

Serial Number 1948/48



THE QUARRIES REGULATIONS 1948

B. C. FREYBERG, Governor-General

ORDER IN COUNCIL

At the Government Buildings at Wellington, this 22nd day of
March, 1948

Present :

THE HON. W. E. PARRY PRESIDING IN COUNCIL

PURSUANT to the Quarries Act, 1944, His Excellency the Governor-General, acting by and with the advice and consent of the Executive Council, doth hereby make the following regulations.

REGULATIONS

PRELIMINARY

1. These regulations may be cited as the Quarries Regulations 1948.
2. These regulations shall come into force on the day following notification in the *Gazette* of the making thereof.
3. In these regulations, if not inconsistent with the context, words and expressions shall have the meanings assigned to them by the Quarries Act, 1944 (hereinafter referred to as the said Act).
4. The respective regulations referred to in the table subjoined to this regulation are revoked :—

Table

Date of Enactment.	Published in <i>Gazette</i> .	
	Year.	Page.
30th January, 1922	1922	237
9th March, 1923	1923	727
7th July, 1924	1924	1638
22nd October, 1924	1924	2600
	Statutory Regulations, Serial Number.	
6th August, 1941	1941/136	
16th August, 1944	1944/117	
5th March, 1947	1947/27	

SAFETY OF THE QUARRY

5. The working of the face, sides, and "tops," or overburden, of the quarry shall be carried on so as to prevent dangerous falls.

6. The overburden, or "tops", of the quarry, and all loose ground or material, shall be cleared far enough back from the edge of the quarry to prevent danger to the persons employed.

7. When it is necessary for safety that any quarry shall be worked in steps or "galleries", the breadth of every one of these shall be at least one-half its height, but in no case shall the breadth thereof be less than 12 ft. When the quarry is worked without steps or galleries sufficient support to the face and sides shall be left to ensure safety to all persons employed.

8. There shall be a clear space between the outside rails of tramways and the edges of galleries sufficient to prevent both the falling of stones from the wagons and the falling of the men themselves to galleries below. Where such a space is impracticable the edges shall be securely fenced.

9. The top of the quarry, if considered dangerous by the Inspector, and the top of every shaft shall be securely fenced to the satisfaction of the Inspector.

10. All bridges shall be provided with secure hand-and-guard rails and a planked footway, and if used for the passage of trucks shall be of such width as will provide a clear space of 3 ft. between the handrails and the sides of the trucks.

11. If work is carried on at night, it shall be under the personal and constant supervision of a competent foreman appointed by the manager, and adequate light shall be provided.

ACCESS TO THE QUARRY

12. Secure means of access shall be provided by which workmen can go to and from their working-places.

13. No ladder permanently used for the ascent and descent of persons in the quarry shall be fixed in a vertical or overhanging position, but such ladder shall be inclined at the most convenient angle; and every such ladder shall have substantial platforms at intervals of not more than 10 yards. Ladders shall project at least 2 ft. above any platform or landing-place. The rungs of any ladder shall not be less than 4 in. away from the rock-face or other surface against which it may be fixed.

14. (1) In every tunnel in which explosives are used or in which the space between any truck and the side of the tunnel is less than 3 ft. manholes for places of refuge shall be provided at intervals not exceeding 20 yards on one side of the tunnel. Every such manhole shall be—

- (a) Not less than 4 ft. in depth and not less than 3 ft. in width :
- (b) Not less than 6 ft. in height or the height of the tunnel at the point where the manhole is, whichever is the less.

Every such manhole shall be constantly kept clear, and no person shall place anything in a manhole which would be likely to prevent access thereto.

(2) All tunnels used as a regular means of access to working-places shall be sufficiently drained.

15. (1) Except with the prior written permission of the Inspector and subject to any conditions which he thinks fit to impose, no machinery shall be used to raise or lower persons in any shaft.

(2) No timber, tools, rails, sprags, or other material, except for repairing the shaft, shall be placed in the same cage in which men are being lowered or raised.

