perform his duties, neglect of duty, or any misconduct which in the Governor's opinion shows him to be unfit to be a member of the board.

(6) Every appointed member of the board other than a member appointed to a casual vacancy shall hold office until the thirtieth day of September in the third year after his appointment. A person appointed to a casual vacancy on the board shall hold office for the balance of the term of the member in whose place he was appointed.

(7) If for any reason the Chief Inspector of Mines is temporarily unable to act as chairman of the board, or there is a vacancy in the office of Chief Inspector, the Governor may appoint a person to act as temporary chairman of the board until the Chief Inspector is able to act, or is appointed.

*Grant of First-Class Mine-Manager's Certificate*

**413.** Subject to these regulations the board may grant a first-class mine-manager's certificate to any of the following persons:—

- (a) Any person who has had practical experience in mining, smelting, reduction or metallurgical works, for not less than three years, and who has passed the examination conducted by the board for candidates for first-class mine-managers' certificates:

- (b) Any person who has had experience and holds qualifications accepted by the board as equivalent to the experience and qualifications required under paragraph (a) of this regulation.

*Grant of Second-Class Mine-Manager's Certificate*

**414.** Subject to these regulations the board may grant a second-class mine-manager's certificate to any of the following persons:—

- (a) Any person who has had practical experience in mining, smelting, reduction or metallurgical works, for not less than three years, and who has passed the examination conducted by the board for candidates for second-class mine-managers' certificates:
- (b) Any person who has had experience and holds qualifications accepted by the board as equivalent to the experience and qualifications required under paragraph (a) of this regulation.

*Grant of Quarry-Manager's Certificate*

**415.** Subject to these regulations the board may grant a quarry-manager's certificate to any of the following persons:—

- (a) Any person who has had practical experience in mining or quarrying for not less than three years and has passed the examination conducted by the board for candidates for a quarry-manager's certificate:
- (b) Any person who has had experience and holds qualifications accepted by the board as equivalent to the experience and qualifications required under paragraph (a) of this regulation.

*Restricted Certificates*

**416.** (1) Where an applicant for a quarry-manager's certificate satisfies the board that he is qualified by experience and knowledge to manage a quarry at which he is or will be employed, or any quarry of a like kind, but the board is not satisfied that he is entitled to an ordinary quarry-manager's certificate, the board may issue to him a restricted manager's certificate.

(2) A restricted certificate shall contain therein a statement of the particular quarry or particular kind of quarries which the holder of the certificate is entitled to manage.

(3) A restricted certificate shall not entitle the holder of it to be a manager of any quarry other than a quarry indicated in the certificate.

*Issue of Temporary Certificates*

**417.** (1) The board may if it deems it expedient to do so issue to any person (whether qualified for a permanent certificate under these regulations or not) a temporary quarry-manager's certificate.

(2) A temporary certificate—

- (a) shall be in force for such a period as the board specified therein;
- (b) shall, while in force, have effect as an ordinary certificate of the same kind;
- (c) may contain any terms and conditions which the board thinks necessary in the public interest; and
- (d) may be cancelled by the board if any of the terms and conditions are broken.

*General Requirements for Certificates*

**418.** A certificate shall not be granted to any person unless—

- (a) he applies therefor on the form supplied by the Board and satisfies the board of the facts giving him the right to be granted a certificate;
- (b) he satisfies the board either by passing a special examination set by the board or otherwise that he has an adequate knowledge of the law of South Australia relating to mining;
- (c) he is of good character and sober habits;
- (d) he is at least twenty-five years of age;
- (e) he has paid the fee prescribed in the Second Schedule hereto.

*Forms and Contents of Certificates*

**419.** The board shall fix the forms of certificates, and may include in any certificate a statement of any restriction or limitations of the effect of the certificate and a statement of any qualifications of the holder which were taken into account by the board in granting the certificate.

*Examinations*

**420.** (1) The board shall hold examinations for each class of certificate not less frequently than once in every two years unless there are no candidates.

(2) The subjects of examinations held by the board shall be as follows:—

**FIRST- AND SECOND-CLASS MINE-MANAGERS' CERTIFICATES**

1. Mining.
2. Ore-dressing and sampling.
3. Ventilation and hygiene.
4. Arithmetic and mensuration.
5. Mine surveying.
6. General and mining geology.
7. Mechanics and mining machinery.
8. Explosives.

## 9. Mining law.

## QUARRY MANAGER'S CERTIFICATE

1. Quarrying.
2. Arithmetic and mensuration.
3. Explosives.
4. Quarry machinery.
5. Mining law.

*Credit for Passing Examinations*

**421.** The board may exempt any candidate for a certificate from the obligation to pass any examination conducted by the board, if the candidate satisfies the board that he is sufficiently qualified in the subject of the examination.

*Issue of Permits*

**422.** (1) The Chief Inspector may grant a permit to act as manager of a quarry where less than ten men are employed to any person who, in the Chief Inspector's opinion, has had sufficient practical experience and has a sufficient knowledge of these regulations.

(2) Every such permit—

- (a) shall authorise the holder to act as manager only of the quarry mentioned in the permit;
- (b) shall remain in force for the period mentioned in the permit which shall not be longer than twelve months;
- (c) may contain any terms and conditions which the Chief Inspector deems necessary in the public interest; and
- (d) may be revoked by the Chief Inspector for a breach of any term or condition.

*Cancellation or Suspension of Certificates and Permits*

**423.** (1) If at any time it is proved to the board that the holder of a certificate, temporary certificate or permit granted under these regulations has been convicted or has been guilty of an offence against these regulations or has been guilty of misconduct or negligence in or in connection with his work as a manager the board may suspend or cancel his certificate or permit.

(2) If the board has reason to believe that any such holder has been guilty of any such offence, misconduct or negligence, it may hold an enquiry.

(3) The board shall hear and determine the matter of any alleged offence, misconduct or negligence, and section 41 of the *Acts Interpretation Act, 1915-1951* shall apply to such hearing and determination.

(4) The holder of a certificate or permit which is suspended or cancelled by the board under this regulation may within fourteen days after the decision of the board is made known to him make a written request to the Minister asking that the decision of the board shall be referred to a special magistrate for review.

- (a) The person making such a request shall deliver a copy of the request to the chairman or secretary of the board within 7 days from the making thereof.
- (b) The board may on receipt of such a copy suspend the operation of its decision for a specified time, or until further order.
- (c) Upon receipt of any such request the Minister shall notify the Attorney-General thereof. The Attorney-General shall thereupon nominate a special magistrate to review the decision, and the magistrate so nominated shall review it accordingly.
- (d) The special magistrate shall give the board and the aggrieved person an opportunity of submitting to him any relevant evidence, information and arguments as to the matters in issue. The magistrate shall not be bound by rules of evidence but may inform his mind in any way which he deems appropriate, and may fix the procedure to be followed as regards the hearing.
- (e) After considering all the information, evidence and arguments, the special magistrate shall decide the question at issue, and make such orders as he deems just, confirming, quashing or varying the decision of the board or substituting any other decision which in his opinion should be given in lieu of the decision of the board.
- (f) The decision of the special magistrate shall not be subject to appeal.

**424.** The board shall keep a register of all certificates and permits issued under this Division.

## **DIVISION 8—WORKMEN'S INSPECTORS**

### *Application of this Division*

**425.** The regulations in this Division shall apply to the appointment of workmen's inspectors under section 12 of the Act and inspections to be made by them.

### *Notice of Meeting*

**426.** (1) Any five or more workmen employed in a quarry may give notice to call a meeting for the purpose of electing workmen's inspectors under section 12 of the Act.

(2) The notice shall be signed by not less than five workmen employed at the quarry and shall be prominently exhibited at the quarry for at least three clear days before the day fixed for the meeting.

(3) The owner and the manager of the quarry shall allow a notice of meeting in proper form to be exhibited at the quarry, as required by this regulation.

**[Owner, manager, contractor]**

*Nominations*

**427.** Every candidate for appointment shall be nominated in writing by a workman employed in the quarry at the time of nomination.

*Meetings and Elections*

**428.** (1) The workmen present at the meeting shall elect a chairman who shall conduct the election in an orderly manner and shall arrange for a secret ballot to be held at the meeting if there are more candidates than the number of vacancies to be filled. A candidate for election shall not act as chairman.

(2) Only workmen employed in the quarry at the time of the meeting shall be eligible to vote at the election of workmen's inspectors.

(3) At a ballot votes shall be indicated by crosses on the ballot paper. Each workman voting shall place a cross against the name of each candidate for whom he votes. A ballot paper shall be informal if it contains more crosses than the number of inspectors to be elected.

(4) If the number of candidates nominated does not exceed the number of inspectors to be elected, the chairman shall declare the nominees duly elected.

(5) The chairman of the meeting shall, as soon as possible after the election—

- (a) notify the Chief Inspector and the manager of the quarry of the full names and addresses and occupations of the persons appointed and the date of the election; and
- (b) forward to the Chief Inspector a statutory declaration, signed by himself as chairman, that the regulations relating to the elections have been properly complied with in every particular; and
- (c) forward to the Chief Inspector signed and dated copies of the notice calling the meeting, and of the nomination paper or papers of the candidate or candidates.

(6) The Chief Inspector of Mines on being satisfied that the appointments have been made in accordance with these regulations shall record them and notify the fact of such recording in writing to the persons appointed and the manager of the quarry.

*Duration of Appointment*

**429.** Every workmen's inspector shall hold office for one year from the date of his election.

*Inspection by Workmen's Inspectors*

**430.** (1) Workmen's inspectors shall not be entitled to commence an inspection unless they have previously notified the manager of their intention to inspect, and arranged a time with the manager.

(2) The owner shall provide a record book for the purpose of recording every report made by workmen's inspectors pursuant to the Act and the regulations. **[Owner]**

(3) Workmen's inspectors shall not inspect any quarry other than that for which they have been appointed.

(4) No person shall wilfully prevent or hinder a lawful inspection of the quarry by the workmen's inspectors. **[Manager, contractor]**

(5) No workmen's inspector shall use the right of inspection of a quarry for any purpose other than that of ascertaining and reporting whether the quarry and its machinery are safe.

(6) Two workmen's inspectors shall carry out inspections. One workmen's inspector cannot act alone. If only one workmen's inspector is available and he desires to make an inspection, the quarry workmen concerned may, after due notice to the manager and obtaining his approval to hold a meeting, elect a deputy to act only for the specific inspection. No manager shall capriciously refuse his approval to hold such a meeting. **[Manager, contractor]**

#### **DIVISION 9—AMENITY OF QUARRY AREA AND ENVIRONMENTS**

##### *Interpretation*

**431.** In this Division, unless the context requires or some other meaning is clearly intended:—

"Top soil" means the surface soil of land in its natural state and exceeding 2 inches in depth, distinguishable from overburden, and capable of growing protective vegetation when spread over the soil parent or reclamation material.

"Approved" means approved by the Chief Inspector.

**432.** (1) Quarrying operations or practices or any operation or practice incidental or ancillary thereto shall interfere as little as possible with the amenity of the area or place.

(2) A person shall not cut, damage or interfere with trees or shrubs except those directly obstructing or preventing quarrying operations.

(3) A person shall not create a nuisance by conducting operations in such a manner that undue or excessive noise or dust is produced.

(4) A person shall not create or permit or suffer to be created a nuisance by conducting operations in a manner whereby any river, the sea or any river, dam, watercourse, billabong, anabranch or tributary becomes polluted.

**433.** A person shall take the top soil from the site of any proposed excavation, dam or stockpile area and shall store it adjacent thereto for rehabilitation purposes or in an approved site and protected as far as is practicable from undue wind and water erosion.

**434.** A person shall not place products, overburden, waste material, dams or material of any kind in a position—

- (a) where they interfere with or could interfere with natural drainage;
- (b) where they cause or may cause damage to property; or
- (c) where they unduly interfere with the amenity of an area;
- (d) where they permit the pollution of the sea or any river, dam, watercourse, billabong, anabranch or tributary.

**435.** (1) Where practicable an owner of land upon which there is an excavation or from which top soil has been removed shall cause any excavation on that land to be drained and shall provide for a run-off that will not cause undue wind erosion or water erosion.

(2) The drainage constructed or permitted pursuant to subregulation (1) hereof shall not cause pollution of the sea or any river, dam, watercourse, billabong, anabranch or tributary.

**436.** (1) An owner shall—

- (a) give notice to the Chief Inspector when quarrying operations are complete;
- (b) a further notice when plant, machinery and materials are removed from that quarry; and
- (c) a further notice when the quarry has (in the opinion of the owner) been rehabilitated.

(2) An owner shall leave an area in a clean and tidy condition. **[Owner/contractor]**

**437.** An owner shall within the period of two years after the day of cessation of quarrying operations on land, carry out or ensure the proper rehabilitation of the area in accordance with the directions given to him in respect of that area by the Chief Inspector.

**438.** A person shall not open up or rework an old quarry or a previously worked quarry or develop or prepare a new deposit for the extraction of any material whether metal or metalliferous ores and non-metallic minerals, excepting precious stones on proclaimed opal fields and petroleum, but including sand, gravel, shell, shale, clay, stone and earthy substances, or erect buildings or plant for the treatment of such substances, unless he has given to the Chief Inspector of Mines notice, in writing, of his intention to do so at least 21 days prior to commencing such work or such working and has received the approval, in writing, of the Chief Inspector thereto. **[Owner]**

**439.** (1) The Chief Inspector may, by notice in writing, containing inter-alia, the matters set out in the schedule to these regulations and addressed to the owner, order that any one or more of the following acts, matters and things be done or made within a time to be set out in that notice—

- (a) accurate surface maps, plans and sections of the quarry and its immediate environs; and
- (b) developmental programmes for all surface works of the quarry area.

(2) An owner to whom such a notice has been given under this regulation shall:—

- (a) cause maps, plans, sections, programmes or any of these requirements to be prepared in accordance with the notice;
  - (b) deliver three copies thereof within the time set out in the notice to the office of the Chief Inspector of Mines at the Mines Department at Adelaide; and
  - (c) keep the original maps, plans, sections, developmental programmes or any of these requirements as the case may be, or correct copies thereof, at the quarry office.
- (3) (a) The owner shall, at intervals of not more than 12 months, and also immediately before the abandonment of a quarry cause all alterations of and additions to the workings of the quarry to be correctly delineated on the current working maps plans and sections and on any copies kept at the quarry office, and shall lodge three copies of any plan of these alterations or additions at the office of the Chief Inspector of Mines at the Mines Department, Adelaide.
- (b) The owner shall at intervals of not more than 12 months lodge details of the developmental programme and submit them to the Chief Inspector for further approval.

(4) All maps, plans and sections prepared under this regulation shall be drawn to scales approved by the Chief Inspector and sufficient to show clearly all relevant detail.

(5) An owner to whom a notice has been given under this regulation to make and deliver developmental programmes may carry on quarry work but he shall not do any work or allow any work to be done that adversely affects or is likely to adversely affect amenities until approval has been given to those programmes or amended programmes as the case may be or unless he has received approval in writing, of the Chief Inspector to those programmes or amended programmes as the case may be. **[Owner]**

**440.** The forms set out in the schedule to these regulations shall apply, *mutatis mutandis*, to the supply of particulars to the Chief Inspector pursuant to the regulations in this Division.

