

INDEPENDENT STATE OF PAPUA NEW GUINEA.

CHAPTER NO. 175.

Industrial Safety, Health and Welfare.

GENERAL ANNOTATION.

ADMINISTRATION.

The administration of this Chapter was vested in the Minister for Labour and Employment at the date of its preparation for inclusion.

The present administration may be ascertained by reference to the most recent Determinations of Titles and Responsibilities of Ministers made under Section 148(1) of the Constitution.

References in or in relation to this Chapter to—

“the Departmental Head”—should be read as reference to the Secretary for Labour and Industry;

“the Department”—should be read as reference to the Department of Labour and Industry.

TABLE OF CONTENTS.

	<i>Page.</i>
<i>Industrial Safety, Health and Welfare Act</i>	3
<i>Industrial Safety, Health and Welfare Regulation</i>	23
Orders—	
Industrial Safety (Building Works) Order	49
Industrial Safety (Chemical Treatment of Timber) Order	73
Industrial Safety (Excavation Works, Shafts and Tunnels) Order	81
Industrial Safety (Explosive-powered Tools) Order	103
Industrial Safety (Lifts) Order	111
Industrial Safety (Monocrotophos) Order	117
Industrial Safety (Tractors and Earthmoving and Mobile Construction Equipment) Order	123
Subsidiary Legislation ¹	127

¹Subsidiary legislation has not been up-dated.

2

1

2

INDEPENDENT STATE OF PAPUA NEW GUINEA.

CHAPTER NO. 175.

Industrial Safety, Health and Welfare Act.

ARRANGEMENT OF SECTIONS.

PART I.—PRELIMINARY.

1. Interpretation—
 - "certificate of registration"
 - "dangerous substance"
 - "employee"
 - "employer"
 - "factory"
 - "Industrial Safety Officer"
 - "manufacturing process"
 - "medical officer"
 - "permit"
 - "place of employment"
 - "premises of employment"
 - "registration"
 - "the regulations"
 - "this Act".

2. Application.

3. Factories.

PART II.—ADMINISTRATION.

4. Administration of Act.
5. Industrial Safety Officers.
6. Medical officers.
7. Delegation.
8. Exemptions.
9. Reports.

PART III.—INSPECTION AND GENERAL

10. Power of inspection.
11. Orders and directions.
12. Prohibition of use of certain machines or appliances.
13. Appeals.
14. Report of offences against other legislation.

PART IV.—REGISTRATION OF FACTORIES.

15. Requirement of registration.
16. Application for registration.
17. Registration, etc.
18. Certificates of registration and permits to occupy.
19. Period of registration.
20. Reasons for failure to register, etc.

21. Vacation of premises.
22. Alteration of business, premises, etc.
23. Cancellation of registration.
24. Failure to pay fees.
25. Applications in respect of more than one factory.
26. Approval for erection, etc.
27. Notification of defects.
28. Authority to occupy temporary premises.

PART V.—CONDITIONS OF WORK.

Division 1.—General Provisions.

29. Cleanliness, space and ventilation.
30. Meals.
31. Sanitary and ablution facilities.
32. Means of access.
33. First-aid facilities and personnel.
34. Notification of disease or injury.

Division 2.—Particular Provisions.

35. Dangerous work.
36. Installation, operation and maintenance of boilers, etc.
37. Clothing, etc., of employees working with machinery.
38. Ventilation, etc., in certain kinds of work.
39. Protection from dust, fluff, fumes, etc.
40. Work in confined spaces.
41. Particular safety responsibilities of employees.

Division 3.—Industrial Safety Orders.

42. Declaration of dangerous trades, occupations and processes.
43. Orders.
44. Application of declarations of dangerous trades and industrial safety orders.

PART VI.—MISCELLANEOUS.

45. Obstruction, etc.
46. Unlawful use of buildings, etc.
47. Institution of proceedings, etc.
48. Relation of this Act to other laws.
49. Application of standard codes.
50. Regulations.

INDEPENDENT STATE OF PAPUA NEW GUINEA.

CHAPTER NO. 175.

Industrial Safety, Health and Welfare Act.

Being an Act relating to industrial safety, health and welfare, and for related purposes.

PART I.—PRELIMINARY.

1. Interpretation.

(1) In this Act, unless the contrary intention appears—

"certificate of registration" means a certificate of registration issued under Section 18;

"dangerous substance" means a substance of an explosive, inflammable, combustible, corrosive, poisonous, infectious, irritating, toxic, obnoxious or otherwise dangerous nature;

"employee" means a person who has entered into or works under a contract of service or apprenticeship;

"employer" means a person, firm or association employing one or more employees;

"factory" means a building or place—

(a) in which employees are engaged directly or indirectly—

(i) in a manufacturing process; or

(ii) in the generation of power (other than for private domestic purposes of the owner); or

(b) that is declared under Section 3 to be a factory for the purposes of this Act;

"Industrial Safety Officer" means an Industrial Safety Officer appointed under Section 5;

"manufacturing process" means a handicraft or process in or incidental to the making, assembling, altering, repairing, renovating, preparing, ornamenting, finishing, cleaning, washing or adapting of goods or articles or parts of goods or articles—

(a) for trade, sale or gain; or

(b) as an ancillary to a business,

other than the processing of copra, rubber, coffee, cocoa, or other agricultural produce by a means that does not involve the use of electricity or of machinery worked by electrical, steam or other mechanical power;

"medical officer" means a medical officer appointed under Section 6;

"permit" means a permit under Section 17(b);

"place of employment" means premises of employment or any other place at which an employee is employed, other than an aircraft, vessel or private residence, except when it is under repair, construction, alteration or demolition;

"premises of employment" means a building, shed or other roofed or partly roofed structure in which an employee is regularly employed;

"registration" means registration as a factory under Section 17;

"the regulations" means any regulations made under this Act;

"this Act" includes the regulations.

(2) In this Act, a reference to a Standards Association of Australia Code shall be read as a reference to a Standard Code published by the Standards Association of Australia, as more particularly described from time to time by the Minister by notice in the National Gazette.

2. Application.

(1) This Act applies to and in relation to the State, and an authority established by or under law.

(2) This Act does not apply to or in relation to a mine, matter or thing to which the provisions of Part XV. of the *Mining Act, 1937* of the former Territory of Papua (Adopted) or the *Mines and Works Regulation Act 1935* of the former Territory of New Guinea (Adopted) apply.

(3) Except where otherwise specifically stated, this Act does not derogate any power granted under, or relieve a person from any liability or duty under, any other law.

3. Factories.

(1) The Minister may, by notice in the National Gazette, declare a building or place to be a factory for the purposes of this Act.

(2) Where the Minister, by special order, so directs, parts of a factory in which different branches or departments of work are carried on shall be deemed to be different factories for all or any of the purposes of this Act specified in the order.

(3) A part of a factory may, on the written application of the occupier and with the written approval of the Departmental Head, be taken for the purposes of this Act to be a separate factory.

(4) Where a place situated within the close, curtilage or precincts of a factory is solely used for some purpose other than a manufacturing process carried on in the factory, that place—

(a) shall be deemed not to form part of the factory for the purposes of this Act; and

(b) shall, if it would otherwise be a factory, be deemed to be a separate factory.

PART II.—ADMINISTRATION.

4. Administration of Act.

(1) The Departmental Head is, subject to any directions of the Minister, charged with the administration of this Act.

(2) The Departmental Head has and may exercise all the powers and functions of an Industrial Safety Officer under this Act.

5. Industrial Safety Officers.

(1) The Minister may, by notice in the National Gazette, appoint officers to be Industrial Safety Officers.

(2) On appointment, an Industrial Safety Officer shall be issued with a certificate of appointment in the prescribed form.

(3) An Industrial Safety Officer has such powers, functions, duties and responsibilities as are conferred or imposed on him by this Act.

6. Medical officers.

The Director of Public Health may, by notice in the National Gazette, appoint medical practitioners to be medical officers for the purposes of this Act.

7. Delegation.

The Departmental Head may, by writing under his hand, delegate to an Industrial Safety Officer all or any of his powers and functions under this Act (except this power of delegation).

8. Exemptions.

The Departmental Head may, by written notice, exempt an employer or a place of employment from all or any of the provisions of this Act, subject to such conditions and for such period as he thinks fit.

9. Reports.

The Departmental Head shall present to the Minister, at least once in every year, for presentation to the Parliament, a report—

- (a) reviewing the operation of this Act; and
- (b) drawing attention to any measures that are, in his opinion, desirable for achieving the purposes of this Act.

PART III.—INSPECTION AND GENERAL.

10. Power of inspection¹.

(1) An Industrial Safety Officer may, at all reasonable times and with or without notice to any person, enter any premises or place at which he has reasonable grounds for suspecting that an employee is, or has recently been, employed.

(2) For the purpose of or in the course of an inspection under Subsection (1), an Industrial Safety Officer may inspect, test and record details of—

- (a) boilers, pressure vessels, machinery, plant, equipment, fittings, appliances, tools or dangerous substances; and
- (b) storage facilities; and
- (c) safety measures, devices and appliances; and
- (d) such other things used, kept or stored at or on the premises or place of employment as are prescribed.

(3) An Industrial Safety Officer may, for the purposes of this Act, examine, test or take samples of any material, matter or thing on, produced, used or stored on, any place referred to in Subsection (1).

(4) At the time of taking a sample under Subsection (3), an Industrial Safety Officer shall, if so required by the employer or the owner or occupier—

- (a) divide the sample into three parts; and
- (b) label or mark, and seal or fasten up, each separate part in such manner as its nature allows; and

¹ See, also, Constitution, Sections 44, 53.

- (c) deliver one part to the owner, employer or occupier, retain one part and arrange for the remaining part to be submitted to examination, test or analysis.

(5) Where an accident has occurred at a place of employment, an Industrial Safety Officer may take—

- (a) for examination, test or analysis; or
- (b) as an exhibit in any proceedings under this Act,

anything that he thinks may have been concerned in or responsible for the accident.

(6) An Industrial Safety Officer may at all reasonable times question an employee and the employer or the occupier or owner of the property in regard to any matter that, in the opinion of the Officer questioning, affects the safety, health or welfare of an employee.

11. Orders and directions.

(1) The Departmental Head may issue directions, not inconsistent with this Act, to an employer as to the manner of doing or refraining from doing any matter or thing required by or under this Act to be done or not to be done.

(2) An Industrial Safety Officer may give an order, not inconsistent with this Act—

- (a) if he is of the opinion that the continued use of any machine, plant, equipment or appliance is of danger to life, health or limb—prohibiting the use of the machine, plant, equipment or appliance, absolutely or conditionally; or

(b) requiring—

- (i) the fitting of guards to any specified machine, plant, equipment or appliance; or

- (ii) the taking of such other safety precautions or measures for the protection of persons,

as are, in his opinion, necessary or reasonable in the circumstances; or

- (c) requiring the issue and the use of safety equipment or protective clothing.

12. Prohibition of use of certain machines or appliances.

For the purposes of this Act, the Departmental Head may, by notice in the National Gazette, prohibit the use of any specified type or make of machine, plant, equipment or appliance, absolutely or conditionally.

13. Appeals.

(1) A person aggrieved by a decision, order or requirement of an Industrial Safety Officer under this Act may appeal to the Departmental Head.

(2) A person aggrieved by a decision, order, direction, requirement, declaration or notice of the Departmental Head under this Act may appeal to the Minister, whose decision is final¹.

(3) Notwithstanding that an appeal under this section is being or is to be made—

- (a) the decision or declaration stands; and

- (b) the order, direction or requirement shall be complied with,

until the appeal is upheld.

¹ But see Constitution, Section 155.

(4) Where—

- (a) an appeal under this section is upheld; and
 - (b) a person has suffered loss or injury by reason of the matter appealed against,
- the State shall pay to the person such amount by way of compensation for the loss or injury as the Minister thinks proper.

14. Report of offences against other legislation.

Where, on an inspection of a place of employment under this Part, an Industrial Safety Officer notices or suspects that an offence against a law other than this Act relating to—

- (a) employment; or
- (b) health or sanitation; or
- (c) fire precautions or safety measures; or
- (d) electrical equipment, installations or appliances; or
- (e) building; or
- (f) town planning,

is being or has been committed, he shall immediately report the matter in writing to the appropriate authority.

PART IV.—REGISTRATION OF FACTORIES.

15. Requirement of registration.

A person shall not occupy or use any premises as a factory unless he holds a certificate of registration, a permit or an authority under Section 17(b) or 28 in respect of the premises.

16. Application for registration.

Application for the registration of premises as a factory—

- (a) shall be made to the Departmental Head by written notice in the prescribed form; and
- (b) shall be accompanied by—
 - (i) a plan of the premises showing such particulars of the premises and the process to be carried on as are prescribed; and
 - (ii) such other information as the Departmental Head requires.

17. Registration, etc.

On receipt of an application under Section 16, the Departmental Head may—

- (a) register the premises as a factory and issue to the applicant a certificate of registration; or
- (b) issue to the applicant a permit authorizing the use of the premises as a factory for a period named in the permit, or such further period as the Departmental Head allows, pending the carrying out of any alterations or repairs required to make the premises suitable for a factory; or
- (c) refuse to register the premises as a factory.

18. Certificates of registration and permits to occupy.

If the Departmental Head decides to register or to issue a permit to occupy the premises as a factory, he shall, on payment of the prescribed registration fee, issue to the applicant a certificate of registration or a permit, as the case may be, in the prescribed form, specifying—

- (a) the name of the occupier; and
- (b) the address and situation of the factory; and
- (c) the nature of the manufacturing process to be carried on in it.

19. Period of registration.

(1) Subject to this Act, the registration of any premises as a factory—

- (a) continues in force until 31 December after the date of the registration; and
- (b) on payment of the registration fee, may be renewed from time to time for periods each not exceeding 12 months.

(2) The Departmental Head may—

- (a) refuse to renew the registration of a factory; or
- (b) hold the renewal over and issue a permit to occupy the factory pending the carrying out of any order, direction or requirement under this Act.

20. Reasons for failure to register, etc.

When the Departmental Head refuses—

- (a) to register any premises as a factory; or
- (b) to renew the certificate of registration of a factory,

he shall, on the written request of the applicant for registration or renewal, state in writing the grounds of his refusal.

21. Vacation of premises.

The person in whose name a factory has been registered shall, on ceasing to be its occupier, serve on the Departmental Head a written notice of the fact, and until he does so he—

- (a) shall be deemed to be an occupier of the factory; and
- (b) is subject to all the provisions of this Act relating to the factory.

22. Alteration of business, premises, etc.

(1) Where—

- (a) in a registered factory there is a change in the nature of the process in respect of which the premises have been registered; or
- (b) there is an extension or structural alteration of the premises constituting a registered factory,

then—

- (c) the occupier shall immediately notify the Departmental Head of the change or of the extension or alteration, as the case may be; and
- (d) the Departmental Head may, by written notice, require the occupier to make a fresh application for registration in the prescribed manner.

(2) If the occupier of any premises to which Subsection (1) applies fails to notify or to make application under that subsection within 14 days, or such further time as the Departmental Head allows, of the change, extension or alteration, as the case may be, the factory shall be deemed to be unregistered.

23. Cancellation of registration.

The Departmental Head may cancel the registration of a factory in respect of which an offence has been committed against this Act or against any other law relating to—

- (a) employment; or
- (b) health or sanitation; or
- (c) fire precautions or safety measures; or
- (d) electrical equipment, installations or appliances; or
- (e) building.

24. Failure to pay fees.

If a fee is unpaid at the expiration of one month after the due date, the factory in respect of which the fee is payable shall be deemed to be an unregistered factory.

25. Applications in respect of more than one factory.

(1) Subject to Subsection (2), an application for a certificate of registration or a permit may relate to more than one factory owned by the applicant and situated—

- (a) on the one block of land; or
- (b) on more blocks of land than one if those blocks are worked as a single property,

and a certificate of registration or a permit may be issued accordingly.

(2) Where, in the case of an application referred to in Subsection (1), the purposes of one or more of the factories the subject of the application are so disparate from those of the other or others that it is desirable in the circumstances that—

- (a) separate applications be made; or
- (b) separate certificates of registration or separate permits be issued,

the Departmental Head may—

- (c) reject the application and require fresh applications; or
- (d) issue separate certificates of registration or separate permits.

26. Approval for erection, etc.

(1) A person shall not—

- (a) commence the erection of a building intended for use as a factory, or cause it to be commenced; or
- (b) carry out any structural alterations or additions to any premises—
 - (i) intended for use as a factory; or
 - (ii) in respect of which a permit is in force, or cause them to be carried out

without the prior approval of the Departmental Head.

(2) Application for approval under Subsection (1) shall—

- (a) be made in the prescribed manner by the builder or owner or his architect; and

(b) be accompanied by—

- (i) two copies of the plans and specifications of the building or of the structural alterations or additions, as the case may be; and
- (ii) such other information as the Departmental Head requires.

(3) The Departmental Head shall retain one copy of the plans and specifications supplied under Subsection (2)(b).

(4) The Departmental Head shall consider an application under Subsection (2) and the plans and specifications accompanying it, and may—

- (a) approve the application, plans and specifications; or
- (b) approve them subject to conditions, or disapprove them.

(5) A building intended for use as a factory, and a structural alteration or addition to premises intended for use as a factory or in respect of which a permit is in force, shall be erected and carried out, to the satisfaction of the Departmental Head, in conformity with the relevant application, plans and specifications approved under Subsection (4).

(6) A person who—

- (a) does work, or causes work to be done, in connexion with the erection of a building intended for use as a factory; or
- (b) carries out structural alterations or additions, or causes them to be carried out, to premises intended for use as a factory or in respect of which a permit is in force,

without the approval required by this section, or otherwise than in conformity with the approval, is guilty of an offence.

Penalty for an offence against this subsection: A fine not exceeding K200.00.

27. Notification of defects.

(1) If, in the opinion of an Industrial Safety Officer, a building or place used or about to be used as a factory is unfit for that use, he shall, by written notice served personally or by post to his last-known address, on the occupier or the applicant for registration of the factory, request the occupier or applicant to comply with such requirements as the Industrial Safety Officer thinks necessary to render the office, building or place fit for occupation as a factory and specifies in the notice.

(2) Where an Industrial Safety Officer reports that in his opinion, by reason of structural difficulties, sanitary defects or otherwise, no requirements that may be specified under Subsection (1) will fit a building or place for use as a factory, he shall so report to the Departmental Head and the Departmental Head may make—

- (a) an order forbidding the use of the building or place as a factory; or
- (b) such other order as he thinks proper; or
- (c) an order cancelling the registration of the building or place.

