

1970. No. 140

[C]

COAL MINES

Precautions against Inflammable Dust

RÉGULATIONS, DATED 1ST JUNE 1970, MADE BY THE MINISTRY OF COMMERCE UNDER SECTIONS 74(3) AND 120 OF THE MINES ACT (NORTHERN IRELAND) 1969.

WHEREAS in pursuance of Part I of Schedule 2 to the Mines Act (Northern Ireland) 1969(a) the Ministry of Commerce has published notice of its intention to make the following regulations and has not received any objection to the draft thereof in respect to which it is required to refer the draft regulations for inquiry and report:

NOW, THEREFORE, the Ministry of Commerce in exercise of the powers conferred on it by sections 74(3) and 120 of the Mines Act (Northern Ireland) 1969 and of all other powers enabling it in that behalf, hereby makes the following regulations:—

PART I

GENERAL

Citation

1. These regulations may be cited as the Coal Mines (Precautions against Inflammable Dust) Regulations (Northern Ireland) 1970.

Exemptions

2. Without prejudice to anything contained in these regulations, if an inspector is satisfied that the application of any provision of these regulations is not requisite for safety in relation to any mine or part thereof, the Ministry may by notice served on the manager of the mine exempt that mine or any part thereof from the application of that provision, and nothing contained in these regulations shall affect the operation of this regulation.

Interpretation

3.—(1) In these regulations the following expressions have the meaning hereby respectively assigned to them, that is to say—

“the Act” means the Mines Act (Northern Ireland) 1969;

“the Ministry” means the Ministry of Commerce.

(2) Without prejudice to section 151 of the Act, for the purposes of these regulations anything for the time being approved under the corresponding provision of the Mines and Quarries Act 1954(b) or regulations made thereunder shall be deemed to be approved by the Ministry, unless the Ministry, by notice published in the *Belfast Gazette* and otherwise brought to the notice of persons concerned in such manner as the Ministry thinks fit, directs that it shall not be so deemed.

(a) 1969. c. 6 (N.I.).

(b) 2 & 3 E.L. 2. c. 70.

PART II

PRECAUTIONS AS REGARDS SCREENS

4. This Part of these regulations shall apply at every mine in which coal is worked other than a mine in which the floor, roof and sides of the roads are naturally wet throughout.

5. It shall be the duty of the manager of every mine to make and ensure the efficient carrying out of arrangements to secure that the entry of coal dust from screens into any downcast shaft is minimised.

6. At any such mine newly opened after the 16th day of December 1911, no plant shall be used for screening or sorting coal within a distance of two hundred and forty feet from any downcast shaft:

Provided that the Ministry may by notice served on the manager exempt a mine from the provisions of this regulation.

PART III

MAINTENANCE OF INCOMBUSTIBLE MATTER IN DUST IN ROADS

7. This Part of these regulations shall apply, at every mine in which coal is worked, to every length of road therein other than—

- (a) a length of road used only in connection with the working of anthracite; or
- (b) a length of road which is within thirty feet of a coal face or which is a shute from the coal face down which coal is thrown.

8.—(1) It shall be the duty of the manager of every mine to make and ensure the efficient carrying out of arrangements to secure that, as respects every length of road to which this Part of these regulations applies and which is required to be ventilated, any dust on the floor, roof or sides thereof which can be raised into the air shall contain not less than the minimum percentage of incombustible matter determined in accordance with the schedule to these regulations in relation to coal in connection with the working of which that length of road is used.

(2) For the purposes of these regulations the incombustible matter in any dust includes moisture contained therein.

9. No incombustible dust shall be used for the purposes of these regulations unless in tests carried out at intervals not exceeding ninety days it is found to comply with the following requirements, that is to say—

- (a) it is of such fineness that of the dry dust which passes through a 60-mesh sieve of a specification approved by the Ministry not less than fifty per cent. by weight and not more than seventy-five per cent. by weight, or such larger percentage as may be authorised by the Ministry by notice served on the manager, shall pass through a 240-mesh sieve of a specification so approved, and
- (b) it is of such character that it is readily dispersible into the air and, if in use in places where it is not directly wetted by water from the strata, it does not cake but is dispersed into the air when blown upon by the mouth or by a suitable appliance.

