(8) BLASTING MATERIALS AND DEVICES

(a) COAL MINES

1956 No. 1767

The Coal Mines (Explosives) Order, 1956

Made - - - -	*7th November*, 1956
Laid before Parliament	*26th November*, 1956
Coming into Operation	*1st January*, 1957

Whereas by subsection (1) of section one hundred and ninety of the Mines and Quarries Act, 1954(**a**) (hereinafter referred to as " the Act "), the Minister of Fuel and Power (hereinafter referred to as " the Minister ") is empowered to re-enact amongst other things (to the extent to which they could by virtue of the Act be enacted in regulations made under section one hundred and forty-one thereof) provisions of any order having effect by virtue of section sixty-one of the Coal Mines Act, 1911(**b**), subject to such modifications (if any) as appear to him to be consequential on the passing of the Act or requisite for the purpose either of bringing those provisions into conformity with the Act or of expressly limiting their operation to mines of the class to which their operation is limited immediately before the commencement of the Act:

And Whereas by subsection (2) of that section it is provided amongst other things that an order under subsection (1) shall set out in a schedule to the order the provisions thereby re-enacted and may direct that those provisions shall have effect as if they were regulations made under section one hundred and forty-one of the Act:

Now, therefore, the Minister in pursuance of the powers conferred upon him by section one hundred and ninety of the Act hereby orders as follows:—

1.—(1) The provisions set out in the schedule hereto, being provisions of the Coal Mines (Explosives) Order, 1951(**c**), subject to such modifications as aforesaid, are hereby re-enacted and shall have effect as if they were regulations made under section one hundred and forty-one of the Act coming into operation at the commencement of the Act.

(2) The provisions set out in the schedule hereto may be cited as the Coal Mines (Explosives) Regulations, 1956.

2. Any certificate, exemption, consent, approval, authority, determination or scheme granted or made for the purpose of the Coal Mines (Explosives) Order, 1951, shall, if in force at the commencement of the Act and so far as it could have been granted or made for the purposes of the Coal Mines (Explosives) Regulations, 1956, have effect as if it had been so granted or made.

3. This order shall come into operation at the commencement of the Act and may be cited as the Coal Mines (Explosives) Order, 1956.

Dated this seventh day of November, nineteen hundred and fifty-six.

Aubrey Jones,
Minister of Fuel and Power.

(**a**) 2 & 3 Eliz. 2. c. 70. (**b**) 1 & 2 Geo. 5. c. 50. (**c**) S.I. 1951/1675 (1951 I, p. 284).

SCHEDULE

THE COAL MINES (EXPLOSIVES) REGULATIONS, 1956, HAVING EFFECT AS IF MADE UNDER SECTION ONE HUNDRED AND FORTY-ONE OF THE MINES AND QUARRIES ACT, 1954.

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PART I

Application

1. These regulations shall apply to every mine of coal, and in these regulations " mine " means such a mine.

PART II

Mines and parts of mines in which only permitted explosives may be used

2.—(1) At any mine in any part of which the use of lamps or lights, other than permitted lights, is unlawful, no person shall take or use below ground any explosive other than explosive of a type and description approved by the Minister for use in places hazardous by reason of the presence or possibility of inflammable gas or of combustible dust (hereinafter referred to as " permitted explosive ").

(2) No person shall take into or use in any part of a mine, being a part in which safety-lamps are for the time being in use by way of temporary precaution, any explosive other than a permitted explosive.

(3) No person shall use any explosive other than a permitted explosive—

(*a*) in a length of road which as regards any working face is an intake airway and which begins at a shaft or outlet or the current of air in which is subsequently split; or

(*b*) in a length of road through which coal is, or during the last preceding six months has been, transported by means of a conveyor or in vehicles moved otherwise than by hand or by animal traction; or

(*c*) in any place within thirty feet of such a road (not being a roadhead).

(4) If an inspector is of opinion that any part of a mine is dry and dusty he may serve on the manager a notice stating that he is of that opinion and requiring him to ensure that no explosive other than a permitted explosive is taken into or used in that part of the mine and any such notice shall, if it is so specified therein, become operative forthwith.

(5) The provisions of Part XV of the Act with respect to references upon notices served by inspectors shall apply to a notice served under the last preceding paragraph and the relevant ground of objection to such a notice shall be that that part of the mine is not so dry and dusty as to make the use therein of explosives other than permitted explosives dangerous.

PART III

Appointment and qualification of shot firers

3.—(1) No person shall fire a shot in any mine unless he has been appointed to fire shots by the manager of that mine. Any person so appointed is hereinafter referred to as " a shot firer ".

(2) No shot firer shall fire a shot in any mine by means of a delay detonator or in a round of more than six shots unless he is appointed so to do by the manager of that mine. The manager shall include a record of any such appointment in the record of the appointment of that shot firer kept in pursuance of section one hundred and thirty-four of the Act.

(3) No shot firer firing shots in the regular course of his employment in any mine or part of a mine in which no explosives other than permitted explosives may be used shall be paid by wages depending upon the amount of mineral gotten:

Provided that this paragraph shall not apply—

(*a*) by virtue of the firing of shots in a part of the mine in which no explosives other than permitted explosives may be used by reason only that safety-lamps are for the time being in use therein by way of temporary precaution; or

(*b*) to a shot firer who is a master sinker or who is a deputy whose district consists of a shaft in the course of being sunk.

Qualification of shot firers

4.—(1) No person shall be qualified to be appointed or to be a shot firer unless—

(*a*) he has attained the age of twenty-two years, or such less age not being less than twenty-one years as may be approved by the Minister having regard to any special qualification held by him, and has had the practical experience specified in paragraph (2) of this regulation; or

(*b*) he is the holder of a service certificate made under paragraph (6) of article twelve of the Coal Mines (Explosives) Order, 1951.

(2) The practical experience referred to in the last preceding paragraph is three years' practical experience below ground in a mine including employment for not less than eighteen months in one or more of the following, namely—

(*a*) getting or cutting coal;

(*b*) ripping in a roadhead:

(*c*) setting or withdrawing supports at or building packs at a face at which coal is being worked;

(*d*) drilling shot holes at a face at which coal is being worked;

(*e*) for not more than six months, repairing or enlarging roads or driving cross measure drifts;

(*f*) in the case of a master sinker or a deputy whose district consists of a shaft in the course of being sunk, sinking operations.