(3) In any shaft exceeding 20 ft. in depth, in which cages are not used, no person shall descend or ascend by the aid of machinery unless (in addition to the use of the loop, cross-bar, or other appliance) he is securely stayed to the rope employed for lowering or raising in such shaft by a strap or other fastening passing round the body under the arms, and such method of staying shall be used by every person who finds it necessary, in the execution of his duty, to descend or ascend a shaft on top of the cage-covers.

16. The top and all entrances between the top and bottom of every working or pumping shaft shall be properly and securely fenced or securely covered, but this provision shall not be deemed to forbid the temporary removal of any fence or cover for the purpose of repairs or other operations provided proper precautions are taken.

17. Every abandoned or disused shaft shall be fenced or securely covered in, and its position indicated on the surface by a post or cairn of stones, or such other permanent distinguishing-mark as an Inspector thinks sufficient.

18. Where a fence or cover has been temporarily removed from any entrance to a shaft to admit of the performance of ordinary quarrying operations, a strong horizontal bar shall be securely fixed across such entrance, not less than 3 ft. nor more than 4 ft. from the floor of the brace, chamber or drive, as the case may be.

19. Where, in the opinion of the Inspector, the natural strata are not safe, every working or pumping shaft shall be securely cased, lined, or otherwise made secure; for which purpose an ample supply of sound, good timber shall be kept on the ground ready for immediate use.

20. Every drive and every excavation of any kind in connection with the working of a quarry shall be securely protected and made safe for the persons employed therein.

21. Where one portion of the shaft is used for the ascent and descent of persons by ladders, and another portion of the same shaft is used for raising material, the first-mentioned portion shall be securely fenced off separate from the last-mentioned portion by a substantial close-timbered division.

22. (1) Every windlass used for shaft sinking or raising debris or material through shafts exceeding 15 ft. in depth shall be equipped with an efficient type of ratchet and pawl, and a suitable hand-brake of sufficient power to lower the sinking bucket or timber down the shaft independently of the windlass handle.

(2) Every ladderway in a shaft exceeding 20 ft. in depth shall be provided with a hinged door fitted at the shaft brace. The door shall be kept closed at all times while men are working in the shaft.

23. Every person employed in a quarry shall make himself acquainted with the system of signals used in such quarry, and a line or some other appliance shall be provided in each shaft to admit of danger-signals being communicated to the engine-driver from any portion of such shaft.

24. A clear view shall be kept for the engine-driver between his station and the shaft at the surface brace.

25. Every brace shall be properly covered to protect the workmen from the inclemency of the weather.

26. In every shaft in which a whim, whip, or windlass is used a proper ladder or footway shall be provided for the use of persons employed therein.

27. Before any winding-rope is used for raising or lowering persons in a quarry a full and accurate description of the rope shall be supplied to the Inspector, and his authority in writing to use the rope for the said purpose shall be obtained.

28. There shall be attached to every machine worked by steam, water, electrical, or mechanical power, and used for lowering or raising persons, an adequate brake, which shall be maintained to the satisfaction of the Inspector at all times while the machine is in use.

29. All machinery in which steam, water, electricity, or air, or any combination of them, is used as motive power shall be subject to the provisions of the Inspection of Machinery Act, 1928, so far as the same reasonably apply; and no such machinery shall be employed until it has been examined by an Inspector appointed under that Act, and certified by him to be in a proper and fit working-condition.

30. All boilers, compressors, engines, gearing, and all other parts of machinery, when used for any quarrying purpose, shall be kept in a safe state and condition.

31. Every fly-wheel, and all exposed or dangerous parts of the machinery, and every tramway constructed on an elevated platform other than a tramway worked by ropes, shall be kept securely and safely fenced.

BLASTING

32. The charging, tamping, and firing of all drilled holes shall be done by the manager or by a competent person appointed in writing by him. The person firing a charge shall, before doing so, see that all persons in the vicinity have taken proper shelter, and he shall also take suitable steps to prevent any person approaching the shot. He shall also himself take proper shelter.