28. Authority to occupy temporary premises.

Where, through fire, tempest or other calamity, an occupier is unable to carry on his factory in the premises for which a certificate of registration has been issued, the Departmental Head may, without payment of further fee, grant an authority to occupy, for a period specified in the authority, other premises as a factory, pending the obtaining by the occupier of permanent premises.

PART V.—CONDITIONS OF WORK.

Division 1.—General Provisions.

29. Cleanliness, space and ventilation.

(1) The occupier of a factory shall maintain, to the satisfaction of an Industrial Safety Officer, the factory and the surroundings in a clean condition and free from effluvia arising from drains, earth or water closets, privies or other nuisances.

(2) A factory shall, to the satisfaction of an Industrial Safety Officer—

- (a) not be so overcrowded while work is carried on in it as to be injurious, or to tend to be injurious, to the safety, health or welfare of the persons employed in it; and
- (b) contain such amount of cubic and clear floor space for each person employed as is prescribed; and
- (c) have the prescribed amount of unobscured natural lighting; and
- (d) be ventilated in such a manner as to remove or make harmless, as far as practicable, all the gases, vapours, dust and other particles and other impurities generated in the course of the process carried on in it.

(3) The occupier of a factory shall comply promptly with any reasonable instruction given by an Industrial Safety Officer for the purpose of requiring compliance by the occupier with any of the provisions of this section.

30. Meals.

The Departmental Head may, by written notice—

- (a) forbid the occupier of a factory to permit employees to take their meals in a room while work is being carried out in the room; or
- (b) direct the occupier to provide in or near the factory a suitable room for the purposes of a dining or eating room for the employees.

31. Sanitary and ablution facilities.

An employer shall provide at all places of employment—

- (a) such sanitary and ablution facilities; and
- (b) such change-rooms, lockers and rest-rooms,

as are prescribed.

32. Means of access.

In any premises of employment there shall be provided, as prescribed or as the Departmental Head in a particular case directs—

- (a) sufficient and safe means of access into and egress from any room or part of the premises for persons working in it; and
- (b) sufficient and safe means of access and passage for persons in the course of their duties in and around plant, equipment, machinery and appliances in the premises; and
- (c) barriers of adequate strength and construction to prevent persons from falling from floors, walkways, platforms, stairs, ladders, ramps or walking or working surfaces.

33. First-aid facilities and personnel.

At a factory and at such other places of employment as a medical officer directs, the prescribed first-aid personnel and first-aid kit shall be provided and maintained by the employer.

34. Notification of disease or injury.

Where an employee suffers a disease or injury that arose or might have arisen out of or in the course of his employment, and that—

- (a) requires attention by a medical practitioner or medical assistant; or
- (b) results in death,

the employer must immediately give notice in the prescribed form to the Departmental Head setting out—

- (c) the nature and cause of the disease or injury; and
- (d) the circumstances in which it occurred.

Penalty: A fine not exceeding K200.00.

*Division 2.—Particular Provisions.***35. Dangerous work.**

(1) This section applies to work that is of a dangerous nature involving the risk of loss of life or limb or deterioration in health, and particularly in work connected with—

- (a) the use, transport or storage of dangerous substances; or
- (b) dangerous industrial processes; or
- (c) the operation of plant, appliances, equipment and machinery; or
- (d) the use of electrical equipment, appliances or tools; or
- (e) building construction; or
- (f) the use of scaffolding, ladders, overhead walks, runways or platforms; or
- (g) deep-sea diving; or
- (h) such other processes as are prescribed.

(2) An employer must not employ an employee in any work to which this section applies unless the employer—

- (a) is satisfied that the employee's physical and mental capacity are such as to fit him for the duties; and
- (b) has—
 - (i) given appropriate prior warning to the employee of the risks involved and of the measures required of the employee to reduce those risks to a minimum; and
 - (ii) appropriately instructed the employee—
 - (A) in the safe performance of his duties; and
 - (B) in the use and handling of any boilers, pressure vessels, machinery, appliances, equipment, fittings, tools and dangerous substances used in connexion with those duties; and

- (iii) provided for the use of the employee such protective clothing and equipment as is necessary for the safe performance of his duties and for his personal safety or as is prescribed; and
- (iv) taken such other measures as will ensure that the employee is adequately safe-guarded and protected whilst employed in that work, including all safety precautions that are—
 - (A) necessary to reduce, as far as is practicable, the risk of accidental death or injury; or
 - (B) normal in relation to the particular risks involved; or
 - (C) required to be taken in any particular case by an Industrial Safety Officer or medical officer; or
 - (D) prescribed.

Penalty: A fine not exceeding K200.00.

36. Installation, operation and maintenance of boilers, etc.

The occupier of a factory must—

- (a) install, maintain and operate, in a manner adequate to safeguard and protect employees from injury, boilers, pressure vessels, machinery, plant, driving belts, electrical equipment, fittings, appliances and tools that are used or are to be used at or in any place or premises—
 - (i) in which employees work; or
 - (ii) in which employees or their dependants are accommodated by or on behalf of the employer, or which they use; and
- (b) provide and maintain in good condition guards for all dangerous parts of machinery so as to prevent, as far as is practicable, accidental contact with—
 - (i) the dangerous parts of the machinery; or
 - (ii) material or objects projected from the machinery,

and in regard to such matters must in addition comply promptly with any reasonable instruction given by an Industrial Safety Officer or medical officer relating to measures for the protection of employees and their dependants.

Penalty: A fine not exceeding K500.00.

37. Clothing, etc., of employees working with machinery.

(1) An employee who while employed in feeding or operating machinery, or working in close proximity to machinery—

- (a) wears—
 - (i) a long-sleeved shirt, coat or garment, a rami or lava lava, a loose dress or blouse or any clothing or adornment likely to become entangled in the machinery; or
 - (ii) footwear of the type commonly known as scuffs; or
 - (iii) any protection to the hand except a glove that is not fastened at the wrist; or
- (b) unless his hair is cut safely short, fails to wear a cap, scarf or other suitable means of fastening and confining his hair,

is guilty of an offence.

(2) An employer who permits an employee to contravene Subsection (1) is guilty of an offence.

Penalty: A fine not exceeding K100.00.

38. Ventilation, etc., in certain kinds of work.

(1) This section applies in any case where—

- (a) grinding, glazing or polishing on a wheel, or dressing timber, or any other process in which dust is generated that is or may be inhaled by an employee to a dangerous extent, is carried on in any premises or place of employment, and it appears to an Industrial Safety Officer that such inhalation could be to a great extent prevented by the use of a fan or by other mechanical means of ventilation; or
- (b) atmospheric humidity is artificially produced in any premises of employment by steaming or other mechanical appliances by which the health of an employee is or may be injuriously affected, and it appears to an Industrial Safety Officer that the humidity so produced could be to a great extent lessened by the adoption of sufficient means of ventilation or prevention; or
- (c) the conditions in any premises of employment are, by reason of defective ventilation or otherwise, such that the health of an employee is or may be injuriously affected, and it appears to an Industrial Safety Officer that those conditions could be improved by use of a fan or by other sufficient means of ventilation.

(2) In a case to which this section applies, the Industrial Safety Officer may serve on the occupier of the premises or place a notice requiring him to provide a fan or other means of ventilation, as the case requires, to the satisfaction of the Industrial Safety Officer.

39. Protection from dust, fluff, fumes, etc.

Where, in connexion with any process carried on in any premises of employment, dust, fluff, fumes or other impurities are generated or given off, of such a character or to such an extent that the inhalation of them would be likely to be injurious or offensive to persons employed in the premises—

(a) effective measures shall be taken by the occupier—

- (i) to prevent the accumulation in a work-room of any such dust, fluff, fumes or impurities; and
- (ii) to protect such persons from the inhalation of the dust, fluff, fumes or impurities,

whether or not a notice has been served under Section 38; and

(b) where the nature of the process makes it practicable, exhaust appliances shall be provided and maintained as near as possible to the point of origin of the dust, fluff, fumes or impurities, so as to prevent them from entering the air of a work-room.

40. Work in confined spaces.

(1) Where work is to be done inside a chamber, tank, vat, pit, pipe, sewer, underground culvert, flue or similar confined space in which dangerous fumes, gas, dust or

vapour are or is likely to be present, to enter or to be generated in the course of the work to such an extent as to involve a risk of a person being overcome—

(a) the space shall, unless there is other adequate means of egress, be provided with a manhole that—

- (i) is rectangular, oval or circular in shape; and
- (ii) is not less than 450 mm long and 400 mm wide, or in the case of tank wagons and other mobile plant not less than 400 mm long and 350 mm wide; and

(b) the employer shall cause the following requirements to be complied with:—

(i) all practicable steps shall be taken—

(A) to remove any fumes, gas, dust or vapour that are present; and

(B) to prevent ingress of fumes, gas, dust or vapour,

and, unless it has been ascertained by a suitable test that the space is free from dangerous fumes, any person entering or working in the space shall wear a belt to which there is securely attached a rope the free end of which is held by a person outside; and

(ii) in case of emergency or where it is impracticable to comply with the requirements of Subparagraph (i), any person entering or working in the confined space shall wear a breathing apparatus of a type approved by the Departmental Head; and

(iii) effective provision shall be made—

(A) to collect as near as practicable to the point of origin, and remove to the outer air, any fumes, gas, dust or vapour generated during the course of the work; and

(B) to ventilate the confined space; and

(iv) breathing apparatus and reviving apparatus of a type approved by the Departmental Head and suitable belts and ropes shall be provided and maintained in a good order and condition and so as to be readily accessible; and

(v) a sufficient number of persons employed in and about the confined space shall be persons trained and practised, to the satisfaction of an Industrial Safety Officer, in the use of apparatus referred to in Subparagraph (iv) and in the method of restoring respiration.

(2) A person shall not be permitted to work in a boiler furnace or boiler-flue or a confined space referred to in Subsection (1) in which excessive heat is present until it has been sufficiently cooled by ventilation or otherwise to make work safe for the persons employed in it.

41. Particular safety responsibilities of employees.

An employee who fails—

- (a) to immediately report to his employer any defect that he discovers in any boiler, pressure vessel, machinery, driving belt, electrical equipment, fitting, appliance or tool; or
- (b) to pay due regard to all warnings issued to him as to the risk in which he is involved in the performance of his duties; or

(c) to take such measures as he is required to take to reduce such risks to a minimum; or

(d) to make proper use of all safeguards, safety devices, protective clothing and equipment, and other appliances furnished for his protection,

is guilty of an offence.

Penalty: A fine not exceeding K100.00.

Division 3.—Industrial Safety Orders.

42. Declaration of dangerous trades, occupations and processes.

The Minister may, by notice in the National Gazette, declare a trade, occupation or process to be a specially dangerous trade, occupation or process.

43. Orders.

Where a declaration has been made under Section 42, the Minister may, by order in the National Gazette, specify the special precautions to be taken in the trade, occupation or process, including—

(a) the conditions under which persons may be employed in it; and

(b) restrictions on employment in it.

44. Application of declarations of dangerous trades and industrial safety orders.

Without limiting the generality of Sections 42 and 43, a declaration or an order under either of those sections may relate to a trade, occupation or process when it is carried on—

(a) in a certain part of the country; or

(b) during a certain period, or at certain times, seasons or occasions; or

(c) generally, in certain circumstances,

specified in the declaration or order.

PART VI.—MISCELLANEOUS.

45. Obstruction, etc.

A person who—

(a) hinders or obstructs a person in the exercise of his powers or the performance of his functions under this Act; or

(b) refuses or fails, without reasonable excuse (proof of which is on him), to comply with a notice, order, direction or requirement given under this Act; or

(c) refuses or fails, without reasonable excuse, to answer questions asked of him under this Act,

is guilty of an offence.

Penalty: A fine not exceeding K100.00.

46. Unlawful use of buildings, etc.

The owner and the occupier of any building or place in respect of which the provisions of this Act, or of a notice, order, direction or requirement under this Act, are not complied with, is guilty of an offence.

Penalty: A fine not exceeding K500.00.

47. Institution of proceedings, etc.

(1) Proceedings under this Act may be instituted in the name of the Departmental Head by the Departmental Head or an Industrial Safety Officer authorized for the purpose by the Departmental Head.

(2) A written authority or a telegram purporting—

(a) to be signed or sent by the Departmental Head; and

(b) to authorize an Industrial Safety Officer to institute any proceedings under this Act,

is, on production—

(c) admissible in evidence in the proceedings; and

(d) conclusive evidence of the authority of the Industrial Safety Officer to institute proceedings in the name of the Departmental Head.

48. Relation of this Act to other laws.

(1) Where, in relation to an employee or to all employees at a place of employment, an act, matter or thing required to be done or provided under this Act is substantially also required to be done or provided under any other law, compliance with that last-mentioned law shall be deemed to be compliance with the relevant provisions of this Act in relation to the employee or to the place of employment, as the case may be.

(2) Where—

(a) an application, report, return or notice is required under this Act to be made, given or sent to an officer or authority; and

(b) an application, report, return or notice with the same or similar requirements is also required to be made, given or sent under any other law to an officer or authority,

compliance with this Act shall be deemed to be compliance with that other law and compliance with that other law shall be deemed to be compliance with this Act.

(3) In a case referred to in Subsection (2), the officer or authority to whom the application, report, return or notice is actually made, given or sent shall immediately forward it or a copy of it to the other officer or authority.

49. Application of Standard Codes.

(1) The regulations may adopt any Standard Code or procedure laid down by the Standards Association of Australia or any other prescribed authority in relation to—

(a) the construction, maintenance or operation of plant or machinery; or

(b) the carrying out of processes; or

(c) any other matter or thing relating to industrial safety, health or welfare,

and compliance with that Code or procedure shall be deemed to be compliance with the relevant provisions of this Act or of any order or direction under this Act.

(2) In adopting a Standard Code or procedure under Subsection (1), the regulations may adopt it subject to such additions, modifications, conditions or restrictions as are prescribed.

50. Regulations.

The Head of State, acting on advice, may make regulations, not inconsistent with this Act, prescribing all matters that by this Act are required or permitted to be prescribed, or that are necessary or convenient to be prescribed for carrying out or giving effect to this Act and in particular for prescribing—

- (a) the notices to be given, and the returns and records to be made, under this Act, and the form of such notices, returns and records; and
- (b) the form and conditions of registration of premises of employment and the fees payable; and
- (c) the control of thermal conditions in premises of employment; and
- (d) requirements for the adequate lighting of any place or places of employment; and
- (e) the space to be provided for persons employed in premises of employment, and the measures necessary to prevent the over-crowding of persons so employed; and
- (f) the nature of the flooring, lining, roofing and ceiling of premises of employment and the methods of construction to be used; and
- (g) the precautions to be taken against the risk of injury to, or impairment of, the health of employees and other persons in or at places of employment, and for imposing on certain persons the duty of seeing that the precautions are taken; and
- (h) the sanitary and ablution facilities, the change-rooms, lockers, rest-rooms, the supply and conditions of drinking water and other amenities to be provided at places of employment; and
- (i) the dimensions, situation, design, construction, material, approach space and ventilation of the places and things referred to in Paragraph (h) necessary for the health and convenience of employees and to secure proper sanitation; and
- (j) the cleaning of premises of employment; and
- (k) the measures to be taken for the prevention and extinguishing of fires at premises of employment; and
- (l) the conditions under which, and the manner in which, any goods or things may be stored in or on places of employment; and
- (m) the measures necessary for securing the safe working and usage of machinery; and
- (n) the measures necessary for securing the safe working and use of cranes and hoists; and
- (na) the measures necessary for securing the safe working and usage of lifts; and
- (o) the measures necessary for securing the safe working and use of boilers and pressure vessels; and
- (oa) the fees to be paid by employers for the inspection of boilers, pressure vessels and lifts; and
- (p) the qualifications necessary for the operation of any plant, equipment, machinery or appliance; and

Industrial Safety, Health and Welfare

Ch. No. 175

(q) the restrictions necessary on the employment of young persons or females in certain trades, occupations or processes; and

(r) penalties of fines not exceeding K500.00 for offences against the regulations.

(Amended by No. 5 of 1976.)

1000

1000

1000

1000

INDEPENDENT STATE OF PAPUA NEW GUINEA.

CHAPTER NO. 175.

Industrial Safety, Health and Welfare Regulation.

ARRANGEMENT OF SECTIONS.

PART I.—PRELIMINARY.

1. Interpretation—
“approved”.

PART II.—ADMINISTRATION.

2. Certificate of appointment of Industrial Safety Officer.

PART III.—REGISTRATION, ETC., OF FACTORIES.

3. Application for registration.
4. Certificates of registration and permits.
5. Registration, etc., fees.
6. Application for approval to erect or alter factory.

PART IV.—CONDITIONS OF WORK.

7. Floor and cubic space.
8. Lighting.
9. Closets, urinals, etc.
10. Wash basins.
11. Showers.
12. Change-rooms, rest-rooms, lockers, etc.
13. Drinking water.
14. Means of access, etc.
15. Service areas.
16. Barriers.
17. First-aid personnel.
18. First-aid facilities.
19. Notification of disease or injury.

PART V.—BOILERS AND PRESSURE VESSELS.

20. Interpretation of Part V.—
“boiler”
“boiler inspector”
“pressure vessel”
“registered number”.
21. Boiler inspectors.
22. Registration of boilers and pressure vessels.
23. Application for registration.
24. Certificate of registration.
25. Inscription of registered number.
26. Change in location or construction.
27. Notice of inspection.

- 28. Certificate of inspection.
- 29. Uncertified boilers.
- 30. Adoption of S.A.A. Boiler Code.

PART VI.—SAW MILLING AND WOODWORKING.

Division 1.—Forestry Operations Generally.

- 31. Personal safety.

Division 2.—Circular Saws.

- 32. Liability of occupier.
- 33. Design, etc.
- 34. Foundations.
- 35. Floors.
- 36. Clearing of sawdust, etc.
- 37. Lighting.
- 38. Marking of safe working speeds.
- 39. Power.
- 40. Collars.
- 41. Riving knives.
- 42. Secure holding of material.
- 43. Adjustment, etc., of attached equipment.
- 44. Guards on bank or gang saws.
- 45. Guards on circular saw blades.
- 46. Guard on pendulum or swinging saw.
- 47. Maintenance, etc.

Division 3.—Band Saws.

- 48. Band saws.
- 49. Guards.
- 50. Tension control.
- 51. Counterweights.
- 52. Dust control.
- 53. Size of saw blade relative to band wheel.
- 54. Maintenance, etc.

Division 4.—Overhand Planing Machines.

- 55. Use of certain machines.

Division 5.—Log Carriages.

- 56. Liability of occupier.
- 57. Platform.
- 58. Log carriages.
- 59. Rails.
- 60. Guard rails.
- 61. Stops.
- 62. Saw clearance..
- 63. Leads.
- 64. Dogs, etc.