5. No person shall be qualified to be appointed or to be a shot firer at a mine in which no explosive other than permitted explosive may be used and no shot firer shall fire a shot in a part of a mine in which no explosive other than permitted explosive may be used, not being such a mine or part of a mine by reason only that safety-lamps are for the time being in use therein by way of temporary precaution, unless (in addition to the qualification required under the last preceding regulation)—

(*a*) he is the holder of a first or second class certificate of competency valid with respect to that mine; or

(*b*) he is the holder of a shot firer's certificate granted by the Minister on the recommendation of the Mining Qualifications Board and he has spent not less than five shifts in practising shot firing in a mine under the close personal supervision of a shot firer; or

(*c*) he is the holder of a service certificate made under paragraph (6) of article twelve of the Coal Mines (Explosives) Order, 1951, being a certificate which states that he regularly fired shots in a mine to which Part II of the Explosives in Coal Mines Order, 1934(a), applied ;

and he has within the last preceding five years obtained a certificate that he was then able to recognise the various gas caps formed in a flame safety-lamp in atmospheres containing one and one quarter per cent. by volume of inflammable gas and more being a certificate granted by a university or university college or by a school, college or institution maintained or assisted by a local education authority, or by another body approved by the Minister for that purpose.

6. No shot firer shall be appointed to fire shots in any mine by means of a delay detonator or in a round of more than six shots unless he has during not less than five shifts been employed in connection with the firing of such shots under the close personal supervision of a shot firer authorised to fire such shots who was not then supervising any other person for the purposes of this regulation.

7. Any certificate required by the preceding provisions of this Part of these regulations to be held as a qualification by any person for the time being employed as a shot firer at any mine shall be kept at the office at that mine or at such other place as may be approved by an inspector.

PART IV

Storage, issue and conveyance of explosives and detonators

8.—(1) The manager of a mine shall not permit any explosive, detonator or safety fuse to be stored thereat except in a place on the surface appointed by him for the purpose (hereinafter referred to as "an explosives store").

(2) The manager of every mine in which explosives are used shall appoint at least one place, which shall be situate conveniently near the top of each shaft or outlet normally used by workmen, as a place for the deposit of explosives and detonators brought out of the mine, and may appoint a place (other than an explosives store) for the issue thereof.

(3) The manager of every mine in which explosives are used shall appoint such number of competent persons and make such arrangements as to secure that a competent person is in charge of each explosives store and place appointed for the purposes of the last preceding paragraph whenever explosives or detonators are to be issued or returned thereat.

9. No person shall cap safety fuse with a detonator at any place at a mine except at a workshop used in connection with an explosive store in pursuance of section forty-seven of the Explosives Act, 1875(b).

Control of issue of detonators

10.—(1) All detonators at an explosives store or at a place appointed in pursuance of paragraph (2) of regulation eight shall, except during a shift for which the manager of the mine has appointed a competent person to have charge of that store or place, be in the sole charge of the manager.

(2) No person shall be in possession of any detonator at any place at a mine other than an explosives store or a place appointed for the storage, issue or deposit of explosives except a shot firer to whom the detonator has been issued for use or a person authorised in writing by the manager of the mine so to be and save as aforesaid no person shall issue or take any detonator from such a store or place.

Conveyance and care of detonators

11.—(1) No person shall take any detonator below ground in a mine except in a securely locked detonator case provided by the owner of the mine:

Provided that nothing in this paragraph shall prevent a primer cartridge fitted with a detonator being taken into a shaft in the course of being sunk for use therein.

(a) S.R. & O. 1934/6 (Rev. IV, p. 301: 1934 I, p. 221). (b) 38 & 39 Vict. c. 17.

(2) No person shall put a detonator into a detonator case if it would then contain a delay detonator as well as a detonator which is not a delay detonator.

(3) No person shall put a delay detonator into a detonator case unless the detonator is clearly marked with a number which indicates the period of delay and that period does not exceed five seconds.

(4) The manager of every mine in which detonators are used shall ensure that no detonator case is issued to a shot firer unless it is so constructed and maintained that when the case is closed it is impossible for any detonator or the leads of any detonator contained in the case to touch any metal part thereof which is exposed outside the case or is in contact with any other metal part so exposed.

12.—(1) Any shot firer to whom a detonator case has been issued shall—

(*a*) retain the key of the case in his own possession throughout the period during which he is on duty ;

(*b*) ensure that, apart from any check sheet for recording shots fired by him, nothing except detonators is in it ;

(*c*) keep it separate from any receptacle containing explosives ;

(*d*) ensure that at any time at which it is not on his person it is in a safe place and, unless he remains in the immediate vicinity, in a securely locked box which does not contain any explosive ; and

(*e*) if at the end of his period of duty it contains any detonator, return it to the appropriate place on the surface appointed for the storage or deposit of explosives.

(2) No shot firer shall remove a detonator from a detonator case unless it is required immediately for charging a shot hole.

Conveyance and care of explosives

13. No person shall take any explosive below ground in any mine unless it is in the form of a cartridge.

14.—(1) Except in pursuance of the next following regulation, no person shall take any explosive below ground in any mine unless it is in a closed canister stoutly constructed and containing not more than five pounds of explosive :

Provided that nothing in this paragraph shall prevent a primer cartridge fitted with a detonator being taken into a shaft in the course of being sunk for use therein.

(2) Every person having any canister of explosives in his possession or control shall ensure that it is not deposited at any time elsewhere than in a place of safety, and in particular if at the end of his period of duty the canister contains any explosive shall return it to the appropriate place on the surface appointed for the storage or deposit of explosives or, if he received it from a reserve station established for the purposes of a scheme of transit, to that reserve station or to a person and at a place appointed by the manager for the purposes of that scheme.

(3) No person below ground shall unlock or open any canister of explosives or take any explosive from any canister unless the shot firer concerned requires to check the quantity of the explosives or the explosive is required immediately for charging a shot hole or the act in question has been authorised by a deputy or other official of the mine.

Conveyance of explosives in bulk

15.—(1) Subject to the following provisions of this regulation the manager of any mine may as respects that mine or any part thereof make a scheme for the conveyance of explosives in bulk (herein referred to as a " scheme of transit ")

whereby explosives packed at an explosives store in securely locked canisters of any size may be conveyed in a special carriage to one or more reserve stations in that mine or part of the mine or to the working face.