33. Where charges are to be fired electrically, the manager or such person appointed by him, before coupling up the cable to the firing-apparatus, shall himself couple up the cable to the detonating wires. Prior to commencing such coupling he shall see that all persons in the vicinity have taken proper shelter.

34. Every electrical firing-apparatus shall be provided with a removable handle. No person shall place such handle in position until a charge is required to be fired, and the person firing the shot shall remove the handle as soon as the charge has been fired. The removable handle shall at all times remain in the personal custody of the manager or the competent person appointed by him for the purpose, whichever is preparing and firing the charge or charges.

35. Tamping shall be of clay or other suitable material to the approval of the Inspector.

36. (1) In any tunnel or drive where the number of holes to be fired exceeds six electrical firing-apparatus shall be used. If the number of holes to be fired does not exceed six, they may be spitted.

(2) Where a shot-hole is being bulled the fuse shall be not less in length than the depth of the shot-hole, and in any other case where a fuse is used for firing a shot the fuse shall be not less than 2 ft. 6 in. in length.

37. In any tunnel or drive, as soon as possible after shot-firing, all places where shots have been fired shall be hosed with water, and a thorough search shall be made for any unexploded portion of a charge.

38. (1) Where blasting is carried on in any tunnel more than 100 ft. in length the occupier shall provide or install a spray plant capable of producing liquid spray under a pressure of not less than 20 lb. to the square inch for the purpose of quelling the dust, smoke, and fumes caused by the blast :

Provided that such equipment shall not be required in any case where the Inspector is of the opinion that its installation is not reasonably practicable.

(2) The manager shall cause such liquid spray to be played continuously in the tunnel at the place affected during all blasting operations and for such period after each of them as may be necessary to abate the resultant impurities in the atmosphere.

(3) The manager shall not cause or permit any workman to return to the scene of the blast until the air is reasonably free from dust, smoke, and fumes.

39. If a charge misses fire—

(a) A second charge shall not be placed in the same hole :

(b) If the charge was fired electrically, the person firing the charge shall, before approaching the hole, disconnect the cable and the removable handle from the firing-apparatus, and shall examine the cable and connections for any defect :

(c) Except where the missfire is due to a faulty cable connection, and the charge is fired within one hour and a half after the defect is remedied, another charge shall be fired in a fresh hole, which shall be drilled not less than 2 ft. away from the hole in which the charge has missfired and in such manner as will prevent it from meeting the hole in which the shot has missfired. If, however, the hole was bulled, the distance of the fresh hole shall be not less than 3 ft. from the hole in which the shot has missfired :

(d) If the missfired charge contained a detonator, the person firing the second charge shall, before doing so, attach a string to the electric lead or the fuse of the missfired charge, and secure it by attaching it to the cable or otherwise :

(e) After the second charge has been fired, no person shall work in proximity thereto until the person firing the charge or an official of the quarry has made a careful search for the detonator and charge of the missfired charge. If these are not found the stone shall be loaded in a specially marked truck under the supervision of the person firing the charge, or an official. The search for the detonator and charge, and the loading of any stone which may contain a detonator, shall be carried out as far as possible without the use of tools :

(f) Should the missfired charge not be dislodged by the second charge, further holes must be drilled and the same precautions taken as aforesaid.

40. No drill shall be used for the boring of a hole for a charge unless it allows at least a clearance of $\frac{1}{8}$ in. over the diameter of the cartridge which is intended to be used in the hole, and no person shall attempt to charge a hole unless such clearance exists.

41. No explosive shall be forcibly pressed into a hole; and when a hole has been charged the explosive shall not be unrammed, nor shall any part of the stemming be removed, nor shall the detonator leads be pulled out.

42. The fuse known as instantaneous fuse shall not be used at or in any quarry.

43. After a hole has been bulled, all loose material shall be removed therefrom, and no charge shall be placed therein within two hours unless the hole has been swabbed with water before the second charge is inserted.

