

# Mines and Quarries Act 1954

## **1954 CHAPTER 70**

## PART III

SAFETY, HEALTH AND WELFARE (MINES)

#### Ventilation

## 55 Duty to provide adequate ventilation

- (1) It shall be the duty of the manager of every mine to take such steps as are necessary for securing that there is constantly produced in all parts of the mine below ground ventilation adequate for the following purposes, namely,—
  - (a) diluting gases that are inflammable or noxious so as to render them harmless and removing them ; and
  - (b) providing air containing a sufficiency of oxygen.

(2) Without prejudice to the general application of the foregoing subsection,—

- (a) ventilation produced in a part of a mine shall be deemed for the purposes of that subsection not to be adequate for the purpose of diluting carbon dioxide so as to render it harmless unless the amount thereof in the general body of the air in that part of the mine is not more than one and a quarter per cent. by volume or, if a smaller percentage by volume is prescribed, that smaller percentage;
- (b) ventilation produced in a part of a mine shall be deemed for the purposes of that subsection not to be adequate for the purpose of providing air containing a sufficiency of oxygen unless the amount of oxygen in the general body of the air in that part of the mine is not less than nineteen per cent. by volume ;

and regulations may provide that, without prejudice to the general application of that subsection, ventilation produced in a part of a mine shall be deemed for the purposes of that subsection not to be adequate for the purpose of diluting a prescribed gas (other than carbon dioxide) that is inflammable or noxious so as to render it harmless unless the amount thereof in the general body of the air in that part of the mine is less than the prescribed percentage by volume.

- (3) In the discharge of the duty imposed on him by subsection (1) of this section, the manager of a mine shall have regard to the desirability of securing (consistently with the discharge of that duty) the maintenance in the mine of working conditions that are reasonable so far as regards the temperature and humidity of the atmosphere and the amount of dust therein.
- (4) Nothing in subsection (1) of this section shall be construed as requiring the production of ventilation—
  - (a) in a part of a mine which is stopped off in a prescribed manner or in such other manner as may be approved by an inspector by notice served on the manager of the mine or is stowed up;
  - (b) in any waste; or
  - (c) in any such other part of a mine as may be prescribed.
- (5) Where, in any part of a mine required by the foregoing provisions of this section to be ventilated, the ventilation is interrupted or ceases to be adequate for the purposes mentioned in subsection (1) of this section, it shall be the duty of the manager of the mine to secure that, until the ventilation is restored, access to that part of the mine is so restricted as to prevent from entering it any person not authorised to do so and no person is permitted to remain in or pass through it except for the purpose of restoring the ventilation or in a case of emergency.

#### 56 Avoidance of danger from gas in waste

(1) This section applies to waste other than—

- (a) waste which is—
  - (i) stopped off in a prescribed manner or in such other manner as may be approved by an inspector by notice served on the manager of the mine in which it is contained; or
  - (ii) stowed up; or
- (b) waste, other than as aforesaid, with respect to which it is known that there is therein—
  - (i) no inflammable gas ; and
  - (ii) either no noxious gas or no noxious gas in a dangerous concentration.
- (2) It shall be the duty of the manager of every mine which contains any waste to which this section applies to secure either—
  - (a) that there is constantly produced in that waste ventilation adequate for the purposes mentioned in subsection (1) of the last foregoing section ; or
  - (b) that appropriate steps are taken for the purpose of minimising dangerous emissions from that waste of inflammable or noxious gas.
- (3) Subsection (2) of the last foregoing section shall, with any requisite modifications, apply for the purposes of paragraph (a) of the last foregoing subsection as it applies for the purposes of subsection (1) of that section.

#### 57 Power of inspector to require improvement of ventilation

(1) If an inspector is of opinion, with respect to a part of a mine that is by section fiftyfive of this Act required to be ventilated, that, in the interests of the safety or health of the persons employed in that part of the mine, it is necessary or expedient to improve the ventilation produced therein, he may serve on the manager of the mine a notice specifying that part and stating that he is of opinion aforesaid with respect thereto and requiring (according as may be specified in the notice) either—

- (a) that ventilation which, after the expiration of such period beginning with the day on which the notice becomes operative as may be specified therein, is produced in that part of the mine in pursuance of the said section fifty-five, must conform to such requirements as may be specified in the notice; or
- (b) that such works for the purpose of improving the ventilation in that part of the mine as may be specified in the notice shall be executed before the expiration of that period.
- (2) The provisions of Part XV of this Act with respect to references upon notices served by inspectors shall apply to a notice served under the foregoing subsection.