(2) Every scheme of transit shall contain provisions for securing safety with respect to each of the following matters—

(*a*) the location, construction and marking of each reserve station and the custody of the keys thereof;

(*b*) the design and construction of the special carriage;

(*c*) supervision of and precautions to be taken during the transit of the carriage;

(*d*) supervision of any explosives at a reserve station;

(*e*) if explosives are to be taken in bulk to any working face, the manner of so doing;

(*f*) the maximum quantity of explosives to be at any reserve station at any time;

(*g*) the control of the issue of explosives from any reserve station;

(*h*) the return of explosives to a reserve station or other place appointed by the manager.

(3) Every scheme of transit shall contain provisions to ensure that—

(*a*) the quantity of explosives conveyed into the mine in pursuance thereof at any time together with any quantity so conveyed already in the mine does not exceed the quantity estimated to be required for use during the period of twenty-four hours next following;

(*b*) except in pursuance of a provision of the scheme, no explosive shall while being conveyed in bulk be taken nearer to a working face (not being only a place in a road at which ripping or work of repair is in progress) than the reserve station nearest to that face.

(4) A scheme of transit may impose duties and prohibitions on persons employed at the mine and those persons shall comply therewith. It shall be the duty of the manager of the mine to secure that the provisions of any scheme of transit for that mine are executed and enforced.

(5) If an inspector is of opinion with respect to a scheme of transit that the provisions contained therein in pursuance of paragraph (2) of this regulation are not adequate to secure safety, he may serve on the manager of the mine a notice stating that he is of that opinion, specifying the nature of the provision which in his opinion ought to be made and requiring the manager to amend the scheme accordingly, and any such notice shall, if it is so specified therein, become operative forthwith.

(6) The provisions of Part XV of the Act with respect to references upon notices served by inspectors shall apply to a notice served under the last preceding paragraph, and the relevant ground of objection shall be that the provisions contained in the scheme of transit in pursuance of paragraph (2) of this regulation are adequate to secure safety.

(7) The person in charge of the explosives at any reserve station shall ensure that any explosives remaining thereat at the end of his period of duty are either delivered by him to a person appointed to have charge of them during the immediately following shift or are returned to the explosives store.

(8) The manager of every mine at which a scheme of transit is in operation shall ensure that a copy thereof is provided in the covered accommodation provided in pursuance of section one hundred and thirty-five of the Act and that a copy thereof is supplied to each shot firer employed at the mine.

PART V

Equipment of a shot firer

16.—(1) For each shot firer on duty there shall be provided by the owner of the mine—

(*a*) a tool made entirely of wood suitable for charging and stemming shot holes;

(*b*) a scraper suitable for cleaning out shot holes; and

(*c*) in the case of a shot firer in a mine in any part of which the use of lamps or lights, other than permitted lights, is unlawful or in the case of a shot firer on duty in a part of a mine in which safety-lamps are for the time being in use by way of temporary precaution, a break detector of a design approved by the Minister (which detector may incorporate the scraper required by sub-paragraph (*b*)).

(2) Each shot firer who is to fire shots by means of electric shot firing apparatus shall be provided by the owner of the mine with the necessary cable of a specification approved by the Minister—

(*a*) if shots are to be fired in a round, for multi-shot firing; or

(*b*) in any other case, for single-shot firing.

17. No shot firer shall fire a shot in any mine by means of electric shot firing apparatus or cable not provided by the owner of the mine.

18.—(1) In any mine or part of a mine in which no explosive other than permitted explosive may be used, no shot firer shall fire a shot except by means of electric shot firing apparatus of a specification approved by the Minister—

(*a*) if shots are to be fired in a round, for multi-shot firing with all explosives; or

(*b*) in any other case, for single-shot firing with all explosives:

Provided that if an inspector is of opinion in any case that it is expedient to allow the firing of a number of shots in a round for which no such multi-shot firing apparatus has been approved, he may by notice served on the manager of the mine permit the use therefor of electric shot firing apparatus specified in the notice.

(2) In a mine or part of a mine to which the last preceding paragraph does not apply, no shot firer shall fire a shot by means of electric shot firing apparatus other than apparatus of a specification approved by the Minister—

(*a*) if shots are being fired in a round, for multi-shot firing with all explosives or with explosives which are not permitted explosives; or

(*b*) in any other case, for single-shot firing with all explosives or with explosives which are not permitted explosives.

(3) Nothing in this regulation shall prevent the use of shot firing apparatus in accordance with the following provisions of these regulations in connection with miss-fired shots and, in a case in which a shot or shots in a shaft are to be fired by means of shot firing apparatus on the surface, nothing in paragraph (1) shall prevent the use of apparatus of a specification approved by the Minister for firing with explosives which are not permitted explosives.

19. A shot firer who is in charge of any electric shot firing apparatus—

(*a*) shall retain the removable handle or key in his own possession throughout his period of duty;

(*b*) shall not place the removable handle or key in position in the apparatus until he is about to fire a shot; and

(*c*) shall remove it from the apparatus immediately after firing each shot.

20.—(1) If any electric shot firing apparatus appears to be defective, the shot firer in charge of it shall not use it further but shall cause it to be returned to the surface forthwith and shall report the circumstances to the manager in writing.

(2) If any electric shot firing apparatus approved for multi-shot firing fails to fire all the shots in any properly connected round at one operation, it shall be deemed to be defective for the purposes of the last preceding paragraph but it may be used to fire the shots in that round in accordance with the provisions of regulation sixty.

21. It shall be the duty of the manager of every mine in which electric shot firing apparatus is used to make and secure the efficient carrying out of arrangements to ensure that—

(*a*) all such apparatus is thoroughly cleaned and overhauled at intervals not exceeding three months by the manufacturer thereof or by a competent person appointed for that purpose by the manager;

(*b*) all multi-shot firing apparatus is tested at the surface at intervals not exceeding seven days in a manner approved by the Minister in respect of apparatus of that type;

(*c*) if in connection with the firing of a round of shots by means of any such apparatus any miss-fire in a round after firing occurs, that apparatus is tested at the surface in such a manner before it is again taken below ground;

(*d*) no such apparatus is taken or used below ground unless on the last previous test thereof it was found to be in satisfactory order; and

(*e*) the date of each cleaning and overhaul and the result of each test carried out in pursuance of this regulation is entered in a book provided for the purpose by the owner of the mine.

Misuse of equipment

22.—(1) No person shall open or tamper with any electric shot firing apparatus below ground.

(2) No person shall use shot firing cable for any purpose other than shot firing.