44. Explosives other than blasting-powder shall not be dropped into holes exceeding 6 ft. in depth, but shall be lowered therein by some suitable device.

TUNNEL BLASTS

45. (1) In every case where it is intended to use more than 100 lb. of explosive in one blast in any tunnel or chamber, the manager or foreman shall cause a detailed theodolite survey of such tunnel or chamber to be made by a registered surveyor, and a plan thereof based on such survey (drawn to a scale of not less than 1 chain to 1 in.), together with particulars of the kind, quantity, and position of the explosive charge or charges intended to be used, the proposed method of detonation of such charge, the proposed method of testing the electrical circuit, and the provisions made for the safety of workmen during the testing of such circuit and during the firing of the charge, shall be delivered to the Inspector at least fourteen days before such drive or chamber is intended to be charged.

(2) No tunnel or chamber shall be charged as aforesaid unless and until—

(a) The plan and particulars delivered to the Inspector pursuant to clause (1) of this regulation have been approved by him in writing; and

(b) Such tunnel or chamber has been inspected and approved in writing by the Inspector or by some person appointed in writing by him for that purpose, and who holds a general authority from the Minister of Mines pursuant to clause (3) of this regulation.

(3) (a) For the purposes of paragraph (b) of the last preceding clause the Minister, upon the recommendation of an Inspector, may, by writing under his hand, grant general authority to persons who, in the opinion of such Inspector, are experienced in the use of explosives in blasting and the working of quarries to inspect and approve tunnels and chambers wherein it is intended to use more than 100 lb. of explosive.

(b) The Minister may, at his discretion, revoke any authority granted by him pursuant to the last preceding subclause.

(4) Neither the manager, foreman, or other person for the time being in charge of any quarry nor any person whatsoever shall charge or permit to be charged any tunnel or chamber with more than 100 lb.

of explosive otherwise than in strict accordance with the terms of the written approvals granted pursuant to paragraph (a) and paragraph (b) of clause (2) of this regulation respectively.

(5) The occupier of every quarry shall keep at the quarry a plan of the quarry (drawn to a scale of not less than 2 chains to 1 in.) showing the position, as determined by a detailed theodolite survey, of every tunnel or chamber wherein a charge of more than 100 lb. of explosive has been fired together with a record of the quantity and kind of explosive used and the date of firing the charge. Every such plan and record shall be produced to an Inspector on request.

MACHINERY AND PLANT

46. No person shall remain under the rope or chain of an aerial incline whilst a wagon or load is ascending. Whilst a load is being moved on the landing-table no person shall remain immediately beneath it; and no person shall be allowed, without special permission from the manager or other official, to ascend or descend by means of an aerial incline.

47. A competent person appointed for the purpose shall daily inspect the external parts of the plant, machinery, and appliances installed in or about a quarry, and shall forthwith make or cause to be made a true report (signed by himself) of the condition thereof, in a book to be kept at the quarry for such purpose.

48. The rails on the tops of all inclines and on all landing-tables shall be provided with proper stops or other appliances for preventing the wagons from running away, except when the rope or chain is not detached from the wagon.

49. Every crane shall be provided with an efficient catch or an efficient brake.

50. Machinery other than that used in connection with stone-crushing shall not be oiled while in motion.

51. The machinery, appliances, and permanent-ways shall be kept in an efficient state of repair.

52. Only wire ropes shall be used for haulage purposes on self-acting inclines, except on the advancing top section of jigs, where chains may be used.

53. All underground haulage inclines and self-acting inclines exceeding 100 ft. in length shall be fitted with bells or other adequate signalling appliances.

54. On every inclined haulage road where mechanical haulage other than endless rope or chain is used provision shall be made, to the satisfaction of the Inspector, to arrest the runaway trucks before reaching the bottom of the incline, and where direct haulage is in use a backstay or trailer shall be attached to each ascending truck or set of trucks if required by the Inspector.