Industrial Safety, Health and Welfare

Ch. No. 175

Division 6.—Sawmilling and Woodworking Operations Generally.

- 65. Liability of occupier.
- 66. Guarding of machinery.
- 67. Disposal of waste.

PART VII.—MISCELLANEOUS.

- 68. Incompetent workers.

SCHEDULE.—

FORM 1.—Certificate of Appointment as Industrial Safety Officer.

FORM 2.—Application for Registration of Factory.

FORM 3.—Certificate of Registration as a Factory.

FORM 4.—Permit Authorizing the use of Premises as a Factory.

FORM 5.—Application for Approval for Building or Structural Alteration.

FORM 6.—Notice of Major Injury, Major Disease or Death.

FORM 7.—Application for Registration of a Boiler/Pressure Vessel.

FORM 8.—Certificate of Registration of a Boiler/Pressure Vessel.

FORM 9.—Certificate of Inspection of Boiler/Pressure Vessel.

INDEPENDENT STATE OF PAPUA NEW GUINEA.

CHAPTER NO. 175.

Industrial Safety, Health and Welfare Regulation.

MADE under the *Industrial Safety, Health and Welfare Act*.

PART I.—PRELIMINARY.

1. Interpretation.

In this Regulation, unless the contrary intention appears "approved" means approved by the Departmental Head, or by an Industrial Safety Officer authorized by the Departmental Head for the purpose.

PART II.—ADMINISTRATION.

2. Certificate of appointment of Industrial Safety Officer.

For the purposes of Section 5(2) of the Act, a certificate of appointment as an Industrial Safety Officer shall be in Form 1.

PART III.—REGISTRATION, ETC., OF FACTORIES.

3. Application for registration.

(1) An application under Section 16 of the Act shall be in Form 2, and shall contain the particulars required by that form to be provided.

(2) The plan accompanying the application shall show—

- (a) a dimensional layout of each floor; and
- (b) the type of materials used for construction; and
- (c) the type, height and lining of all walls, roofs and partitions; and
- (d) the purposes for which each area is proposed to be used; and
- (e) the welfare facilities; and
- (f) the position and dimensions of each wall or roof opening; and
- (g) the number of persons to be employed in each room.

4. Certificates of registration and permits.

- (1) A certificate of registration shall be in Form 3.
- (2) A permit shall be in Form 4.

5. Registration, etc., fees.

- (1) The fee for the registration of premises as a factory is—
 - (a) where not more than 10 persons are usually employed, or to be employed, in the premises—K4.00; and
 - (b) where more than 10 persons but not more than 50 persons are usually employed, or to be employed, in the premises—K10.00; and
 - (c) in any other case—K20.00.
- (2) The fee for a permit is K4.00.

6. Application for approval to erect or alter factory.

An application for approval under Section 26(2) of the Act shall be in Form 5, and shall contain the particulars required by that form to be provided.

PART IV.—CONDITIONS OF WORK.**7. Floor and cubic space.**

The clear cubic and floor space provided for an employee shall be adequate to ensure—

- (a) his reasonable comfort, having regard to the nature of his work; and
- (b) his own and other employees' safety during the performance of his duties.

8. Lighting.

(1) Subject to this section, the general unobscured natural lighting in a factory or part of a factory shall be—

- (a) sufficient and suitable for the purposes for which the factory or part of the factory is to be used; and
- (b) in respect of the interior of the factory—
 - (i) in a part of the factory where persons are usually employed—not less than 110 lux, measured on a horizontal plane at a level of 1m from the floor; and
 - (ii) in a part of the factory where persons are not usually employed—not less than 11 lux measured at floor level.

(2) Where, in the opinion of an Industrial Safety Officer, the amount of unobscured natural light prescribed by Subsection (1) cannot be reasonably obtained, the occupier shall provide artificial light that is, in the opinion of the Industrial Safety Officer, equivalent to it.

9. Closets, urinals, etc.

(1) For the purposes of Section 31 of the Act, water-closets shall be provided for the use of employees at each place of employment in accordance with the following scale:—

Number of employees.	Proportion of closets to female employees.	Proportion of closets to male employees.
Not exceeding 100	1 to each 20 or part of 20.	1 to each 25 or part of 25.
Exceeding 100 but not exceeding 200	1 to each 25 or part of 25.	1 to each 30 or part of 30.
Exceeding 200	1 to each 25 or part of 25.	1 to each 40 or part of 40.

(2) In addition to the closets prescribed by Subsection (1), at each place of employment where male persons are employed the occupier shall provide urinals for their use at the rate of one urinal stall for every 15, or part of 15, male employees.

(3) Notwithstanding Subsection (2), where the number of male persons employed at a place of employment is less than 10, a pedestal pan with a hinged tip-up lid may be provided in place of the urinal prescribed by that subsection.

10. Wash basins.

(1) Wash basins shall be provided in a place of employment at the rate of one basin for each 20, or part of 20, employees of each sex.

(2) Notwithstanding Subsection (1) where the number of male employees or of female employees exceeds 100, the rate of wash basins prescribed by that subsection may be decreased to one basin for each 25, or part of 25, male employees or female employees, as the case may be.

(3) Where the place of employment is connected with a water supply the water supply shall be laid onto the wash basins referred to in this section and in any other case water shall be provided at a convenient distance from each wash basin together with proper utensils for its distribution.

11. Showers.

(1) Where an Industrial Safety Officer, having regard to the nature of the work performed at a place of employment, so directs, showers shall be provided at the rate of one shower for each 10, or part of 10, male or female employees, as the case may be.

(2) Unless the Industrial Safety Officer in any specific case otherwise directs, showers provided under Subsection (1) shall be located immediately adjacent to the change rooms (if any) provided at the place of employment.

12. Change-rooms, rest-rooms, lockers, etc.

(1) In a place of employment where, in the opinion of an Industrial Safety Officer, a change of dress of the employee is necessary, whether by reason of the class of work being performed or otherwise, separate change-rooms of approved design and dimensions shall be provided for employees of each sex.

(2) In relation to a change-room prescribed under Subsection (1), an Industrial Safety Officer may direct that lockers in approved numbers and design shall be provided.

(3) Where female employees are employed at a place of employment, an Industrial Safety Officer may direct that a rest-room or rest-rooms, suitably furnished, of approved location and dimensions shall be provided.

13. Drinking water.

In every factory, there shall be provided for the free use of employees not less than 3.5 l of potable water per employee per day.

14. Means of access, etc.

(1) In this section—

“main traffic way” means a traffic way that, in the opinion of an Industrial Safety Officer, is in regular or constant use;

“subsidiary traffic way” means a traffic way that, in the opinion of an Industrial Safety Officer, is in irregular or intermittent use.

(2) In the premises of employment—

(a) all main traffic ways shall be so arranged that a minimum unobstructed width of 1 200 mm is provided; and

(b) all subsidiary traffic ways shall be so arranged that a minimum unobstructed width of 600 mm is provided; and

(c) all main traffic ways shall be so arranged that there is a minimum unobstructed headroom of 2 300 mm; and

(d) all subsidiary traffic ways shall be so arranged that there is a minimum unobstructed headroom of 2 000 mm.

(3) For the purposes of Subsection (2), an isolated obstruction that is marked in an approved manner shall not be deemed to obstruct the width or headroom, as the case may be.

15. Service areas.

(1) In this section, "service area" means the area in the premises of employment that an employee normally or necessarily occupies while operating, servicing, repairing or otherwise working on any plant, equipment, machinery, processes or appliances in the premises.

(2) In any premises of employment, so far as is practicable a service area shall be so arranged that an employee remaining in it shall not be exposed to any danger from plant, equipment, machinery or appliances in the premises.

16. Barriers.

In any premises of employment where, in the opinion of an Industrial Safety Officer, the installation of a barrier would prevent persons from falling from floors, walkways, platforms, stairs, ladders, ramps or walking or working surfaces, barriers of approved design and construction shall be installed.

17. First-aid personnel.

For the purposes of Section 33 of the Act, where in the opinion of a medical officer facilities for medical treatment are not otherwise readily available to employees at their place of employment, there shall be employed employees—

(a) in such numbers; and

(b) with such first-aid qualifications,

as are approved by a medical officer.

18. First-aid facilities.

(1) For the purposes of Section 33 of the Act, for each 50, or part of 50, employees there shall be provided a first-aid kit containing the following items:—

adhesive strapping, reels 25 mm	1
bandages, rolls 50 mm x 1 800 mm	6
bandages, triangular	3
cotton wool, roll of 454 g	1
cotton wool, sterile, 28 g sealed cartons	8
Dettol, Zepharin, Solypsol or equivalent	113g
finger-dressings, sterile and individually wrapped	6
forceps, dressing 127 mm	1
gauze, plain 5 m ² , in sealed cartons	1
glass, medicine	1
pins, safety	12
savlatile, 28 g bottles	2
scissors, surgical, 127 mm	1

splints, sufficient for—

(a) a fractured arm below the elbow; or

(b) a fractured leg below the knee,

and of approved design

splint, Thomas or approved equivalent

1

stretcher, approved type

1

Sulphacetimide (APF) eye drops, weak solution of, in screw-top dropper
of 28 g

2

Tincture of Iodine B.P. 2.5%

tourniquet, approved type

1

W/V Iodine

113g

(2) The first-aid kit referred to in Subsection (1) shall—

(a) be kept under the charge of a person, (if any) employed in accordance with
Section 17, and otherwise in the charge of some responsible person; and

(b) be kept secure and apart from items other than items used in connexion with
the giving of medical or emergency assistance; and

(c) be replenished as and when the items in it become defective or exhausted;
and

(d) be located in accordance with the directions of a medical officer; and

(e) be distinctively marked with a white cross on a green background.

19. Notification of disease or injury.

For the purposes of Section 34 of the Act, a notification of disease, injury or death shall
be in Form 6, and shall contain the particulars required by that form to be supplied.

PART V.—BOILERS AND PRESSURE VESSELS.

20. Interpretation of Part V.

In this Part, unless the contrary intention appears—

“boiler”—

(a) means a closed vessel in which steam is generated under a pressure
greater than atmospheric pressure; and

(b) includes—

(i) an economizer used to heat water being fed to such a vessel; and

(ii) a superheater used for heating steam; and

(iii) feed blow down steam distribution pipe lines,

and all fittings and connexions used in relation to any of them;

“boiler inspector” means a boiler inspector appointed under Section 21;

“pressure vessel” means a closed vessel not being heated but subject to pressure
greater than atmospheric pressure by liquids, vapour or air or other gases, but
does not include—

(a) cylinders for the storage and transport of compressed gases; or

(b) a domestic hot water system or a domestic water system; or

- (c) a vessel or a member of a class of vessels declared by the Departmental Head, by notice in the National Gazette, not to be a pressure vessel or class of vessels for the purposes of this Regulation;

"registered number" means the registered number assigned under Section 24 to a boiler or pressure vessel.

21. Boiler inspectors.

The Departmental Head may, by notice in the National Gazette, appoint suitably qualified Industrial Safety Officers to be boiler inspectors for the purposes of this Part.

22. Registration of boilers and pressure vessels.

A boiler or pressure vessel used in a factory, place of employment or premises of employment shall be registered under this Part.

23. Application for registration.

An application for registration shall—

- (a) be in Form 7; and
- (b) be forwarded to the Departmental Head; and
- (c) contain the particulars required by that form to be supplied.

24. Certificate of registration.

As soon as is practicable after the receipt of an application under Section 23, the Departmental Head shall issue a consecutively-numbered certificate of registration in Form 8.

25. Inscription of registered number.

The owner of a boiler or pressure vessel registered under Section 24 shall cause the number endorsed on the certificate of registration referred to in that section to be inscribed in an approved position on the boiler or vessel.

26. Change in location or construction.

Where—

- (a) the location of a boiler or pressure vessel is changed; or
- (b) substantial changes are effected to the design of a boiler or pressure vessel,

the owner of the boiler or vessel shall forward to the Departmental Head details of the change of location or design.

27. Notice of inspection.

An Industrial Safety Officer may, by written notice to the owner of a boiler or pressure vessel, direct him to make it available for inspection by a boiler inspector.

28. Certificate of inspection.

(1) A boiler inspector may, in respect of a boiler or pressure vessel in relation to which a notice has been issued under Section 27—

- (a) issue a certificate of inspection subject to such conditions (if any) as are endorsed on it; or
- (b) defer the issue of a certificate of inspection until he is satisfied that the boiler or pressure vessel, as the case may be, has been made safe and fit for use; or

- (c) refuse to issue a certificate of inspection.
- (2) A certificate of inspection—
 - (a) shall be in Form 9; and
 - (b) subject to this Regulation, remains current for a period of 12 months or such greater period as is endorsed on it.

29. Uncertified boilers.

The owner of a boiler or pressure vessel who uses it, or permits it to be used—

- (a) if a certificate of inspection in respect of it has been refused; or
- (b) during the currency of the deferment, if a certificate of inspection in respect of it has been deferred; or
- (c) in a manner contrary to a condition endorsed on the certificate of inspection in respect of it; or
- (d) after it has once been the subject of a certificate of inspection unless there is a current certificate of inspection issued in respect of it,

is guilty of an offence.

Penalty: A fine not exceeding K100.00.

30. Adoption of S.A.A. Boiler Code.

In respect of matters relating to the design, construction, installation, maintenance and method of operation and inspection of boilers and pressure vessels and cancellation of certificates of inspection, the Standards Association of Australia Boiler Code C.B.1¹ is adopted.

PART VI.—SAW MILLING AND WOODWORKING.

Division 1.—Forestry Operations Generally.

31. Personal safety.

A person engaged in forestry operations, including logging, falling, snigging, loading, transporting and tractor operations associated with forestry operations, shall comply with any reasonable request by a Forest Officer or an Industrial Safety Officer directed at ensuring that—

- (a) the tools and equipment used in the operations are suitable, safe and in good repair; and
- (b) safe operating practices are observed.

Division 2.—Circular Saws.

32. Liability of occupier.

The occupier of a factory in which a circular saw is used or is to be used for cutting timber must comply with this Division or cause it to be complied with.

Penalty: A fine not exceeding K200.00.

¹ See, now S.A.A. Code for Fired Tube Boilers Class 1-Welded Construction (AS 1797-1975) and S.A.A. Unfired Pressure Vessels Code (AS 1210-1977).

33. Design, etc.

The saw, saw bench and equipment, saw mountings and other components of any circular saw installation shall be so designed, put together and set up as to be suitable, safe, and adequately strong for the purpose for which the saw is used or intended to be used.

34. Foundations.

A stationary circular saw installation shall—

- (a) be erected on, and securely fixed to, adequate foundations; and
- (b) be so placed that ample clear space for safe working is provided all round.

35. Floors.

The floor or other surface around a circular saw installation shall—

- (a) be sound, level and even; and
- (b) provide a firm foothold, and not be allowed to become slippery; and
- (c) be kept free of material or other impediments, and, as far as practicable, of accumulations of sawdust and trade waste.

36. Clearing of sawdust, etc.

Sawdust and trade waste shall be removed from potentially dangerous positions under and around a circular saw installation only when the saw is stopped.

37. Lighting.

Adequate and suitable lighting free from harmful or confusing glare shall be provided at each circular saw.

38. Marking of safe working speeds.

The maximum safe working speed in revolutions per minute and the maker's name of each circular saw shall be clearly and legibly impressed on the saw in a conspicuous position and maintained so impressed at all times.

39. Power.

(1) The power provided for driving a circular saw shall be sufficient to ensure an efficient cutting speed for all purposes for which the saw is used.

(2) A governor or other means of speed control shall be provided to prevent the circular saw being driven at a speed in excess of its maximum safe working speed.

40. Collars.

(1) The diameter of collars for circular saw blades shall—

- (a) be as large as practicable; and
- (b) not be less than $2\frac{1}{2}$ times the diameter of the saw spindle, measured between the fixed collar and the first bearing.

(2) Collars for circular saw blades shall be recessed.

41. Riving knives.

The saw blade shall be provided with a riving knife that—

- (a) is made of good quality steel with a smooth finish; and

- (b) is capable of being held rigidly in any working position in alignment with the saw blade; and
- (c) is as close as possible to the thickness of the saw kerf and thicker than the saw blade, with the leading edge chamfered to provide a lead for passing material; and
- (d) is curved approximately to the periphery of the saw blade with which it is used; and
- (e) is adjustable so that the clearance between the riving knife and saw blade is as little as practicable and in any case is not greater than 12 mm; and
- (f) is adjusted so as to reach not less than 3.2 mm below the maximum height of the saw blade protruding above the table.

42. Secure holding of material.

(1) Where practicable, during manually-fed operations anti-kick-back devices shall be provided, or jigs and fixtures that effectively hold the work shall be used.

(2) Where used, anti-kick-back devices shall be such that—

- (a) they are in contact with the work as it moves under them; and
- (b) any backward movement of the material being cut will cause them to engage instantly and hold the material; and
- (c) they are effective on all thicknesses of material fed.

43. Adjustment, etc., of attached equipment.

Equipment attached to the circular saw bench shall, as far as practicable, be adjusted or serviced only when the saw is stopped.

44. Guards on bank or gang saws.

Every bank or gang saw (other than a log saw or a band resawing machine) shall be guarded as follows:—

- (a) the rim and front of both top and bottom pulley shall be completely encased in sheet metal or other suitable material; and
- (b) all portions of the blade shall be encased except the portion of the blade between the table and top guide.

45. Guards on circular saw blades.

(1) Every circular saw blade (except the blade of log saws, and the blade of circular saws that move towards the timber) shall be so guarded at the top, back and lower portion that the risk of accidental contact with it is reduced to the least practicable.

(2) The guards shall conform to the following requirements:—

- (a) all guards shall be readily adjustable to the different sizes of saw blades used in the bench; and
- (b) the top guard shall be kept as close to the material being sawn as is practicable; and
- (c) subject to Subsection (3), the back guard shall at all times—
 - (i) cover the back of the saw blade; and
 - (ii) extend from the top of the bench to the under side of the top guard; and

- (iii) at the bench level be as close as possible to, and not more than 15 mm distant from, the saw teeth; and
 - (d) if the portion of the saw blade beneath the bench is not completely encased in a dust-collecting hood—
 - (i) it shall be encased by means of boards or sheet-iron; and
 - (ii) the enclosure shall extend at least 50 mm below the saw teeth; and
 - (iii) the opening in the enclosure through which the sawdust passes shall not exceed 75 mm in width; and
 - (e) guards shall be kept in an efficient state and securely fixed in position.
- (3) Subsection (2)(d) does not apply to a fire-wood saw guarded with a flat strap type of guard.
- (4) On every circular saw that moves towards the timber being cut in a case where the timber is placed on a table or bench—
- (a) guards shall be provided to cover the saw blade as much as practicable; and
 - (b) there shall be some means of limiting the travel of the saw so that no part of the saw blade can project beyond the front edge of the table or bench.