10.—(1) For the purpose of establishing the efficacy of his arrangements made in pursuance of regulation 8 it shall be the duty of the manager of the mine to ensure that at intervals not exceeding thirty days a sufficient number of samples of the dust on every length of road to which that regulation applies are systematically collected and analysed.

(2) In the case of any such length of road which is used for the transport of coal or which is within six hundred feet of a working face and is used as a return airway in respect of that face, the number of samples so collected and analysed shall not be less than in the proportion of ten per mile:

Provided that the Ministry may by notice served on the manager permit the taking and analysis of a lesser number of samples in any such length of road.

(3) If in the case of any length of road every analysis of a sample taken within the preceding six months indicates that the natural conditions of the road are such that the requisite percentage of incombustible matter is maintained without the application of incombustible dust or if, in the case of a length of road to which the last preceding paragraph does not apply, every such analysis indicates that the application of incombustible dust is not necessary at intervals of less than six months, it shall be sufficient for samples to be collected and analysed at intervals not exceeding ninety days or at such longer intervals as may be authorised by the Ministry by notice served on the manager:

Provided that if there is any change in the natural conditions or in the method of working which affects or may affect substantially the percentage of incombustible matter in any such length of road, samples shall be taken and analysed as soon as any effect of the change would be apparent.

(4) The manager shall ensure the result of every analysis required to be made by this regulation is within twenty-one days of the collection of the sample entered in a book provided by the owner of the mine for the purpose. Except at a mine at which less than one hundred persons are employed below ground, entries in that book relating to each length of road shall be distinguished by colour, number, letter or mark which shall be identified with that length of road by means of a suitable plan preserved with that book.

(5) The manager shall ensure that a notice specifying the result of every analysis required to be made by this regulation is kept in the covered accommodation provided in pursuance of section 114 of the Act for a period of thirty days commencing when that result is entered in the book in pursuance of the last preceding paragraph.

11.—(1) When any sample is collected to ascertain the percentage of incombustible matter in any dust in any road for the purposes of these regulations it shall (subject to the following provisions of this regulation) be collected—

- (a) over a length of road not less than one hundred and fifty feet in length;
- (b) in the case of dust on the roof or sides, to a depth not exceeding a quarter of an inch or, in the case of dust on the floor, to a depth not exceeding one inch; and
- (c) in the manner specified in paragraph (5) of this regulation.

(2) If since samples were last collected from any length of road in pursuance of regulation 10 some part of it has been treated with incombustible dust more frequently or more recently than other parts, separate samples shall for the purposes of that regulation be collected from those parts respectively irrespective of their lengths.

(3) Samples of the dust on the roof and sides of any length of road shall be taken together in the case of a length of road supported by steel arches and in the case of any other length of road unless there is in force a direction given by the Ministry by notice served on the manager that samples of the dust on the roof and sides of that length of road are to be taken separately.

(4) If in the case of any length of road the dust on the floor is systematically treated in a manner approved by the Ministry so as to consolidate it and render it indispersable, samples of the dust on that floor shall be taken to a depth of a quarter of an inch, as nearly as may be, and be taken together with dust from the roof and sides of that length of road unless there is in force a direction to the contrary given by the Ministry by notice served on the manager.

(5) Every sample shall be so taken as to be representative of the whole surface of the floor, roof or sides, roof and sides or all of them, as the case may be, of the length of road in question and shall be collected—

- (a) by a method of strip sampling by which the dust is collected from a succession of transverse strips as nearly as may be of equal width and equally spaced, not more than fifteen feet apart and of an aggregate area not less than one per cent. of the total area sampled; or
- (b) by a method of spot sampling by which it is collected from one point for each three feet of that length of road.