55. No person shall ride upon any truck without permission of the manager.

56. No motor-vehicle used in any quarry shall be operated in such a mechanical or structural condition, or be so loaded, as to cause or be liable to cause injury or annoyance to any person or damage to any property.

57. (1) No internal-combustion engine shall be used in or taken for the purpose of use into any tunnel.

(2) (a) Notwithstanding the provisions of clause (1) of this regulation, a compression-ignition internal-combustion engine may be used in a tunnel, provided—

(i) The tunnel is open from end to end and is ventilated by a mechanical appliance producing ventilation sufficient in quantity and velocity to dilute and render harmless exhaust gases from the engine; and

(ii) The prior written consent of an Inspector has been obtained, which written consent may be given subject to any conditions regarding the use of the engine which the Inspector thinks fit to impose, and shall include a statement that the ventilation of the tunnel complies to his satisfaction with the requirements of the last preceding paragraph of this subclause.

(b) Should such mechanical ventilation fail when such an engine is in use, or should the engine develop any defect liable to affect the complete combustion of the fuel oil, the engine shall be stopped immediately.

(3) The exhaust and fumes from any internal-combustion engine installed in any building or enclosed space used in connection with a quarry or installed in any other place so used where in the opinion of the Inspector such fumes will not be naturally dissipated, shall, to the satisfaction of the Inspector, be conducted by an airtight pipe to such distance away as will prevent contamination of the air in any place where workmen are required to work or to travel in the course of their work.

AMBULANCE AND WATER-SUPPLY

58. (1) At every quarry there shall be provided and kept in good condition and ready for immediate use at a convenient spot a box containing a sufficient supply of suitable splints and bandages, adhesive plaster, boric, vaseline, cotton-wool, and tincture of iodine or other suitable antiseptic solution.

(2) At every quarry where more than five persons are employed there shall be provided a suitably constructed stretcher kept in good condition and ready for immediate use at a convenient spot.

(3) The manager shall personally inspect the appliances so provided at least once in every month and shall satisfy himself that they are in conformity with the above requirements.

59. A sufficient supply of fresh drinking-water shall be provided at every quarry for the free use of all persons employed.

DUTIES OF INSPECTOR

60. (a) It shall be the duty of the Inspector generally to see that the provisions of the said Act and of these regulations are complied with, and from time to time to visit and inspect quarries and all machinery used in or about such quarries other than steam-engines and boilers.

(b) In the performance of his duties and functions under the said Act the Inspector, or any person appointed by the Inspector in writing shall at all convenient times have full and free access to any such quarry or machinery, or to any tramways used in connection with any such quarry, and may use all convenient means and appliances

belonging thereto or connected therewith; and it shall be the duty of the occupier of such quarry, machinery, or tramway, and all persons in any way employed in or about the same, to afford such assistance as is reasonably required for facilitating such inspection.

(c) Every person commits an offence who refuses to permit the use of such means and appliances, or to render such assistance, or who obstructs the Inspector or the person so appointed by him as aforesaid in making any such visit or inspection.

DUTIES OF OFFICIALS AND WORKMEN OF THE QUARRY

61. The manager shall see that the provisions of the said Act and of these regulations are carried out.

62. The manager shall daily, and within two hours immediately before the time for commencing work in any part of the quarry, inspect every working-place and travelling-road, and all adjacent places from which danger might arise, and shall forthwith make a true report of his inspection in a book kept for the purpose at the quarry, which book shall be accessible to the Inspector and the workmen employed. Should danger be apprehended, he shall at once take the steps required to remove the source of it. He shall also satisfy himself as to the safety of any rope and other appliances used by the workmen.

63. The manager shall once at least in every twenty-four hours examine the state of all safety appliances or gear connected with the working of the quarrying operations; and he shall once in each week carefully examine the buildings, machinery, shafts, levels, planes, and all places used in the working of such quarrying operations; and every such manager forthwith after every such examination shall record in writing, in a book to be kept for that purpose, his opinion as to their condition and safety, and as to any alterations or repairs required to ensure greater safety to the persons employed in the working of such quarry.