46. Guard on pendulum or swinging saw.

Every pendulum or swinging saw shall be guarded as follows:—

- (a) all teeth above the centre line shall be covered with a hood made of metal or other suitable material; and
- (b) if the back of the bench is in such a position that operatives may come in contact with the saw, the back of the saw shall be completely encased; and
- (c) a check chain or other suitable device—
 - (i) made of not less than 6.30 mm welded steel links or other material approved by an Industrial Safety Officer; and
 - (ii) securely bolted at one end of the saw frame and at the other end to a permanent fixture; and
 - (iii) of such a length that it will at all times prevent the projection of any portion of the saw past the front edge of the saw bench,shall be attached.

47. Maintenance, etc.

- (1) Each circular saw shall be in good condition, the teeth sharp and correctly set and the gullets rounded.
- (2) The work of sharpening, setting and conditioning a circular saw shall be done in a competent manner.
- (3) A circular saw—
 - (a) that is cracked, fractured, warped, has teeth missing or is otherwise defective or in bad condition shall not be used; and
 - (b) shall be maintained in good working order and condition while in use; and
 - (c) shall be securely and truly mounted and adjusted and be operated without undue vibration; and

- (d) shall be provided with an efficient stopping and starting appliance of a type that will prevent inadvertent starting, the control being in such a position as to be readily and conveniently operated by the person using the saw; and
- (e) shall not be allowed to run idly—
 - (i) between jobs; or
 - (ii) when the work in hand is delayed or interrupted; or
 - (iii) when unattended; and
- (f) shall be mounted or adjusted only while the saw is stopped and secured against inadvertent starting.

Division 3.—Band Saws.

48. Band saws.

The occupier of a factory in which a band saw is used or is to be used for cutting timber must comply with this Division or cause it to be complied with.

Penalty: A fine not exceeding K200.00.

49. Guards.

Suitable guards shall cover the upper and lower band wheels, the return side of the saw blade and as much as practicable of the cutting side.

50. Tension control.

Band saws shall be provided with efficient tension control to compensate for expansion and contraction and to ensure proper tension during use.

51. Counterweights.

Counterweights, where used, shall be enclosed for the full length of the travel.

52. Dust control.

Means shall be provided for preventing the accumulation of dust on the rim of the band wheel.

53. Size of saw blade relative to band wheel.

The manufacturer's recommendations concerning gauge and width of saw blade relative to width and diameter of band wheel shall be followed.

54. Maintenance, etc.

(1) A band wheel shall be inspected and tested at frequent intervals by a person competent to detect cracks, loose spokes, or other defects of the wheel and rim, and any wheel in which a defect is found shall be removed from service.

(2) Band saw blades shall be checked at frequent intervals for cracks, faulty joints, and misalignment.

*Division 4.—Overhand Planing Machines.***55. Use of certain machines.**

The occupier of a factory must not require or permit the woodworking machine commonly known as a jointer, surface planer or buzzer to be used for overhand planing unless—

- (a) it is fitted with a cylindrical cutter block the slots of which are not more than 15.8 mm in width and 11 mm in depth, or such greater width or depth as an Industrial Safety Officer approves in a particular case; and
- (b) the edges of the table that form the slot or opening in which the cutter block revolves are kept as close to the block as possible, consistent with the proper working of the machine; and
- (c) the cutting heads are in proper balance and sets of blades are balanced to exactly the same weight after sharpening; and
- (d) suitable guards are fitted to the cutter bar on both sides of the gauge fence.

Penalty: A fine not exceeding K200.00.

*Division 5.—Log Carriages.***56. Liability of occupier.**

The occupier of a factory in which a log carriage is used or is to be used must comply with this Division or cause it to be complied with.

Penalty: A fine not exceeding K200.00.

57. Platform.

Where the operator of a log carriage uses the carriage floor as a platform, it shall be completely decked over to prevent persons stepping through the openings in the frame.

58. Log carriages.

- (1) The wheels of log carriages shall be so protected as to prevent toes and feet being caught between the wheels and rails.
- (2) Log carriage cables and winch cables shall be maintained in a satisfactory condition at all times.
- (3) The carriage control shall be so located and protected that its operation does not create a hazard to the operator.
- (4) All belts, pulleys, sprockets, chain wheels, shafting and gearing, including that controlling the setworks, on the carriage shall be securely guarded.
- (5) The cable pulleys shall be guarded by boxes of adequate strength securely fixed in position.
- (6) The clearance between the rear end of the log carriage or log and the wall or wall timbers shall not be less than 1 200 mm when used as a passage way, and shall in no case be less than 600 mm.
- (7) Roof truss timbers or other parts of the buildings or fixtures shall not be located within 2 000 mm above the surface of the log carriage deck.
- (8) The wheel mountings of the log carriage shall be so constructed and maintained that excessive lateral movement does not occur.

59. Rails.

(1) Rails shall be installed and maintained level and straight in correct relationship with the saw blades.

(2) Brushes or other satisfactory means of keeping the rails free from trade waste shall be provided.

60. Guard rails.

Where practicable, guard rails shall be provided along the track to prevent accidental contact with the moving carriage.

61. Stops.

Each end of a log carriage runway shall be provided with a stop capable of safely arresting the carriage.

62. Saw clearance.

Means of providing saw clearance on the return trip of the carriage shall be maintained in good condition.

63. Leads.

Where a lead is thought necessary, it shall not exceed 6 mm in 6 m and should preferably be not more than 3 mm in 6 m.

64. Dogs, etc.

(1) On underslung saws, suitable chocks or dogs shall be provided to prevent the log from moving in the cut.

(2) Dogs—

(a) shall be properly designed and of adequate strength; and

(b) shall be maintained sharp and free from burrs.

Division 6.—Sawmilling and Woodworking Operations Generally.

65. Liability of occupier.

The occupier of a factory in which sawmilling or other woodworking operations are, or are to be, carried on must comply with the provisions of this Division or cause them to be complied with.

Penalty: A fine not exceeding K200.00.

66. Guarding of machinery.

(1) All machinery or machines other than those referred to in this Part used in or about sawmilling or other woodworking operations, including sanders, lathes, morticers, tenoners, planers, thicknessers, molders or any combination machines or others used for special operations shall be effectively guarded to the satisfaction of an Industrial Safety Officer to secure the safety and health of persons engaged on or in the vicinity of the machines or operations.

(2) For the purposes of Subsection (1), the Departmental Head may, by notice in the National Gazette, declare—

(a) any machine or operation to be dangerous to persons; and

(b) approved measures for guarding and operation of the machine or operation.

67. Disposal of waste.

(1) Disposal of waste from sawmilling and woodworking operations is the responsibility of the owner or occupier.

(2) Within the limits of any town, disposal by burning shall be only by means of an approved type of incinerator.

(3) Where disposal of waste is not effected by burning, all waste shall be removed, at least once weekly or at such other times as are directed by an Industrial Safety Officer, from the site of operations to approved dumping areas.

PART VII.—MISCELLANEOUS.

68. Incompetent workers.

(1) Where, in the opinion of an Industrial Safety Officer, an employee is by reason of—

(a) his lack of comprehension; or

(b) his physical or mental disability; or

(c) any other cause,

unable to engage in a particular work or a particular class of work without danger to himself or other persons, an Industrial Safety Officer may, by written notice to the employer, direct that that employee be not engaged in the work or class of work specified in the notice.

(2) An employer shall not engage or permit a worker named in a notice under Subsection (1) to perform the work or class of work specified in the notice.

SCHEDULE.

PAPUA NEW GUINEA.

Industrial Safety, Health and Welfare Act.

Act, Sec. 5(2).

Form 1.

Reg., Sec. 2.

CERTIFICATE OF APPOINTMENT AS INDUSTRIAL SAFETY OFFICER.

This is to certify that _____ of _____, whose signature appears below, has been appointed an Industrial Safety Officer for the purposes of the *Industrial Safety, Health and Welfare Act*.

Dated _____ 19__.

(Signature of Appointee.)

Secretary,
Department of Labour and Industry.

Industrial Safety, Health and Welfare

Ch. No. 175

PAPUA NEW GUINEA.

Industrial Safety, Health and Welfare Act.

Act, Sec. 16.

Form 2.

Reg., Sec. 3.

APPLICATION FOR REGISTRATION OF FACTORY.

To the Secretary,
Department of Labour and Industry.

Application is made for the registration of the place or premises described below as a factory under the *Industrial Safety, Health and Welfare Act*.

In support of this application the following particulars are provided:—

Situation—

Allotment:

Section:

Town:

Postal address:

Proposed No. of employees—

Males:

Females:

Brief description of manufacturing process, etc., that is to be carried on:

Type of power:

Date operations commenced or are proposed to commence:

If premises, etc., were previously used as a factory, name of previous occupier:

If certificate of a Building Board has been issued in respect of the premises, etc., number of certificate:

Particulars desired to be shown on the Certificate of Registration:

Name:

Address:

I/We* attach a copy of the plan of the premises, etc., showing the particulars required by Section 3(2) of the *Industrial Safety, Health and Welfare Regulation*.

I/We* certify that the particulars stated in this application and shown on the attached plan are true and correct to the best of my/our* knowledge, information and belief.

Dated

19 .

(Signature of Applicant(s).)

* Strike out whichever is inapplicable.

Ch. No. 175

Industrial Safety, Health and Welfare

PAPUA NEW GUINEA.

Industrial Safety, Health and Welfare Act.

Act, Sec. 18.

Form 3.

Reg., Sec. 4(1).

CERTIFICATE OF REGISTRATION AS A FACTORY.

This is to certify that, the prescribed fee having been paid, the premises, particulars of which are set out below have been registered as a (type) factory under the *Industrial Safety, Health and Welfare Act* until 31 December 19 .

Particulars.

Occupier:

Section:

Allotment:

Town:

Postal address:

Nature of business:

Dated 19 .

Secretary,
Department of Labour and Industry.

PAPUA NEW GUINEA.

Industrial Safety, Health and Welfare Act.

Act, Sec. 18.

Form 4.

Reg., Sec. 4(2).

PERMIT AUTHORIZING THE USE OF PREMISES AS A FACTORY.

This is to certify that, the prescribed fee having been paid, the use until 19 of the premises, particulars of which are set out below, as a (type) factory under the *Industrial Safety, Health and Welfare Act* has been approved.

Particulars.

Occupier:

Section:

Allotment:

Town:

Postal address:

Nature of business:

Dated 19 .

Secretary,
Department of Labour and Industry.

Industrial Safety, Health and Welfare

Ch. No. 175

PAPUA NEW GUINEA.

Industrial Safety, Health and Welfare Act.

Act, Sec. 26(2).

Form 5.

Reg., Sec. 6.

APPLICATION FOR APPROVAL FOR BUILDING OR STRUCTURAL ALTERATIONS.

To the Secretary,

Department of Labour and Industry.

Application is made for approval for the construction/alteration* of the places or premises described below being used/to be used* as a (type) factory under the *Industrial Safety, Health and Welfare Act*.

In support of this application the following particulars are provided:—

Situation—

Allotment:

Section:

Town:

Postal address:

If application for approval of alteration of factory only, brief details of the alteration proposed together with any necessary alterations to the Certificate of Registration considered necessary:

If application is for approval of construction of premises, etc., as a factory—then the following questions should be answered:—

Proposed number of employees—

Male:

Female:

Brief description of manufacturing process that is to be carried on:

Type of power to be used:

Date operations are proposed to be commenced:

No. of Building Board Certificate, if applicable:

I/We* attach two copies of the plans showing details of the proposed construction/alterations*.

I/We* certify that the particulars stated in and shown on the attached plans are true and correct to the best of my/our* knowledge, information and belief.

The capacity in which I/we* make this application is as builder/owner/architect* of the proposed factory.

Dated

19 .

(Signature of Applicant(s))

* Strike out whichever is inapplicable.

Ch. No. 175

Industrial Safety, Health and Welfare

PAPUA NEW GUINEA.

Industrial Safety, Health and Welfare Act.

Act, Sec. 34.

Form 6.

Reg., Sec. 19

NOTICE OF MAJOR INJURY, MAJOR DISEASE OR DEATH.

Employee's Full Name (*block letters*):

Village:

Address:

Sub-district:

Province:

Age: years.

Sex:

Marital status:

Occupation:

Employed at

since:

Salary/wages—

per lunar month ()

per day ()

per week ()

per fortnight ()

Employed by—

the Government—

Permanent ()

Temporary ()

Administration

Servant ()

Agreement ()

Agreement No.

Casual ()

other than the Government—

Agreement ()

Agreement No.

Casual ()

Day-to-day ()

Prov. with

rations ()

Prov. with

accommodation ()

all other—

n.e.i. ()

Accompanying dependants:

wife ()

No. of accompanying children ()

MAJOR INJURY.

Nature of injury: . Where did accident happen?

Date and time when injury sustained:

Was it during normal working hours?

Witnesses (*names and addresses*):

Treatment given by employer:

Admitted to Hospital on

Injury to fingers or hand—was person injured right-handed () or left-handed ().

Injury by motor vehicle—was person injured—driver or rider () passenger () or pedestrian ().

Injury by machinery—

Name and type of machine: . Part of machine responsible:

Was machinery operated by—steam () electricity () other power () or hand ().

What was person doing at time of injury?

Will salary/wages be paid during period of incapacity?

Industrial Safety, Health and Welfare

Ch. No. 175

MAJOR DISEASE.

Nature of disease:

Symptoms—nature:

When first evidenced:

Treatment given by employer:

If sent to hospital—admitted to () or attended at ()
on

Hospital

Will salary/wages be paid during period of incapacity?

DEATH.

Cause (or suspected cause) of death:

Date:

Time:

Place:

If deceased died in hospital, name of hospital:

Where death resulted from accident, what was deceased doing immediately prior to the accident?

Where death resulted from motor vehicle accident, was deceased—driver or rider () passenger () or pedestrian ().

Where death resulted from machinery:—

Name and type of machine:

Part of machine responsible:

Was machine operated by—steam () electricity () other power () or hand ().

Next of kin (*name in full*):

Relationship:

Address:

CHILDREN UNDER 16 YEARS OF AGE.

Name.	Sex.	Age.
-------	------	------

Name of Employer:

Industry:

Address:

Name of insurer:

Address:

Scope of insurance—full cover () weekly payments excluded ().

Dated

19 :

(*Signature of Employer.*)

PAPUA NEW GUINEA.

Industrial Safety, Health and Welfare Act.

Reg., Sec. 23.

Form 7.

APPLICATION FOR REGISTRATION OF A BOILER/PRESSURE VESSEL.

To the Secretary,

Department of Labour and Industry.

Application is made for the registration of the equipment mentioned below as a boiler/pressure vessel* for the purposes of the *Industrial Safety, Health and Welfare Regulation*.

Ch. No. 175

Industrial Safety, Health and Welfare

PARTICULARS.

Name and address of owner (*state if only lessee or mortgagee in possession*):

Location of boiler/pressure vessel*:

Type: Serial No. Capacity:

Construction details:

Area of heating surface: m². Safety valve setting: MPa.

Max. tested pressure: MPa. Max. allowable working pressure: MPa.

Purpose for which used:

Date of last inspection: Inspection Certificate No.

Dated 19 .

(*Employer or Agent.*)

* Strike out whichever is inapplicable.

PAPUA NEW GUINEA.

Industrial Safety, Health and Welfare Act.

Reg., Sec. 24.

Form 8.

CERTIFICATE OF REGISTRATION OF A BOILER/PRESSURE VESSEL.

This is to certify that the boiler/pressure vessel* the particulars of which are stated below has been registered for the purposes of the *Industrial Safety, Health and Welfare Regulation*.

PARTICULARS.

Registered No. . Situated at

Name and address:

(*owner or lessee or mortgagee*)

Type:

Purpose for which used:

Safety valve setting MPa.

Dated 19 .

Secretary,
Department of Labour and Industry.

* Strike out whichever is inapplicable.

PAPUA NEW GUINEA.

Industrial Safety, Health and Welfare Act.

Reg., Sec. 28.

Form 9.

CERTIFICATE OF INSPECTION OF BOILER/PRESSURE VESSEL.

This is to certify that the boiler/pressure vessel,* particulars of which are set out below, was on 19 inspected by (*Inspector*) and I am satisfied that it may safely be used up to a pressure of MPa.

Industrial Safety, Health and Welfare

Ch. No. 175

PARTICULARS.

Registered No.

. Situated at:

Name and address of owner or lessee or mortgagee:

Type:

This Certificate is in force until

19 , unless previously suspended or cancelled.

Issued by me on

19 .

Boiler Inspector.

* Strike out whichever is inapplicable.

INDEPENDENT STATE OF PAPUA NEW GUINEA.

CHAPTER NO. 175.

Industrial Safety (Building Works) Order.

ARRANGEMENT OF SECTIONS.

PART I.—PRELIMINARY.

1. Interpretation—
 - "crane"
 - "fixed ladder"
 - "hoist"
 - "ladder"
 - "the Ladders Code"
 - "step ladder"
 - "trestle ladder".

PART II.—SAFETY GENERALLY.

2. Person carrying out building work to provide safety measures.
3. Fencing of platforms, etc.
4. Stability of walls.
5. Protection in lift wells or stair wells.
6. Temporary ramps.
7. Protection of footpaths, etc.

PART III.—LADDERS.

8. Standards for ladders.
9. Provision of ladders.
10. Placing of ladders.
11. Securing ladders.
12. Angle of ladders.
13. Use of separate ladders for ascent and descent.
14. Landing places.
15. Step ladders.
16. Scaffolding planks.
17. Use of ladders.

PART IV.—SCAFFOLDING.

18. Interpretation of Part IV.—
 - "birdcage scaffolding"
 - "heavy-duty scaffolding"
 - "independent-pole scaffolding"
 - "light-duty scaffolding"
 - "run"
 - "single-pole scaffolding"
 - "toe board".
19. Electrical dangers.
20. Construction of scaffolding generally.

21. Construction of single-pole and independent-pole scaffolding.
22. Heavy-duty short single-pole and independent-pole scaffolding.
23. Longer heavy-duty single-pole and independent-pole scaffolding.
24. Light-duty single-pole and independent-pole tubular scaffolding.
25. Light-duty scaffolding for single-storey wooden buildings.
26. Tubular birdcage scaffolding.
27. Use of unit frame scaffolding.

PART V.—TRETTLE LADDERS.

28. Interpretation of Part V.
29. Construction of trestle ladders.
30. Timber ladders.
31. Steel or alloy metal ladders.
32. Hinges, etc.
33. Distance between stiles.
34. Guard rails.
35. General construction.

PART VI.—CRANES AND HOISTS.