PART VI

Shot firing—all mines

Drilling and cleaning shot holes

23.—(1) No person shall drill a shot hole or any part thereof with a drill of which the diameter does not exceed by at least one eighth of an inch the diameter of any cartridge to be inserted in that shot hole.

(2) No person shall for the purpose of testing, cleaning out or charging any shot hole use any tool other than the appropriate tool provided for the purpose by the owner of the mine.

24.—(1) No person shall begin to charge any shot hole unless it has been thoroughly cleaned out.

(2) No person shall use compressed air to clean out any shot hole unless he ensures that the giving off of any dust is minimised.

Charging shot holes

25.—(1) No person shall charge a shot hole unless he is a shot firer or is doing so under the supervision of a shot firer, and no shot firer shall charge a shot hole, or permit a shot hole to be charged, before it is necessary to do so for the purpose of firing a shot.

(2) No person shall begin to charge any shot hole unless he has satisfied himself by taking all reasonable precautions that it is so placed and drilled as to be safe for the firing of a shot.

(3) Except in the case of shots to be fired in one round or of a relieving shot for the purposes of a miss-fire, no person shall charge a shot hole if there is a charged shot hole within ninety feet thereof.

(4) No person shall charge a shot hole to be fired as one of a round in a cross measure drift, heading or ripping or in a shaft or staple-pit until all shot holes for that round have been completely drilled.

26.—(1) No shot firer shall permit more than one canister of explosives to be open at any one time for the charging of shot holes by him or under his supervision.

(2) No person shall charge a shot hole—

(*a*) otherwise than with a complete cartridge or complete cartridges ; or

(*b*) with cartridges of different diameters or of explosives of different descriptions.

(3) No person shall remove any external sheathing from a sheathed explosive.

(4) No person shall press any cartridge into a shot hole if it cannot be inserted without the use of force.

(5) Any person charging a shot hole shall to the best of his judgment ensure that it is not overcharged having regard to the task to be performed.

27.—(1) Except in accordance with the provisions of Part IX of these regulations in relation to a miss-fire, no person shall insert more than one detonator into a shot hole.

(2) No shot firer shall fire a shot by means of a detonator except by means of an electric detonator or safety fuse capped with a detonator at a workshop in accordance with regulation nine.

(3) No shot firer shall use any detonator in firing a round of shots electrically in any mine unless—

(*a*) it is a low tension detonator or a delay detonator ; and

(*b*) it has copper leading wires.

(4) No shot firer shall use a delay detonator unless it is clearly marked with a number which indicates the period of delay and that period does not exceed five seconds.

(5) Where a delay detonator is to be used and the charge is to consist of more than one cartridge, the person charging the shot hole shall insert the primer cartridge first with the detonator at the back of the hole.

28.—(1) Any person charging a shot hole shall ensure that it is stemmed with sufficient suitable and non-inflammable stemming to prevent a blown out shot.

(2) Except where a device for pneumatic stemming approved by the Minister is being used, no person shall insert any tool not made entirely of wood into a shot hole containing explosive.

29.—(1) No person shall remove any stemming from any charged shot hole otherwise than by means of water.

(2) No person shall pull out any detonator lead from any charged shot hole.

(3) No person shall remove any explosive from any charged shot hole.

Firing shots

30.—(1) No shot firer shall fire any shot unless he has satisfied himself by taking all reasonable precautions that it is in a shot hole so placed and drilled as to be safe for the firing of a shot and is charged and stemmed in accordance with the provisions of these regulations.

(2) Subject to the provisions of the last preceding paragraph, each shot firer shall unless prevented by circumstances beyond his control fire every shot which has been charged by him or under his supervision.

31. Each shot firer shall keep a record of all shots fired by him on each shift of his in a book provided by the owner of the mine for that purpose.

Firing shots electrically

32.—(1) Except in a cross measure drift or in a shaft in the course of being sunk, no shot firer shall fire more than six shots in any one round.

(2) Where a round of shots is to be fired by means of electric shot firing apparatus, the shot firer shall ensure that—

(*a*) the detonators are connected in series ;

(*b*) no additional wire is used for connecting any detonator leads to each other.

(3) No shot firer shall use any cable for firing shots if its length is less than—

(*a*) sixty feet when a single shot is being fired otherwise than in a shaft in the course of being sunk ;

(*b*) one hundred and fifty feet when a round of shots in coal is being fired ;

(*c*) two hundred and ten feet when a round of six shots or less is being fired in stone ;

(*d*) six hundred feet when a round of more than six shots in a cross measure drift, or any shot in a shaft in the course of being sunk, is being fired.

(4) A shot firer who is about to use shot firing cable shall ensure that it is not in, and cannot make, contact with any other cable or electric apparatus.

(5) No person other than a shot firer shall couple any shot firing cable to any detonator or to shot firing apparatus.

(6) No shot firer shall couple a shot firing cable to shot firing apparatus for the purpose of firing a shot unless the cable has already been coupled by him to the detonator or detonator circuit.

(7) No shot firer shall fire any round of shots by means of electric shot firing apparatus unless he has tested the circuit for continuity by means of a testing device approved by the Minister and has found it to be satisfactory. A shot firer shall not make any such test unless all persons in the vicinity have withdrawn to a place of safety, and he himself has taken proper shelter.

Firing shots by fuse

33.—(1) No shot firer shall fire a single shot by fuse less than three feet in length or any shot in a round by fuse less than four feet in length.

(2) Not more than one shot firer shall charge shot holes or permit shot holes to be charged or fire shots by means of fuse at any one time in any working place or at any working face which does not exceed one hundred and fifty feet in length.

(3) At any working face exceeding one hundred and fifty feet in length no shot firer shall fire any shot by means of fuse within one hundred and fifty feet of another charged shot hole unless he has satisfied himself that no other shot firer is about to fire that other shot.

(4) Except where means approved by the Minister of firing a round of shots by means of fuse is used, no shot firer shall attempt to fire more than four shots at one time by means of fuse.

(5) Where any shot is to be fired by means of fuse the shot firer shall ensure that—

(*a*) no naked light or person smoking is directly above, or within four feet in any other direction of, any shot hole, explosive or detonator ;

(*b*) all surplus explosives are removed from the vicinity of the shot hole before a light is brought near to it for the purpose of lighting the fuse.

Warning and shelter

34. In every case where a shot may blow through into another place the shot firer concerned shall cause due warning to be given to all persons in that place, and he shall after firing the shot cause notice to be given to them that the period of danger is ended.

35.—(1) Any shot firer proposing to fire a shot shall before firing determine the danger zone likely to be created.