**PART III  
SMELTERS**

**DIVISION 1—GENERAL**

*Interpretation*

**500.** In these regulations unless the context otherwise requires or some other meaning is clearly intended—

"the Act" means the *Mines and Works Inspection Act, 1920-1962*:

"authorised person" means a person authorised pursuant to Section 7 of the Act to inspect a smelter:

"high explosive" means an explosive which is not effective unless fired by a detonator:

"inspector" means the Chief Inspector of Mines and any Inspector of Mines and Quarries appointed under this Act:

"machinery" means steam or other engines, boilers, furnaces, air receivers, crushing apparatus, ore-reducing or concentrating or treatment plants, winding or pumping gear, trucks and tramways, and includes all chains, straps, bands, belts, wires, rope cables, tackle, blocks, tools and all appliances of whatsoever kind used in or about or in connection with a smelter:

"manager" means the person for the time being having the immediate charge or direction of the smelting operations in a smelter:

"the Minister" means the Minister of Mines:

"smelter" means works whose operation or operations comprise or include the reduction of metallic ores or concentrates by melting, and the verb "smelt" shall have a corresponding meaning:

"works" means any plant, building or group of buildings wherein industrial operations are carried on:

"owner" means any person, who, either in his own name and on his own account, or jointly, or jointly and severally, or concurrently with any other person or persons, is the immediate proprietor or lessee or occupier of a smelter or any part thereof, but does not include a person—

- (a) who merely receives a royalty, rent, or fine from a smelter; or
- (b) who is merely the proprietor of a smelter which is subject to a lease, grant, or licence for the working thereof; or
- (c) who is merely the owner of the soil and not interested directly or indirectly in the products of the smelter.

*Exemptions*

**501.** If the Chief Inspector is satisfied that compliance with a provision of this Part is unnecessary, impractical, or undesirable in any particular circumstances, or that a satisfactory alternative procedure, action, or installation will be adopted, taken or installed, he may, in his discretion, exempt any person or class of persons from the duty to comply with that provision.

Any such exemption may be granted subject to any conditions and limitations which the Chief Inspector deems necessary.

The Chief Inspector may cancel any such exemption, if any condition thereof is contravened or not complied with, or if the circumstances under which the exemption was granted have altered.

*Duties and Responsibilities*

**502.** (1) The duties and responsibilities created and defined by the regulations and subregulations set forth in Column 1 of the Schedule to this regulation shall be performed and discharged according to their tenor as hereinafter provided in this regulation.

(2) Subject to regulation 514, the persons whose respective titles or descriptions appear in Column 2 of the Schedule shall perform and discharge, or (as the case may require) ensure the performance and discharge of, the duties and responsibilities created and defined by those regulations and subregulations opposite which the titles or descriptions respectively appear, in all respects according to the tenor thereof: provided that where the title or description "Contractor" appears in Column 2 of the Schedule, the provisions of this subregulation and of subregulation (3) shall with respect to a contractor apply to the extent only that the duties and responsibilities, created or defined by the regulation or subregulation appearing in Column 1 opposite such title or description, touch and concern that part, or those parts, of the smelter and those persons to which or to whom a Contractor's power and authority extends.

(3) Where the titles or descriptions of two or more persons appear opposite any regulation or subregulation in Column 1 of the Schedule, subregulation (2) of this regulation shall apply to those persons jointly and severally.

(4) Where the performance or discharge, or (as the case may require) the ensuring of the performance or discharge, of a duty or responsibility created and defined by these regulations, is, in any particular case, delegated by a person or persons specified by Column 2 of the said Schedule such delegation shall not, in any respect, excuse non-compliance with the provisions of subregulation (2) and subregulation (3) of this regulation.

(5) Where there has been a contravention of, or failure to observe, or perform, or comply with, any regulation or subregulation set forth in Column 1 of the Schedule, the person or persons required to perform or discharge, or to ensure the performance or discharge of, the duty or responsibility created and defined by the regulation or subregulation shall be guilty, or (as the case may be) jointly and severally guilty, of an offence.

(6) (i) Where an act or default committed by some person, other than an owner or manager, constitutes a contravention of, or failure to observe, or perform, or comply with, any regulation, such person shall be guilty of an offence against that regulation, whether or not the owner or manager is also, by virtue of subregulation (5), guilty of an offence against the same regulation.

(ii) An owner or manager who knowingly suffers or permits a contractor to commit an offence against the regulations of this Part shall be guilty of the same offence to that committed by the contractor.

(7) Nothing in the regulations of the Part shall take away or restrict any liability of any person, whether under the *Justices Act, 1921-1960*, or at common law, for aiding, abetting, counselling, procuring or otherwise being a party to the commission of an offence.

(8) The words "owner" "manager" and "contractor" (or any one or two of them) appearing in square brackets after the regulation or subregulation whose numbers appear in the left hand column of the Schedule are placed there for the purpose of convenient reference only, and do not form part of the regulation of this Part.

(9) Where any regulation in this Part refers to the number of persons working in a smelter, the number of those persons for the purpose of each such regulation, shall be computed by excluding the owner, but including the manager or contractor or both (as the case may require) if working therein.

## SCHEDULE TO REGULATION 502

Number of Regulation or Subregulation	Title or Description of Person or Persons
505(1)-(3)	Owner
505(5)	Owner, manager
506(1)	Owner, manager
506(2)	Owner, manager
507(1)	Owner
508(1)	Owner
509	Owner, manager, contractor
510	Manager, contractor
511	Owner, manager, contractor
513	Manager, contractor
515	Manager, contractor
516	Manager, contractor
517	Owner, manager, contractor
519	Owner, manager, contractor
520(a), (b), (c), (d), (e)	Owner
520(f)	Manager, contractor
522	Owner
523	Owner
524(1)	Owner
524(2)	Manager, contractor
526	Owner, manager, contractor
527	Manager, contractor
528(1)	Owner
528(2)	Manager, contractor
529	Owner, manager, contractor
530	Owner, manager, contractor
531	Owner, manager, contractor
532	Owner, manager, contractor
533	Owner, manager, contractor
534	Owner, manager, contractor
535	Manager, contractor
536(1), (3), (4)	Manager, contractor
536(2)	Owner, manager, contractor
537	Manager, contractor
538(1), (2)	Owner, manager, contractor
538(3)	Manager, contractor
539	Manager, contractor
540	Manager, contractor
541	Owner
542	Owner, manager, contractor
543	Owner
544	Manager, contractor
545	Owner, manager, contractor
546	Owner, manager, contractor
547	Owner, manager, contractor

548	.....	Manager, contractor
549	.....	Manager, contractor
550(1) (2) (4)	.....	Owner, manager, contractor
550(3)	.....	Owner
551	.....	Owner, manager, contractor
552	.....	Manager, contractor
553	.....	Manager, contractor
554	.....	Manager, contractor
555	.....	Manager, contractor
556	.....	Manager, contractor
558(1) (2)	.....	Manager, contractor
558(3)	.....	Owner
560(1) (4)	.....	Owner, manager, contractor
560(5) (6)	.....	Manager, contractor
561(1)	.....	Owner
561(2) (3)	.....	Manager, contractor
562	.....	Manager, contractor
563	.....	Manager, contractor
564(1), (2), (3), (5), (6) (7), (8), (9), (10), (11)	.....	Manager, contractor
564(4)	.....	Owner
565	.....	Manager, contractor
566	.....	Manager, contractor
567	.....	Manager, contractor
568	.....	Manager, contractor
569	.....	Manager, contractor
570	.....	Manager, contractor
571(1)(a) (b)	.....	Owner
571(1)(c)	.....	Manager, contractor
571(2)(a) (b) (c)	.....	Owner, manager, contractor
572	.....	Manager, contractor
573	.....	Manager, contractor
574(1), (2) (3)-(5), (6), (7), (8), (9), (10), (11)	.....	Manager, contractor
574(4)	.....	Owner
575(1)(a) (b)	.....	Owner
575(1)(c)	.....	Owner, manager, contractor
575(1)(d)	.....	Owner
575(2), (3), (4)	.....	Manager, contractor
576(1)	.....	Owner, manager, contractor
576(2), (3), (4), (5)	.....	Manager, contractor
577	.....	Manager, contractor
580	.....	Owner, manager, contractor
581	.....	Owner, manager, contractor
582	.....	Owner, manager, contractor
583	.....	Owner
584	.....	Owner, manager, contractor
585	.....	Owner, manager, contractor
586	.....	Owner
587	.....	Owner
588(1), (5)(a)	.....	Owner
588(2), (3), (4), (5), (b)	.....	Manager, contractor
589	.....	Manager, contractor

590	.....	Manager, contractor
591	.....	Manager, contractor
595	.....	Owner, manager, contractor
596	.....	Owner, manager, contractor
597	.....	Owner
598	.....	Manager, contractor
599	.....	Owner
600(1)	.....	Owner
600(2)	.....	Manager, contractor
601	.....	Owner
602	.....	Owner
603	.....	Owner
604	.....	Owner
605	.....	Manager, contractor
606	.....	Owner
607(1), (2)	.....	Owner
607(3)	.....	Manager, contractor
608	.....	Owner, manager, contractor
609	.....	Owner
610	.....	Owner
611	.....	Manager, contractor
612	.....	Owner
613	.....	Owner
614	.....	Manager, contractor
615	.....	Owner, manager, contractor
616	.....	Owner, manager, contractor
617	.....	Owner
618	.....	Manager, contractor
619	.....	Manager, contractor
620	.....	Owner
621	.....	Owner
622	.....	Owner, manager, contractor
623	.....	Owner, manager, contractor
624	.....	Owner, manager, contractor
625	.....	Owner
626	.....	Owner
627	.....	Owner
628	.....	Owner, manager, contractor
629	.....	Owner, manager, contractor
631	.....	Manager, contractor
645	.....	Owner, manager, contractor
649(2)	.....	Owner
649(4) (6)	.....	Manager, contractor

*Penalty*

**503.** The penalty for a breach of any provision of these regulations shall be a fine not exceeding one thousand dollars.

*Summary Procedure*

**504.** Proceedings for offences against these regulations shall be taken and determined in a summary way.

*Appointment of Manager*

**505.** (1) No more than nine persons shall work in a smelter in any period of twenty-four hours unless—

- (a) the owner has appointed a person holding a certificate as required by Division 8 of this Part to be the manager of the smelter; and
- (b) the owner has given to the Chief Inspector a written notice stating the name and address of the manager so appointed and particulars of the certificate held by him; and
- (c) the manager so appointed is (except in the case of his temporary absence) supervising the working of the smelter. **[Owner]**

(2) The Chief Inspector may at any time by written notice to the owner of any smelter, irrespective of the number of persons employed thereat, require him to appoint a manager holding a certificate or permit issued under Division 8 of this Part.

(3) Where a notice under the previous subregulation has been given to an owner, no work shall be done in the smelter unless—

- (a) the owner has appointed a person holding a certificate or permit as required by Division 8 of this Part to the manager of the smelter; and
- (b) the owner has given to the Chief Inspector a written notice of the name and address of the manager so appointed and the particulars of the certificate or permit held by him; and
- (c) the manager so appointed is (except in the case of his temporary absence) supervising the working of the smelter. **[Owner]**

(4) Where an individual person is the owner, or one of the co-owners of a smelter, and holds a certificate or permit as required by these regulations, he may appoint himself, or join in appointing himself, as manager of that smelter.

- (5) No person shall accept appointment or act as manager of more than one smelter. **[Owner, manager]**

(6) If no manager has been appointed for a smelter, the owner, or if the smelter is jointly owned, each of the owners, shall without affecting his duties or responsibilities as owner be deemed to be the manager of the smelter within the meaning of all provisions of these regulations which impose duties or responsibilities on the manager.

(7) What may be "temporary absence" within the meaning of this regulation shall depend on all the circumstances of the case but shall in no case exceed forty-eight hours.

*Temporary Manager*

**506.** (1) Whenever the manager is absent from the smelter for any length of time while it is working, the owner or some person authorised by him in writing shall appoint a competent person to act as temporary manager during the absence of the manager. **[Owner, manager]**

(2) If the manager is absent or intends to be absent for seven days or more, the owner shall as soon as practicable give the Chief Inspector written notice of the appointment of a temporary manager specifying the name, address, and certificate or permit of the person appointed and the period (if any) for which he is appointed. **[Owner, manager]**

(3) Where by these regulations a duty or responsibility is imposed on the manager, the same duty or responsibility shall be deemed to be imposed on the temporary manager whilst acting as such.

*Appointment of Agents by Owners*

**507.** (1) Where the owner is a person whose usual residence, or whose place of incorporation, is outside the State, the smelter shall not be worked unless—

- (a) the owner has appointed a natural person ordinarily resident in the State, or a company incorporated in the State, or a company registered in the State as a foreign company, to be his or its agent; and
- (b) notice in writing of such appointment has been given to the Chief Inspector; and
- (c) such appointment is still in force. **[Owner]**

(2) Any process or notice required or permitted to be served on the owner shall be sufficiently served if delivered by post or otherwise to the agent appointed by the owner under this regulation at his place of business or his usual or last known place of residence.

*Commencement and Cessation of Smelting*

**508.** (1) The owner of a smelter shall, within three days from and after commencement of work or his assumption of ownership in the case of a working smelter, send notice in writing to the Chief Inspector setting out—

- (a) the full name and address of the owner and the name and address of the manager of the smelter and particulars of the certificate or permit held by him;
- (b) the situation of the smelter;
- (c) the mineral or other substances being smelted; and
- (d) the estimated number of persons to be employed at the smelter. **[Owner]**

(2) The owner shall, within three days from and after the cessation of work at the smelter, and within three days from and after the recommencement of work after any such cessation, send notice in writing to the Chief Inspector of such cessation or recommencement.

(3) In this regulation "cessation of work" does not include a cessation for holidays, repairs, or on account of strikes or other industrial troubles.

*Inspection Record Books*

**509.** (1) The owner shall in all respects in accordance with these regulations keep at an office of the smelter books to be labelled respectively the "Inspection Record Book", and the "Machinery Record Book".

(2) The information recorded in the said books shall be accurate and shall include all relative dates and times.

(3) The entries in the said books shall be written clearly and legibly in ink.

(4) The owner, the manager and all persons having custody and control of either of the said books shall on demand by an inspector produce it to him for inspection and perusal, and the inspector may make entries and give written instructions in such books.

(5) Where an owner or manager is charged with an offence against any of these regulations, he shall produce the said books at the hearing of the charge.

**[Owner, manager, contractor]**

*Periodical Inspections*

**510.** (1) (a) Once at least in each working day the smelter shall be examined by the manager or a competent person to ascertain the state of all safety appliances; and

(b) Once in each week the buildings, machinery, equipment, appliances, apparatus, and all places used in the working of the smelter, shall be examined by the manager or a competent person.

