

without the written permission of the manager or of the official under whose directions he works, allow any one to work the engine. He shall in no circumstances permit any one, except with the authority in writing of the manager, to work the engine while persons are being raised or lowered in the shaft.

*Persons in Charge of Ventilating-machines.*

The following regulations shall not apply to any auxiliary fan placed underground which does not contribute to the general ventilation of the mine or of any ventilating district of the mine:—

100. The owner or manager shall cause to be provided in connection with every ventilating-fan driven by mechanical power a water-gauge and either an automatic indicator registering the number of revolutions of the fan or an automatic indicator registering the water-gauge.

101. The person in charge of any ventilating machinery driven by mechanical power shall keep the machinery running at the speed ordered by the manager or underviewer, and shall examine the machinery and observe the indicators at intervals which in the case of mines in which safety-lamps are required by the said Act or by the additional rules of the mine to be used shall be of not more than half an hour or such longer time as may be approved by the Inspector, and in the case of other mines shall be of not more than two hours.

102. The person in charge of any ventilating machinery as aforesaid shall immediately report to the official under whose direction he works any damage to, or defect or derangement in, the machinery.

103. He shall from time to time observe the ventilating pressure as indicated by the water-gauge, and where an automatic indicator registering the water-gauge is not in use, he shall at the end of each period of two hours enter in a book to be provided by the manager the number of revolutions of the fan and the pressure shown by the water-gauge at the end of that period.

104. In the event of a stoppage of the machinery or of any unusual variation of the water-gauge he shall at once inform the official under whose direction he works.

105. He shall maintain the water in each boiler as nearly as practicable at the proper working-level, but if it becomes too low he shall at once lower the dampers and damp down the fire, and if necessary draw the same, and report the circumstance to the official under whose direction he works. He shall also see that the pressure of steam fixed by the manager is on no account exceeded.

**USE OF ELECTRIC LAMPS OTHER THAN LOCKED SAFETY-LAMPS.**

106. In any mine or part of a mine in which safety-lamps are required to be used, electric lamps, if enclosed in airtight fittings and having the lamp-globes hermetically sealed, may, subject to the provisions of the Act and any regulations made thereunder as to the use of electricity in mines, be used within the following limits:—

(a.) On main intake airways and haulage-roads ventilated by intake air up to within 300 yards of the first working-place at the working-face which the air enters.

(b.) On main return airways within 300 yards of the bottom of the upcast shaft if that shaft is regularly used for the purpose of winding persons or minerals, but not within 300 yards of the last working-place at the working-face which the air leaves.

**CAPPING OF WINDING AND HAULING ROPES.**

107. No mode or type of capping shall be used which fails to withstand a strain—

(a.) In the case of a winding-rope, of at least seven times the weight of the maximum load carried at any time by the capel;

(b.) In the case of a hauling-rope, of at least 60 per cent. of the breaking-strain of the rope.

108. A competent person appointed by the manager shall, whenever a winding-rope is capped or recapped, superintend the work, and see that it is properly carried out.

109. In no case shall the capel of a round winding-rope be attached to the rope by the use of rivets passing through the rope.

110. In those forms of capping in which the wires at the end of the rope are bent back on the rope itself to form a cone, wedges of a soft metal, or wedges formed by the lapping of soft wire, shall be placed between the rope and that portion which is bent back. This regulation shall not apply to hauling-ropes if materials only are hauled or if the gradient is less than 45°.

111. If white metal is used in the capping of ropes, the composition of the white metal shall be such that its melting-point is under 750 degrees Fahrenheit.

112. Where white metal is used in the capping of ropes the untwisted ropes shall be thoroughly cleaned, and before the white metal is poured into the socket the latter shall be heated or warmed.

113. Where men are raised or lowered in shafts, or carried along inclined planes, no spliced rope shall be used.

**SIGNALLING (EXCEPT IN SINKING PITS).**

*Winding.*

114. The manager shall, in the case of a mine where there are entrances into the workings from the shaft at different levels, prescribe the signals to be used to indicate the level to which the cage is to be sent, and in respect of movements of the cage between one level and another level, and shall fix any other signals that may be required.

115. A notice shall be posted in the engine-house, and at the pit-head, and at each entrance into the workings from the shaft, containing the signals fixed by the manager in pursuance of the preceding regulation.

116. In connection with every winding-engine there shall be provided an appliance which shall automatically indicate in a visible manner to the winding-engineman (in addition to the ordinary signal) the nature of the signal until the signal is complied with.

117. The foregoing Regulations 114 to 116 shall not come into operation until the 1st January, 1916.

*Hauling.*

118. The following signals shall be used in all mines in connection with underground haulage worked by gravity or mechanical power:—

(a.) Direct or main-rope haulage—

To stop .. .. .	1
To lower .. .. .	2
To wind up .. .. .	3

(b.) Haulage (other than endless-rope or chain haulage) on self-acting inclines—

To stop .. .. .	1
To lower .. .. .	2
When persons are about to travel up or down the incline .. .. .	4
This signal shall be acknowledged by signalling .. .. .	4

(c.) Main- and tail-rope haulage—

To stop .. .. .	1
To haul inbye .. .. .	2
To haul outbye .. .. .	3
To slack out tail-rope .. .. .	4
To tighten tail-rope .. .. .	5
To slack out main rope .. .. .	6
To tighten main rope .. .. .	7

(d.) Endless-rope haulage—

To commence hauling .. .. .	2
To stop hauling .. .. .	1

119. When persons are about to be conveyed inbye or outbye, each of the signals required by the foregoing regulations to be given when a set or train of tubs is about to be hauled inbye or outbye, as the case may be, shall be preceded by a cautionary signal of 8.

120. The manager shall, in the case of a mine where there are several districts, prescribe the additional signals that may be required.

121. A notice shall be posted in the hauling-engine house, and at each signalling-station, containing the system of haulage signals in use at such engine-house or signalling-station.

122. The foregoing Regulations 118 to 121 shall not come into operation until the 1st January, 1916.

**TELEPHONES.**

123. In any mine in which the total number of persons employed underground exceeds thirty, and the length of the main haulage-road exceeds 1,000 yards, efficient means of telephonic communication shall be provided and maintained between the end of the main haulage and the surface.

**BAROMETER AND THERMOMETER.**

124. Every person on whom responsible duties are imposed with respect to the ventilation underground, and who is required to make a daily report in a book to be kept at the mine for the purpose, shall, immediately before going into the mine and also after coming out of the mine, read the barometer and thermometer required to be placed near the entrance to the mine.

**EXPLOSIVES.**

*Part I.—General Provisions.*

125. (1.) Nothing in these regulations shall relieve the owner or manager of a mine from complying with the provisions of the Explosives and Dangerous Goods Act, 1908, regarding the storage of explosives.