36. Standards for cranes and hoists.
37. Notice showing safe loading.
38. Safe loads.
39. Maintenance.
40. Arrangement of components, etc.
41. Guards on moving parts.
42. Earthing.
43. Load radius attachments.
44. Riding on loads.
45. Construction of timber hoist towers.
46. Construction of tubular hoist towers.
47. Gates, etc., at platforms and landings.
48. Hoist platform to be visible to driver.
49. Platform to operate between guides, etc.
50. Safe signalling system.
51. Riding on platform.
52. Protective gear.

PART VII.—WORK ON ROOFS OF BRITTLE MATERIALS.

53. Warning notices.
54. Cat walks.

INDEPENDENT STATE OF PAPUA NEW GUINEA.

CHAPTER NO. 175.

Industrial Safety (Building Works) Order.

MADE under the *Industrial Safety, Health and Welfare Act.*

PART I.—PRELIMINARY.

1. Interpretation.

(1) In this Order, unless the contrary intention appears—

“crane” means—

- (a) a grab crane, charging crane, excavator power shovel, floating crane, cableway, overhead travelling crane, jib crane, derrick crane, cantilever crane, bridge or gantry crane, loader, monorail and mobile crane; or
- (b) any other crane or apparatus used for raising, lowering or handling; or
- (c) the supporting structure and gear used in connexion with any crane referred to in Paragraph (a) or (b);

“fixed ladder” means a ladder that is permanently attached to a building or structure;

“hoist” means a mechanical appliance used, or capable of being used, for raising or lowering materials and includes—

- (a) hoists and hoisting appliances used with any building works; and
- (b) supporting structures used in connexion with a hoist;

“ladder” means an appliance usually consisting of two side rails or stiles joined at regular intervals by cross pieces called steps, rungs or treads, on which a person may rest or step in ascending or descending;

“the Ladders Code” means the Standards Association of Australia *Code for Fixed Platforms, Walkways, Stairways and Ladders* (AS 1657-1974), as in force from time to time;

“step ladder” means a self-supporting portable ladder, non-adjustable in length, having flat steps or treads and hinged back legs;

“trestle ladder” means a self-supporting portable ladder consisting of two sections hinged at the top to form equal angles with the base.

(2) For the purposes of this Order—

- (a) the size of a step ladder is designated by the overall length of the ladder measured along the front edge of the side-rails; and
- (b) the size of a trestle ladder is designated by the length of the side-rails measured along the front edge.

PART II.—SAFETY GENERALLY.

2. Person carrying out building work to provide safety measures.

(1) A person who, directly or by his servants or agents, carries out any building work shall, subject to Section 3, take all necessary measures—

- (a) to minimize accident risk; and
- (b) to prevent injury to the health of persons engaged in the building work.

(2) For the purposes set out in Subsection (1) and without limiting the generality of that subsection, a person referred to in that subsection shall—

- (a) provide suitable and safe scaffolding that conforms to the requirements of this Order for all work that cannot be done safely from ladders constructed in conformity with this Order; and
- (b) provide and maintain safe means of access to any place at which a person has to work at any time; and
- (c) where a person is working at a place from which he would be liable to fall a distance of more than 1.829 m¹ to the ground—provide means, by fencing or otherwise, for securing his safety; and
- (d) keep all stairways, corridors and passageways free from loose materials and debris, building materials, supplies and obstructions of any kind; and
- (e) where there is a likelihood of persons being injured by objects falling from above, provide—
 - (i) where practicable—adequate overhead protection for persons working or passing below; or
 - (ii) if it is impracticable to fix overhead protection—head protective helmets, of an approved type, for the use of all persons; and
- (f) subject to Subsection (3), effectively fence in a manner prescribed in this Order—
 - (i) all platforms; and
 - (ii) the open sides of all floors, openings in floors, roofs and platforms into which persons could accidentally walk; and
 - (iii) the open sides of stairways and stairway landings; and
 - (iv) all excavations and holes more than 1.524 m² deep; and
- (g) cause the exhaust gases of engines used on the premises to be conducted away to the atmosphere so as to prevent discomfort or danger to health; and
- (h) where necessary, provide—
 - (i) goggles of an approved type; or
 - (ii) effective screens,to protect the eyes of persons employed on the building work; and
- (i) take measures to ensure that—
 - (i) scaffolding materials, tools, waste materials and other objects and materials are not thrown, tipped or shot down from a height but are properly lowered; and

¹ Metricated editorially. The original distance was 6 ft.

² Metricated editorially. The original depth was 5 ft.

- (ii) adequate steps are taken to protect persons from falling or flying debris; and
 - (j) cause protruding nails to be knocked in or removed from all materials used in the construction of scaffolding, false work and shuttering, and take measures to ensure that no timber or material with projecting nails is allowed to remain in any place where persons are liable to come into contact with such nails; and
 - (k) take all necessary precautions, by the use of adequate temporary guys, stays, supports and fixings or otherwise, to prevent danger to any person through the collapse of any part of a building or structure—
 - (i) during any temporary state or weakness or instability of the building or structure, or a part of it; or
 - (ii) before a building or structure is completed; or
 - (iii) during the demolition of a building or structure; and
 - (l) provide adequate safeguards for falling products of any electric arc or similar equipment.
- (3) Where, because of the nature of the building work, it is impracticable to comply with Subsection (2)(f), an Industrial Safety Officer may direct that the contractor or person in charge of the building provide safety nets, safety belts or lifelines of an approved type in order that the work may be carried out without risk of serious injury.

3. Fencing of platforms, etc.

Where it is required by this Order that a platform, landing, stairway, excavation or hole, opening in a floor, roof, platform or landing or any other place be fenced, the fencing shall be effected—

- (a) by positively fastening in position uprights or posts of 101.6 mm x 50.8 mm¹ timber at a distance of not more than 2.438 m² apart and bolting to each upright or post such length or lengths of 101.6 mm x 50.8 mm¹ timber as are necessary to form the top guard rail of the fence, the 101.6 mm x 50.8 mm¹ timber being bolted to each upright or post at such a position that the distance from its top edge to the level of the place being fenced is 1.067 m³; or
- (b) by positively fastening to the uprights or posts mentioned in Paragraph (a) toe or fender boards, of not less than 228.6 mm x 25.4 mm⁴ timber, in such a manner that—
 - (i) the bottom edge of each toe or fender board is level with the place being fenced; and
 - (ii) an opening or gap is not left between the bottom edge of the toe or fender board and the surface of the place being fenced; or
- (c) if constructing the members of steel—by providing that each steel member used possesses the strength and rigidity of its corresponding timber member as specified in this Order; or

¹ Metricated editorially. The original size was 4 in x 2 in.

² Metricated editorially. The original distance was 8 ft.

³ Metricated editorially. The original distance was 3 ft 6 in.

⁴ Metricated editorially. The original size was 9 in x 1 in.

- (d) by securely attaching a flexible steel wire rope, or a fibre rope not less than 76.2 mm¹ in circumference, to the uprights or posts, and keeping the rope taut and properly secured.

4. Stability of walls.

A wall or portion of a wall shall not, during its construction, be built to a greater height than 1.524 m² or six times its thickness, whichever is the greater, unless it is supported, until such time as roof or floor ties or cross walls are in position, by temporary shores, proper scaffolding or buttresses at intervals of length not greater than 30 times the thickness of the wall.

5. Protection in lift wells or stair wells.

When persons are working in a lift well or stair well during the construction, alteration or equipping of a building, timber planks not less than 50.80 mm³ thick shall be laid across the lift well or stair well not more than two stories above nor one storey below the level at which they are working.

6. Temporary ramps.

(1) A temporary ramp built to provide access for vehicles to the site of a building work shall—

- (a) have a grade safe for vehicles using it; and
- (b) possess adequate strength and stability under the effects of the maximum loads to which it is subjected.

(2) The minimum width of a ramp referred to in Subsection (1) is 3.048 m⁴, and a guide or kerb 228.6 mm⁵ in height and 152.4 mm⁵ in width shall be positively fixed in position on either side.

7. Protection of footpaths, etc.

A person who, directly or by his agents or servants, carries out any building works shall, where the public uses a footpath, walkway or road in the vicinity of or close to any construction work, provide—

- (a) such adequate protection by way of fences, barriers or overhead protection; and
- (b) during the hours of sunset to sunrise—such lights to illuminate the fence, barrier or protection,

as are necessary to prevent any possible injury resulting from the building works to persons using the footpath, walkway or road.

PART III.—LADDERS.

8. Standards for ladders.

(1) Ladders shall conform to the Ladders Code.

(2) Ladders shall not—

- (a) be made by fastening cleats across a single rail; or

¹ Metricated editorially. The original thickness was 3 in.

² Metricated editorially. The original height was 5 ft.

³ Metricated editorially. The original thickness was 2 in.

⁴ Metricated editorially. The original width was 10 ft.

⁵ Metricated editorially. The original measurements were 9 in and 6 in, respectively.

- (b) be joined together to form a longer ladder unless the longer ladder so formed complies with the Ladders Code with respect to strength and rigidity; or
- (c) be used as guys, braces, tows, struts, beams or skids, or for any purpose other than their intended purpose; or
- (d) be used with missing, broken, weakened or otherwise defective rungs or treads, or broken or defective stiles; or
- (e) be used with rungs or treads that depend for their support solely on nails, spikes or other similar fixing.

9. Provision of ladders.

(1) A person who, directly or by his agents or servants, carries out any building work shall provide and maintain in place during working hours such ladders as are necessary to provide safe means of access to—

- (a) all floor levels; and
- (b) all places where any person has to work,

until such time as temporary or permanent stairways are completed and are available as such safe means of access.

(2) Ladders for a purpose set out in Subsection (1) shall rise to a height of at least 1.067 m¹ above the place of landing for persons using them.

(3) A ladder used as a place from which a person has to work shall rise to a height of at least 1.067 m¹ above the highest rung to be reached by the feet of the person working on the ladder, or if that is impracticable then to the greatest practicable height.

10. Placing of ladders.

(1) Ladders shall be so placed that—

- (a) each side-rail or stile has a level and firm footing; and
- (b) the top rest for each side-rail or stile—
 - (i) is level and reasonably rigid; and
 - (ii) is of adequate strength to support the maximum applied load; and
- (c) the side-rails or stiles are not supported by boxes, house bricks or other loose packing.

(2) A ladder shall not be placed in front of a door opening towards the ladder, unless the door is fastened open, or is locked or guarded.

11. Securing ladders.

A ladder shall, as far as practicable, be securely fixed so that it cannot move either from the top or from its bottom points of rest, or if it cannot be so securely fixed—

- (a) it shall, where practicable, be securely fixed at the base; or
- (b) if fixing at the base is impracticable, a person shall be stationed at the base of the ladder to prevent it from slipping.

12. Angle of ladders.

A ladder shall, where possible, be used at such an angle that the horizontal distance from the top support to the foot of the ladder is equal to 25% of the length of the ladder.

¹ Metricated editorially. The original height was 3 ft 6 in.

13. Use of separate ladders for ascent and descent.

Where, in connexion with any building work, traffic conditions on ladders are such as to warrant the use of separate ladders for the purposes of ascent and descent, separate ladders shall be provided, designated and used for the purpose of ascent only or descent only.

14. Landing Places.

(1) A landing place at least 685.8 mm¹ in width and 1 219.2 mm¹ in length shall be provided at the head and base of a ladder used for a purpose set out in Section 10.

(2) If any person is liable to fall a distance of more than 1 828 mm² from a landing referred to in Subsection (1), the landing shall be fenced in a manner prescribed by Section 3.

(3) A ladder or run of ladders rising a vertical distance of 6.096 m³ or more shall be provided with an intermediate landing place or places so that the vertical distance between two successive landing places does not exceed 6.096 m³.

15. Step ladders.

Where a step ladder is used, it shall be set up on a level and firm footing, and shall not be stood on loose bricks or other loose packing.

16. Scaffolding planks.

Where it is necessary to support a plank on which a person is to work above ground level, the plank shall be supported on properly constructed trestle ladders.

17. Use of ladders.

Persons using ladders—

- (a) shall face the ladder while in the act of ascending or descending; and
- (b) shall not crowd together on ladders.

PART IV.—SCAFFOLDING.**18. Interpretation of Part IV.**

In this Part, unless the contrary intention appears—

“birdcage scaffolding” means independent pole scaffolding used—

- (a) in connexion with interior decoration of buildings; or
- (b) for fixing building ceilings; or
- (c) for other such work,

in the course of which loads required to be carried are small in weight when compared with the weight of persons using the scaffolding;

“heavy-duty scaffolding” means scaffolding used by bricklayers, masons, plasterers and other such tradesmen who in the course of their work require heavy materials to be deposited on the scaffolding;

¹ Metricated editorially. The original measurements were 27 in. and 48 in. respectively.

² Metricated editorially. The original distance was 6 ft.

³ Metricated editorially. The original distance was 20 ft.

"independent-pole scaffolding" means scaffolding supported from the base by two or more rows of standards independent of support from a wall or other structure;

"light-duty scaffolding" means scaffolding for the use of carpenters, painters, plumbers, electricians and other such tradesmen that is required to support material of a weight that is small when compared with the weight of persons using the scaffolding;

"run" means a stationary incline provided as a means of ascent and descent from one level to another;

"single-pole scaffolding" means scaffolding supported from the base by one row of standards, the inner edge of the working platform being supported by putlogs fixed to the wall or structure;

"toe board" means a board 228.6 mm¹ in height erected at right angles to a scaffolding platform and held tightly against the scaffolding platform—

(a) for protection of persons; and

(b) to prevent materials or tools falling from the platform.

19. Electrical dangers.

(1) Scaffolding in which a metal member is used shall not be set up within 4.572 m² of—

(a) any overhead electricity transmission line or main; or

(b) any electrical apparatus,

until the line, main or apparatus has been protected in an approved manner by the electricity supply authority.

(2) Scaffolding built of timber members shall not be set up within 1.524 m³ of any electricity line, main or apparatus until the line, main or apparatus has been protected in an approved manner by the electricity supply authority.

20. Construction of scaffolding generally.

(1) Scaffolding shall be—

(a) of sound materials, good construction, and adequate strength, and free from defects; and

(b) suitable and safe for the purpose for which it is intended.

(2) Scaffolding and fixing shall be inspected by an Industrial Safety Officer, or a person appointed by an Industrial Safety Officer for the purpose, before it is used, in order—

(a) to eliminate any defective or broken items; and

(b) to ensure that it complies with this Order.

(3) Timber used in scaffolding shall be of good quality hardwood.

¹ Metricated editorially. The original height was 9 in.

² Metricated editorially. The original distance was 15 ft.

³ Metricated editorially. The original distance was 5 ft.

(4) Working platforms shall have a minimum width of 457.2 mm ¹, and all scaffold planks shall—

- (a) be of a uniform thickness of not less than 228.6 mm ² in width by 38.1 mm ² in depth; and
- (b) be lapped 228.6 mm ³ over supports; and
- (c) be laid over the full width of the scaffolding frame.

(5) Guard rails and toe boards shall be provided on the outer edges and ends of all scaffolding from which a person or object could fall a distance of 3.048 m ⁴ or more.

(6) Guard rails shall be—

(a) of timber—

(i) of equivalent strength and rigidity to the timber used in construction of the scaffolding; and

(ii) at least 101.6 mm x 50.8 mm ⁵ in dimensions and a minimum of 0.914 m ⁶ in height above the working platform; or

(b) of metal piping of not less than 48.419 mm ⁷ external diameter; or

(c) of rope not less than 76.2 mm ⁸ in circumference,

and shall be secured to uprights at intervals of not more than 2.438 m ⁹.

(7) Toe boards shall—

(a) project not less than 228.6 mm ³ above the top of the platform planks; and

(b) be set up so as to leave no space between the platform planks and the bottom edge of the toe boards.

(8) Fittings shall be—

(a) for sawn-timber scaffolding—steel bolts 15.875 mm ¹⁰ in diameter with washers and nuts; or

(b) for round wood pole scaffolding—

(i) more than 9.144 m ¹¹ in height—fibre rope lashings each 5.486 m ¹¹ in length by 38.1 mm ¹¹ in circumference; and

(ii) 9.144 m ¹² or less in height fibre rope lashing each 4.877 m ¹² in length by 3.8 mm ¹² in circumference; and

(c) for tubular scaffolding—approved types of connectors, and all fittings shall accurately embrace, over the whole area of their bearing surface, the member or members on which they are used.

(9) Pipes used for the construction of tubular scaffolding shall be straight and free from indentations, corrosion and other defects, and the ends of the pipes shall be squared.

¹ Metricated editorially. The original width was 18 in.

² Metricated editorially. The original measurements were 9 in. and 1½ in.

³ Metricated editorially. The original measurement was 9 in.

⁴ Metricated editorially. The original distance was 10 ft.

⁵ Metricated editorially. The original size was 4 in. x 2 in.

⁶ Metricated editorially. The original height was 3 ft.

⁷ Metricated editorially. The original diameter was 1-29/32 in.

⁸ Metricated editorially. The original measurement was 3 in.

⁹ Metricated editorially. The original distance was 8 ft.

¹⁰ Metricated editorially. The original diameter was 5/8 in.

¹¹ Metricated editorially. The original measurements were 30 ft., 18 ft. and 1½ in., respectively.

¹² Metricated editorially. The original measurements were 30 ft., 16 ft. and 1½ in., respectively.

21. Construction of single-pole and independent-pole scaffolding.

(1) Single-pole and independent-pole scaffolding shall comprise a number of standards to which are fixed horizontal ledgers supporting putlogs on which are laid scaffold planks, the whole structure being braced both longitudinally and transversely.

(2) Bracing shall be adequate in all directions to form a rigid structure capable of maintaining a wide margin of stability under all possible conditions.

(3) Standards shall bear on a firm footing, and shall be protected against any forces or impacts that may tend to displace them.

(4) Where splices are necessary in round timber pole standards, butt-jointed double poles shall be used in place of simple poles, and double poles shall break joint at least 2.743 m¹, the poles being secured together with two rope lashings at the base and one rope lashing on each side of each butt joint.

(5) Sawn timber standards shall be butt-jointed with two 0.914 m² lengths of timber 101.6 mm x 50.8 mm³ fixed one on each side of the butt joint and bolted through with four steel bolts 15.875 mm⁴ in diameter and fitted with washers and nuts, spaced at 228.6 mm⁵ centres.

(6) Joints in tubular scaffolding shall be made with approved type fittings and shall not be at distances greater than 228.6 mm⁵ from ledgers or other members capable of effectively constraining the joints against lateral displacement.