(2) The person making such an inspection shall record in writing in the Inspection Record Book his opinion as to the conditions and safety of the things examined and whether any alterations or repairs are necessary or desirable in the interests of safety, and if the inspection is made by a person other than the manager, that person shall, after making the entries, forthwith inform the manager that the entries in the said book have been made and the said entries shall thereupon be signed by the manager.

**[Manager, contractor]**

*Duty to Exhibit Regulations*

**511.** A legible copy of these regulations or a poster containing such of these regulations as the Chief Inspector deems it necessary to exhibit shall be kept posted in a conspicuous position on the smelter.

**[Owner, manager, contractor]**

*Complaints*

**512.** If a person working in a smelter gives information to an inspector from which it appears to the inspector that a breach of the Act or of these regulations (other than a trivial breach) may have occurred, the inspector shall make or cause to be made an investigation into the matter so alleged.

*Inspections*

**513.** The manager shall forthwith on the request of an authorised person desiring to inspect a smelter pursuant to the Act or these regulations—

- (a) give such person access to all parts of the smelter and all plant and machinery thereat;
- (b) do all things necessary to enable the inspection to be made. **[Manager, contractor]**

*Duty of Owners to Provide Material and Equipment*

**514.** (1) (a) Except where these regulations expressly provide otherwise, the owner shall provide and install all such material and equipment as is necessary to enable these regulations to be complied with.

(b) Where a contractor is operating in a smelter, he shall, except where these regulations expressly provide otherwise, be under the same duties as the owner to provide and install material and equipment in that part, or those parts, of the smelter, and to or for those persons, to which, or to whom, the contractor's power and authority extends.

(2) The fact that these regulations mention specific cases in which the owner is required to provide material or equipment shall not be deemed to restrict the general duty imposed by owners by this regulation.

(3) In this regulation "equipment" includes machinery, plant, appliances, tools, materials, and articles of all kinds.

*Report of Accidents*

**515.** (1) Where at or in a smelter an accident occurs as the result of which any person suffers injury likely to cause him to be absent from work on three or more working days, or is killed, a written report shall, within 24 hours after the accident, be sent to the Chief Inspector stating the nature of the accident and the number of persons killed and persons injured.

(2) Where an accident has been reported under this regulation and a person subsequently dies as a result of the accident, a report shall be sent in writing to the Chief Inspector within twenty-four hours after the death becomes known to the manager.

(3) If an accident report form has been supplied by the Chief Inspector to the owner, manager or contractor, the said report shall be furnished on the form, but if no form has been supplied the report shall contain all such particulars as are necessary for giving reasonable information as to the nature and cause of the accident (including the numbers of persons killed or injured or both). **[Owner, manager, contractor]**

*Interference with Wreckage Etc., at Accidents*

**516.** (1) When a fatal accident or an accident arising out of the use of explosives occurs, no person shall, except with the consent of the Inspector, or for the purpose of saving human life or relieving human suffering:—

- (a) move, interfere with, destroy or carry away any wreckage, article or thing at the place of or connected with the accident; or
- (b) interfere with, or alter the state and condition of any hole, tunnel or excavation at the place of or connected with the accident.

(2) In giving consent under the previous subregulation the Inspector may impose any conditions or restrictions he thinks fit.

(3) Any person who knowingly contravenes or fails to comply with this regulation or any condition or restriction imposed under subregulation (2) of this regulation shall be guilty of an offence. **[Manager, contractor]**

## **DIVISION 2—SANITATION AND HYGIENE**

### *First-Aid Requirements*

**517.** (1) Where more than nine men are working on a smelter in any one shift—

- (a) a person trained in first-aid to the injured shall, at all times during working hours, be on the smelter and ready to attend to sick or injured persons; and
- (b) there shall be provided and maintained in good condition a room for affording first-aid to sick or injured persons; and
- (c) there shall be kept at the smelter a motor vehicle capable of transporting a sick or injured person in reasonable comfort and readily available for that purpose at any time; and
- (d) there shall be kept in the first-aid room an adequate supply of splints, bandages, and other requirements for first-aid to the sick or injured, sufficient oxygen gas for the treatment of persons suffering from fumes of explosives or other noxious gases, and appliances for the administration of such oxygen gas, and instructions for the use of such appliances.

(2) So long as any men (irrespective of the number thereof) are working on a smelter the owner shall keep at the smelter an adequate supply of splints, bandages, and other requirements for first-aid to the sick or injured sufficient for the number of men working on the smelter.

**[Owner, manager, contractor]**

### *Use of Rubbish for Filling*

**518.** No person shall for any purpose place in or about a smelter any debris, refuse, or other material likely to be injurious to the health of human beings, or to endanger the life or limb of any human being.

### *Smelter to be Clean and Free from Vermin*

**519.** A smelter is at all times to be kept clean and sanitary and free from vermin.

**[Owner, manager, contractor]**

*Sanitary Conveniences*

**520.** The following requirements shall at all times be complied with in respect of privies on a smelter for the use of persons working at or in the smelter:—

- (a) There shall be one privy for each twenty men working there at any one time, and an additional privy for any fractional part of twenty men so working; such privies shall be near the working place: **[Owner]**
- (b) Every privy shall have a floor of concrete or other hard and impervious material: **[Owner]**
- (c) Where a pan is used in a privy, it shall be furnished with a stool: **[Owner]**
- (d) Every pan shall be emptied, thoroughly cleaned and washed inside and outside and disinfected at least once a week: **[Owner]**
- (e) Every privy shall be adequately ventilated and screened from observation and kept in a clean and hygienic condition: **[Owner]**
- (f) Where a pan is used an adequate supply of deodorant and disinfectant shall be kept at each privy with a scoop for application. **[Owner, manager, contractor]**

*Pollution of Workings*

**521.** No person shall pollute the working places of a smelter or foul or misuse any sanitary convenience thereon.

*Drinking Water*

**522.** There shall be provided at convenient places throughout the smelter supplies of wholesome drinking water sufficient for the men working there. **[Owner]**

*Covering Working Places*

**523.** Where a man is working in a fixed exposed position there shall be made available in a convenient place or in convenient places adequate protection against inclement weather. **[Owner]**

*Change-Houses*

**524.** (1) Where more than nine persons are working in any one shift in a smelter, the owner shall provide and maintain in good repair and clean condition and keep available for use a change-house which shall comply with the following requirements:—

- (a) The change-house shall be as near to the working places as practicable.
- (b) The floor space of the change-house shall not be less than six square feet for each person using the change-house in any one shift, in addition to the floor space required for pasageways, heating pipes, and drying racks.
- (c) Every change-house shall—
  - (i) be properly warmed and kept free from draughts and adequately lighted;

- (ii) be ventilated so as to carry off any steam and vapour arising from showers and wash basins;
  - (iii) have floors with smooth and waterproof surfaces;
  - (iv) have provision for drying working clothes and for keeping street clothes and working clothes separate. Provided that where working clothes do not become wetted, provision may be made for airing instead of drying them.
- (d) There shall be provided in the change-house adequate supplies of clean hot and cold water for the men to wash and bathe themselves.
- (e) Washing accommodation shall be as follows:—
- (i) If a trough is provided, its inside surface shall be smooth and waterproof. It shall have a waste pipe without a plug, and a constant supply of hot and cold water from taps or jets fixed above the trough at intervals of not more than two feet. Its length shall be at least two feet for every five persons using the accommodation at any one time.
  - (ii) If basins are provided, there shall be at least one basin for every ten persons using the accommodation at any one time and an additional basin for any fractional part of ten men at any one time. Each basin shall be fitted with a waste pipe and plug, and shall be provided with a constant supply of hot and cold water.
- (f) Shower accommodation shall be as follows:—
- Showers shall be supplied in the change-house at the rate of not less than one for every ten men in any one shift and an additional shower for any fractional part of ten men in any one shift. The showers shall be at least four feet apart, and the floor of the shower area shall be provided with drainage to remove waste water. [Owner]

- (2) The floor of every change-house while in use shall be washed daily. [Manager, contractor]

*Removal of Dirty Clothes from Change-House*

**525.** A person using a change-house shall, when requested by the manager, remove all his dirty clothes (other than safety helmets, belts or boots) from the change-house.

**DIVISION 3—VENTILATION AND CONTROL OF DUST AND FUMES**

*Standards of Ventilation*

**526.** (1) The smelter shall be ventilated so that at all times the air in every part of the smelter where men are working, shall comply with the following requirements:—

- (a) It shall contain at least 20 per cent by volume of oxygen:

- (b) It shall not contain more than 0.5 per cent of carbon dioxide, or more than 0.005 per cent of carbon monoxide, or more than 0.0005 per cent of the higher oxides of nitrogen, or more than 0.002 per cent of sulphuretted hydrogen; all such percentages being calculated by volume:
  - (c) It shall not contain more than 300 particles per cubic centimetre of dust which is five microns or less in diameter.
- (2) The number of dust particles per cubic centimetre shall be determined:—
- (a) by a konimeter, taking the average of the numbers ascertained by six tests made at intervals of one minute; or
  - (b) by any other instrument approved by the Chief Inspector of Mines.

In either case, the number of such particles shall be counted under dark field illumination.  
[Owner, manager, contractor]

*Work in Places Inadequately Ventilated*

**527.** No person shall do any work in a part of the smelter where the ventilation does not comply with these regulations, unless such work is necessary to make the ventilation so comply or for rescue or firefighting work.  
[Manager, contractor]

*Traps and Receivers*

**528.** (1) All compressed air systems shall be effectively drained to prevent the accumulation of water.  
[Owner]

(2) All devices used for this purpose shall be blown off and checked for operation at least once each day while they are in use.  
[Manager, contractor]

*Other Operations Producing Dust*

**529.** Whenever in the course of smelting operations, dust is produced, sprays or jets of water or other effective means for laying or removing the dust shall be provided and used so that it will not be a danger to or to the health of any person.  
[Owner, manager, contractor]

*Water Used for Laying Dust*

**530.** Water used for laying dust shall be free from matter harmful to the health of human beings.  
[Owner, manager, contractor]

*Provision of Self-Contained Breathing Apparatus*

**531.** (1) No person shall work in a part of the smelter where air dangerous to the health or safety of human beings has accumulated unless—

- (a) such work is necessary to improve the ventilation or for the rescue of any men; and

(b) the person so working is provided with a self-contained breathing apparatus and has been trained in the use thereof.

(2) There shall at all times be kept available and in good order sufficient sets of efficient self-contained breathing apparatus to enable the provisions of subregulation (1)(b) of this regulation to be complied with.

(3) In this regulation "self-contained breathing apparatus" means apparatus capable of being carried or worn by men while working, and from or through which pure air can be breathed during the whole of the work. **[Owner, manager, contractor]**

*Disposal of Dangerous Fumes and Gases*

**532.** All fumes and gases which are generated in any furnace or plant at the smelter, and which are dangerous to human life or health, shall be disposed of or treated so that there is no reasonable possibility that any person will be injured by them. **[Owner, manager, contractor]**

**DIVISION 4—SAFETY AND PROTECTION**

**533.** (1) All machinery which is in use in or at a smelter, shall be kept at all times in good working order and in safe condition.

(2) In this regulation "machinery" includes machinery, engines, plant, gear and equipment of all kinds. **[Owner, manager, contractor]**

*Construction and Maintenance*

**534.** (1) All material and equipment installed or used in a smelter shall be sound and of adequate strength for the purpose for which it is to be used.

(2) Every working part of a smelter and every structure and item of equipment which is in use in or at the smelter shall be maintained in good order, and in a safe condition. **[Owner, manager, contractor]**

*Interference with Structures, Plant or Equipment*

**535.** (1) No person shall except in the course of duties which he is engaged in or authorised to carry out, interfere with or remove any structure or part of a structure or any machinery, plant or equipment at or in a smelter.

(2) Where a person opens a gate or removes or displaces any fence, guard or other like structure provided at or in a smelter, he shall shut the gate or restore the fence, guard or structure to its usual place as soon as the necessity for the opening, removal, or displacement has ceased. **[Manager, contractor]**

*Procedure in Case of Danger*

**536.** (1) If the manager or a person for the time being in charge of any part of a smelter is of the opinion that dangerous conditions exist in the smelter or part thereof respectively, he shall—

- (a) forthwith order the immediate withdrawal of every workman from such smelter or part and every workman so ordered shall withdraw accordingly; and
- (b) cause such smelter or part to be inspected by a competent person; and
- (c) not permit any person to enter such smelter or part while in his opinion it remains dangerous, except for the purpose of making an inspection thereof or doing work to make it safe. **[Manager, contractor]**

(2) During the making of an inspection under subregulation (1) of this regulation—

- (a) if it appears reasonably possible to the person making the inspection that there is any danger arising from inflammable gas, no lamp other than a locked safety lamp shall be used;
- (b) if it appears reasonably possible to the person making the inspection that there is any danger arising from noxious gas, a self-contained breathing apparatus shall be used by him and all other persons making the inspection.

**[Owner, manager, contractor]**

(3) Forthwith after making the inspection, the person making the same shall enter in the Inspection Record Book a record of the inspection specifying the nature of any dangerous conditions found by him and of any action recommended to remedy them. **[Manager, contractor]**

(4) When any action is taken under this regulation the particulars thereof shall forthwith be entered in the Inspection Record Book and a written report specifying the nature of the dangerous conditions and the action taken to remedy them shall be transmitted to an Inspector. The said record and the said report shall be signed by the Manager. **[Owner, manager, contractor]**

#### *Men Working Alone*

**537.** (1) Whenever a person is working in a smelter in a place where he is not in frequent communication with, or within speaking distance of, some other person, such first-mentioned person shall be—

- (a) visited by a competent person at intervals of not more than two hours; or
- (b) communicated with by telephone or other means every hour and visited as aforesaid every half-shift.

(2) No person shall work in a dangerous place unless such person is within constant view of some other person working in the smelter. **[Manager, contractor]**

#### *Safety Helmets*

**538.** (1) A safety helmet shall be supplied to every person working in a smelter crushing or screening plant or in any place where he may be hit by a falling object.

**[Owner, manager, contractor]**

(2) Whenever a helmet supplied pursuant to this regulation is lost or destroyed, or becomes unserviceable, the owner shall, at his own cost, replace the helmet: Provided that, if the replacement is necessary because of negligence or wilful wrong-doing by the person to whom the same was supplied, that person shall be liable to pay the owner the cost of the helmet supplied by way of replacement. **[Owner, manager, contractor]**

(3) A person working in a smelter shall wear a safety helmet at all times while he is working in a smelter, crushing, or screening plant or any other place where he may be hit by a falling object. **[Manager, contractor]**

(4) A helmet supplied pursuant to this regulation shall, unless otherwise agreed, remain the property of the owner who supplied it.

