

(e.) For the purpose of determining the amount of combustible matter in samples of dust mixture which contain carbonates, the following procedure shall be adopted in lieu of the procedure prescribed by sub-clause (3) (c) hereof:—

(i.) A weighed quantity of the dried dust shall be heated to a temperature high enough to ensure complete decomposition of the carbonates in an open vessel, until it no longer loses weight, and the percentage loss of weight shall be determined.

(ii.) A weighed quantity of the dried dust shall be treated with dilute acid in a suitable apparatus, and the percentage loss of weight due to the evolution of carbon dioxide shall be determined.

(iii.) The difference between the two percentage losses of weight so determined shall be reckoned as the percentage of combustible matter for the purpose of the test.

(f.) If any dispute arises as to the test which should be applied, it shall be determined by the Chief Inspector.

(g.) Representative samples shall be taken and tested as often as may be necessary, but not less frequently than once in every three months: Provided that if the representative tests show in respect of any mine, or of any part of a mine, that the natural conditions as regards presence of incombustible dust and moisture are such as to comply with the requirements of this regulation, it shall suffice thereafter to make representative tests in respect of that mine, or that part of a mine at intervals not exceeding six months, or at such longer intervals as may be approved in writing by the Inspector.

(4.) No dust shall be used for the purpose of complying with these regulations of a kind which may be prohibited by the Minister of Mines on the ground that it would be injurious to the health of persons working in the mine.

PRECAUTIONS AGAINST SPONTANEOUS COMBUSTION OF COAL.

239. The following provisions shall apply to any mine or part of a mine in which safety-lamps are required by the said Act to be used, and to any other mine where the Minister of Mines directs that they shall apply in view of the conditions existing in that mine.

(1.) On the appearance in any part of the mine of smoke or other sign indicating that a fire has or may have broken out below ground, every workman other than those necessarily engaged in dealing with the emergency shall be withdrawn from the ventilating district or districts affected, and before any workman is readmitted into the district or districts affected the manager or underviewer, accompanied by the fireman-deputy, shall examine the district or districts, and shall make a full and accurate report of the condition of the district or districts, and no workman shall be readmitted unless the manager or underviewer making the examination reports the mine to be safe. Every such report shall be signed by the persons making the examination, and shall indicate, if possible, by means of a plan, the situation of the fire. The report shall be kept at the office of the mine. The reports made by the responsible official appointed to supervise the affected area shall be posted up at the mine-mouth or pit-head at the end of each shift for the information of the workmen.

(2.) When the existence of a fire has been definitely ascertained, every workman, except those engaged in combating the fire, shall be withdrawn from the seam in which the fire exists and from every other seam communicating with the shaft on the same level, and shall not be readmitted until an examination has been made and the seam or seams reported to be safe in the manner indicated above.

Provided that—

(a.) It shall not be necessary to withdraw the workmen on the intake side of the fire if the seam or, in cases to which proviso (b) applies, the ventilating district in which the fire exists is naturally wet throughout, and it is reported after examination made in the manner indicated above that it is safe for such men to remain:

(b.) It shall only be necessary to withdraw the workmen from the ventilating district or districts in which the fire exists if each ventilating district in the seam is adequately protected against the spread of an explosion of coaldust from any other district by some means approved by the Minister of Mines:

(c.) It shall not be necessary to withdraw the workmen from any seam communicating with the shaft on the same level if such seam is naturally wet throughout or is adequately protected against the spread of an explosion of coaldust from the seam in which the fire exists by some means approved by the Minister of Mines.

(3.) While a fire is being dammed off, every workman in the mine, except the men engaged in the work of damming off the fire, shall be withdrawn from the mine, and shall not be readmitted after the completion of the work until an examination has been made and the mine reported to be safe,

in the manner indicated above. There shall be available during the whole time at or near the place two suits of breathing-apparatus or two smoke-helmets, and persons competent to use them.

(4.) Such means as may be approved by the Minister for the purpose shall be taken to render harmless the coaldust in all accessible parts of the mine immediately contiguous to the seat of the fire.

(5.) The Minister may, by regulation, modify the requirements of this regulation in respect of any mine to such extent and subject to such conditions as he may think fit, if he is satisfied that this can be done without danger in view of the special character of the mine.

240. Where in any mine or part of a mine to which the foregoing regulation does not apply the existence of a fire has been definitely ascertained, an examination of the place in which the fire exists shall be made in the manner indicated above, and if any part is reported to be dangerous the workmen, except those engaged in combating the fire, shall be withdrawn from such part.

When the workmen have been withdrawn from any part of the mine in pursuance of this regulation they shall not be readmitted until a further examination has been made and such part reported to be safe in the manner indicated above.

ELECTRICITY.

The following regulations shall not apply in the case of any apparatus used above ground, except such as may directly affect the safety of persons below ground:—

241. It shall be the duty of the mine-owner, agent, and manager to comply with and enforce the following regulations, and it shall be the duty of all workmen and persons employed to conduct their work in accordance with the regulations.

242. "Pressure" means the difference of electrical potential between any two conductors, or between a conductor and earth as read by a hot wire or electrostatic voltmeter.

"Low pressure" means a pressure in a system normally not exceeding 250 volts where the electrical energy is used.

"Medium pressure" means a pressure in a system normally above 250 volts, but not exceeding 650 volts, where the electrical energy is used.

"High pressure" means a pressure in a system normally above 650 volts, but not exceeding 3,300 volts, where the electrical energy is used or supplied.

"Extra-high pressure" means a pressure in a system normally exceeding 3,300 volts where the electrical energy is used or supplied.

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

"Concentric system" means a system in which the circuit in a conductor or conductors (called the "inner conductor") is completed through one or more conductors (called the "outer conductor") arranged so that the inner conductor is insulated and the outer conductor is disposed over the insulation of and more or less completely around the inner conductor.

"Conductor" means an electrical conductor arranged to be electrically connected to a system.

"Apparatus" means electrical apparatus, and includes all apparatus, machines, and fittings in which conductors are used or of which they form a part.

"Circuit" means an electrical circuit forming a system or branch of a system.

"Covered with insulating-material" means adequately covered with insulating-material of such quality and thickness that there is no danger.

"Metallic covering" means iron or steel armouring with or without a lead or other metallic sheath as the conditions of the case may require, or an iron or steel pipe surrounding two or more conductors.

"Bare" means not covered with insulating-material.

"Live" means electrically charged.

"Dead" means at or about zero potential, and disconnected from any live system.

"Open sparking" means sparking which, owing to the lack of adequate provision for preventing the ignition of inflammable gas external to apparatus, would ignite such inflammable gas.

"Earthed" means connected to the general mass of earth in such manner as will ensure at all times an immediate discharge of electrical energy without danger.

"Earthing-system" means an electrical system in which all the conductors are earthed.

"Switch gear" means switches or fuses, conductors, and other apparatus in connection therewith used for the purpose of controlling the current or pressure in any system or part of a system.

"Authorized person" means a person appointed in writing by the manager of the mine to carry out certain duties incidental to the generation, transformation, distribution, or use of electrical energy in the mine, such person being a person who is competent for the purposes of the regulation in which the term is used.