#### 58 Provisions as to means of ventilation

- (1) Unless, in all parts of a mine that are required by section fifty-five of this Act to be ventilated, ventilation adequate for the purposes specified in subsection (1) of that section is provided wholly by natural means, there shall be provided and maintained on the surface of the mine mechanically operated apparatus capable of producing in all those parts of the mine an amount of ventilation sufficient (apart from any ventilation produced by any mechanically operated apparatus below ground) to enable all the persons who are below ground in the mine at any one time to leave it safely; and any apparatus provided in pursuance of this subsection shall, if it is not normally used to produce ventilation, be used once at least in each week and be kept constantly available for use.
- (2) Where (whether in pursuance of the foregoing subsection or not) there is provided on the surface of a mine of coal mechanically operated apparatus for producing ventilation below ground in the mine, then, unless that apparatus is so designed or adapted, and is so installed, as to permit of its operation both by way of forcing air into, and by way of exhausting air from, the mine, there shall be provided in association with that apparatus, maintained and kept constantly available for use, adequate means for reversing the direction of flow of the ventilation produced by that apparatus.
- (3) Regulations may—
  - (a) exempt any prescribed class of mines from the provisions of subsection (1) of this section ;
  - (b) exempt any prescribed class of mines of coal from the provisions of subsection (2) of this section ;

and an inspector may, by notice served on the manager of a particular mine other than of coal, exempt the mine from the provisions of the said subsection (1) and may, by notice served on the manager of a particular mine of coal, exempt the mine from the provisions of either or both of those subsections:

Provided that no exemption shall be granted by regulations made by virtue of this subsection unless the Minister is satisfied that no persons employed in mines of the class to which the regulations apply will be exposed to undue risk in consequence of the granting of the exemption, and no exemption shall be granted under this subsection by an inspector in the case of a particular mine unless he is satisfied that no persons employed in that mine will be exposed to undue risk in consequence of the granting of the exemption.

(4) It shall not be lawful to use a fire for ventilation in a mine or, except with the consent of an inspector, given by notice served on the manager of the mine, to release in a mine compressed air for the purpose thereby of diluting or removing inflammable or noxious gas.

### 59 Prevention of leakage of air between airways

(1) Where, of any two lengths of different passages in a mine of coal, stratified ironstone, shale or fireclay, one is made after the commencement of this Act '(whatever the date of the making of, or of any part of, the other), then, unless there is (without any steps being taken for the purpose of minimising the leakage of air between them) no, or no appreciable, leakage of air between them, it shall not be lawful to use one as, or as part of, an intake airway and the other as, or as part of, a return airway unless such steps are taken as are necessary for the purpose of minimising the leakage of air between them:

Provided that nothing in the foregoing provisions of this subsection shall render unlawful the use as, or as part of, an airway of so much of any passage in a mine as lies within the relevant distance from a working face to which air is supplied or from which air is drawn off through that airway.

- (2) For the purposes of the proviso to the foregoing subsection—
  - (a) the expression " relevant distance " means, in relation to a working face in a mine, four hundred and fifty feet (measured from any point on that face in a straight line on any plane) or such other distance, so measured (whether greater or less than four hundred and fifty feet), as may, in any particular case, be determined by an inspector by notice served on the manager of the mine; and
  - (b) the expression " working face " does not include a place in a road at which ripping or work of repair is in progress.

#### 60 Provision of barometers and other measuring instruments

- (1) At every mine of coal or fireclay and at every mine other than of coal or fireclay, being either a safety-lamp mine or a mine (other than a safety-lamp mine) containing any waste to which section fifty-six of this Act applies, there shall be provided in a conspicuous place and in such a position as to be easily seen and read by the persons employed at the mine a barometer which shall, in such cases as may be prescribed, be of the prescribed kind.
- (2) Provision may be made by regulations for requiring-
  - (a) the provision at any such mine as aforesaid of a barometer of a prescribed kind in addition to that required by the foregoing subsection to be provided thereat;
  - (b) the provision at the prescribed places in mines of the prescribed instruments for measuring the temperature or humidity, or temperature and humidity, of the atmosphere.
- (3) Every instrument provided at a mine in pursuance of, or of regulations having effect by virtue of, the foregoing provisions of this section shall be properly maintained, and regulations may require that any such instrument shall be read by such persons at such times as may be prescribed and that the readings shall be entered by those persons in a book to be provided for that purpose by the owner of the mine.