*Minors Not to be in Charge of Steam Engines or Boilers*

**539.** No person under 21 years of age shall be in charge of or have control of a steam engine or steam boiler used on a smelter. **[Manager, contractor]**

*Duty of Drivers of Machinery to Remain*

**540.** No person having charge or control of a steam boiler, steam engine, winding engine, winch or crane, which is used on a smelter for the working thereof, shall absent himself from or cease to have effective charge or control (as the case may be) of such boiler, steam engine, winding engine, winch or crane while it is required to be used, unless relieved by a person qualified to replace him. **[Manager, contractor]**

*Certificates of Registration of Boilers*

**541.** A person having the possession, custody, or control of any certificate relating to the registration, inspection, or testing of a boiler or air receiver used at a smelter, shall, on the request of an inspector, produce such certificate to him for inspection. **[Owner]**

*Protection of Machinery, Platforms, Vats and Ladders*

**542.** (1) At a smelter—

- (a) all exposed dangerous parts of machinery in operation;
- (b) every flywheel pulley, drive wheel, drive belt;
- (c) all steps, ladders, elevated gangways, and elevated platforms, including those on such equipment as overhead travelling cranes;

shall be securely fenced and guarded and every such fence and guard shall be kept in good order. **[Owner, manager, contractor]**

(2) Adequate precautions shall be taken at all ashpits, ash heaps and other places where there are hot or molten materials to ensure that no person is endangered by these materials. A notice shall be posted in a conspicuous position warning people of the danger. **[Owner, manager, contractor]**

*Platforms, Gangways, Stairs and Ladders*

**543.** All platforms, gangways, stairs and ladders shall be designed, constructed and erected in accordance with the Code of the Standards Association of Australia known as the S.A.A. Code for Platforms, Gangways, Stairs and Ladders No. CA 10/1938 and any amendments thereto.

[Owner]

*Garments for Oilers and Machinery Attendants*

**544.** No person shall work in the immediate vicinity of moving machinery in or about a smelter unless he is wearing close-fitting and close-fastening garments. [Manager, contractor]

*Lights in Working Places*

**545.** (1) Every working place shall be illuminated at all times when men are working in or passing through it between half-an-hour after sunset and half-an-hour before sunrise.

(2) The illumination required under subregulation (1) shall be sufficient for the safety of the persons working in or passing through the place, and shall be provided by fixed lamps.

(3) No person shall enter an unlighted part of a smelter unless he carries a light adequate to ensure his own safety and the safety of those accompanying him.

(4) "Fixed lamp" in this regulation means a lamp not being carried by a person.

[Owner, manager, contractor]

*Safety Ropes and Belts*

**546.** (1) (a) Safety ropes and safety belts shall be provided for use where there is a danger of falling from a height and in chutes, or bins.

(b) Every such safety rope when in use shall be kept securely anchored.

(2) No person shall work on or move across a place where there is a danger of falling from a height unless he is using a safety rope secured to a substantial anchorage.

(3) No person shall enter or remain in a chute, or bin unless—

(a) he is wearing a safety belt attached to a securely anchored safety rope; and

(b) at least one other person is within hearing distance of him, at all times whilst he is within such chute or bin. [Owner, manager, contractor]

*Precautions Against Fire*

**547.** (1) Adequate precautions shall be taken to prevent the outbreak of fire in or about a smelter.

(2) Adequate provision shall be made for the prompt suppression of any outbreak of fire.

(3) Without affecting the generality of subregulations (1) and (2) of this regulation, the following rules shall be complied with.

- (a) In the event of an outbreak of fire at or in a smelter, an effective warning of the fire shall be given first to persons likely to be affected by the fire or the products of combustion; and secondly to all other persons in the smelter.
- (b) At all times all necessary arrangements shall have been made and be thoroughly understood by all concerned for the purpose of ensuring compliance with this subregulation (3)(a). **[Owner, manager, contractor]**

*Duty of Employees as to Safety*

**548.** (1) A person working in a smelter—

- (a) shall at all times carefully observe the condition of the place where he is working or is about to work and of the plant and equipment therein;
- (b) shall take all steps within his power to make his working place safe and to remedy any defects apparent in equipment;
- (c) shall report to the person under whose immediate direction or control he is working any defect or danger which comes to his notice;
- (d) shall not work with any defective plant or equipment;
- (e) shall not work in an unsafe place except for the purpose of making it safe.

(2) Every foreman and every shift boss in a smelter and every person in charge of a portion of a smelter shall on changing his shift inform the person who relieves him of the state of the workings, plant, and equipment in the part of the smelter for which he is immediately responsible in his character as such. **[Manager, contractor]**

*Places Forbidden to Intoxicated Persons*

**549.** No person under the influence of liquor shall be on the smelter and the appurtenances thereof. **[Manager, contractor]**

*Test Certificate of Wire Ropes*

**550.** (1) Before a new rope is used in a smelter, a true copy of the maker's certificate stating—

- (a) details of the construction of the rope;
- (b) the class of steel of which it is made;
- (c) the breaking strain of the rope;

shall be deposited with an inspector.

**[Owner, manager, contractor]**

(2) No person shall use as a winding or haulage rope any rope which has been previously used for any other purpose, or on a different winding haulage or hoist engine or drum, unless—

- (a) a complete record of the previous use of the rope and the purpose for which it is to be used has been furnished to an inspector; and
- (b) the approval of an inspector has been obtained for the proposed use.

**[Owner, manager, contractor]**

(3) An inspector may request the owner to obtain a certificate of the breaking strain of any rope in use or about to be used in a smelter from the Engineering School of the University of Adelaide or from any other testing station indicated by the inspector and approved by the Chief Inspector and to produce such certificate to the inspector. The owner shall comply with any such requests.

**[Owner]**

(4) No spliced rope shall be installed on a smelter for the purpose of raising or lowering material, but this shall not prevent the splicing of "eyes" in the ends of haulage ropes.

**[Owner, manager, contractor]**

#### *Strength of Wire Ropes*

**551.** Every rope used for raising or lowering materials—

- (a) shall have a breaking strain of at least six times the working load;
- (b) shall have a breaking strain of at least three-quarters of its breaking strain when new; and
- (c) shall have no defect rendering its use unsafe in the circumstances.

**[Owner, manager, contractor]**

#### *Examinations of Wire Ropes, Plant and Equipment*

**552.** The following examination of ropes, plant and equipment on a smelter shall be carried out by a competent person.

- (a) Each wire rope in use with its attached shackles and other couplings shall be examined at least once a day.
- (b) Each rope shall be examined at least once a month in order to discover the amount of deterioration. In this examination the rope shall be thoroughly cleaned at places not more than one hundred feet apart, and the person making the examination shall note the condition of the external parts of the rope and, as far as possible, the condition of the internal parts, and any significant reduction in the diameter of the rope; and shall estimate the reduction in the strength of the rope due to wear.
- (c) The person making an examination under this paragraph shall forthwith after the examination record the condition of the rope in the machinery record book.

- (d) Every winch or hoist in use shall be examined internally and externally at least once a year. The person making the examination shall record the condition of the winch or hoist in the Machinery Record Book. **[Manager, contractor]**

*Rope Cleaning and Lubrication*

- 553.** All wire ropes shall be kept in a clean and well lubricated condition. **[Manager, contractor]**

*Record of Ropes*

**554.** A record of each haulage or hoisting rope used on the smelter setting out the following particulars concerning the rope shall be entered in the Machinery Record Book—

- (a) the haulage, crane or hoist on which it was used;
- (b) the date on which it was first used;
- (c) the dates when it was shortened; or end for ended;
- (d) the dates when it was examined, cleaned or oiled;
- (e) the dates when it was taken off. **[Manager, contractor]**

*Chains and Couplings*

**555.** At intervals of not more than twelve months all chains, shackles and other couplings and connections shall be annealed or otherwise treated so as to remove fatigue.

**[Manager, contractor]**

*Records of Chains and Couplings*

**556.** A record shall be entered in the Machinery Record Book of each chain, shackle and other coupling or connection used on the smelter, setting out the following particulars with respect to each such item—

- (a) the date when it was first used;
- (b) its size and breaking strength;
- (c) its maximum working load;
- (d) dates of annealing or other treatment to remove fatigue;
- (e) its condition when examined. **[Manager, contractor]**

*Definition of Working Load*

**557.** (1) For the purpose of these regulations working loads shall be calculated as follows:—

- (a) The working load of a hoisting rope shall be the sum of—
- (i) the weight of the rope below the head sheave when the load is at its lowest point; and
  - (ii) the weight of all chains, shackles and other couplings and connections between the hoisting rope and the load; and
  - (iii) the weight of the carrying contrivance;
  - (iv) the maximum load at any time carried in the carrying contrivance.
- (b) The working load of a chain, shackle or other coupling or connection between a hoisting rope and a load shall be the sum of—
- (i) the weight of all chains, shackles and other couplings and connections between the load and the chain shackle coupling or connection whose load is being computed; and
  - (ii) the weight of the carrying contrivance;
  - (iii) the maximum load at any time carried in the carrying contrivance.

#### *Cranes*

**558.** (1) No person shall use a crane on a smelter unless all the parts of the crane have sufficient strength for the work and are in safe working order. **[Manager, contractor]**

(2) All cranes shall be operated, maintained, and inspected in accordance with the rules governing the operation, maintenance and inspection of cranes set out in the Code of the Standards Association of Australia known as the "Crane and Hoist Code A.S. No. C.B. 2/1960" and any amendments thereto. **[Manager, contractor]**

(3) No person shall install on a smelter a new crane or service hoist unless it conforms in respect to design, construction, erection and testing with the requirements of the Code of the Standards Association of Australia known as the "Crane and Hoist Code A.S. No. C.B. 2/1960" and any amendments thereto. **[Owner]**

### **DIVISION 5—EXPLOSIVES**

**559.** In this Division—

"butt" means the bottom portion of a hole bored to take a charge of explosives, which portion remains in existence after the charge of explosives has been fired:

"high explosive" means an explosive which is not effective unless fired by a detonator:

"ramming" means to force vigorously into position:

"stemming" means sand or other inert material placed over explosives in the hole prepared for them:

"tamp" means to press into position by some means other than ramming.

*Storage of Explosives*

**560.** (1) No explosives shall be kept in or on a smelter in any other place than—

- (a) a Government magazine; or
- (b) a magazine or premises licensed under the *Explosives Act, 1936-1958*; or
- (c) a magazine approved in writing by an inspector. **[Owner, manager, contractor]**

(2) No inspector shall approve of a magazine or proposed magazine unless he is satisfied with the situation, construction, lighting, ventilation and safety thereof.

(3) An inspector may withdraw approval of a magazine if he is satisfied that explosives can no longer be safely kept therein.

(4) No detonators shall be stored in the same magazine as other explosives. **[Owner, manager, contractor]**

(5) (a) no person shall enter a magazine containing explosives, without the manager's consent;

(b) all explosives in the smelter shall be stored safely and handled with care. **[Manager, contractor]**

(6) If a smelter or part of a smelter is abandoned all explosives shall be removed from it. **[Manager, contractor]**

*Cutting of Fuses*

**561.** (1) Sufficient sharp knives suitable for cutting fuses to the lengths required, and crimpers to crimp detonators on to fuses, shall be provided. **[Owner]**

(2) No person shall sever any fuse except with a sharp knife or cutting instrument. **[Manager, contractor]**

(3) No person shall fix a detonator to a fuse except by crimping with a crimper supplied for that purpose. **[Manager, contractor]**

*Lights and Smoking*

**562.** (1) No person entering or being in a magazine in which explosives are stored shall have in his possession any exposed burning or incandescent substance.

(2) No person shall smoke while carrying, handling, or using explosives or while being within twenty feet of any explosives (whether being carried, handled or used by another person, or not). **[Manager, contractor]**

*Opening Cases of Explosives*

**563.** No person shall open a case containing explosives—

- (a) in any storage magazine; or
- (b) within twenty feet of a storage magazine; or
- (c) with any implement not made of wood, brass or copper. **[Manager, contractor]**

*Use of Explosives*

**564.** (1) No person shall take more explosives from a magazine than he reasonably expects to use on the day on which they are so taken. **[Manager, contractor]**

(2) When explosives taken from a magazine are not used on the day on which they are so taken, the person who took them from the magazine shall return them or cause them to be returned to the magazine on that day. **[Manager, contractor]**

(3) No person shall convey explosives from a magazine to the working places except in a securely covered container; and shall not convey detonators in the same container as other explosives. **[Manager, contractor]**

(4) Sufficient securely covered containers for the purpose of conveying explosives from magazines to the working places shall be provided. **[Owner]**

(5) No person who is under the age of twenty-one years or who does not understand the English language shall charge, or fire explosives. **[Manager, contractor]**

(6) No person shall remove the wrappers from, or break the cartridges of, high explosive used in charging a hole: Provided that this subregulation shall not apply to primer cartridges or to special charges used for firing in hot materials. **[Manager, contractor]**

(7) No person shall—

- (a) sink a detonator into the compound of a primer cartridge to a depth exceeding the length of the detonator;
- (b) forcibly press a cartridge of high explosive into a hole of insufficient size. **[Manager, contractor]**

(8) No person shall use a safety fuse for firing a charge unless the fuse is at least six feet long. **[Manager, contractor]**

(9) No person shall use any implement except a wooden tamping stick for tamping charges of explosives into the holes prepared for them. **[Manager, contractor]**

(10) No person shall tamp explosive or stemming into a hole by ramming. **[Manager, contractor]**

(11) No person shall fire a charge of explosives unless stemming has been used to confine such charge. **[Manager, contractor]**

*Firing Explosives*

**565.** (1) The person in charge of blasting shall before a charge is fired—

- (a) cause all persons who are in places (herein called "the danger zone") where they might be injured by the blasting to be warned of the intended blasting, and of the locality thereof, and of the number of charges to be fired;
- (b) ensure that persons are stationed at suitable places for the purpose of giving warning of the intended blasting to persons approaching the danger zone;
- (c) wait until all persons in the danger zone have taken shelter or left such zone.

(2) Where more than three fuses are to be ignited at one time in the same working place—

- (a) at least two persons shall be present; and
- (b) no person shall ignite a fuse unless another person is sufficiently near him to be able to assist him in case of accident or emergency.

(3) When charges are fired by safety fuses the person in charge of the blasting shall count the number of explosions if possible and if he has any doubt by reason of the count or otherwise whether all the charges have been exploded he shall proceed in accordance with these regulations, as though each charge had misfired. **[Manager, contractor]**

*Misfire*

**566.** (1) Where a charge prepared for firing by safety fuse has misfired, no person shall approach the charge within thirty minutes after the lighting of the fuse.

(2) Where a charge prepared for firing by electric current has misfired, no person shall approach the charge unless—

- (a) ten minutes have elapsed since the attempted firing; and
- (b) the conducting wires have been disconnected and short circuited.

(3) Where a charge of high explosive has misfired, no person shall attempt to withdraw it from the hole, but the following action shall be taken:—

- (a) the stemming shall be removed by water under pressure or compressed air and water, applied through a copper tube or a rubber hose with no ferrous metal at its free end;
- (b) another priming charge shall be fired in the hole to explode the original charge;

- (c) if the second charge fails to explode the original charge, one or more additional holes shall be bored and fired. The position of any additional hole shall be determined by a shift boss or foreman or the manager after consultation with the person who bored the original hole. **[Manager, contractor]**

*Treatment of Butts*

**567.** (1) If the butt of a hole in which a charge has been exploded remains after the explosion, no person shall do any work in a place where he might be injured by an explosion in the butt unless—

- (a) the work is solely for the purpose of making the butt safe or;
- (b) at least two competent persons working in the smelters have inspected the butt and reported that there is no explosive in it.