(7) Ledgers shall—

(a) be secured to each standard at each crossing by use of the appropriate fixing prescribed by Section 22(6)(d); and

(b) be so fixed that the greater rectilinear dimension of a section stands vertically; and

(c) be continuous, and be kept continuous, for the whole length of a scaffolding frame,

and joints shall not be made—

(d) in a ledger of a single span; or

(e) in ledgers near the end or outer standards; or

(f) in adjacent spans of a ledger.

(8) Where a straight ledger is supported—

(a) by a row of not less than three standards—one joint only may be made in the ledger and then only if it is not placed at a greater distance than 685.8 mm⁶ from the central standard; or

(b) by a row of four or more standards—the ledger joints may be placed at any position but not within adjacent or end spans.

(9) A putlog shall—

(a) be set above ledgers and securely fixed to ledgers or standards; and

¹ Metricated editorially. The original measurement was 9 ft.

² Metricated editorially. The original measurement was 3 ft.

³ Metricated editorially. The original size was 4 in. x 2 in.

⁴ Metricated editorially. The original diameter was 5/8 in.

⁵ Metricated editorially. The original measurement was 9 in.

⁶ Metricated editorially. The original distance was 2 ft. 3 in.

(b) in the case of single-pole scaffolding—

- (i) have not less than 114 mm¹ bearing in walls; and
- (ii) be securely wedged in position in walls; and
- (c) be effectively secured to any structure on which it rests; and
- (d) be arranged so as to provide a true and even support to scaffold planks; and
- (e) where placed in timber scaffolding—be spaced not more than 1.829 m² apart; and
- (f) subject to Subsection (10), where placed in tubular scaffolding—be placed one at each side of each standard not more than 228.6 mm³ from the centre of the standard to the centre of the putlog.

(10) In the case of a standard at the end of the scaffolding frame, one putlog only shall be placed on the inside of the standard.

(11) A joint shall not be made in a putlog.

(12) The maximum span of a putlog—

- (a) in timber and tubular scaffolding—shall not exceed 1.587 m⁴; and
- (b) in aluminium scaffolding—shall not exceed 1.435 m⁵.

(13) On each ledger, at least one putlog within 0.610 m⁶ of each standard shall remain in the scaffolding until the scaffolding is finally removed.

22. Heavy-duty short single-pole and independent-pole scaffolding.

(1) This section applies to heavy-duty single-pole and independent-pole scaffolding not exceeding 7.62 m⁷ in height.

(2) Except as provided by this section, Section 21 also applies to scaffolding to which this section applies.

(3) The load due to the weight of—

- (a) men and material uniformly distributed over the area of a scaffolding platform shall not exceed 34 750.08 kN per square metre⁸ of platform area; or
- (b) a concentrated load imposed on any bay—shall not exceed 181.436 kg⁹.

(4) Subject to Subsection (5), no more than two working platforms shall be set up and used on a scaffolding frame at any one time.

(5) Short platforms may be set up at different positions on a scaffolding frame, if the total area of the short platforms supported by a standard does not exceed that supported when two full length platforms are set up.

(6) Standards shall be effectively tied to the building or structure or be otherwise braced at points not more than 3.658 m¹⁰ apart on the length of each standard, and shall be—

- (a) of sawn hardwood timber 101.6 mm x 76.2 mm¹¹ sectional dimensions; or

¹ Metricated editorially. The original measurement was 4½ in.

² Metricated editorially. The original distance was 6 ft.

³ Metricated editorially. The original distance was 9 in.

⁴ Metricated editorially. The original span was 5 ft. 2½ in.

⁵ Metricated editorially. The original span was 4 ft. 8½ in.

⁶ Metricated editorially. The original distance was 2 ft.

⁷ Metricated editorially. The original height was 25 ft.

⁸ Metricated editorially. The original load was 35 lb. per square foot.

⁹ Metricated editorially. The original weight was 400 lb.

¹⁰ Metricated editorially. The original distance was 12 ft.

¹¹ Metricated editorially. The original size was 4 in. x 3 in.

- (b) of timber poles not less than 76.2 mm¹ in diameter at the small end; or
 - (c) in the case of tubular scaffolding only—of round metal pipes, steam quality, mild steel or pipes of an approved high tensile aluminium alloy or other approved alloy, all such pipes being of an outside diameter of not less than 48.419 mm² and a nominal bore of 38.1 mm³.
- (7) Standards shall be spaced—
- (a) in the case of sawn timber and pole standards—not more than 3.048 m⁴ apart from centre line to centre line of one standard to the next in row; or
 - (b) in the case of tubular or pipe standards—not more than 2.286 m⁵ apart in any row; or
 - (c) if two or more rows of standards are used—
 - (i) in the case of the scaffolding constructed of timber or mild steel pipes—not more than 1.524 m⁶ apart; and
 - (ii) in the case of scaffolding constructed of high tensile aluminium alloy pipes—not more than 1.372 m⁷ apart.
- (8) Ledgers shall be—
- (a) of sawn hardwood timber not less than 152.4 mm x 50.8 mm⁸ sectional dimensions; or
 - (b) of timber poles not less than 76.2 mm⁹ diameter at the small end; or
 - (c) in the case of tubular scaffolding only—of round metal pipes of the description and dimensions specified in Subsection (6)(c); or
 - (d) of such other material, construction and dimensions as are approved in writing.
- (9) Ledgers shall not be spaced more than 1.828 m¹⁰ apart, except that the distance measured from the base of the scaffolding to the first ledger may be increased to not more than 3.048 m⁴ to provide a working bay, if an additional cross-brace is added to all other bays.
- (10) Putlogs shall be—
- (a) of sawn hardwood timber not less than 101.6 mm x 76.2 mm¹¹ sectional dimensions; or
 - (b) in the case of tubular scaffolding only—of round metal pipes of the description and dimensions specified in Subsection (6)(c).
- (11) Bracings shall be—
- (a) in the case of timber scaffolding—
 - (a) of sawn hardwood timber, not less than 58.064 cm² ¹² in sectional area;
 - or

¹ Metricated editorially. The original diameter was 3 in.

² Metricated editorially. The original diameter was 1-29/32 in.

³ Metricated editorially. The original size was 1½ in.

⁴ Metricated editorially. The original distance was 10 ft.

⁵ Metricated editorially. The original spacing was 7 ft. 6 in.

⁶ Metricated editorially. The original spacing was 5 ft.

⁷ Metricated editorially. The original spacing was 4 ft. 6 in.

⁸ Metricated editorially. The original size was 6 in. x 2 in.

⁹ Metricated editorially. The original diameter was 3 in.

¹⁰ Metricated editorially. The original spacing was 6 ft.

¹¹ Metricated editorially. The original size was 4 in. x 3 in.

¹² Metricated editorially. The original area was 9 sq. in.

- (ii) timber poles not less than 76 mm¹ in diameter at the small end; or
- (b) in the case of tubular scaffolding—round metal pipes of the description and dimensions specified in Subsection (6)(c).

23. Longer heavy-duty single-pole and independent-pole scaffolding.

(1) This section applies to heavy-duty, single-pole and independent-pole scaffolding from 7.62 m to 45.72 m² in height.

(2) Except as provided by this section, Sections 21 and 22 also apply to scaffolding to which this section applies.

(3) Standards of sawn hardwood timber shall not be less than 101.6 mm x 101.6 mm³ sectional dimension.

(4) Sawn timber and pole standards shall not be spaced more than 2.743 m⁴ apart in any row.

(5) Tubular or pipe standards shall not be spaced more than 2.286 m⁵ apart in any row.

24. Light-duty single-pole and independent-pole tubular scaffolding.

(1) Light-duty single-pole or independent-pole tubular scaffolding may be used only by painters, decorators and tradesmen engaged in other similar building work where the scaffolding is subjected, from the combined weight of workmen and materials, to the equivalent of a uniformly distributed load of 9 928.8 kN to the square metre⁶, and subject to the succeeding provisions of this section.

(2) The height of the topmost platform shall not exceed 30.48 m⁷ from the base of the scaffold.

(3) Subject to Subsection (4), more than two working platforms shall not be set up and used on a light-duty scaffolding at the same time.

(4) Short platforms may be set up at different positions on a scaffolding frame provided that the total area of the short platforms supported by a standard does not exceed that supported when two full length platforms are set up.

(5) Standards shall be of round metal pipe of the description and dimensions specified in Section 22(6)(c).

(6) All standards shall be effectively tied to the building or structure and be otherwise braced at points not more than 3.657 m⁸ apart.

(7) Standards shall not be spaced more than 3.657 m⁸ apart, and if two or more rows of standards are used the rows shall be spaced so as to be not more than 1.524 m⁹ apart.

(8) Ledgers shall be of round metal pipe of the description and dimensions specified in Section 22(6)(c) and shall not be spaced more than 3.048 m¹⁰ apart.

(9) The distance of a joint in a ledger from the vertical shall not exceed 533.4 mm¹¹.

¹ Metricated editorially. The original diameter was 3 in.

² Metricated editorially. The original heights were 25 ft. and 150 ft., respectively.

³ Metricated editorially. The original size was 4 in. x 4 in.

⁴ Metricated editorially. The original spacing was 9 ft.

⁵ Metricated editorially. The original spacing was 7 ft. 6 in.

⁶ Metricated editorially. The original load was 10 lb. to the square foot.

⁷ Metricated editorially. The original height was 100 ft.

⁸ Metricated editorially. The original spacing was 12 ft.

⁹ Metricated editorially. The original spacing was 5 ft.

¹⁰ Metricated editorially. The original spacing was 10 ft.

¹¹ Metricated editorially. The original distance was 21 in.

(10) Putlogs shall be of round metal pipe of the description and dimensions specified in Section 22(6)(d).

(11) A putlog shall not be placed more than 610 mm¹ from a standard at each side of each standard, except in the case of the standards at each end of the scaffolding frame where only one need be used on the inside of a standard.

(12) The span of a putlog shall not more than 1.638 m².

25. Light-duty scaffolding for single-storey wooden buildings.

For single-storey wooden buildings, light-duty scaffolding, not exceeding 6.096 m³ in height, used for carpenters, plumbers, painters and others working on wooden buildings may be erected according to the following specifications:—

- (a) standards shall be not less than 101.6 mm x 50.8 mm⁴ hardwood, spaced not more than 2.743 m⁵ apart; and
- (b) ledgers shall not be less than 152.4 mm x 25.4 mm⁶ hardwood well nailed—
 - (i) to the standards and to the studs of walls; or
 - (ii) to cleats not less than 76.2 mm x 38.1 mm¹ well nailed to the wall of the building or structure and checked out to fully accommodate them; and
- (c) the span between a standard and the wall of the structure shall not exceed 1.219 m¹; and
- (d) scaffold boards shall be of sound timber not less than 228.6 mm x 38.1 mm¹ in cross-section laid butting or lapping, and when they are laid lapping the laps shall not be less than 228.6 mm¹; and
- (e) the floor of the platform shall not be less than 457.2 mm¹ in width; and
- (f) a fender board not less than 228.6 mm¹ in height shall be fixed to the outside edge of the platform; and
- (g) guard rails shall not be less than 76.2 mm x 38.1 mm¹ hardwood, securely fastened to standards at a height of not less than 0.914 m¹ above the platform; and
- (h) bracings shall be of 101.6 mm x 25.4 mm¹ sectional area sawn timber.

26. Tubular birdcage scaffolding.

(1) Where tubular birdcage scaffolding is used, the total load on the platform in any bay at any time shall not exceed the weight of two men plus material weight 22.68 kg¹.

¹ Metricated editorially. The original distance was 2 ft.

² Metricated editorially. The original span was 5 ft. 4½ in.

³ Metricated editorially. The original height was 20 ft.

⁴ Metricated editorially. The original size was 4 in. x 2 in.

⁵ Metricated editorially. The original spacing was 9 ft.

⁶ Metricated editorially. The original size was 6 in. x 1 in.

⁷ Metricated editorially. The original size was 3 in. x 1½ in.

⁸ Metricated editorially. The original span was 4 ft.

⁹ Metricated editorially. The original size was 9 in. x 1½ ins.

¹⁰ Metricated editorially. The original distance was 9 ins.

¹¹ Metricated editorially. The original width was 18 in.

¹² Metricated editorially. The original distance was 3 ft.

¹³ Metricated editorially. The original size was 4 in. x 1 in.

¹⁴ Metricated editorially. The original weight was 50 lb.

(2) The general arrangement, construction and materials shall be as specified in Section 24, subject to the following conditions :—

- (a) platform planks may be spaced not more than 177.8 mm¹ apart; and
- (b) the span of putlogs may be increased to 2.438 m² for steel and 1.829 m² for approved aluminium alloy; and
- (c) standards shall not be spaced more than 3.048 m³ apart in any row, unless additional putlogs are provided to support cantilevered ends of platform planks; and
- (d) more than one working platform shall not be set up on a scaffold frame at the same time.

27. Use of unit frame scaffolding.

Unit frame scaffolding shall not be used except where the design is such that the construction of the scaffolding is the same in strength, rigidity and safety as if wooden round poles or tubular scaffolding, as specified in this Order, had been used.

PART V. —TRESTLE LADDERS.

28. Interpretation of Part V.

For the purposes of this Part, the height of a trestle ladder is the height when fully opened for work.

29. Construction of trestle ladders.

Subject to this Part, trestle ladders shall be constructed in accordance with Part III.

30. Timber ladders.

(1) Trestle ladders constructed of timber—

- (a) up to 3.048 m⁴ in height—shall have stiles and ledgers of not less than 69.85 mm x 34.925 mm⁵ dressed timber; and
- (b) over 3.048 m⁶ and up to 4.877 m⁶ in height—shall have stiles of not less than 69.85 mm x 44.45 mm⁷ and ledgers of not less than 69.85 mm x 34.925 mm⁵ dressed timber.

(2) Trestle ladders constructed of timber shall not be used over 4.877 m⁸ in height.

31. Steel or alloy metal ladders.

Trestle ladders constructed of steel or alloy metals shall not exceed 4.877 m⁸ in height, and their construction shall be of a standard equivalent in strength, rigidity and safety to that of wooden ladders specified in this Order.

¹ Metricated editorially. The original spacing was 7 in.

² Metricated editorially. The original spans were 8 ft. and 6 ft., respectively.

³ Metricated editorially. The original spacing was 10 ft.

⁴ Metricated editorially. The original height was 10 ft.

⁵ Metricated editorially. The original size was 2½ in. x 1½ in.

⁶ Metricated editorially. The original heights were 10 ft. and 16 ft., respectively.

⁷ Metricated editorially. The original measurement was 2½ x 1½ in.

⁸ Metricated editorially. The original height was 16 ft.

32. Hinges, etc.

(1) Trestle ladders more than 3.048 m¹ in height shall have hinges not less than 355.6 mm² long on each side of the hinge pin, and each side shall be secured to the stile with three steel bolts 9.525 mm³ in diameter.

(2) Trestle ladders not more than 3.048 m¹ in height shall have hinges not less than 254 mm⁴ long on either side of the hinge pin, and each side shall be secured to the stile with three steel bolts 9.525 mm³ in diameter.

33. Distance between stiles.

(1) The width between the inside faces of stiles at the top rung shall be—

(a) for trestle ladders up to and including 3.048 m⁵ in length—not less than 381 mm⁶ or more than 508 mm⁶; and

(b) for trestle ladders over 3.048 m⁵ in length—not less than 482.6 mm⁷ or more than 533.4 mm⁷.

(2) The dimensions specified in Subsection (1) shall increase towards the lower rungs at a ratio not less than 1:8 and not more than 1:7 of the length of the stiles⁸.

34. Guard rails.

Where an Industrial Safety Officer directs that guard rails are necessary, guard rails in accordance with this Order shall be fitted.

35. General construction.

(1) A trestle ladder shall have—

(a) ledgers with tenons of not less than 25.4 mm⁹ in length and not less than 22.225 mm⁹ in thickness that extend the full depth of the ledger and into the stile or side rail for not less than 25.4 mm⁹; and

(b) iron tie rods of 9.525 mm³ in diameter with nuts and washers fitted at the top, bottom and centre; and

(c) strap hinges and effective measures to prevent spreading; and

(d) rungs equally spaced so that there is not less than 508 mm¹⁰ or more than 609.6 mm¹⁰ from centre to centre; and

(e) hinges of steel not less than 44.45 mm¹¹ wide and not less than 6.35 mm¹¹ in thickness.

(2) Tenons for the purposes of Subsection (1)(a) shall be secured by means of two nails of at least 12 gauge driven through the narrow edge of the side rail and passing completely through the tenon.

(3) The top rung of either pair of stiles shall be not more than 152.4 mm¹² from the top of the trestle ladder.

¹ Metricated editorially. The original height was 10 ft.

² Metricated editorially. The original length was 14 in.

³ Metricated editorially. The original diameter was $\frac{3}{8}$ in.

⁴ Metricated editorially. The original length was 10 in.

⁵ Metricated editorially. The original length was 10 ft.

⁶ Metricated editorially. The original widths were 15 in. and 20 in., respectively.

⁷ Metricated editorially. The original measurements were 19 in. and 21 in., respectively.

⁸ The original ratios were $1\frac{1}{4}$ in. per foot and $1\frac{1}{4}$ in. per foot, respectively.

⁹ Metricated editorially. The original measurements were 1 in., $\frac{7}{8}$ in. and 1 in., respectively.

¹⁰ Metricated editorially. The original spacings were 20 in. and 24 in., respectively.

¹¹ Metricated editorially. The original measurements were $1\frac{1}{2}$ in. and $\frac{3}{4}$ in., respectively.

¹² Metricated editorially. The original spacing was 6 ins.

(4) The spread between pairs of side-rails on stiles, in the fully opened position, shall not be less than one third or more than two thirds of the length of the side rails¹.

PART IV.—CRANES AND HOISTS.

36. Standards for cranes and hoists.

Unless otherwise provided in this Order, cranes and hoists used in construction and building works shall be designed, constructed, maintained, inspected and operated in conformity with the Standards Association of Australia Code No. C.B.2².

37. Notice showing safe loading.

(1) Each crane or hoist shall have constantly maintained on it a permanent notice, prominently and legibly exhibiting—

- (a) all of the safe working loads of the crane or hoist; and
- (b) information as to the conditions, incidence and manner in which the loads shall or may be lifted or handled for the safe use of, and for the manipulation of, the crane or hoist.

(2) The loads, conditions, incidence and manner as shown on the notice referred to in Subsection (1) are the limiting values of the loads, conditions, incidence and manner of loadings.

38. Safe loads.

(1) Subject to Subsection (2), a person shall not subject, or instruct or permit any person to subject, a crane or hoist to a greater load, or to a more adverse incidence or manner of load than that shown on the notice referred to in Section 37(1) on the crane or hoist.

(2) Subsection (1) does not prevent a crane or hoist being tested in the presence of an Industrial Safety Officer for the purpose of calculating safe working loads.