64. The manager shall cause to be provided proper sanitary arrangements for the use of the workmen of the quarry to the satisfaction at all times of the Inspector.

65. All workmen shall comply with the provisions of the said Act and of these regulations, and with such directions concerning safety and discipline as may be given to them by the officials of the quarry.

66. Every workman working on the face of the quarry at a greater height than 6 ft. above the level of the quarry-floor shall be at all times attached to a properly secured safety-rope by means of a safety-belt or other appliance approved by the Inspector, and every workman shall, before commencing work on the face of the quarry as aforesaid, satisfy himself as to the safety of the rope and safety-belt or other appliance and shall not use anything that he finds unsafe.

67. Each workman shall, before commencing work, and during the course of it, and especially after blasting, make a careful examination of his working-place, and remove any loose rocks, stones, or earth which might be dangerous.

68. No workman shall throw down rock, stones, earth, or other material which might endanger other persons, without giving them warning and seeing that they have retired to a safe place.

69. Every workman who notices anything that appears unsafe or likely to produce danger shall forthwith report it to the occupier, manager, or person in charge.

70. Every person, howsoever employed in or about the quarry shall be subject to the provisions of the said Act and to these regulations and shall obey the commands or instructions of the manager.

71. No person shall use threatening or abusive language towards the manager, nor shall the manager or any other person use threatening or abusive language towards any person employed at or about the quarry.

72. No person shall enter or remain in or about the quarry or works while in a state of intoxication. No person shall take intoxicating liquor into a quarry except in case of illness or accident, and then only with the consent of the manager.

73. A copy of these regulations and of the general rules under Section 16 of the said Act shall at all times be posted in a conspicuous place in every quarry, and it shall be the duty of the manager to see that such copies are at all times so posted and kept in a clearly legible condition.

PREVENTION OF DUST, AND VENTILATION

74. (1) When rock is crushed in a dry state there shall, if required by the Inspector, be provided an adequate jet or spray of water, or a suction fan, which in the opinion of the Inspector will effectually keep the air pure and prevent the circulation of dust.

(2) In quarries, crushing-plants, and screening-plants where conditions are so dusty as to be, in the opinion of the Inspector, injurious to the health of workmen, and where it is impracticable to remove or lay the dust by suction fan or liquid spray, each workman shall, if so required by the Inspector, be provided with a respirator of a type approved by the Inspector. Such respirator shall be constantly used by the workman while working in the dusty atmosphere.

75. No power-operated rock-drills, other than axial water-feed rock-drills, shall be used in any tunnel or quarry unless a certificate under the hand of the Inspector is in force to the effect that there is sufficient water in the ground to prevent the formation of dust or that the dust is innocuous :

Provided that where the Inspector considers it impracticable to provide water for drilling purposes he may issue a certificate permitting the use of an auxiliary apparatus of a type approved by the Inspector for the effective prevention of the escape of rock dust into the air.

76. (1) There shall be constantly maintained in every working-face of a tunnel or drive exceeding 100 ft. in length adequate ventilation to the extent of not less than 150 cubic feet of pure air per minute for every person and 600 cubic feet of pure air per minute for every horse working therein.

(2) Appliances to ensure mechanical ventilation shall be installed at any quarry whenever deemed necessary by the Inspector.

RAILWAY SIDINGS

77. No person shall pass immediately in front of or between wagons which are being loaded except the person in charge of the wagons.

78. Where, during the period between one hour after sunset and one hour before sunrise, or during foggy weather, shunting or any operations likely to cause danger to persons employed in or about railway sidings are frequently carried on, efficient lighting shall be provided either by hand-lamps or stationary lights, as the case may require, at all points where necessary for the safety of such persons.