(2) No shot firer shall fire any shot unless he has—

(*a*) at each entrance to that danger zone either posted a sentry or placed an appropriate fence conspicuously marked with the words "danger" and "shot firing" ;

(*b*) ensured that all persons have withdrawn from that zone or have taken proper shelter; and

(*c*) himself taken proper shelter.

36.—(1) No person who has been posted as a sentry by a shot firer shall leave the place where he was posted until directed so to do by the shot firer in person.

(2) No person shall pass a danger sign exhibited for the purpose of shot firing without the authority of the shot firer or shall pass a sentry who has forbidden him to do so.

Precautions after shot firing

37.—(1) Every shot firer after firing a shot shall—

(*a*) ascertain by a personal examination whether it is safe for ordinary working to be resumed in each working place affected by that shot; and

(*b*) ensure that any necessary action is taken to make each such place safe for such working.

(2) Where a round of shots has been fired the shot firer—

(*a*) shall not make that examination, if it was a round of six shots or less, before the expiry of five minutes or, in any other case, before the expiry of ten minutes;

(*b*) shall in the course of his examination examine for sockets in the face, for any explosive remaining in any such socket and, if he has reason to think that any shot may not have completely exploded, for any unexploded charge in the material brought down.

PART VII

Shot firing—additional provisions for mines in which only permitted explosives may be used

Shot firers' maximum number of shots

38.—(1) For each shot firer firing shots in the regular course of his employment in any mine or part of a mine in which no explosives, other than permitted explosives, may be used, the manager shall fix the maximum number of shots which he may fire in any one hour and in any one shift being in each case a number consistent with the requirements of safety:

Provided that the numbers so fixed shall not apply to shots fired in a round of more than six shots.

(2) If the manager proposes to fix a maximum exceeding ten for any one shift for a shot firer who is a deputy assigned to a district for that shift he shall give to the inspector for the district notice thereof in such form as may be specified by the Minister.

(3) If an inspector is of opinion that the firing of more than ten shots in a shift by a shot firer referred to in a notice given under the last preceding paragraph is inconsistent with the requirements of safety, he may within fourteen days of the receipt of that notice serve on the manager a notice requiring him not to fix a number for that shot firer exceeding a number specified in the notice, and any such notice shall if it is so specified therein become operative forthwith.

(4) If an inspector is of opinion that any maximum number of shots fixed by the manager for any shot firer is inconsistent with the requirements of safety he may serve on the manager a notice requiring him to reduce that number to a number not exceeding that specified in the notice:

Provided that an inspector shall not serve a notice under this paragraph in relation to a number of which notice was given under paragraph (2) unless there has been a material change in the circumstances since the date of that notice.

(5) The provisions of Part XV of the Act with respect to notices served by inspectors shall apply to a notice served under either of the two last preceding paragraphs and the relevant ground of objection to such a notice shall be that the firing by the shot firer in question of the maximum number of shots fixed or proposed to be fixed will not be inconsistent with the requirements of safety.

39.—(1) The manager shall give notice to each shot firer of each maximum fixed under the last preceding regulation in relation to him and shall record each such maximum in a book provided by the owner of the mine for the purpose.

(2) No shot firer shall in any one hour or in any one shift fire a greater number of shots than the permitted maximum notified to him under the last preceding paragraph:

Provided that those numbers shall not apply to shots fired in a round of more than six shots.

Restrictions on shot firing where inflammable gas is present

40.—(1) If any determination of firedamp content made in pursuance of Part II of the Coal and Other Mines (Ventilation) Regulations, 1956(a), at any point in any part of a mine shows a firedamp content exceeding one and a quarter per cent., the manager shall take such steps as are necessary for securing that no shot firer fires a shot in that part of the mine on the return side of that point during the period described in paragraph (4) of this regulation.

(2) If any deputy to whom a deputy's district is assigned in a mine in any part of which the use of lamps or lights, other than permitted lights, is unlawful finds at any place a firedamp content exceeding one and a quarter per cent. or can see at any place in the general body of the air an indication of gas on the lowered flame of a safety-lamp, he shall ensure—

(*a*) that no shot is fired or shot hole charged in his district on the return side of that place during the period described in paragraph (4) of this regulation; and

(*b*) if the air in question will ventilate any part of any other deputy's district, that the deputy in charge thereof is informed of the facts.

(3) A deputy to whom such information is given shall ensure that no shot is fired or shot hole charged in any part of his district ventilated by air which has been found to contain inflammable gas as aforesaid during the period described in paragraph (4) of this regulation.

(4) Any prohibition imposed by this regulation shall continue as regards any place until the senior official on duty at the mine has satisfied himself that the firedamp content at the place at which it was found does not exceed one and a quarter per cent. and has authorised the resumption of shot firing.

(5) The manager shall forthwith give to the inspector for the district notice of any occasion on which shot firing is required to be suspended by this regulation by virtue of a firedamp content at any place exceeding one and a quarter per cent. unless such content was caused by the temporary derangement of the ventilation.

Restrictions on certain shots

41. If the face of any cross measure drift in a part of a mine in which no explosives, other than permitted explosives, may be used contains a seam of coal more than twelve inches thick, or is in waste, or is known to have approached within fifteen feet of any such seam or of waste, no shot firer shall in that drift—

(*a*) use any delay detonator; or

(*b*) fire any round of more than six shots;

unless an inspector by notice served on the manager consents thereto.

(a) S.I. 1956/1764 (p. 1295 above).

42. In a mine in any part of which the use of lamps or lights, other than permitted lights, is unlawful or in any part of a mine being a part in which safety-lamps are for the time being in use by way of temporary precaution, no shot firer shall fire a shot—

(*a*) in the roof of any longwall working between the coal face and the waste; or

(*b*) in any waste.

Precautionary examinations

43.—(1) The provisions of this regulation shall apply to every mine in any part of which the use of lamps or lights, other than permitted lights, is unlawful and to every part of a mine being a part in which safety-lamps are for the time being in use by way of temporary precaution.

(2) No shot firer shall fire a shot unless he has carried out with respect to it an examination for general safety and tests for the presence of inflammable gas in accordance with the following provisions of this regulation. Every such test for inflammable gas shall be made with a locked flame safety-lamp of a type approved by the Minister for the purpose of deputies' inspections, a methanometer of a type approved by the Minister or other apparatus of a type approved by the Minister for the purpose.