(2) A person inspecting a butt for explosive shall first thoroughly clean it out with water.

(3) Where any explosive remains in a butt after firing, a misfire shall be deemed to have taken place. **[Manager, contractor]**

*Misfires Not Cleared Before End of Shift*

**568.** When a misfire occurs and the hole is not cleared of explosives before the end of a shift the person in charge of the firing shall—

- (a) report the misfire to his shift boss or the foreman or manager and to the man relieving him;
- (b) forthwith cause a barricade or other obstruction to be erected so as to prevent persons from approaching the misfire; and
- (c) forthwith cause a notice to be erected near the misfire containing the word "danger". **[Manager, contractor]**

*Inspection After Firing at End of Shift*

**569.** After charges of explosives have been fired in a working place at the end of a shift, no person shall commence work in that place until it has been carefully inspected by a competent person. **[Manager, contractor]**

*Procedure Where Explosive Burns Without Exploding*

**570.** When on an attempt to fire a charge of explosives, the charge burns without exploding—

- (a) no person shall approach the hole until one hour has elapsed from the time when the attempt was made;
- (b) no person shall place another charge in the same hole unless—

- (i) the hole has been filled with water, or a copper rod has been inserted in the hole for at least five minutes and upon withdrawal has been found sufficiently cool to enable the back of the hand to be held against it; and
  - (ii) the hole has been tested with a wooden tamping stick and found clear and free of obstruction.
- (c) if the hole is not free from obstruction it shall be dealt with as a misfire.

[Manager, contractor]

#### *Ammonium Nitrate*

In addition to the general regulations in this Division the two following special regulations Nos. 571 and 572 shall apply to the handling and use of ammonium nitrate mixtures.

#### *Transport and Charging*

**571.** (1) (a) All cartridges, bags or other containers of ammonium nitrate mixtures shall be labelled to indicate their contents. [Owner]

(b) Ammonium nitrate mixtures shall be conveyed in covered containers. The lid of the container shall be fitted with a suitable fastening device to prevent as far as possible the mixture becoming damp or the accidental opening of the lid and the spillage or contamination of the contents. The container and lid shall be constructed of non-absorptive and non-corrodable material. The use of galvanized iron, zinc or copper shall not be permitted. Alternatively, explosives of this type may be conveyed in closed polythene bags of adequate thickness and strength. The contents of either type of container shall not exceed 50 lb. Provided that this requirement shall not prevent the conveyance of ammonium nitrate mixtures in bulk containers approved by the Chief Inspector of Mines. [Owner]

(c) Any spilt material shall be cleaned up promptly and thoroughly. [Manager, contractor]

(2) (a) Pneumatic loading of ammonium nitrate mixtures shall not be used unless the pneumatic loader is safe and efficient to the satisfaction of an Inspector of Mines.

[Owner, manager, contractor]

(b) The ammonium nitrate mixture shall be loaded through safe and efficient conductive tubing to the satisfaction of an Inspector of Mines. [Owner, manager, contractor]

(c) The loader and associated equipment shall be earthed by means of a flexible wire connected to a spike driven into the rock in a suitable location. No water lines, compressed air lines, rails, wire countered hoses or permanent electrical earthing systems shall be used as a means of earthing. [Owner, manager, contractor]

#### *Misfires*

**572.** When a misfire occurs with an ammonium nitrate mixture the following procedure shall be adopted:—

- (a) An attempt shall be made to wash out the stemming and explosive from the hole.

- (b) If the attempt to wash out the hole is successful, the hole may be recharged and fired.
- (c) If the attempt to wash out the hole is unsuccessful, and electric firing has been used, the hole shall be reprimed and an attempt made to explode the original charge.
- (d) If the attempt to wash out the hole is unsuccessful, and fuse firing has been used, or if the attempt made in (c) fails, the foreman or manager after consultation with the person who bored the original hole shall determine the steps to be taken to clean up the misfire and shall take those steps. **[Manager, contractor]**

*Blasting in Hot Materials*

**573.** Notwithstanding anything contained in this Division, holes in hot materials shall be charged with explosives and fired in a manner approved by the Chief Inspector in writing. Materials in which the temperature exceeds 135°F shall be considered hot materials.

**[Manager, contractor]**

*Electrical Shot Firing*

**574.** (1) During an electric storm, no person shall do any work in connection with the electric firing of charges. **[Manager, contractor]**

(2) No person shall fire a charge of explosives electrically unless he is authorised to do so by the manager. **[Manager, contractor]**

(3) The name of every person who is authorised by the manager to fire charges of explosives electrically shall be recorded in the Inspection Record Book. **[Manager, contractor]**

(4) For the purpose of electric firing, suitable and efficient circuit testers, exploders, switches, fuses, conductors and other necessary apparatus shall be provided. **[Owner]**

(5) All such articles of equipment and apparatus shall be maintained in good working order and shall be tested at such intervals as are necessary to ensure their constant efficiency. If any such article is found to be inefficient or unsuitable, it shall immediately be withdrawn from use.

**[Manager, contractor]**

(6) Where electric firing conductors are used in the vicinity of other electric conductors, the firing conductors shall be prevented from coming into contact with other electric conductors or being affected by leakage of current from other conductors. **[Manager, contractor]**

(7) A blaster shall prevent firing conductors used by him from making electric connection with firing conductors in another circuit. **[Manager, contractor]**

(8) Before using an electric detonator a blaster shall test it for continuity and while testing it shall keep it covered so as to protect himself. **[Manager, contractor]**

(9) No person shall connect the leads from the detonators to the firing conductors unless the firing conductors are short circuited by joining the ends of the wires together at a place so located that a premature explosion would be harmless to men opening that short circuit later.

[Manager, contractor]

(10) Immediately before firing a charge of explosives electrically the blaster shall open the short circuit and shall test the complete circuit of conductors and electric detonators for continuity.

[Manager, contractor]

(11) Immediately after firing a charge of explosives electrically the blaster shall disconnect the conductors from the blasting machine, and shall replace the short circuit on the conductors by joining the wires together.

[Manager, contractor]

*Use of Power and Lighting Circuits for Firing*

**575.** (1) Where electricity from a power or lighting circuit is used for firing charges the following requirements shall be complied with:—

(a) A special firing-switch shall be installed between the source of power and the firing conductors and shall be so constructed and protected as to ensure that electric current will not leak into the firing conductors: [Owner]

(b) The switch shall be placed in a switch-box so constructed that it cannot be shut unless the switch is in the off position: [Owner]

(c) There shall be only one key for each switch-box. The key of each switch-box shall be in the personal custody of an authorised blaster, who shall retain the key in his personal custody at all times while he is on duty as a blaster: [Owner, manager, contractor]

(d) Firing conductors shall be provided which are fitted with plugs capable of connecting them to appropriate bases in the switching apparatus. [Owner]

(2) No person shall connect firing conductors to the switching apparatus for the purpose of firing charges by electricity from a power or lighting circuit until—

(a) all persons have been removed from places where they may be injured by the explosion; and

(b) all preparations for firing have been made. [Manager, contractor]

(3) When firing conductors have been connected to the switching apparatus after compliance with the foregoing provisions of this subregulation, the blaster shall immediately fire the charge. [Manager, contractor]

(4) Immediately after firing the blaster shall disconnect such firing conductors from the switching apparatus, short circuit them by twisting the wires together, and lock the switch-box.

[Manager, contractor]

*Use of Exploders for Firing*

**576.** (1) No person shall use an exploder, unless it is fitted with a locking device having a detachable handle, connection, or key, without which the firing circuit cannot be completed.

[Owner, manager, contractor]

(2) The handle, connection, or key of the exploder shall be placed in the personal custody of an authorised blaster, who shall retain it in his personal custody at all times while he is on duty as a blaster.

[Manager, contractor]

(3) No person shall connect an exploder to firing conductors until—

(a) all persons have been removed from places where they are likely to be injured by the explosion; and

(b) all other preparations for firing have been made. [Manager, contractor]

(4) When the exploder has been connected to firing conductors after the foregoing provisions of this subregulation have been complied with, the blaster shall immediately fire the charge.

[Manager, contractor]

(5) Immediately after a charge has been fired by an exploder the blaster shall disconnect the firing conductors from the exploder, short circuit them by twisting the wires together, remove the handle or lock the mechanism, and place the handle or key in his pocket or otherwise secure it about his person.

[Manager, contractor]

*Batteries Not to be Used for Firing*

**577.** No person shall use a primary or secondary battery for firing. [Manager, contractor]

**DIVISION 6—PREVENTION OF LEAD AND GAS POISONING***Application of this Division*

**578.** This Division applies only to persons, processes, acts, matters and things in or at lead works.

*Definitions*

**579.** In this Division, unless the context otherwise requires or some other meaning is clearly intended—

"lead materials" means materials containing not less than 2½ per cent of lead:

"lead process" means—

- (i) the manipulation, movement or treatment of lead materials for the recovery of lead products and by-products; and

- (ii) the cleaning, demolition, or repair of a furnace, melting-pot, retort, flue or other structure or appliance used in connection with the treatment of lead materials:

"damp" means sufficiently moist to prevent the escape of dust:

"owner" means owner of lead works:

"efficient exhaust draught" means a draught of air which removes gas, vapor, fumes and dust at the point where they originate in order, as far as practicable, to prevent them escaping into the air of any place where work is being carried on:

"lead works" means a smelter or works where a lead process is being carried on.

*Duty to Exhibit Notice and Regulations*

**580.** (1) There shall be kept posted up in a conspicuous place in the lead works so as to be seen by all persons engaged in lead processes therein—

- (a) a copy of this Division; and
- (b) a notice in the following form:—

**WARNING NOTICE**

Persons working in or about these works may take dust or fumes or gas into their bodies. Danger to health may arise from the inhalation of—

- (a) lead dust in suspension in the atmosphere;
- (b) fumes given off by molten lead;
- (c) carbon monoxide gas.

Early treatment prevents permanent injury to health from any of these causes. A person suspecting himself to be affected in any degree by lead, or suffering from head ache, persistent loss of appetite, constipation of the bowels, frequent nausea and vomiting, weakness in the arms or legs, dizziness, pallor of the skin, lassitude, or a foul mouth or foetid breath, should present himself for medical examination.

This notice is exhibited in accordance with the regulations made under the *Mines and Works Inspection Act, 1920-1962.*

.....  
*Owner.*

(2) A copy of this Division of these regulations shall be given to each new employee at the lead works before he commences to work and a record shall be kept showing the name of every employee to whom such a copy has been supplied, and the record shall be signed by each such employee. **[Owner, manager, contractor]**

*Prevention of Dust, Fumes and Gas from Lead*

**581.** All measures which are reasonably practicable shall be taken to ensure—

- (a) that no dust shall arise from lead materials stored at the lead works; and
- (b) that no dust, fumes, or gas arising from a lead process shall be liberated into the atmosphere of working places at the works. **[Owner, manager, contractor]**

*Prevention of Emission of Flue Dust*

**582.** (a) All measures which are reasonably practicable shall be taken to ensure that flue dust shall not be emitted from smelter stacks and shall not accumulate except inside a securely closed receptacle.

(b) All flue dust shall be wetted wherever practicable before or while being drawn from the flue or closed receptacle.

(c) All flue dust shall be removed as soon as possible from the working places and handled in a safe manner. **[Owner, manager, contractor]**

*Water to Lay Dust*

**583.** At every place in the lead works where dust may be raised an adequate supply of water shall be provided for the purpose of laying such dust by sprinkling with water. **[Owner]**

*Duty to Keep Premises Free from Dust*

**584.** (1) All floors, walls, rafters and other parts of buildings at the lead works shall be kept as far as possible free from dust.

(2) No person shall sweep dust from any part of the lead works unless the part to be swept is first wetted with water so as to prevent dust from being raised: Provided that it shall not be necessary to wet any such part when the sweeping is carried out by a vacuum cleaner which does not permit the dust to escape into the air. **[Owner, manager, contractor]**

*Prevention of Dust*

**585.** All necessary measures shall be taken to ensure that dust does not arise from roads, tracks, and open spaces within the lead works. **[Owner, manager, contractor]**

*Accommodation for Meals, Lockers, Etc.*

**586.** There shall be provided at the lead works and maintained in good repair and clean condition for the use of all persons employed in a lead process.

- (a) a suitable and sufficiently large meal room situated or built so that it does not admit dust or fumes from any lead process;
- (b) adequate and suitable arrangements adjacent to the meal room for the washing of hands and face, with warm water always available;

- (c) boiling water for making tea with meals;
- (d) in or adjacent to the meal room adequate facilities for the safe storage of food. **[Owner]**

*Drinking Water*

**587.** An ample supply of wholesome drinking water shall at all times be available to all persons employed in a lead process.

If the water is stored in a container the container shall be such as to prevent contamination by dust. **[Owner]**

*Provision of Clothing and Respirators*

**588.** (1) Clean overalls, head coverings and effective respirators shall be provided daily for the use of all persons working in any of the undermentioned processes at the lead works, namely—

- (a) cleaning any flue or chamber and manual handling of flue dust;
- (b) demolishing any furnace, melting pot, retort, flue or chamber;
- (c) doing work inside any furnace, melting pot, retort, flue or chamber except where the materials being used are free from contamination by lead or other toxic materials;
- (d) breaking up, crushing or grinding lead material, unless such material is enclosed in an apparatus which prevents the escape of dust. **[Owner]**

(2) A person working in any of the processes mentioned in subregulation (1) of this regulation shall—

- (a) whilst so working wear overalls in such manner as to protect his underclothes and body from dust;
- (b) take off the overalls and deposit them in the place provided before partaking of food or leaving the lead works. **[Manager, contractor]**

(3) Every person who cleans dust from flues or gathers or manually handles flue dust shall—

- (a) put on clean overalls before commencing such work each day;
- (b) remove his overalls forthwith after finishing such work. **[Manager, contractor]**

(4) No person shall—

- (a) clean flues or gather or manually handle flue dust; or
- (b) engage in work in any place where flue dust is being handled; or

- (c) enter or remain in a furnace or vessel, melting pot retort, chamber or flue containing dust, fumes or noxious gas, unless he is wearing an effective respirator.

[Manager, contractor]

(5) (a) Effective respirators (by which phrase is meant, in this regulation, respirators conforming to Australian Standard Z18-1963 "Respiratory Protective Devices" and any amendments thereto) shall be provided to every person employed on the lead smelting and refining process or handling materials which are likely to give rise to lead-bearing or other harmful fumes or dusts.

[Owner]

(b) The employee so engaged shall keep the respirator on his person available for immediate use and he shall wear it whenever conditions require it to be worn.

[Manager, contractor]

*Restriction on Working in Certain Places*

**589.** No person shall—

- (a) enter or remain in a flue which is not provided with an efficient exhaust draught; or
- (b) remain in a chamber for more than three hours continuously;
- (c) after coming out of a chamber, again enter a chamber if he is affected by gas, dust or fumes.