79. No materials of any kind shall be placed near a line of rails in such a manner as to expose persons employed to risk or injury from traffic by having to pass on foot over the same or between the same and the line, and in no case, unless with the special permission of the Inspector, shall materials be placed within 5 ft. 6 in. from the centre-line of the nearest line of rails.

80. No person shall cross a line of rails by climbing over or passing underneath a train or wagons thereon where there may be risk of danger from traffic.

81. Wherever railway wagons are specially placed so as to afford a thoroughfare, such thoroughfare shall be at least 5 yards in width.

82. Where a locomotive is engaged in pushing more than one wagon and risk of injury may thereby be caused to persons employed in or about the quarry a man shall, wherever it is safe and reasonably practicable so to do, accompany or precede the front wagon, or other efficient means shall be taken to obviate such risk.

83. No person shall place himself upon the buffer of a locomotive or wagon in motion unless there is a secure handhold on the same, nor stand thereon unless there is also a secure footplace thereon.

84. No locomotive or wagon shall be moved on a line of rails until warning has been given by the person in charge thereof to persons employed in or about the quarry whose safety is likely to be endangered thereby.

85. Where persons employed have to pass on foot or work in or about a quarry no locomotive or wagon shall be moved on a line of rails therein during the period between one hour after sunset and one hour before sunrise or during foggy weather unless the approaching end is distinguished by a suitable light or, where it is safe and reasonably practicable, the locomotive or wagon is accompanied by a man with a lamp.

86. All spaces between the rails of turnouts and crossings in which the boot of a workman passing over the same is liable to be caught shall be kept filled with concrete, tar, asphalt, or wooden blocks.

87. No structure or part of a structure up to a height of 7 ft. 6 in. above the rail level shall be erected or allowed to remain within a distance of 5 ft. 6 in. from the centre-line of the nearest line of rails unless with the special permission of the Inspector.

QUARRY-MANAGER'S CERTIFICATE BY EXAMINATION

88. (1) Every application to be examined for a quarry-manager's certificate shall be made in writing under the hand of the applicant to the Inspector for the district in the form numbered 1 in the Schedule hereto, and shall be accompanied by a fee of £1 and by evidence in writing as to the applicant's experience in quarrying, tunnelling, or mining, and his general conduct and sobriety at date.

(2) Every candidate for examination shall specify in his application, with sufficient particularity for identification and reference, the respective quarries, tunnels, or mines in which he has been employed and the period and nature of his employment in each.

(3) Examinations shall be of an oral nature and shall be held at such times and places as shall be appointed by the Inspector.

(4) Certificates by examination may be of two classes—

- (a) Surface quarrying ;
- (b) Underground quarrying,—

and shall be in the form numbered 2 in the Schedule hereto.

(5) Candidates in order to qualify for a certificate shall obtain a minimum of 50 per cent. of the marks allotted in each subject of the examination.

(6) The subjects of examination for a surface-quarry manager's certificate shall be as follows :—

- (a) *Quarrying* : The methods of working quarry faces ; precautions to be taken to prevent accidents from falls of rock ; the provision of means of access and egress ; the precautions to be observed to prevent workmen falling from their working-places ; the duties of a manager with regard to the working of quarry faces and the employment of workmen therein.
- (b) *Explosives* : The composition and action of all ordinarily used explosives ; the causes of deterioration in explosives ; the means of detecting deterioration in explosives ; the storage and handling of explosives in magazine or quarry.
- (c) *Blasting* : The charging of holes and firing of blasts ; use of electrical firing apparatus ; methods of detecting defects in such apparatus ; the causes of missfires ; the duties of a quarry-manager with regard to the carrying-out of blasting operations.
- (d) *Machinery* : A knowledge of the requirements of the Act and regulations as to the inspection of machinery used in connection with quarrying operations, and the care of such machinery, ropes, chains, &c. ; methods of haulage.
- (e) *General* : Conditions under which ambulance supplies have to be provided, and the nature of such supplies ; conditions under which axial water-feed drills must be used ; a knowledge of the Quarries Act and regulations.