(3) No shot firer shall fire a shot or charge a shot hole if on any such test made with respect to it he finds a percentage of inflammable gas exceeding one and a quarter per cent. or he can see an indication of gas on the lowered flame of a safety-lamp.

(4) If shots are to be fired singly in succession in coal along a longwall face, the shot firer concerned shall arrange the shots in groups of not more than six and shall fire all the shots in any such group so far as practicable without interruption for duties other than shot firing.

(5) If a shot firer intends to fire shots in one or more rounds or groups in any area he shall—

(*a*) before shot firing in that area is begun carry out an examination for general safety and test for the presence of inflammable gas over the whole of that area and the approaches thereto;

(*b*) immediately before the first shot hole of any round or group is charged, test for gas—

(i) in every accessible place within thirty feet of either of the two shot holes in the round or group which are farthest apart;

(ii) at the mouth of each shot hole in the round or group;

(iii) if the shots are to be fired at a face, and there is waste in the vicinity, throughout that part of the workings which is between the face and the waste and between those two shot holes;

(*c*) immediately before firing any round or any shot in a group, test for gas in the vicinity of each shot hole and at the edge of any waste opposite.

(6) If a shot firer intends to fire a single shot otherwise than as one of a group he shall—

(*a*) immediately before the shot hole is charged, carry out an examination for general safety and test for gas—

(i) in the vicinity and at the mouth of the shot hole;

(ii) if the shot hole is in a longwall face, throughout every accessible place within, if the shot hole is not within sixty feet of the end of the face, thirty feet from the shot hole or, if it is within sixty feet of the end of the face, sixty feet therefrom;

(*b*) immediately before firing, test for gas in the vicinity of the shot hole and at the edge of any waste opposite.

Preparation and charging of shot holes

44. Unless an inspector by notice served on the manager consents thereto, no shot firer shall charge a shot hole in any coal face in a part of a mine in which no explosives, other than permitted explosives, may be used unless the coal has been holed or sheared to a depth greater than the depth of the shot hole:

Provided that this regulation shall not apply to a shot hole in anthracite or to any shot hole in a cross measure drift.

45.—(1) In a mine in any part of which the use of lamps or lights, other than permitted lights, is unlawful and in any part of a mine being a part in which safety-lamps are for the time being in use by way of temporary precaution, any person drilling a shot hole in coal or in a ripping and finding a break along or across it which exceeds one eighth of an inch in width shall mark the hole concerned in a distinctive manner. No shot firer shall charge any shot hole so marked.

(2) In any such mine or part of a mine no shot firer shall charge any shot hole in coal or in a ripping unless he has tested, with the break detector with which he is provided, for breaks running along or across it and has satisfied himself that no such break exceeding one eighth of an inch in width exists.

46.—(1) No person other than a shot firer shall charge any shot hole in a part of a mine in which no explosives, other than permitted explosives, may be used:

Provided that nothing in this paragraph shall apply to a holder of a shot firer's certificate who is practising shot firing under the close personal supervision of a shot firer.

(2) No person shall stem any such shot hole unless he is a shot firer or is doing so under the supervision of a shot firer.

47.—(1) No shot firer shall charge a shot hole in a part of a mine in which no explosives, other than permitted explosives, may be used with an aggregate weight or length of explosive exceeding the maximum specified on any cartridge forming part of the charge.

(2) No shot firer shall use in any such part of a mine—

(*a*) any detonator except an electric detonator with a copper tube;

(*b*) any delay detonator except in a cross measure drift or in a shaft in the course of being sunk.

48. In a mine in any part of which the use of lamps or lights, other than permitted lights, is unlawful and in any part of a mine being a part in which safety-lamps are for the time being in use by way of temporary precaution, no shot firer shall—

(*a*) begin to charge any shot hole in under-cut coal or in a roof ripping within three hundred feet of a coal face unless he has inserted a plug of stemming at the back of the hole; or

(*b*) charge any shot hole in a roof ripping within sixty feet of the face otherwise than with sheathed explosive.

PART VIII

Shot firing—additional provisions for shafts and staple-pits

49. No person shall take any explosive into a shaft or staple-pit for use therein unless it is immediately required for charging a shot hole.

Primer cartridges

50. No person other than a shot firer shall take a primer cartridge fitted with a detonator into a shaft in the course of being sunk and no shot firer shall take such a cartridge into such a shaft otherwise than in a thick felt bag or other receptacle suitable for protecting it from shock.

Detonators

51. No shot firer shall fire a shot in a shaft or staple-pit except by means of an electric detonator.

Precautions before firing

52.—(1) No shot firer shall couple a shot firing cable to a detonator in a shaft or staple-pit provided with winding apparatus unless—

(*a*) the kibble is conveniently placed for men in the shaft or staple-pit to enter it; and

(*b*) he has satisfied himself that the person operating the winding apparatus is ready to raise.

(2) No shot firer shall couple a shot firing cable to shot firing apparatus for the purpose of firing any shot in a shaft or staple-pit unless all persons who may be affected are in a place of safety.

Precautions after firing

53. No person shall enter a shaft or staple-pit after a shot has been fired therein until it has been inspected by the deputy in pursuance of regulation fifteen or paragraph (4) of regulation thirty-two of the Coal and Other Mines (Managers and Officials) Regulations, 1956(**a**).

PART IX

Miss-fires

A. Single shots

Meaning of "single-shot miss-fire"

54.—(1) For the purposes of this Part of these regulations, all shots fired by fuse shall be deemed to be single shots.

(2) A shot being fired as a single shot shall be treated as a miss-fire (hereinafter referred to as a "single-shot miss-fire"), if it fails to explode, in the case of a shot being fired—

(*a*) by fuse, after the shot firer has withdrawn after once lighting or attempting to light the fuse; or

(*b*) electrically, after the shot firer, having attempted unsuccessfully to fire the shot, has followed the procedure described in paragraph (3) of this regulation.

(3) The said procedure is that the shot firer shall—

(*a*) disconnect from the shot firing apparatus the removable handle or key and the shot firing cable;

(*b*) after waiting five minutes, examine the cable and connections for any defect, and remedy any defect so found;

(*c*) make a further attempt to fire the shot, for which purpose he may use shot firing apparatus of a type approved by the Minister for multi-shot firing for not more than six shots with the appropriate explosive.