[Manager, contractor]

*Washing Hands*

**590.** A person who has been working in a place where a lead process is being carried on shall wash thoroughly his face and hands before partaking of food.

[Manager, contractor]

*Rolling Cigarettes, Filling Pipes Etc.*

**591.** No person working in a place where a lead process is being carried on shall while so working make cigarettes or fill a pipe, or cut or roll tobacco.

[Manager, contractor]

**DIVISION 7—USE OF ELECTRICITY**

*Interpretation*

**592.** In this Division—

"aerial conductor" means a conductor which is supported by insulators above the ground and is directly exposed to the weather:

"approved" means approved by an Inspector of Mines:

"cable" means an insulated conductor or two or more insulated conductors laid up together, whether provided with an overall protective covering or not:

"conductor" means a wire, cable, or other form of metal suitable for carrying current, but does not include a wire, cable or other metallic part directly employed in converting electrical energy into another form of energy:

"damp place" means a place where moisture is either permanently or intermittently present to such an extent as to be likely to impair the effectiveness or safety of an installation which otherwise complies with the requirements of these regulations:

"earthing system" means all conductors, clamps, earth clips, and earth plates or pipes (including any metallic piping system to which such cables and other conductors, clamps, or clips are attached) used to maintain any portion of an installation at earth potential or necessary to ensure that an installation is effectively earthed:

"voltage" means the difference of electrical potential under normal conditions between any two conductors through which a supply of energy is given, or between any part of either conductor and earth:

"system" means an electrical system in which all the conductors and apparatus are electrically connected to a common source of supply; and

"trailing cable" means a cable suitably insulated and protected for the supply of electric power to portable electrical apparatus.

#### *Application*

**593.** The regulations in this Division shall apply to electrical installations and apparatus at or in smelters.

#### *Wiring Methods and Materials*

**594.** Where these regulations do not prescribe the wiring method or materials to be employed, Parts I and II of the Wiring Rules of the Standards Association of Australia, 1961, and any amendments thereto, shall be observed.

#### *Conductors and Appliances to be efficient*

**595.** All electrical apparatus and conductors shall be sufficient in size and power for the work they may be called upon to do, and efficiently covered or safeguarded, and so installed, worked, maintained as to prevent as far as reasonably possible any danger of shock, fire or overheating, and shall be so constructed and proportioned that there shall be no appreciable rise in temperature when the current is passing through. **[Owner, manager, contractor]**

#### *Danger Notices to be Erected*

**596.** Conspicuous danger notices shall be erected and permanently maintained in a legible condition in the vicinity of all apparatus carrying electricity at more than six hundred and fifty volts. Every such notice shall contain the word "DANGER" in bold letters not less than one and a half inches high, and shall state the voltage at which the apparatus operates. **[Owner, manager, contractor]**

*Earthing Frames Etc.*

**597.** The armouring of conductors and the frames, bedplates and metallic coverings of generators, transformers, rheostats, liquid switches, motors, and other apparatus, including portable devices, shall be properly and efficiently connected to earth. Earthing conductors shall be of stranded copper of a cross-sectional area not less than that of a 7/.036 (7/20 S.W.G.) conductor, except that for circuits up to twelve amperes, a 7/.029 (7/22 S.W.G.) conductor may be used. Where the cross-sectional area of portable leads is less than that of a 7/.036 (7/20 S.W.G.) conductor, the earthing conductor may be equal in cross-sectional area to the live conductor. Earthing conductors shall be suitably protected from mechanical injury, and efficiently and permanently earthed. The connection of an earthing conductor shall be visible and accessible. The sectional area of an earthing conductor shall in no case be less than half of that of the conductor necessary to supply the connected load. Where an efficient earth or earths, such as water pipe, cannot be obtained from the direct earthing system, the earthing shall be installed in accordance with the multiple-earth neutral system or the earth leakage protective system as outlined in rules Nos. 501-558 of the Wiring Rules of the Standards Association of Australia, 1961, and any amendments thereto. **[Owner]**

*Instruction in Duty and Competence*

**598.** No person shall work an electric motor or other apparatus unless he has been properly instructed in his duty and is competent for the work that he is set to do. **[Manager, contractor]**

*Switchboards*

**599.** Every switchboard shall be either—

- (a) placed in a dry well-ventilated place, or
- (b) effectively protected against moisture.

Except where a switchboard is a combination fuse switchboard with no live contacts at the back, there shall be a clearance of at least four inches between the wall upon which it is fixed and the back of the board. Where the area of a switchboard exceeds four square feet the distance from the wall shall be not less than twelve inches. A switchboard exceeding ten square feet in area shall be mounted on standards supported by the floor, and shall have a clear space of two feet six inches between the wall and any live metal. All stays and conductors shall be so arranged as to allow of head room of not less than six feet six inches. Every switchboard shall be provided either with a main no-volt release attachment, which will ensure the simultaneous opening of all poles of the supply, or alternatively, each motor shall be provided with a no-volt attachment operating in a similar manner. Ample space shall be maintained in front of a switchboard for safe operation of switchgear. **[Owner]**

*Space at Back of Switchboards*

**600.** (1) The space at the back of a switchboard exceeding ten square feet in area shall be floored, and except in the case of a switchboard for a supply not exceeding two hundred and fifty volts, shall be closed by a self-closing door with a warning notice, containing the word "DANGER" and setting out the voltage of the supply in a prominent position upon it. The floor at the back and front shall be firm and even, and insulating hardwood boards or mats shall be provided. **[Owner]**

- (2) The space at the back of a switchboard shall not be used for the storage of any article.  
[Manager, contractor]

*Provisions Where Voltage Exceeds Six Hundred and Fifty*

**601.** Where the electricity is at a voltage exceeding six hundred and fifty volts—

- (a) there shall be no live metal work on the front of a switchboard within eight feet of the floor or platform, and the space between the back of a switchboard and the wall shall be not less than four feet in the clear; and
- (b) all terminals and live metal on machines shall be protected where practicable, with insulating covers or with metal covers connected to earth in a skilful and efficient manner. [Owner]

*Leakage Detection*

**602.** Efficient means shall be provided for indicating any defect in the insulation of a system, unless the multiple-earth neutral system is used. [Owner]

*Live Parts of Fittings*

**603.** All live metal on main and distribution switches and fuse boards shall be mounted on incombustible and insulating material, and shall be fixed in as dry a situation as practicable. [Owner]

*Fuses or Cut-Outs*

**604.** Every sub-main circuit or motor circuit shall be protected at its origin by an efficient fuse or other automatic cut-off on each active pole, but where the rated full-load current of a motor connected in the circuit exceeds sixty amperes, automatic maximum current circuit-breakers shall be used: Provided that with high-rupturing capacity fuse a circuit breaker need not be used until the rated full load current exceeds eighty amperes. Every circuit breaker shall be provided with an overload trip-coil on each active pole. Fuses shall be of approved safe-replacement type and marked with the rated voltage and capacity. [Owner]

*Replacing Fuses*

**605.** No person other than a person authorised by the manager or by some person appointed by the manager shall adjust or replace a fuse. [Manager, contractor]

*Circuit Breakers*

**606.** Every automatic maximum-current circuit-breaker shall be so constructed and arranged that it opens the circuit without danger to any person and interrupts the current effectively in the circuit before it so exceeds the working rate as to involve danger. [Owner]

*Emergency Switches for Supply Outside Smelter*

**607.** (1) Where conductors carry current to the smelter from an outside source, a main switch shall be provided in a convenient position near the point of entry of such supply and shall be protected so as to prevent damage thereto. **[Owner]**

(2) This switch shall be so placed that it can be operated without danger by a person unfamiliar with the operation of such switch gear. **[Owner]**

(3) In the event of this switch being locked up, the keys for obtaining access to it shall be kept in such places as to be immediately available at any time, day or night, to officials of the smelter. **[Manager, contractor]**

*Emergency Lamps*

**608.** In all machine rooms and places where a failure of electric light is likely to cause danger, suitable lamps or other proper lights shall be kept ready for use in the event of such failure. **[Owner, manager, contractor]**

*Lightning Arresters on Overhead Lines*

**609.** All overhead transmission lines shall be provided with effective lightning arresters connected to earth in a workmanlike manner. **[Owner]**

*Trailing Cables Protection*

**610.** Trailing cables for portable apparatus shall be flexible, heavily insulated and protected from mechanical injury by a suitable sheathing or the equivalent. If a flexible metallic covering is used as a means of protection against mechanical injury, it shall not alone be used to form an earth conductor for the portable apparatus. **[Owner]**

*Trailing Cable Inspection*

**611.** Each trailing cable in use on a smelter shall be examined daily for abrasions and other defects by a person or persons appointed by the manager. Such person or persons shall record daily the results of such examination in the Inspection Record Book. **[Manager, contractor]**

*Trailing Cables—How to be Connected*

**612.** The conductors of a trailing cable shall be divided at the apparatus end only for such a length as is necessary for the making of connection to the apparatus; and the cable with its outer covering complete shall be held by a suitable clamp on the motor frame of the apparatus 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 connection with the apparatus. **[Owner]**

*Trailing Cables—Terminal Boxes*

**613.** At points where a trailing cable is joined to a main cable, an efficient type of switch and a plug outlet with earthing device shall be installed, capable of entirely cutting off the electricity from the trailing cable. **[Owner]**

*Machines Not to be Left with Current On*

**614.** No person in charge of a portable machine shall leave the machine while it is working, nor shall he allow the trailing cables to be dragged along by the machine. A person in charge of a portable machine shall, before leaving the working place, see that the electricity is cut off from the cables. No person shall make repairs to a portable machine until the electricity has been cut off from the trailing cables. **[Manager, contractor]**

*Poles to be Kept in Good Condition*

**615.** All poles carrying electric conductors shall be maintained in good condition and shall be of sufficient strength to support the conductors, and shall be examined at least once every six months by a competent person in such a way as to discover any deterioration. **[Owner, manager, contractor]**

*Cross-Fittings to be Kept in Good Condition*

**616.** All cross-arms, insulators and attachments of conductors shall be examined for deterioration by a competent person at least once every six months, and all defective crossarms, insulators, and attachments shall be removed and replaced, and the conductors re-strained if required. **[Owner, manager, contractor]**

*High and Low Voltage Conductors*

**617.** Overhead conductors carrying electricity at a voltage exceeding six hundred and fifty volts shall be erected so that any other conductors carrying a lower voltage are below them, and at the points of support and also between supports, at least three feet space in any direction shall be allowed between conductors carrying different voltages. **[Owner]**

*Disused Conductors*

**618.** All electric conductors, whether inside or outside a building, which are permanently out of use, shall be disconnected from the mains and removed. **[Manager, contractor]**

*Conductors Not to Lie About*

**619.** Conductors which are temporarily out of use shall, where practicable, be disconnected from the supply and coiled up, except those on "standby plant", kept in working order for emergencies. Dead and disused conductors shall not touch or make contact with live conductors. **[Manager, contractor]**

*Motor Protection*

**620.** Every motor, together with its starting resistance, shall be protected by switches which are capable of entirely cutting off the supply and are fixed in a convenient position as near the motor as practicable. When the starting switch is remote or not visible from the motor, an efficient cut-off switch for isolation purposes shall be placed adjacent to the motor so as to be readily handled in case of emergency. **[Owner]**

*Remote Control*

**621.** (1) Remote control haulage or conveyor systems shall be provided with a convenient means of stoppage at any point along the system.

(2) Where a motor is operated by remote control the circuit shall be so arranged that such motor after being stopped at any point cannot be operated again until released at that point.

**[Owner]**

*Adjustments to Live Parts*

**622.** Where the live parts of electrical apparatus, switches or machines working at a voltage above two hundred and fifty volts have to be handled for the purpose of testing or adjustment, gloves, mats and shoes of india rubber or other insulating material for the use of the persons handling the apparatus, switches or machines shall be supplied to and used by every such person.

**[Owner, manager, contractor]**

*Live Parts to be Guarded*

**623.** Every switch (except an oil or enclosed switch) circuit breaker and fuse shall be mounted on an incombustible and insulating base. All live parts of a switch, contact-breaker or fuse which it is necessary to handle in replacing or removing, and which are not in a switch-room or a compartment specially arranged for the purpose, shall be in a box protected by a cover or guard. Every such box, cover or guard shall be of incombustible material, and shall be either non-conducting, or of rigid metal, efficiently earthed, and, as far as practicable, clear of all internal mechanism. No such box or cover shall be used for storing articles of any description.

**[Owner, manager, contractor]**

*Makeshift Not Allowed*

**624.** All points at which a circuit (other than a circuit for signals) has to be made or broken shall be fitted with proper switches.

**[Owner, manager, contractor]**

*Switches and Fittings to be Protected*

**625.** All open-type switch-gear such as main switches and fittings controlling an installation in a building, or electrical machinery, shall be so placed or protected as to prevent any person accidentally coming in contact with the live parts of the switch or apparatus, and switches shall be so arranged that their blades or moving parts are disconnected from supply in the "off" position.

**[Owner]**

*Damp Places*

**626.** Electrical plant or gear in damp places shall be protected in an efficient manner to obviate the risk of shock to any person.

**[Owner]**

*Knife Switches*

**627.** Every switch of the "knife" type shall be so constructed or arranged that the contacts cannot accidentally close when left open.

**[Owner]**

*Posting of Regulations and Notices—Accidents and  
Fire Protection*

**628.** There shall be exhibited in conspicuous places throughout the smelters—

- (a) legible copies of this Division;
- (b) legible notices warning unauthorised persons not to touch or interfere with any fallen or broken electric conductor, but to report it at once to the manager or electrician;
- (c) legible copies of proper instructions for the treatment of persons suffering from electric accidents;

and all persons concerned shall comply with the notices and instructions.

[Owner, manager, contractor]

*Fire Buckets and Sand, and Extinguishers*

**629.** An adequate supply of clean dry sand in buckets or suitable chemical fire extinguishers as approved by the Fire Underwriters Association shall be kept near each main switchboard, ready for immediate use in extinguishing fires. [Owner, manager]

*Signalling, Firing Etc.*

**630.** The previous regulations in this Division shall not apply to apparatus used for telephone, telegraph, or signal purposes or for the purpose of firing explosive charges.

*Signal Wires Protection*

**631.** No person shall cause or permit electric signal or telephone wires from coming into contact with other electric conductors whether insulated or not. [Manager, contractor]

Notwithstanding anything contained in this Division, any electric plant or apparatus installed, or in use, or contracted to be bought, before the coming into force of these regulations, may be continued in use or used subject to any reasonable conditions affecting safety that the Chief Inspector may prescribe.

**DIVISION 8—MANAGERS CERTIFICATES AND PERMITS**

*Qualifications for Smelter Managers*

**632.** (1) No person shall act as the manager of a smelter unless he holds an appropriate qualification in accordance with this regulation.