(7) The subjects of examination for an underground quarry-manager's certificate shall comprise the subjects explosives, blasting, machinery, and general as specified in subclause (6), and also the following subjects :—

- (i) Working stone and timbering underground ;
- (ii) Ventilation of underground quarry workings ;
- (iii) Gases likely to be found in underground quarries ; their properties and effects on the human body.

(8) The Inspector for each district shall keep a record of all applications received and certificates issued by him, and shall, if required, forward a copy of such record to the Minister.

DUPLICATE CERTIFICATES

89. An applicant for a duplicate quarry-manager's certificate shall, in his application, state the nature (underground or surface) and, if possible, the number and date of the certificate a duplicate of which he desires to obtain, and shall forward with such application :—

- (i) A fee of 5s. ; and
- (ii) A statutory declaration that he is the person named in the lost or destroyed certificate. The declaration shall also state the circumstances under which such certificate was lost or destroyed and the date of such loss or destruction.

ANNUAL RETURN

90. The annual return required to be furnished by the occupier or manager of a quarry pursuant to section 23 of the said Act shall be in the form numbered 3 in the Schedule hereto.

DUTY GENERALLY

91. (1) Whenever these regulations require that any equipment shall be provided, or that any act, matter, or thing shall be done or shall not be done in or about a quarry, it shall be the duty of the occupier and the manager to provide such equipment or to do or cause to be done or to refrain from doing and as far as possible to prevent any other person from doing such act, matter, or thing, as the case may be.

(2) Whenever in these regulations an obligation is expressly or by implication cast upon any workman or any other person to do or refrain from doing any act, matter, or thing in or about a quarry it shall be the duty of such workman or other person to do or refrain from doing such act, matter, or thing, as the case may require.

PENALTIES

92. (1) Every person shall be deemed to commit a breach of these regulations and shall be guilty of an offence who—

- (a) Does or commits or attempts to do or commit any act, matter, or thing contrary to any of the provisions hereof ;
- (b) Fails or omits to do or to provide anything required to be done or to be provided by him by these regulations :
- (c) Fails to comply with any direction of the Inspector properly given hereunder.

(2) Every person guilty of an offence against these regulations for which no penalty is provided elsewhere than in this regulation shall be liable on summary conviction in respect of a first offence to a fine not exceeding £20, and in respect of any second or subsequent offence, whether of the same nature or not, to a fine not exceeding £50, and (if the offence is a continuing one) to a further fine not exceeding £5 for every day during which such offence continues.

SCHEDULE

[Form 1 (Reg. 88)

Under the Quarries Act, 1944

APPLICATION TO BE EXAMINED FOR A QUARRY-MANAGER'S CERTIFICATE

To the Inspector of Quarries.

I, the undersigned [*Full name, residence, and occupation*], hereby apply to be examined for a surface (underground)* quarry-manager's certificate, and hereby declare that I have had the experience specified in the Schedule hereto, in proof whereof I forward with this application evidence in writing from my previous employers.

Dated at, this day of, 19..

SCHEDULE

Particulars of Employment, and Nature of Evidence in Proof thereof

Name and Locality of Quarry or Mine.	Name of Employer.	Period of Employment.		Nature of Employment.	Signature of Employer or Manager.
		From	To		

* Delete whichever is not applicable.

Signature of applicant :

[Form 2 (Reg. 88)

Quarries Act, 1944
 QUARRY-MANAGER'S
 CERTIFICATE

Date :
Name :
Address :

.
 Inspector of Quarries.

New Zealand
Quarries Act, 1944

QUARRY-MANAGER'S CERTIFICATE

THIS is to certify that has passed an oral examination, and has produced satisfactory evidence of his experience in quarrying [and mining] and the use of explosives in blasting, and is entitled to the issue to him of this certificate to act as quarry-manager in a surface quarry (an underground quarry).

.
 Inspector of Quarries.