Single-shot miss-fires, general precautions

55. In the event of a single-shot miss-fire, no person shall approach the shot hole until, if the shot is being fired—

(*a*) by fuse, there have elapsed, from the lighting of the fuse or the attempt to light it, not less than thirty minutes; or

(*b*) electrically, the removable handle or key and the shot firing cable have been disconnected from the shot firing apparatus, and there have elapsed, from the last attempt to fire the shot, not less than five minutes.

(**a**) S.I. 1956/1758 (p. 1212 above).

Single-shot miss-fires, remedial action

56.—(1) In the event of any single-shot miss-fire, the shot firer concerned shall ensure that either—

(*a*) the procedure described in paragraph (2) of this regulation is complied with ; or

(*b*) the stemming is removed with water, an additional primer inserted in the shot hole with proper stemming, and the shot then duly fired, as provided in these regulations.

(2) The said procedure is as follows—

(*a*) a shot hole shall be drilled not nearer to the miss-fire than twelve inches, and, so far as is practicable, parallel to, and of equal depth to, its shot hole ;

(*b*) if the miss-fire contains a detonator, the leads or fuse thereof shall be attached by a string to the shot firing cable, or to some distinctive marker ;

(*c*) a shot shall be duly fired in the shot hole aforesaid ;

(*d*) if the miss-fire is not dislodged, the procedure herein described shall be repeated.

B. Shots in a round

Circuit not continuous

57.—(1) If, when the circuit of a round is tested in pursuance of paragraph (7) of regulation thirty-two, it is found not to be continuous, the shot firer shall comply with the following procedure, that is to say—

(*a*) examine the shot firing cable and connections for defects (after disconnecting the cable from the shot firing apparatus, if the testing device formed part of it) ;

(*b*) remedy any defect so found ; and

(*c*) subject to the provisions of the said paragraph (7), test the circuit again for continuity.

(2) If the test aforesaid is successful, the provisions of this Part of these regulations shall not apply in relation to that round, unless one or more of the shots fails to explode when fired.

(3) If the said test is unsuccessful, the shot firer shall, by individual tests for continuity (which shall be subject to the provisions of paragraph (7) of regulation thirty-two), determine the faulty shot or shots.

Meaning of " miss-fire in a round ", etc.

58.—(1) A shot being fired in a round shall be treated as a miss-fire (hereinafter referred to as a " miss-fire in a round "), if—

(*a*) by the individual tests under paragraph (3) of regulation fifty-seven, it is found to be a faulty shot (any such shot being hereinafter referred to as a " miss-fire in a round by broken continuity ") ; or

(*b*) when the round is fired, it fails to explode (whether or not all other shots in the round have exploded) (any such shot being hereinafter referred to as a " miss-fire in a round after firing ").

(2) Whenever, in the event of any miss-fire in a round, any shot forming part of the round is, for the purposes of remedial action under regulation fifty-nine or sixty required to be fired singly, it may be fired by means of the shot firing apparatus used for firing the round.

Remedial action

59.—(1) In the event of a miss-fire in a round by broken continuity, the shot firer concerned shall ensure that either—

(*a*) the procedure described in paragraph (2) of this regulation is complied with ; or

(*b*) the stemming is removed with water, an additional primer inserted in the shot hole with proper stemming, and the round duly connected up, tested and fired, as provided in these regulations.

(2) The said procedure is as follows—

(*a*) the leads of the detonator of the miss-fire shall be attached by a string to the shot firing cable, or to some distinctive marker ;

(*b*) the other shots in the round (excluding, where delay detonators are being used, any shot having a higher period of delay) shall be duly connected up, tested and fired, as provided in these regulations ;

(*c*) if it has been dislodged, any shots having a higher period of delay shall be duly connected up, tested and fired ;

(*d*) if it has not been dislodged—

(i) if there were any shots having a higher period of delay, they shall be fired in turn, in ascending order of delay (in each delay period, the shot which is nearest to the miss-fire being fired first) ; and

(ii) in any other case, it shall be treated as a single-shot miss-fire.

60.—(1) In the event of a miss-fire in a round after firing—

(*a*) no person shall approach the shot hole unless the removable handle or key and the shot firing cable have been disconnected from the shot firing apparatus ; and

(*b*) the shot firer concerned shall at the expiry of the period specified in regulation thirty-seven make a personal examination as provided in that regulation, whether or not any shot in the round has exploded.

(2) If there were more than one miss-fire, the shot firer shall connect them in series and fire them as a round as provided in these regulations.

(3) If there was one miss-fire only, or if one or more miss-fires, fired as a round in pursuance of paragraph (2), fails or fail to explode, the shot firer shall fire it, or each of them, as the case may be, singly.

(4) Any miss-fire, fired singly as aforesaid and failing to explode, shall be treated as a single-shot miss-fire.

61.—(1) Whenever, in pursuance of this Part of these regulations, in relation to any round of shots, any shot in the round is fired while one or more shots already charged remain unexploded, the shot firer concerned shall, in the course of his examination made in pursuance of regulation thirty-seven, ascertain whether any such shot has been dislodged.

(2) The provisions of regulation sixty-four shall apply to the recovery and disposal of the detonator and charge of any shot so dislodged.

C. All miss-fires

62. No person shall attempt to remove any part of the charge from the shot hole of any shot which is to be treated as a miss-fire.

63. In the case of any shot which is to be treated as a miss-fire or any round of shots of which the circuit has been found not to be continuous, if the shot firer concerned leaves the working place before the shot or shots have been fired or the detonator and cartridges have been dislodged and the provisions of the next following regulation have been complied with he shall—

(*a*) cause notice of the circumstances to be given to the deputy in charge of the district ; and

(*b*) ensure that sufficient fences and danger notices are erected to warn any person approaching the place.

64. Whenever any miss-fire is dislodged by the firing of another shot there shall be made under the supervision of the shot firer or an official of the mine before any person resumes work and before any further shot is fired at or

near that place a search for the detonator (if any) and the charge thereof and if any detonator or cartridge is not found all mineral so dislodged shall be conveyed out of the mine separately from any other mineral and under the like supervision.

65. In the event of any miss-fire, the shot firer shall, before leaving the mine, report the circumstances thereof to the senior official on duty at the mine, and shall record the fact of the miss-fire in his daily record of shots.

PART X

Apparatus and explosives for killing horses

66.—(1) Nothing in Parts II to IX of these regulations except regulation eight shall apply to such apparatus or such cartridges of explosive as are approved by the Minister for use in mines for destroying horses.

(2) No person shall take or use below ground in any mine for any other purpose any such apparatus or cartridge.