(3) A person shall not represent a crane or hoist to be capable of lifting or handling a greater load, or of sustaining a more adverse incidence, condition or manner of load, than the designed and constructed limiting values of the load or the conditions, incidence and manner of load, of the crane or hoist.

39. Maintenance.

(1) A crane or hoist used on construction or building works shall be constantly and efficiently maintained at all times by competent tradesmen.

(2) Lifting hooks that have opened out at the throat by 5% of their throat dimensions shall not be used.

(3) Lifting rings of which any internal diameter has increased or decreased by 5% shall not be used.

(4) Where members, components, parts, linkages or attachments are—

- (a) unduly loose or slack; or
- (b) unduly worn, deteriorated, or otherwise impaired; or

¹ The original read—"not less than four inches nor more than eight inches per foot length".

² See, now, SAA Crane Code (AS 1418-1977).

- (c) so cracked, distorted, eroded, burned, fatigued, strain-hardened or in any way defective or so damaged, as to be productive or conducive to conditions of hazard, uncertainty or danger,

they shall be immediately discontinued and immediate action taken to repair or replace them.

40. Arrangement of components, etc.

Members, components, parts, linkages or attachments (particularly operating cords, controls and brakes) shall be so arranged that at all times they carry out their functions freely and without obstruction.

41. Guards on moving parts.

Moving parts of a crane or hoist winch that constitute a safety hazard shall be adequately guarded with guards, to the satisfaction of an Industrial Safety Officer.

42. Earthing.

A mobile or portable crane or hoist near electrical equipment or apparatus shall be effectively earthed in a manner that ensures the safety of persons using or working in connexion with it.

43. Load radius attachments.

(1) Where a jib or derrick crane or hoist is not designed to lift its maximum rated working load at all attainable positions of the jib without breach of this Order, it shall have a load radius indicator that functions automatically and the load markings on which are of a permanent nature.

(2) The load radius indicator shall be constantly maintained in good order.

44. Riding on loads.

(1) Subject to Subsection (3), a crane or hoist shall not be used for the purpose of lifting or lowering a person or persons.

(2) A person shall not ride on the load of a crane or hoist.

(3) In special circumstances, the Departmental Head may approve of the use of a crane or hoist for the purpose of lifting or lowering a person or persons.

45. Construction of timber hoist towers.

(1) A timber hoist tower the overall outside dimensions of which do not exceed $1.524 \text{ m} \times 1.524 \text{ m}^1$ shall be constructed as follows:—

- (a) each corner post shall not be less than 101.6 mm^2 in cross section if it is in one piece of timber, but if it is built up of two pieces of timber each piece shall not be less than $127 \text{ mm} \times 50.8 \text{ mm}^3$ in cross section; and
- (b) the corner posts shall be properly framed together at each side of the tower by horizontal and diagonal braces, the distance between the centres of the horizontal braces being not more than 1.524 m^4 , and the horizontal and diagonal braces not being less than $127 \text{ mm} \times 50.8 \text{ mm}^3$ in cross section; and

¹ Metricated editorially. The original size was 5 ft. x 5 ft.

² Metricated editorially. The original size was 4 in.

³ Metricated editorially. The original size was 5 in. x 2 in.

⁴ Metricated editorially. The original distance was 5 ft.

- (c) all braces shall be connected to the corner posts by bolts not less than 12.7 mm¹ in diameter, with nuts and washers under both the bolt head and the nut; and
- (d) the supporting beams of the tower head rope sheaves shall be of hardwood, and each beam being not less than 152.4 mm x 101.6 mm² in cross section; and
- (e) where beams referred to in Paragraph (d) are longer than 1.829 m,³ the cross section dimensions shall be increased to provide the same factor of safety as the shorter beams; and
- (f) a platform constructed of planks not less than 38.1 mm⁴ in thickness shall be provided and fixed adjacent to the tower head rope sheaves to give safe access to the sheaves for maintenance purposes; and
- (g) the platform referred to in Paragraph (f) shall be protected on all sides by guard rails that comply with this Order; and
- (h) a ladder or ladders that complies or comply with this Order shall be fixed to the tower to provide a safe means of access to the platform from the floor of the buildings or the ground, as the case requires; and
- (i) the tower shall be effectively enclosed, to a height of not less than 1.829 m⁵ above the level of each floor, scaffolding, platform or stairway adjacent to it by—
 - (i) close fitting timber boarding not less than 19.05 mm⁶ in thickness; or
 - (ii) 1.25 mm¹ wire mesh; or
 - (iii) black or galvanized flat iron not less than 0.6 mm¹ thickness, positively fixed to the outside of the tower frame; and
- (j) a tower set up in or contiguous to a building shall be positively fixed to the building at each floor level; and
- (k) if a tower is set up in any other position, it shall be kept upright by steel wire guy ropes, the breaking load of which is not less than four times the maximum load to which they are subjected; and
- (l) the guy ropes shall be effectively secured to the tower corner posts, and efficient provision made for keeping every guy taught; and
- (m) a set of four guy ropes shall be used for every 9.144 m¹ of tower height; and
- (n) the anchorage for the guy ropes shall be so spaced that the guys are not more than 90° apart in plan.

(2) The timber used in the construction of a hoist tower shall be of the best grade, well seasoned, and free from knots, shakes and other defects.

¹ Metricated editorially. The original diameter was $\frac{1}{2}$ in.

² Metricated editorially. The original size was 6 in. x 4 in.

³ Metricated editorially. The original length was 6 ft.

⁴ Metricated editorially. The original thickness was 1 $\frac{1}{2}$ in.

⁵ Metricated editorially. The original height was 6 ft.

⁶ Metricated editorially. The original thickness was $\frac{1}{2}$ in.

⁷ Metricated editorially. The original size was 18 gauge.

⁸ Metricated editorially. The original thickness was 24 gauge.

⁹ Metricated editorially. The original height was 30 ft.

46. Construction of tubular hoist towers.

(1) The metal tubes used to construct a tubular tower hoist shall be of the description and dimensions specified in Section 22(6)(d).

(2) A tubular hoist tower the overall outside dimensions of which do not exceed 1.524 m x 1.524 m¹ shall be constructed as follows:—

- (a) the height of the topmost platform shall not exceed 51.816 m² measured from the base of the corner of the hoist tower to the surface of the top platform supporting the tower head rope sheaves; and
- (b) the standards shall rest on solid footings sufficient to prevent any unequal settlement; and
- (c) the distance between the horizontal braces shall not exceed 1.524 m;³ and
- (d) horizontal braces shall extend at least 228.6 mm⁴ past each standard; and
- (e) diagonal bracing shall be fitted on all sides of the hoist tower; and
- (f) each section or panel between the horizontal braces shall contain at least one rigid diagonal brace; and
- (g) a tower set up in or contiguous to a building shall be positively fixed to the building at each floor level; and
- (h) if a tower is set up in any other position, it shall be kept upright by steel wire ropes as specified in Section 45(1)(k); and
- (i) if timber beams are used to support the tower head rope sheaves, they shall comply with Section 45(1)(d) and (e); and
- (j) where tubular steel is used as beams for supporting the tower head rope sheaves—
 - (i) the tubes shall be suitably trussed to provide supports to the centre of the beam; and
 - (ii) channel iron having a minimum section of 152.4 mm x 101.6 mm⁵ may be used for the supporting beams of the tower head rope sheaves; and
- (k) supporting beams referred to in Paragraph (j) (ii) shall be effectively secured at each end; and
- (l) the horizontal brace of the steel tower on which any beam supporting the tower head rope sheaves rests shall be suitably trussed to provide support to the centre of the beam; and
- (m) effective means shall be taken to enclose the hoist tower at all times, to a height of not less than 1.829 m⁶ above the level of all floor scaffolding, platforms or stairways adjacent to it; and
- (n) there shall be a platform similar to that specified in Section 45(1)(f) and (g) at the top of the tower, with access similar to that specified in Section 45(1)(h).

¹ Metricated editorially. The original size was 5 ft. x 5 ft.

² Metricated editorially. The original height was 170 ft.

³ Metricated editorially. The original distance was 5 ft.

⁴ Metricated editorially. The original extension was 9 in.

⁵ Metricated editorially. The original size was 6 in. x 4 in.

⁶ Metricated editorially. The original height was 6 ft.

47. Gates, etc., at platforms and landings.

(1) A gate, door or fixed barrier, fitted with a suitable locking device to hold it closed, shall be placed across all openings giving access to a hoist platform.

(2) When the hoist is stopped level with a floor or landing and the gate, door or barrier is opened for working purposes, it shall be shut immediately the purposes are effected.

(3) The gate, door or barrier shall be fixed not less than 152.4 mm ¹ back from the extreme projecting edges of the hoist platform.

48. Hoist platform to be visible to driver.

Hoists used for building operations shall be erected in such a position that the hoist platform is in plain view of the hoist driver at all times.

49. Platform to operate between guides, etc.

(1) The platform shall be arranged to operate between suitable vertical guides, which shall be secured to the building floors, building frame-work or other structures surrounding them by bolts of not less than 15.875 mm ² in diameter.

(2) The hoist platform shall be so constructed that it will not show any signs of distortion when the maximum load to be lifted or lowered is placed in any position on it.

50. Safe signalling system.

(1) An efficient and safe signalling arrangement shall be provided for the purpose of transmitting signals to the hoist driver.

(2) A notice setting out the signalling code shall be prominently displayed at the hoist drivers' station and at all landings.

51. Riding on platform.

(1) A person shall not be allowed to ride on the platform of a builder's hoist unless written approval has been obtained from the Departmental Head for persons to ride on the platform.

(2) A notice prohibiting persons from riding on hoist platforms shall be displayed on the platform of a builder's hoist.

52. Protective gear.

(1) Personal protective equipment and gear shall be provided to all persons operating or working near a crane or hoist used in building or construction works.

(2) A sign shall be displayed at the site of construction and building works where a crane or hoist is being used, requiring all persons to wear protective head hats.

¹ Metricated editorially. The original distance was 6 in.

² Metricated editorially. The original diameter was $\frac{1}{2}$ in.

PART VII.—WORK ON ROOFS OF BRITTLE MATERIALS.

53. Warning notices.

The owner of a building (other than a private dwelling house) or a structure, that has any roof sheathing of asbestos cement or other brittle material, shall provide and fix on each individual slope, curve or flat of the roofing, notices—

- (a) warning persons that the roof sheathing is of brittle material, in lettering not less than 44.45 mm¹ in height; and
- (b) carrying the wording "WARNING—DANGER" in red lettering.

54. Cat walks.

(1) For the purpose of fixing or repairing roof sheeting of asbestos, cement, terra-cotta, or cement tiles, slates or other brittle materials, cat walks shall be provided.

(2) Cat walks shall be constructed of planks not less than 254 mm in width and 25.4 mm in thickness, with not less than 50.8 mm x 25.4 mm wooden cleats securely nailed to the planks at not more than 457.2 mm² centres.

(3) Cat walks shall be securely fastened over the ridge of the roof.

(4) Spoutings or gutters shall not be used as supports for cat walks.

¹ Metricated editorially. The original height was 1½ in.

² Metricated editorially. The original measurements were 10 in. 1 in., 2 in. x 1 in., and 18 in., respectively.

INDEPENDENT STATE OF PAPUA NEW GUINEA.

CHAPTER NO. 175.

Industrial Safety (Chemical Treatment of Timber) Order.

ARRANGEMENT OF SECTIONS.

1. Interpretation—
 - "the diffusion stage"
 - "solution"
 - "treated timber"
 - "treatment process".
2. Application.
3. Approval for use of chemicals.
4. Dry-mixing.
5. Preparation of solutions.
6. Requirements for chemical-processing areas.
7. Maintenance.
8. Storage of chemicals.
9. Disposal of used containers.
10. Medical examination.
11. Restriction of period of employment in treatment process.
12. Working of treated timber.
13. Protective clothing and equipment.
14. Washing facilities.
15. Duties of employees.

INDEPENDENT STATE OF PAPUA NEW GUINEA.

CHAPTER NO. 175.

Industrial Safety (Chemical Treatment of Timber) Order.

MADE under the *Industrial Safety, Health and Welfare Act.*

1. Interpretation.

In this Order, unless the contrary intention appears—

"the diffusion stage" means the period during which timber is handled or stored after the application of a solution until such time as the timber is deemed to be treated by the process;

"solution" means a solution of salt and water, to which is added certain approved chemicals for the control of mould, sapstain and foaming;

"treated timber" means timber that has been treated by the use of chemicals;

"treatment process" means the process of preservation of timber by the use of chemicals, and includes—

- (a) the storage of chemicals; and
- (b) the preparation of chemical solutions; and
- (c) the operation of treatment apparatus; and
- (d) the handling of timber during the diffusion stage; and
- (e) the handling and working of treated timber subsequent to the diffusion stage.

2. Application.

This Order applies to and in relation to the measures for health and safety in connexion with the preservative treatment of timber by the use of chemicals and the working of treated timber.

3. Approval for use of chemicals.

(1) A person shall not use chemicals in a treatment process unless—

- (a) he has first made written application to the Departmental Head for approval to do so; and
- (b) the Departmental Head has so approved.

(2) The application for approval shall state—

- (a) the chemical formulas of the active ingredients and the subsidiary components; and
- (b) information from a reputable scientific journal relating to the use and toxic effect of, and the necessary safety measures in connexion with, the ingredients and subsidiary components.

4. Dry-mixing.

A person other than a person licensed to manufacture in accordance with C.S.I.R.O. Patent No. 246298 (1960-1963) shall not dry-mix component chemicals.

5. Preparation of solutions.

(1) The preparation of chemical solutions shall be carried out in a manner approved by the Departmental Head.

(2) The mixing of a solution shall be carried out in such manner as will prevent dust or fumes escaping from the area in which the solution is mixed to the extent that the dust or fumes would constitute a danger to the health of any person employed in the treatment plant.

6. Requirements for chemical-processing areas.

(1) Tanks, troughs and containers used for mixing a solution or holding a solution for any purpose shall be—

- (a) constructed so as to prevent loss of any solution through splashing; and
- (b) maintained in good condition and free from leaks; and
- (c) provided with close-fitting covers, which shall be kept in place when the tanks, troughs or containers are not in use.

(2) Floors and areas around tanks, troughs or containers shall be—

- (a) impervious to moisture and solutions used in the treatment process; and
- (b) well drained.

(3) Platforms above floor level shall be provided on floors surrounding treatment plants where employees may have to walk or stand while engaged in the treatment process.

(4) Drains from floors referred to in Subsection (2) shall be—

- (a) impervious to moisture and solutions used in the treatment process; and
- (b) designed to direct any solution or effluent away from the area and into a receptacle or soakage pit.

(5) Soakage pits shall be sited, constructed and protected in such a way as to ensure that there is no danger to persons or animals.

7. Maintenance.

Platforms, floors and areas surrounding tanks, troughs, containers or drip trays shall be—

- (a) kept free of sawdust or waste; and
- (b) thoroughly cleansed by washing—
 - (i) at least once each day; and
 - (ii) at such other times as an Industrial Safety Officer orders.

8. Storage of chemicals.

(1) Chemicals for use in a treatment process shall be stored in containers provided with close-fitting covers, which shall be kept in place when the containers are not in use.

(2) Containers shall be kept in a storage area, which shall be—

- (a) kept locked except when chemicals are being withdrawn for use; and
- (b) dry and well ventilated; and
- (c) maintained in a clean condition and free from spilt chemicals; and
- (d) in an area that is well drained; and

- (f) used solely for the storage of wood preservatives, pesticides or other chemicals used in a treatment process.

9. Disposal of used containers.

Containers that hold ingredients for use in a treatment process shall, as soon as the ingredients have been used—

- (a) in the case of metal containers—be holed to prevent further storage of materials; and
- (b) in the case of containers other than metal containers—be destroyed by burning or any other method approved by the Departmental Head,

except where—

- (c) the Departmental Head, in writing, otherwise approves; or
- (d) the container is to be used for the storage of chemicals in another operation in a treatment process.

10. Medical examination.

(1) A person employed in a treatment process shall submit himself for a medical examination by a medical practitioner—

- (a) at intervals not exceeding 12 months; or
- (b) at such other times as an Industrial Safety Officer orders.

(2) A medical practitioner shall, as soon as practicable after he has medically examined a person under Subsection (1), forward a report to the employer of the person.

(3) An employer shall, within seven days after being notified in accordance with Subsection (2), submit the results of the medical examination to the Departmental Head.

(4) An employer shall take all reasonable steps to facilitate arrangements for a medical examination of any person employed by him in a treatment process.

(5) A person who, without reasonable excuse, fails to submit himself for a medical examination as required by this section—

- (a) is guilty of an offence; and
- (b) shall not be employed in a treatment process until he has submitted to a medical examination.

(6) Where a medical practitioner certifies that a person examined by him is unfit to be employed in a treatment process, the Departmental Head may, by written notice to the employer, order that the person shall not be employed in a treatment process.

11. Restriction of period of employment in treatment process.

(1) A person engaged in—

- (a) the preparation of solutions; or
- (b) the operation of treatment apparatus; or
- (c) the manual handling of timber during the diffusion stage; or
- (d) the handling of treated timber; or
- (e) any part of a treatment process,

shall not work for a period exceeding four consecutive weeks on that operation.

(2) A person who has been engaged for a period of four consecutive weeks on any operation in a treatment process shall not be permitted to work again on any stage of a treatment process during the period of four weeks after the completion of that period.

12. Working of treated timber.

(1) The working of treated timber (including the use of saws, planes or sanding machines) shall be carried out in an area that is—

- (a) well ventilated; and
- (b) well drained.

(2) Wood dust shall be directed away from any persons employed in the treatment area.

(3) Wood dust and plane shavings shall be disposed of as soon as possible by burning and burying the ash or waste.

13. Protective clothing and equipment.

(1) An employer shall provide for the use of each person employed in a treatment process at least two sets of protective clothing and equipment of a type approved by the Departmental Head.

(2) Protective clothing and equipment referred to in Subsection (1) shall consist of—

- (a) gloves and a bib-apron that are impervious to moisture and to the solutions used in the treatment process; and
- (b) a shirt; and
- (c) trousers.

(3) In addition to the clothing referred to in Subsection (2), persons employed in the preparation of any solution used in the treatment process shall be provided with—

- (a) a cloth cap; and
- (b) a dust mask of a kind fitted with a means of replacing the filter element.

(4) A person issued with clothing and equipment under this section shall keep it in good order and condition.

(5) An employer shall cause washable clothing provided under this section to be thoroughly washed, cleaned and dried after use each day, and before re-use.

14. Washing facilities.

(1) An employer shall provide for the use of persons employed by him in a treatment process adequate washing facilities adjacent to the processing areas.