(2) For the manager of a smelter the appropriate qualification shall be—

- (a) if twenty or more men are working at the smelter—a first-class mine-manager's certificate; or a first-class mine-manager's restricted certificate;

- (b) if more than nine and not more than nineteen men are working at the smelter—a first-class mine-manager's certificate or a first or second-class manager's restricted certificate;
- (c) if not more than nine men are working at the smelter and the owner has received a direction from the Chief Inspector that a qualified manager be employed thereat—a first-class mine manager's certificate or a first or second-class mine manager's restricted certificate or a special permit.

(3) No person shall employ as manager of a smelter any person who does not hold a qualification required by this regulation to be held by the manager of such smelter.

#### *Board of Examiners*

**633.** (1) For the purposes of this Division there shall be a board to be called "The Board of Examiners for Mine Managers" consisting of the Chief Inspector of Mines and such number of appointed members, not less than two, as the Governor determines.

(2) The Governor shall make such appointments as are necessary from time to time and to keep the board at its appointed strength; but a decision of the board made at a meeting at which a quorum is present shall not be invalid solely on the ground that there is a vacancy in the office of any member.

(3) The Chief Inspector of Mines shall be the chairman of the board, and shall have a deliberative vote, and in the event of equality of votes on any question, a casting vote also.

(4) Three members of the board shall form a quorum and a decision concurred in by a majority of the members of the board at a meeting at which a quorum is present shall be deemed to be a decision of the board

(5) The Governor may dismiss any appointed member of the board from his office for incapacity to perform his duties, neglect of duty, or any misconduct which in the Governor's opinion shows him to be unfit to be a member of the board.

(6) Every appointed member of the board other than a member appointed to a casual vacancy shall hold office until the thirtieth day of September in the third year after his appointment. A person appointed to a casual vacancy on the board shall hold office for the balance of the term of the member in whose place he was appointed.

(7) If for any reason the Chief Inspector of Mines is temporarily unable to act as chairman of the board, or there is a vacancy in the office of Chief Inspector, the Governor may appoint a person to act as temporary chairman of the board until the Chief Inspector is able to act, or is appointed.

#### *Grant of First-Class Mine-Manager's Certificate*

**634.** Subject to these regulations the board may grant a first-class mine-manager's certificate to any of the following persons:—

- (a) Any person who has had practical experience in mining, smelting, reduction or metallurgical works, for not less than three years, and who has passed the examination conducted by the board for candidates for first-class mine-manager's certificates:
- (b) Any person who has had experience and holds qualifications accepted by the board as equivalent to the experience and qualifications required under paragraph (a) of this regulation.

*Restricted Certificates*

**635.** (1) Where an applicant for a mine-manager's certificate satisfies the board that he is qualified by experience and knowledge to manage a smelter at which he is or will be employed, or smelters of any specified class, but the board is not satisfied that he is entitled to an ordinary mine-manager's certificate the board may issue to him a restricted mine-manager's certificate of the first or second-class.

(2) A restricted certificate shall contain therein a statement of the particular smelter or particular class of smelters which the holder of the certificate is entitled to manage.

(3) No restricted certificate shall entitle the holder of it to be a manager of any smelter other than a smelter indicated in the certificate.

*Issue of Temporary Certificates*

**636.** (1) The board may if it deems it expedient to do so issue to any person (whether qualified for a permanent certificate under these regulations or not) a temporary first-class or second-class mine-manager's certificate.

(2) A temporary certificate—

- (a) shall be in force for such period as the board specifies therein;
- (b) shall, while in force, have effect as an ordinary certificate of the same kind;
- (c) may contain any terms and conditions which the board thinks necessary in the public interest; and
- (d) may be cancelled by the board if any of the terms and conditions are broken.

*General Requirements for Certificates*

**637.** A certificate shall not be granted to any person unless—

- (a) he applies therefor on the form supplied by the Board and satisfies the board of the facts giving him the right to be granted a certificate;
- (b) he satisfies the board either by passing a special examination set by the board or otherwise that he has an adequate knowledge of the law of South Australia relating to mining;

- (c) he is of good character and sober habits;
- (d) he is at least twenty-five years of age;
- (e) he has paid the fee prescribed in the Second Schedule hereto.

*Forms and Contents of Certificates*

**638.** The board shall fix the forms of certificates, and may include in any certificate a statement of any restrictions or limitations of the effect of the certificate and a statement of any qualifications of the holder which were taken into account by the board in granting the certificates.

*Examinations*

**639.** (1) The board shall hold examinations for each class of certificates not less frequently than once in every two years unless there are no candidates.

(2) The subjects of the examination held by the board for first-class mine-manager's certificate shall be as follows:—

1. Mining.
2. Ore-dressing and sampling.
3. Ventilation and hygiene.
4. Arithmetic and mensuration.
5. Mine surveying.
6. General and mining geology.
7. Mechanics and mining machinery.
8. Explosives.
9. Mining law.

*Credit for Passing Examinations*

**640.** The board may exempt any candidate for a certificate from the obligation to pass any examination conducted by the board, if the candidate satisfies the board that he is sufficiently qualified in the subject of that examination.

*Issue of Permits*

**641.** (1) The Chief Inspector may grant a permit to act as manager of a smelter where less than ten men are employed to any person who, in the Chief Inspector's opinion, has had sufficient practical experience and has a knowledge of these regulations.

(2) Every such permit—

- (a) shall authorise the holder to act as manager only of the smelter mentioned in the permit;
- (b) shall remain in force for the period mentioned in the permit which shall not be longer than twelve months;

- (c) may contain any terms and conditions which the Chief Inspector deems necessary to the public interest; and
- (d) may be revoked by the Chief Inspector for a breach of any term or condition.

*Cancellation or Suspension of Certificates and Permits*

**642.** (1) If at any time it is proved to the board that the holder of a certificate, temporary certificate or permit granted under these regulations has been convicted or has been guilty of an offence against these regulations or has been guilty of misconduct or negligence in or in connection with his work as a manager the board may suspend or cancel his certificate or permit.

(2) If the board has reason to believe that any such holder has been guilty of any such offence, misconduct, or negligence, it may hold an inquiry.

(3) The board shall hear and determine the matter of any alleged offence, misconduct or negligence, and Section 41 of the *Acts Interpretation Act, 1915-1957*, shall apply to such hearing and determination.

(4) The holder of a certificate or permit which is suspended or cancelled by the board under this regulation may within fourteen days after the decision of the board is made known to him make a written request to the Minister asking that the decision of the board be referred to a special magistrate for review.

- (a) The person making such request shall deliver a copy of the request to the chairman or secretary of the board within 7 days from the making thereof.
- (b) The board may on receipt of such a copy suspend the operation of its decision for a specified time, or until further order.
- (c) Upon receipt of any such request the Minister shall notify the Attorney-General thereof. The Attorney-General shall thereupon nominate a special magistrate to review the decision, and the magistrate so nominated shall review it accordingly.
- (d) The special magistrate shall give the board and the aggrieved person an opportunity of submitting to him any relevant evidence, information and arguments as to the matters in issue. The magistrate shall not be bound by rules of evidence but may inform his mind in any way which he deems appropriate, and may fix the procedure to be followed as regards the hearing.
- (e) After considering all the information, evidence and arguments, the special magistrate shall decide the question at issue, and make such orders as he deems just, confirming, quashing or varying the decision of the board and substituting any other decision which in his opinion should be given in lieu of the decision of the board.
- (f) The decision of a special magistrate shall not be subject to appeal.

**643.** The board shall keep a register of all certificates and permits issued under this Division.

## **DIVISION 9—WORKMEN'S INSPECTORS**

### *Application of this Division*

**644.** The regulations in this Division shall apply to the appointment of workmen's inspectors under Section 12 of the Act and inspections to be made by them.

### *Notice of Meeting*

**645.** (1) Any five or more workmen employed in a smelter may by notice call a meeting for the purpose of electing workmen's inspectors under Section 12 of the Act.

(2) The notice shall be signed by not less than five workmen employed at the smelter, and shall be prominently exhibited at the smelter for at least three clear days before the day fixed for the meeting.

(3) The owner and the manager of the smelter shall allow a notice of meeting in proper form to be exhibited at the smelter as required by this regulation.

**[Owner, manager, contractor]**

### *Nominations*

**646.** Every candidate for appointment shall be nominated in writing by a workman employed in the smelter at the time of nomination.

### *Meetings and Elections*

**647.** (1) The workmen present at the meeting shall elect a chairman who shall conduct the election in an orderly manner and shall arrange for a secret ballot to be held at the meeting if there are more candidates than the number of vacancies to be filled. A candidate for election shall not act as chairman.

(2) Only workmen employed in the smelter at the time of the meeting shall be eligible to vote at the election of workmen's inspectors.

(3) At a ballot votes shall be indicated by crosses on the ballot paper. Each workman voting shall place a cross against the name of each candidate for whom he votes. A ballot paper shall be informal if it contains more crosses than the number of inspectors to be elected.

(4) If the number of candidates does not exceed the number of inspectors to be elected, the chairman shall declare the nominees duly elected.

(5) The chairman of the meeting shall, as soon as possible after the election—

- (a) notify the Chief Inspector and the manager of the smelter of the full names and addresses and occupations of the persons appointed and the date of the election; and
- (b) forward to the Chief Inspector a statutory declaration, signed by himself as chairman, that the regulations relating to the election have been properly complied with in every particular; and

- (c) forward to the Chief Inspector signed and dated copies of the notice calling the meeting, and of the nomination paper or papers of the candidate or candidates.

(6) The Chief Inspector of Mines on being satisfied that the appointments have been made in accordance with these regulations shall record them and notify the fact of such recording in writing to the persons appointed and the manager of the smelter.

*Duration of Appointment*

**648.** Every workman's inspector shall hold office for one year from the date of his election.

*Inspection by Workmen's Inspectors*

**649.** (1) Workmen's inspectors shall not be entitled to commence an inspection unless they have previously notified the manager of their intention to inspect, and arranged a time with the manager.

(2) The owner shall provide a record book for the purpose of recording every report made by workmen's inspectors pursuant to the Act and the regulations. **[Owner]**

(3) Workmen's inspectors shall not inspect any smelter other than that for which they have been appointed.

(4) No person shall wilfully prevent or hinder a lawful inspection of the smelter by the workmen's inspectors. **[Manager, contractor]**

(5) No workmen's inspector shall use the right of inspection of a smelter for any purpose other than that of ascertaining and reporting whether the smelter and its machinery are safe.

(6) Two workmen's inspectors shall carry out inspection; one workman's inspector cannot act alone. If only one workmen's inspector is available and he desires to make an inspection the smelter workmen concerned may after due notice to the manager and obtaining his approval to hold a meeting, elect a deputy to act only for the specific inspection. No manager shall capriciously refuse his approval to hold such a meeting. **[Manager, contractor]**

**DIVISION 10—AMENITY OF SMELTER AREA AND ENVIRONMENTS**

*Interpretation*

**650.** In this Division, unless the context requires or some other meaning is clearly intended:—

"Top soil" means the surface soil of land in its natural state and exceeding 2 inches in depth, distinguishable from overburden, and capable of growing protective vegetation when spread over the soil parent or reclamation material.

"Approved" means approved by the Chief Inspector.

**651.** (1) Smelting operations or practices or any operation or practice incidental or ancillary thereto shall interfere as little as possible with the amenity of the area or place.

(2) A person shall not cut, damage or interfere with trees or shrubs except those directly obstructing or preventing smelting operations.

(3) A person shall not create a nuisance by conducting operations in such a manner that undue or excessive noise or dust is produced.

(4) A person shall not create or permit or suffer to be created a nuisance by conducting operations in a manner whereby any river the sea or any river, dam, watercourse, billabong, anabranh or tributary becomes polluted.

**652.** A person shall take the topsoil from the site of any proposed excavation, dam or stockpile area and shall store it adjacent thereto for rehabilitation purposes or in an approved site and protected as far as is practicable from undue wind and water erosion.

**653.** A person shall not place products, overburden, waste material, dams or material of any kind in a position—

- (a) where they interfere with or could interfere with natural drainage;
- (b) where they cause or may cause damage to property; or
- (c) where they unduly interfere with the amenity of an area;
- (d) Where they permit the pollution of the sea or any river, dam, watercourse, billabong, anabranh or tributary.

**654.** (1) Where practicable an owner of land upon which there is an excavation or from which topsoil has been removed shall cause any excavation on that land to be drained and shall provide for a run-off that will not cause undue wind erosion or water erosion.

(2) The drainage constructed or permitted pursuant to subregulation (1) hereof shall not cause pollution of the sea or any river, dam, watercourse, billabong, anabranh or tributary.

[Owner]

**655.** (1) An owner shall—

- (a) give notice to the Chief Inspector when smelting operations are complete;
- (b) a further notice when plant, machinery and materials are removed from that land; and
- (c) a further notice when the land has in the opinion of the owner been rehabilitated.

(2) An owner shall leave an area in a clean and tidy condition. [Owner/contractor]

**656.** An owner shall within the period of two years after the day of cessation of smelting operations on land, carry out or ensure the proper rehabilitation of the area in accordance with the directions given to him in respect of that area by the Chief Inspector.

**657.** A person shall not open up or rework an old smelter or a previously worked smelter or develop or prepare a new deposit for the extraction of any metal or metalliferous ores and non-metallic minerals, excepting precious stones on proclaimed opal fields and petroleum, but including sand, gravel, shell, shale, clay, stone and earthy substances, or erect buildings or plant for the treatment of such substances, unless he has given to the Chief Inspector of Mines notice, in writing, of his intention to do so at least 21 days prior to commencing such work or such working and has received the approval, in writing, of the Chief Inspector thereto. **[Owner]**

**658.** (1) The Chief Inspector may, by notice in writing containing *inter alia* the matters set out in the schedule to these regulations and addressed to the owner, order that any one or more of the following acts, matters and things be done or made within a time to be set out in that notice—

(a) accurate surface maps, plans and sections of the smelter and its immediate environs; and

(b) developmental programmes for all surface works of the smelter area.

(2) An owner to whom such a notice has been given under this regulation shall—

(a) cause maps, plans, sections, programmes or any of these requirements to be prepared in accordance with the notice;

(b) deliver three copies thereof within the time set out in the notice to the office of the Chief Inspector of Mines at the Mines Department at Adelaide; and

(c) keep the original maps, plans, sections, developmental programmes or any of these requirements as the case may be, or correct copies thereof, at the office of the smelters.

(3) (a) The owner shall, at intervals of not more than 12 months, and also immediately before the abandonment of smelters cause all alterations of and additions to the workings of the smelters to be correctly delineated on the current working maps plans and sections and on any copies kept at the office, of the smelters and shall lodge three copies of any plan of these alterations or additions at the office of the Chief Inspector of Mines at the Mines Department at Adelaide.

(b) The owner shall at intervals of not more than 12 months lodge details of the developmental programme and submit them to the Chief Inspector for further approval.

(4) All maps, plans and sections prepared under this regulation shall be drawn to scales approved by the Chief Inspector and sufficient to show clearly all relevant detail.