67. The manager of every mine shall ensure that horse killing apparatus is—

(*a*) kept in the custody of a competent person appointed by him and used only by that person or under his close personal supervision ;

(*b*) cleaned and examined immediately after use on any occasion.

68.—(1) The manager of every mine shall ensure that cartridges for horse killing are issued from the explosives store only to a person appointed to have custody of horse killing apparatus and in a case or box with a lock provided by the owner of the mine.

(2) No person shall put any cartridge for horse killing into a receptacle containing any other kind of explosive or a detonator.

(3) Every person having a case or box of cartridges for horse killing shall keep it separate from any other receptacle containing explosive or detonators and shall keep it locked.

(4) No person shall remove any cartridge for horse killing from its case or box below ground until it is required for immediate use.

69.—(1) In any mine in any part of which the use of lamps or lights, other than permitted lights, is unlawful or in any part of a mine being a part in which safety-lamps are for the time being in use by way of temporary precaution, no person shall fire a shot with horse killing apparatus unless immediately before firing a competent person has made tests for the presence of inflammable gas throughout every accessible place within thirty feet of the place where the shot is to be fired and it has been found safe for the firing of that shot.

(2) Every such test shall be made with a locked flame safety-lamp of a type approved by the Minister for the purpose of deputies' inspections, a methanometer of a type approved by the Minister or other apparatus of a type approved by the Minister for the purpose.

(3) No person shall fire a shot with horse killing apparatus if on any such test made with respect to that shot there has been found a firedamp content exceeding one and a quarter per cent. or an indication of gas on the lowered flame of a safety-lamp has been seen at any place.

PART XI

General

Exemptions

70. The Chief Inspector of Mines if he is satisfied that the application of any provision of these regulations is inappropriate in relation to any mine or part thereof may by notice served on the manager of that mine exempt it or a part thereof from the application of that provision.

Interpretation

71.—(1) In these regulations, unless the context otherwise requires, the following expressions have the meanings hereby respectively assigned to them, that is to say—

" the Act " means the Mines and Quarries Act, 1954 ;

" cross measure drift " includes any drift driven otherwise than in coal or otherwise than for the purpose of getting coal therefrom ;

" deputy " and " deputy's district " have the meanings assigned thereto in the Coal and Other Mines (Managers and Officials) Regulations, 1956 ;

" detonator " includes safety fuse capped with a detonator ;

" explosive " does not include a detonator ;

" explosives store " has the meaning assigned thereto in regulation eight ;

" firedamp content " means the percentage of inflammable gas present in the general body of the air ;

" mine " has the meaning assigned thereto in regulation one ;

" miss-fire in a round ", " miss-fire in a round by broken continuity " and " miss-fire in a round after firing " have the meanings respectively assigned thereto in regulation fifty-eight ;

" permitted explosive " has the meaning assigned thereto in regulation two ;

" round ", in relation to shots, means (subject to the provisions of paragraph (1) of regulation fifty-four) a number of shots fired—

(*a*) electrically in series, either simultaneously or by means of delay detonators ; or

(*b*) by fuse, by means of apparatus approved for firing a number of shots by fuse simultaneously ; or

(*c*) where the number does not exceed four, by fuses lighted at the same time ;

" safety fuse " means fuse consisting of gun powder protected either by not less than three coverings of thread or by not less than two coverings of thread and one of tape or gutta-percha, being of such a quality that the rate of burning does not vary more than ten seconds above or below the rate of ninety seconds for each three feet of fuse ;

" scheme of transit " has the meaning assigned thereto in regulation fifteen ;

" sheathed explosive " means explosive covered by an external sheath of incombustible material spread evenly over the sides of the cartridge, and includes explosive in any type of cartridge certified by the Minister to be equivalent in safety to sheathed explosive ;

" shot firer " has the meaning assigned thereto in regulation three ;

" single-shot miss-fire " has the meaning assigned thereto in paragraph (2) of regulation fifty-four.

(2) In these regulations any reference to the use of explosive includes the charging of a shot hole therewith.

(3) Expressions to which meanings are assigned by the Act or by these regulations shall (unless the contrary intention appears) have the same meanings in any document issued under the provisions of these regulations.

(4) The Interpretation Act, 1889(a), shall apply to the interpretation of these regulations as it applies to the interpretation of an Act of Parliament.

(a) 52 & 53 Vict. c. 63.

EXPLANATORY NOTE

(This note is not part of the order, but is intended to indicate its general purport.)

This order is made under the Mines and Quarries Act, 1954, s. 190, which empowers the Minister of Fuel and Power to re-enact (to the extent to which they could be enacted in regulations made under the Act and subject to modifications of the kind specified in that section) the provisions of any order, having effect by virtue of the Coal Mines Act, 1911, s. 61, which will cease to have effect at the commencement of the 1954 Act.

The provisions set out as regulations in the schedule to this order apply to mines of coal, and relate to the storage, issue, conveyance and use of explosives and detonators, and to the appointment, qualifications, equipment and duties of shot firers, at such mines. In mines or parts of mines which are hazardous by reason of inflammable gas or combustible dust, only explosives of types approved by the Minister may be used, and there are additional provisions in Part VII with regard to shot firing in such places. Part VIII makes provision with regard to shot firing in shafts and staple-pits, and Part IX specifies the procedure for dealing with various kinds of miss-fires. Part X deals with apparatus and explosives for killing horses. These regulations comprise, and will at the commencement of the Act replace, provisions of the Coal Mines (Explosives) Order, 1951.

1956 No. 1942

The Coal Mines (Cardox and Hydrox) Regulations, 1956

Made - - - -	*6th December,* 1956
Laid before Parliament	*12th December,* 1956
Coming into Operation	*1st January,* 1957

The Minister of Fuel and Power in pursuance of the powers conferred upon him by sections one hundred and forty-one and sixty-nine of the Mines and Quarries Act, 1954(a), and of all other powers him enabling hereby orders that the following regulations shall have effect:—

PART I

Application

1. The provisions of these regulations shall apply to the maintenance, preparation for use and use of blasting materials and devices known as "cardox shells" and "hydrox shells" (hereinafter referred to collectively as "shells") and materials for the priming and filling thereof, at every mine of coal, and in these regulations "mine" means such a mine.

PART II

Preparation, maintenance, carriage and custody of shells and equipment

2.—(1) The manager of every mine shall ensure that no shell is filled or primed with an initiator on the surface at the mine except in a place appointed by him for the purpose.

(a) 2 & 3 Eliz. 2. c. 70.