12. When any sample of dust is to be analysed for the purposes of these regulations it shall be well mixed and a representative portion which is passed through a 60-mesh sieve of a specification approved by the Ministry shall be analysed by a method so approved.

PART IV

MISCELLANEOUS PROVISIONS

Precautions as regards vehicles containing coal dust

13. It shall be the duty of the manager of every mine to ensure that no vehicle is used therein for the transport of material consisting wholly or mainly of coal dust (not being anthracite dust) along any length of road in which there is any electric cable or apparatus unless such steps are taken to enclose the material as would prevent the dust being thrown into the air if the vehicle were upset.

Stone dust barriers

14.—(1) In every area of a mine of coal—

- (a) in which there are one or more lengths of road on which any coal (other than anthracite) is carried by means of a conveyor, and
- (b) which is an area throughout which the flame that may be caused by an ignition of inflammable gas or dust occurring at a working coal face or at such other place as the manager may determine is likely to extend,

the manager shall ensure that stone dust barriers of a type approved by the Ministry are provided and maintained in or near to one or more such lengths of road.

(2) The manager shall prepare a scheme in respect of each such area specifying the position and type of each such barrier and such scheme or a copy thereof shall be kept at the office at the mine or at such other place as the Ministry may approve.

(3) If an inspector is of the opinion that for reasons of safety it is advisable that the scheme should be amended, the Ministry may serve on the manager a notice requiring him to make such amendment to the scheme as may be specified in the notice.

(4) The provisions of Part XIII of the Act with respect to references upon notices served by the Ministry shall apply to a notice served under the last preceding paragraph, and the relevant grounds of objection shall be that compliance with any requirement sought to be imposed by, or by virtue of, the notice is wholly, or to a particular extent, unnecessary, inadvisable for reasons of safety or impracticable.

(5) In this regulation "conveyor" means a single conveyor not less than one hundred and fifty feet long, or two or more conveyors operating as one unit which together are not less than one hundred and fifty feet long.

Sealed with the Official Seal of the Ministry of Commerce for Northern Ireland this 1st day of June 1970 in the presence of

(L.S.)

J. H. Armstrong,
Assistant Secretary.

SCHEDULE

Minimum Percentage of Incombustible Matter

1. For the purposes of regulation 8 the minimum percentage of incombustible matter in relation to any coal shall be determined by reference to the volatile matter content of that coal calculated on an ash-free dry basis in accordance with the following table:

Volatile matter content of coal (Per cent.)	Minimum percentage of incombustible matter required
Not exceeding	
20	50
22	55
25	60
27	65
30	68
32	70
35	72
Exceeding	
35	75

2. For the purposes of this schedule the volatile matter content of any coal shall be deemed to be that determined by analysis of a representative section of the seam or of a representative sample of run-of-mine coal from the seam taken within the preceding twelve months or where no such determination has been made shall be deemed to exceed thirty-five per cent.

3. Where any road is used in connection with the working of coal from more than one seam the volatile matter content of the coal shall be deemed to exceed thirty-five per cent, unless such a determination has been made in respect of each seam and in the excepted case shall be deemed to be the highest percentage so determined.

4. No account shall be taken for the purposes of this schedule of any analysis of a representative sample of coal unless forthwith after the making thereof notice containing particulars thereof was served on the Ministry.

5. Where in the seam or seams of coal in connection with the working of which any road is used inflammable gas is unknown and no explosive, which is not sheathed explosive within the meaning assigned to that term by the Stratified Ironstone, Shale and Fireclay Mines (Explosives) Regulations (Northern Ireland) 1970(c) is used in that road, the minimum percentage of incombustible matter required shall not exceed sixty per cent. in a case in which the road is treated with incombustible dust or fifty per cent. in a case in which it is not so treated.

EXPLANATORY NOTE

(This note is not part of the regulations but is intended to indicate their general purport.)

These regulations impose duties upon managers of mines of coal in regard to the taking of precautions against danger from inflammable dust and deal with the collection and analysis of samples of the dust in such mines.