(5) An owner to whom a notice has been given under this regulation to make and deliver developmental programmes may carry on smelting on work incidental thereto but he shall not do any work or allow any work to be done that is likely to adversely affect amenities until he has received approval, in writing, of the Chief Inspector to those programmes or amended programmes as the case may be. **[Owner]**

**659.** The forms set out in the first schedule to these regulations shall apply, *mutatis mutandis*, to the supply of particulars to the Chief Inspector pursuant to the regulations in this Division.

**THE FIRST SCHEDULE**

NOTE: These forms may be used for mines, quarries and smelters provided that, wherever appropriate the word "quarry" and its derivatives or smelter and its derivatives are substituted for the word "mine" and its respective derivatives.

..... Mine  
..... S.A.

INFORMATION AND PLANS REQUIRED UNDER DIVISION 13 OF PART I,  
DIVISION 9 OF PART II OR DIVISION 10 OF PART III

(Regulations Under the *Mines and Works Inspection Act, 1920-1970*)

*All maps, plans, sections, programmes, etc., to be supplied in triplicate*

1. A locality plan of the mine area and of an area not less than . . . . metres, outside the boundaries of the mine area [*i.e.*, area over which mining rights are held], on standard sheet (x) with date and north point and showing the following information:—

- (1) The name of the county and hundred.
- (2) The boundaries of sections and allotments and their section and allotment numbers.
- (3) The names and addresses of the occupiers and owners of the mine area.
- (4) The surface contours of the mine area at intervals not exceeding 3 metres related to sea level or to an established permanent local bench mark.
- (5) The locations of public and private utilities, protected works, housing and buildings existing within the limits of the plan, including transmission lines, watercourses, drains and water storages, and explosives storages and preparation buildings, and oil storages.

"Protected works" means historic buildings, monuments, etc.

2. A working plan of the present mine area or the proposed mine area, as the case may be, and sections (at least two, one longitudinal and one a cross-section) giving contours at intervals not exceeding 3 metre intervals and showing the following:—

- (1) The boundaries of the land over which mining rights are held.
- (2) The positions of bore holes and test excavations showing the depths, thicknesses and types of strata therein.
- (3) The boundaries of existing excavations showing also bench floors and slopes of faces.
- (4) The locations of existing plant, machinery, buildings, roads, safety fences, services, and utilities, tree belts and other screens such as hedgerows, waste rock screens, and other barriers, explosives storages and preparation buildings, and oil storages.
- (5) The locations of existing slime dams, tailing dams, settling ponds, water storages, watercourses and drains.
- (6) The location of existing dumps of overburden and waste, and stockpiles of products.
- (7) The proposed situation for . . . . years at intervals . . . . years or when mining is complete with regard to—

(a) the boundaries of all quarry excavations showing also bench floors, slopes of faces;

- (b) the location of plant, machinery, buildings, roads, safety fences, services and utilities, tree belts and other screening such as hedgerows and waste rock screens, explosives storages, and preparation buildings, and oil storages;
- (c) the location and the reduced level of the top of soil and overburden dumps;
- (d) the locations and the reduced level of the top of water storages, settling ponds, slime dams and tailing dumps.
- (e) The drainage system for disposal of water and liquid waste products.

3. A developmental programme showing—

- (1) the order of procedure or stages to be adopted in the progressive extraction of mineral substances;
- (2) the provisions made or to be made for prevention of nuisances, and for the prevention of pollution of drainage waters;
- (3) the order of procedure for screening: the progressive rehabilitation of worked-out areas, dumps, dams and so on so as to conform to the general amenity of the area, as well as the methods by which the planting of trees, shrubs and grasses will be carried out.

**SECOND SCHEDULE***Fees*

1.	Issue of blaster's permit (for 2 years) . . . . .	\$23.00
2.	Renewal of blaster's permit (for 2 years) . . . . .	\$8.00
3.	Duplicate of blaster's permit . . . . .	\$15.00
4.	Application for mine or quarry manager's certificate . . . . .	\$16.00
5.	Examination for mine or quarry manager's certificate—	
	(a) oral examination . . . . .	\$8.00
	(b) written examination (for 4 papers) . . . . .	\$33.00
6.	Oral examination in mining law . . . . .	\$8.00
7.	Issue of mine or quarry manager's certificate . . . . .	\$25.00
8.	Duplicate of mine or quarry manager's certificate . . . . .	\$16.00

**PART IV  
SPECIAL REGULATIONS**

**DIVISION 1—MINING FOR PRECIOUS STONES**

**801.** Where there is any variation between this Part and any other Part of these Regulations, this Part shall take precedence in all matters concerning the mining of precious stones.

*Definitions*

**802.** In this Part, unless the contrary intention appears—

"a brace" means a strong fence constructed of materials acceptable to an inspector, built completely around a shaft and supported on its outer side with the excavated material;

"claimholder" means a person who is the holder of a precious stones claim in accordance with the provisions of the *Mining Regulations, 1972*;

"drill hole" means a hole greater than 15 centimetres nominal diameter which has been drilled in the ground by means of a mechanical device;

"precious stones" shall have the same meaning as that given in Section 6 of the *Mining Act, 1971-1972*;

"a shaft" means any vertical opening in the ground which gives a person access to underground mining works and includes drill holes.

*Protection of Shafts and Drill Holes*

**803.** Unless a drill hole is required for use as a shaft, the claimholder shall within one week of the completion of the hole fill it to the level of the surface.

**804.** (1) Where a drill hole is required as a shaft it shall in completion be equipped by the claimholder with a brace at least one metre in height.

(2) All shafts, whether in use or not, shall be equipped by the claimholder with a brace at least one metre in height.

(3) Where shafts are sunk on sloping ground the height of the brace shall be measured from the surface of the highest side.

(4) If a brace is removed from a shaft, the claimholder shall immediately cause that shaft to be filled to the surface.

(5) No person shall withdraw a brace or any part of a brace from any shaft on any abandoned, lapsed, cancelled or forfeited claim.

*Bulldozer Cuts*

**805.** No person shall make a cut deeper than eight metres below the natural surface of the ground, without first obtaining the written approval of an inspector which shall include a sketch showing details of the proposed cut.

**806.** The owner, joint owner or hirer of every bulldozer operating in a cut deeper than three metres shall provide a canopy sufficiently strong to protect the operator from falling material.

**807.** No person shall make any excavation into the wall of any bulldozer cut unless he has first obtained the written approval of an inspector.

*Mining Equipment*

**808.** When persons are in a mine the claimholder shall provide a safety rope not less than twenty-five millimetres diameter, which rope shall be hung down the shaft. The rope must be firmly anchored at the surface and must reach the bottom of the shaft.

**809.** The claimholder shall ensure that every rope used for raising or lowering men or materials shall have a breaking strain at least ten times its maximum load.

**810.** (1) The claimholder shall ensure that all hoisting equipment using guy wires for stability shall have such wires firmly anchored and they shall be plainly marked to show their existence.

(2) No claimholder shall permit guy wires to project beyond the boundaries of his claim without first obtaining the written approval of the adjacent claimholder.

**811.** The claimholder shall ensure that no electrically operated equipment is used unless the installation of that equipment has been certified safe by an electrician possessing an A-class Electrical Worker's Licence.

**812.** (1) The operator and/or owner of a blower shall ensure that when a pneumatic extraction system is used, no fan incorporated in the system shall be run at an unsafe speed.

(2) A speed which is an unsafe speed shall be determined by an Inspector.

(3) The operator and/or owner shall ensure that the fan outlet from pneumatic extraction systems is not less than four metres from the natural surface of the ground.

*Accidents*

**813.** A claimholder shall within twenty-four hours of its occurrence on his claim report to an Inspector or an Area Officer of the Department of Mines any accident arising out of the use of explosives, winding equipment, machinery or electricity.

**814.** When a fatal accident or an accident arising out of the use of explosives, winding equipment, machinery or electricity occurs, no person shall, except with the consent of an Inspector or for the purpose of saving human life or relieving human suffering—

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- (a) move, interfere with, destroy, or carry away any wreckage, article, or thing at the place of or connected with the accident or
- (b) interfere with or alter the state and condition of any hole, shaft, tunnel or excavation at the place of or connected with the accident.

In giving consent under this regulation the Inspector may impose any conditions or restrictions he thinks fit.

**APPENDIX****LEGISLATIVE HISTORY**

Regulation 1:	varied by 5, 1979, reg. 1(2)
Regulation 8:	substituted by 5, 1979, reg. 1(3)
Regulation 24(1):	substituted by <i>Gaz.</i> 3.10.68, p. 1071, reg. 1
Regulation 125(5):	varied by <i>Gaz.</i> 2.11.67, p. 1975, reg. 1
Regulation 136(1):	varied by <i>Gaz.</i> 2.11.67, p. 1975, reg. 2(a)
Regulation 136(4) and (6):	varied by <i>Gaz.</i> 2.11.67, p. 1975, reg. 2(a), (c)
Regulation 136(7):	varied by <i>Gaz.</i> 2.11.67, p. 1975, reg. 2(a)-(c)
Regulation 136(8), (10) and (11):	varied by <i>Gaz.</i> 2.11.67, p. 1975, reg. 2(b)
Regulation 137(1):	varied by <i>Gaz.</i> 2.11.67, p. 1975, regs. 2(a)-(c), 3
Regulation 137(2):	varied by <i>Gaz.</i> 2.11.67, p. 1975, reg. 2(a), 3
Regulation 137(3) and (4):	varied by <i>Gaz.</i> 2.11.67, p. 1975, reg. 2(a), (b)
Regulation 138(2):	varied by <i>Gaz.</i> 2.11.67, p. 1975, reg. 2(b)
Regulation 138(3):	varied by <i>Gaz.</i> 2.11.67, p. 1975, reg. 2(a)
Regulation 138(4):	varied by <i>Gaz.</i> 2.11.67, p. 1975, reg. 2(a), (b)
Regulation 138(5):	varied by <i>Gaz.</i> 2.11.67, p. 1975, regs. 2(b), 4
Regulation 139:	varied by <i>Gaz.</i> 2.11.67, p. 1975, reg. 2(a)
Regulation 206 and heading:	varied by <i>Gaz.</i> 2.11.67, p. 1975, reg. 5
Regulation 214:	varied by 53, 1984, reg. 2(1)
	Division 13 of Part I comprising regs. 227 - 236 and heading inserted by <i>Gaz.</i> 30.9.71, p. 1232, reg. 2
Regulation 300:	definition of "quarry" varied by <i>Gaz.</i> 6.6.74, p. 2221, reg. 2
Regulation 303:	substituted by 5, 1979, reg. 1(3)
Regulation 317(1):	substituted by <i>Gaz.</i> 3.10.68, p. 1071, reg. 2
Regulation 356(5):	substituted by <i>Gaz.</i> 2.11.67, p. 1975, reg. 6
Regulation 356(6):	substituted by <i>Gaz.</i> 2.11.67, p. 1975, reg. 7; varied by 53, 1984, reg. 2(2)
First Schedule:	inserted by <i>Gaz.</i> 2.11.67, p. 1975
Regulation 367(4) and (6):	varied by <i>Gaz.</i> 2.11.67, p. 1975, reg. 2(a), (c)
Regulation 367(7):	varied by <i>Gaz.</i> 2.11.67, p. 1975, reg. 2(a)-(c)
Regulation 367(8), (10) and (11):	varied by <i>Gaz.</i> 2.11.67, p. 1975, reg. 2(b)
Regulation 368(1):	varied by <i>Gaz.</i> 2.11.67, p. 1975, regs. 2(a)-(c), 3
Regulation 368(2):	varied by <i>Gaz.</i> 2.11.67, p. 1975, regs. 2(a), 3
Regulation 368(3) and (4):	varied by <i>Gaz.</i> 2.11.67, p. 1975, reg. 2(a), (b)
Regulation 369(2):	varied by <i>Gaz.</i> 2.11.67, p. 1975, reg. 2(b)
Regulation 369(3):	varied by <i>Gaz.</i> 2.11.67, p. 1975, reg. 2(a)
Regulation 369(4):	varied by <i>Gaz.</i> 2.11.67, p. 1975, reg. 2(a), (b)
Regulation 369(5):	varied by <i>Gaz.</i> 2.11.67, p. 1975, regs. 2(b), 4
Regulation 370:	varied by <i>Gaz.</i> 2.11.67, p. 1975, reg. 2(a)
Regulation 409 and heading:	varied by <i>Gaz.</i> 2.11.67, p. 1975, reg. 5
Regulation 418:	varied by 53, 1984, reg. 2(3)
	Division 9 of Part II comprising regs. 431 - 440 and heading inserted by <i>Gaz.</i> 30.9.71, p. 1232, reg. 3
Regulation 503:	substituted by 5, 1979, reg. 1(3)
Regulation 564(5):	varied by <i>Gaz.</i> 2.11.67, p. 1975, reg. 1
Regulation 574(4) and (6):	varied by <i>Gaz.</i> 2.11.67, p. 1975, reg. 2(a), (c)
Regulation 574(7):	varied by <i>Gaz.</i> 2.11.67, p. 1975, reg. 2(a)-(c)
Regulation 574(8), (10) and (11):	varied by <i>Gaz.</i> 2.11.67, p. 1975, reg. 2(b)
Regulation 575(1):	varied by <i>Gaz.</i> 2.11.67, p. 1975, regs. 2(a)-(c), 3
Regulation 575(2):	varied by <i>Gaz.</i> 2.11.67, p. 1975, reg. 2(a), 3
Regulation 575(3) and (4):	varied by <i>Gaz.</i> 2.11.67, p. 1975, reg. 2(a), (b)

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Regulation 576(2):	varied by <i>Gaz.</i> 2.11.67, p. 1975, reg. 2(b)
Regulation 576(3):	varied by <i>Gaz.</i> 2.11.67, p. 1975, reg. 2(a)
Regulation 576(4):	varied by <i>Gaz.</i> 2.11.67, p. 1975, reg. 2(a), (b)
Regulation 576(5):	varied by <i>Gaz.</i> 2.11.67, p. 1975, regs. 2(b), 4
Regulation 577:	varied by <i>Gaz.</i> 2.11.67, p. 1975, reg. 2(a)
Regulation 630 and heading:	varied by <i>Gaz.</i> 2.11.67, p. 1975, reg. 5
Regulation 637:	varied by 53, 1984, reg. 2(4)
	Division 10 of Part III comprising regs. 650 - 659 and heading inserted by <i>Gaz.</i> 30.9.71, p. 1232, reg. 4
Regulation 659:	varied by 110, 1988, reg. 3
Schedule:	inserted by <i>Gaz.</i> 30.9.71, p. 1232, reg. 4; redesignated as First Schedule by 53, 1984, reg. 2(5)
Second Schedule:	inserted by 53, 1984, reg. 2(6); substituted by 239, 1987, reg. 3; 110, 1988, reg. 4; 121, 1989, reg. 3; 107, 1990, reg. 3; 128, 1991, reg. 3; 124, 1992, reg. 3; 120, 1993, reg. 3; 81, 1996, reg. 3
	Part IV comprising regs. 801 - 814 and headings inserted by <i>Gaz.</i> 24.5.73, p. 2198, reg. 2