(2) Washing facilities provided under Subsection (1) shall consist of not less than one wash point, in the proportion of one to every five, or fraction of five, employees.

(3) An employer shall—

- (a) ensure an adequate supply of water to each wash point; and
- (b) maintain the supply during working hours and for at least 30 minutes afterwards.

15. Duties of employees.

(1) A person employed in a treatment process shall—

- (a) while he is in the immediate vicinity of a treatment process—wear protective clothing and equipment; and

- (b) remove protective clothing and equipment after ceasing work on a treatment process; and
 - (c) before eating a meal—wash his hands and forearms; and
 - (d) as soon as possible after ceasing work—
 - (i) remove all his clothing; and
 - (ii) thoroughly wash his whole body with clean water and soap; and
 - (iii) ensure that discarded clothing has been laundered before re-use.
- (2) A person employed in a treatment process shall not—
- (a) misuse or interfere with any appliance, clothing, equipment or facilities provided; and
 - (b) have, prepare or partake of food or drink in the immediate vicinity of the treatment plant.
-

INDEPENDENT STATE OF PAPUA NEW GUINEA.

CHAPTER NO. 175.

Industrial Safety (Excavation Works, Shafts and Tunnels) Order.

ARRANGEMENT OF SECTIONS.

PART I.—PRELIMINARY,

1. Interpretation—
"excavation work".
2. Liability of operator, etc.

PART II.—VENTILATION.

3. Determination of adequate ventilation.
4. Maintenance of adequate ventilation.
5. Recirculation of air.
6. Supply of air through air compressor, etc.
7. Clearance of air receiver mains, etc.
8. Dust fumes, etc.
9. Maintenance of rock-drilling machines, etc.
10. Timing of blasting operations.
11. Smoke helmets.

PART III.—WINDING AND SIGNALS IN SHAFT EXCAVATION OPERATIONS.

12. Readiness of winding engines.
13. Provision of cages in shafts.
14. Drop bars on cages.
15. Raising and lowering of tools, etc.
16. Overhead protection.
17. Safety appliances on cages.
18. Safety measures for cages, etc.
19. Clearance between landing and point of detachment.
20. Testing of cage, etc.
21. Record of tests.
22. Travelling on outside of cage.
23. Maximum number of passengers in cage.
24. Overwind catches.
25. Brakes on winding drums.
26. Depth indicators.
27. Automatic overwinding devices in deep shafts.
28. Appliances on drums.
29. Winding engines with defective drums, etc.
30. Supporting, etc., of cages during repairs.
31. Speed of winding.
32. Winding ropes, general.
33. Certificate as to strength of winding rope.

34. Examination of winding ropes, etc.
35. Maintenance of ropes.
36. Defects in ropes.
37. Use of chains for lowering persons.
38. Winding after stopping.
39. Guides in shafts.
40. Signalling.
41. Knowledge of signals.
42. Speaking to drivers.
43. Power-indicating gauges.

PART IV.—LADDERS AND TRAVELLING WAYS.

44. Travelling way clearance.
45. Lining of shafts.
46. Ladders, etc., in shafts.
47. Doors on shafts.

PART V.—SPECIAL SAFETY AND PROTECTION.

48. Withdrawal of workmen in case of damage.
49. Workmen approaching dangerous places.
50. Men working alone.
51. Safety helmets.
52. Fencing of shafts and protection of excavations.
53. Safety of machinery.
54. Safety inspection.
55. Guarding of machines.
56. Lights.
57. Safety belts and ropes.
58. Working on power lines.
59. Fire-fighting equipment.
60. Inflammable refuse.
61. Open cuts.
62. Report of dangerous conditions.
63. Intoxicating liquor.

PART VI.—INTERNAL COMBUSTION ENGINES UNDERGROUND.

64. Use of internal combustion engines underground.
65. Inspection of engines.
66. Fuel for diesel engines.
67. Fire extinguishers, etc.
68. Exhaust scrubbers, etc.
69. Running of engines when stationary.
70. Engine exhausts.
71. Ventilation.
72. Analyses of air.
73. Devices to indicate air circulation.

PART VII.—TRENCHES.

- 74. Trenches in hard compact ground.
- 75. Trenches in saturated, etc., ground.
- 76. Use of heavier timbers.
- 77. Disposal of excavated material.
- 78. Egress from trenches.
- 79. Safety hats.
- 80. Barriers about trenches.

INDEPENDENT STATE OF PAPUA NEW GUINEA.

CHAPTER NO. 175.

***Industrial Safety (Excavation Works, Shafts and Tunnels)
Order.***

MADE under the *Industrial Safety, Health and Welfare Act.*

PART I.—PRELIMINARY.

1. Interpretation.

In this Order, unless the contrary intention appears "excavation work" includes any quarry, clay pit, gravel pit, sand pit, trench or any similar type or excavation made for the purpose of obtaining construction materials or for constructional purposes.

2. Liability of operator, etc.

(1) A person who, directly or by his servants or agents, carries out any work in an excavation, tunnel or shaft shall ensure that the provisions of this Order are complied with.

(2) Subsection (1) does not relieve a person from liability under any other provision of this Order.

(3) It is a defence to a charge of a contravention of this Order if the defendant proves that—

- (a) he was not aware, and could not, with the exercise of reasonable diligence, have become aware, of the relevant non-compliance with this Order; and
- (b) he took all reasonable steps to ensure that no such non-compliance took place.

PART II.—VENTILATION.

3. Determination of adequate ventilation.

(1) The air in a shaft, tunnel or other underground working place is not adequate if—

- (a) it contains less than 20% by volume of oxygen; or
- (b) it contains by volume more than—
 - (i) 0.25% of carbon dioxide (CO₂); or
 - (ii) 0.007% of carbon monoxide (CO); or
 - (iii) 0.001% of nitrous fumes; or
 - (iv) 0.002% of hydrogen cyanide (HCN); or
 - (v) 0.002% of hydrogen sulphide (H₂S); or
 - (vi) 0.0001% of arsine (AsH₃); or
- (c) it shows a count per cc in excess of 300 particles of dust of 5 microns or less in diameter; or
- (d) the temperature of the air exceeds 28.3° C¹ by the wet bulb thermometer.

¹ Metricated editorially. The original temperature was 83° Fahrenheit.

(2) Where the free silica content of an airborne sample exceeds 35%, the maximum allowable number of dust particles per cc is as prescribed in writing by a medical officer.

4. Maintenance of adequate ventilation.

(1) Subject to Subsection (2), in each shaft or tunnel or other underground working place, ventilation shall—

- (a) be constantly produced at not less than 2.832 m^3 ¹ per minute for each person underground; and
- (b) be maintained so that the air is adequate for all persons in it.

(2) Notwithstanding Subsection (1), where an Industrial Safety Officer certifies that the ventilation or the distribution of the ventilation current is inadequate in any particular shaft, tunnel or other underground working place, auxiliary ventilating appliances shall be provided and kept constantly working.

5. Recirculation of air.

The air currents passing through a tunnel, shaft or other underground working place shall be regulated, as far as practicable, in such a manner that—

- (a) the air passes through the workings from inlet to outlet without local circulation; and
- (b) the same air is not allowed to return continuously through the same place.

6. Supply of air through air compressor, etc.

(1) The supply of air for a ventilating machine or air compressor that forces air into the workings of a tunnel, shaft or other underground working place shall be drawn from the purest source available.

(2) Where an Industrial Safety Officer certifies that the supply of air to a tunnel, shaft or other underground working place, does not comply with Section 3, air compressors shall be fitted with suitable inter-coolers and after-coolers.

7. Clearance of air receiver mains, etc.

Subject to Section 6—

- (a) air receivers, and pipes connecting air receivers with the compressors, shall be blown out each day on which they are in operation; and
- (b) air mains from the compressors and branch lines shall be furnished with sufficient traps of an approved type to remove accumulations of water, and water shall not be allowed to blow through to the working face; and
- (c) pumps shall be blown off at least once in each shift.

8. Dust fumes, etc.

(1) Where dust, fumes or toxic gases are produced in the course of any excavation, operation, crushing operation, or any other process, to such an extent that the health of workmen is in any way endangered, a person shall not be allowed to work in the area until provision is made for preventing or allaying the dust, fumes or toxic gases so produced.

(2) Water used for the purpose of laying dust, fumes or toxic gases shall be free from pollution with noxious matter.

¹ Metricated editorially. The original measurement was 100 cu.ft.

9. Maintenance of rock-drilling machines, etc.

(1) Rock-drilling machines employed in a tunnel, shaft or other underground place shall be overhauled regularly at least once each fortnight, and maintained in a proper state of repair.

(2) In the event of fogging occurring as a result of any defect or misuse of a rock-drilling machine—

(a) the person in charge shall not permit the machine to be further used; and

(b) a person shall not use the machine,

until the cause of the fogging has been removed.

10. Timing of blasting operations.

(1) Times of blasting operations in a tunnel, shaft or other underground place shall be so arranged that workmen are not exposed to dust, fumes or toxic gases from them.

(2) A person shall not be allowed to enter a working place after blasting has taken place until the fumes, dust or toxic gases arising from the explosion have been effectively dispersed.

11. Smoke helmets.

Where foul air accumulates, or is likely to accumulate, in a tunnel, shaft or other underground place to such an extent that it is dangerous to the safety of persons employed in the tunnel, shaft or place, approved smoke helmets or other like appliances shall be kept ready for use in the tunnel, shaft or place.

PART III.—WINDING AND SIGNALS IN SHAFT EXCAVATION OPERATIONS.

12. Readiness of winding engines.

(1) Winding engines in a vertical shaft shall—

(a) be kept ready for use; and

(b) be in charge of a competent engine driver,

when any person is in the shaft, tunnel or underground place.

(2) A winding engine driver shall not, under any pretext, absent himself or cease to have continual supervision of the machinery under his control during the time that he is required to be on duty in a tunnel, shaft or other underground place, unless he is relieved by a person qualified for the purpose.

13. Provision of cages in shafts.

(1) Except as provided in Subsection (3), a cage properly constructed for the purpose and driven by engine-power shall be provided for raising and lowering men in any shaft exceeding 60.96m¹ in depth.

(2) Buckets or skips may be used for raising or lowering materials or debris in a shaft.

(3) During the sinking of a shaft, one or two men may be raised or lowered in a bucket or skip properly constructed for the purpose if—

(a) a person capable of directing the winch driver in the signal code used for that occupation; and

¹ Metricated editorially. The original measurement was 200 ft.

- (b) a person capable of directing the winch driver in the signal code used for lowering,

are stationed at each staging, in constant communication with the winch operator by means of a knocker-signal line or other means of communication that is, to the satisfaction of an Industrial Safety Officer, functional.

(4) A cage, bucket or skip shall be deemed to be properly constructed for the purposes specified in Subsection (1) or (2), as the case may be, if it is approved by the Departmental Head for the work for which it is being used.

14. Drop bars on cages.

A drop bar shall—

- (a) be fitted to each cage at any entrance, gate or door; and
- (b) be securely fixed while the cage is being raised or lowered.

15. Raising and lowering of tools, etc.

(1) When men are in the cage, tools, machines or materials shall not be taken up or down a shaft unless the men are authorized by the Departmental Head to travel in the cage at a time when tools, machines or materials are being taken up or down the shaft.

(2) When men are working in a shaft, tools, machines or materials shall not be raised or lowered in the shaft, except—

- (a) in a bucket or other receptacle properly constructed for the purpose; and
- (b) in such a way that they are properly secured and cannot fall out of the bucket or receptacle.

16. Overhead protection.

(1) Men working in a shaft, or being raised or lowered in a shaft, shall be protected overhead from falling material by means of an approved roof or other suitable appliance, to the satisfaction of an Industrial Safety Officer.

(2) It is a defence to a charge of a failure to comply with Subsection (1) if it is proved that—

- (a) the contravention occurred during repairs to, or an inspection of, the shaft; and
- (b) it was not possible to provide overhead protection.

17. Safety appliances on cages.

A cage, skip or other similar receptacle used in a shaft shall be fitted with a suitable and properly constructed safety appliance approved by the Departmental Head, to prevent it—

- (a) falling down the shaft; or
- (b) coming into contact with the poppet head.

18. Safety measures for cages, etc.

(1) The following safety measures shall be carried out on each cage, skip or other similar receptacle used in a shaft :—

- (a) all detaching and suspending hooks and safety catches shall, at least once in every month, be taken to pieces, examined and cleaned by a competent person and a record kept of the inspection; and

- (b) an inspection hole 9.525 mm ¹ in diameter shall be drilled through the plates of each safety hook and kept clear; and
- (c) each safety hook shall be cleaned at least once in every six months, or at such lesser periods as an Industrial Safety Officer orders; and
- (d) all detaching plates and bells in use shall be tested at least each six months by means of calipers and gauges; and
- (e) subject to Subsection (2), at least once in every six months all cage or skip chains and hooks in general use shall—
 - (i) be annealed or given other proper heat treatment; and
 - (ii) be thoroughly examined by a properly qualified and competent person; and
- (f) a safety hook that will not suspend a cage at the poppet head or landing stage when the cage is detached from the winding ropes shall not be used; and
- (g) each baling tank shall be fitted with a safety device approved by the Departmental Head.

(2) The Departmental Head may, in writing, exempt from the requirements of Subsection (1)(e) chains or hooks made from materials that do not require heat treatment.

19. Clearance between landing and point of detachment.

When a cage, skip or other similar receptacle is at the landing of any shaft, there shall be not less than 3.048 m ² of clearance between the detaching hooks and the point of detachment.

20. Testing of cage, etc.

(1) Before a cage, skip or other similar receptacle is first used in a shaft, it shall be tested in the presence of an Industrial Safety Officer to show that it complies with this Order.

(2) Cages, skips or other receptacles—

- (a) shall be tested with maximum load to the satisfaction of the Industrial Safety Officer; and
- (b) shall not be used unless approved.

(3) The Industrial Safety Officer may require a cage, skip or other receptacle used in a shaft to be tested by a "free fall" test.

(4) At least once in every month, each cage, skip or other receptacle used in a shaft shall be tested from the drum.

21. Record of tests.

A record shall be kept of all tests made in accordance with this Order, and the record shall be made available to an Industrial Safety Officer at all times.

22. Travelling on outside of cage.

A person shall not ascend or descend a shaft on the outside of a cage unless the ascent or descent has been authorized by the Departmental Head for a special duty.

¹ Metricated editorially. The original measurement was $\frac{1}{4}$ in.

² Metricated editorially. The original measurement was 10 ft.

23. Maximum number of passengers in cage.

(1) The Departmental Head shall determine the maximum number of persons who may ride in a cage at any time, and the number so determined shall be posted up and kept posted up at all landing stages in the shaft.

(2) A number of persons greater than the number authorized in accordance with Subsection (1) shall not ride in the cage at any one time.

24. Overwind catches.

(1) Automatic or self-acting catches of a suitable kind shall be fixed below the winding sheaves of each shaft in which a cage is used, so as to prevent the fall of the cage down the shaft when detached from the rope by overwinding.

(2) Catches referred to in Subsection (1) shall be kept in proper working order at all times.

25. Brakes on winding drums.

(1) Machinery used for raising or lowering persons or for the haulage of material in a shaft shall be fitted with an adequate brake.

(2) A brake referred to in Subsection (1) shall—

(a) be fitted in such a manner to each winding drum that it can be applied by the engine driver without leaving his operating position; and

(b) be kept in efficient working order.

26. Depth indicators.

A dial or indicator approved by an Industrial Safety Officer shall be provided in machinery used for raising and lowering persons in order to enable the engine driver to accurately determine the position in the shaft of each cage, skip or bucket.

27. Automatic overwinding devices in deep shafts.

(1) Where—

(a) a shaft is more than 91.44 m¹ in depth; and

(b) mechanical power is used for raising or lowering persons to or from the surface,

an automatic device, effectual to prevent overwinding, shall be installed, to the satisfaction of the Departmental Head—

(c) to prevent the descending cage from being landed at the shaft bottom at a speed exceeding 1.524 m² per second; and

(d) to control the movement of the ascending cage so as to prevent danger to any person riding in or using the cage.

(2) Unless it is in full and fixed engagement with the winding engine, an automatic device installed in accordance with Subsection (1) shall be fully engaged, either automatically or by the winding engine driver, whenever persons are to be raised or lowered.

(3) An automatic indicator shall be installed, in such a position that it can be seen by the bracman, to show whether the device is engaged or not engaged.

¹ Metricated editorially. The original measurement was 300 ft.

² Metricated editorially. The original measurement was 5 ft.

(4) A person shall not be allowed to enter a cage until the indicator shows that the device is fully engaged.

28. Appliances on drums.

On the drum of each machine used for lowering or raising persons, there shall be—

- (a) such flanges or horns and if the drum is conical, such other appliances as are necessary to prevent the rope from slipping on the drum; and
- (b) appliances to prevent the drum from revolving when out of gear.

29. Winding engines with defective drums, etc.

(1) Where winding engines are provided with two drums, a persons shall not, except in cases of emergency, be raised or lowered in the cage while one of the drums is out of gear and loose on the shaft that supports it.

(2) A person shall not be raised or lowered by means of a winding engine with an ungeared or single drum with brake or friction gear only.

30. Supporting, etc., of cages during repairs.

When repairs are being effected to the clutch or brakes of a winding engine and ropes are attached to the drums, the skip, cage or other receptacle shall be disconnected, or firmly supported by some means other than the rope, while the work is in progress.

31. Speed of winding.

(1) When a cage, skip or other receptacle is raising or lowering men, it shall not exceed a speed of 152.4 m^1 per minute within 60.96 m^2 of the surface or bottom stopping place.

(2) The maximum rate of speed in any other portion of the shaft shall be determined by the Departmental Head for each particular shaft.

32. Winding ropes, general.

(1) Ropes used for hoisting materials or men in a shaft shall be approved by the Departmental Head before installation.

(2) A written record shall be kept of the service of each rope used for hoisting materials and men, and the record shall be available for inspection at all times by an Industrial Safety Officer.

(3) Ropes used for winding shall be reshod or reclamped at least once in each six months.

(4) The Departmental Head may require that any rope used for winding be replaced, reshod or reclamped at any time when he thinks it unsatisfactory.

33. Certificate as to strength of winding rope.

(1) When a winding rope is to be placed in service in a shaft, there shall be deposited with the Departmental Head a true copy of the maker's certificate, giving full details of—

- (a) the construction of the rope; and
- (b) the class of steel used; and
- (c) the breaking strain of the rope; and

¹ Metricated editorially. The original measurement was 500 ft.

² Metricated editorially. The original measurement was 200 ft.

(d) the condition of the rope at the time of installation.

(2) The Departmental Head may require further tests to be carried out on the rope before it is installed.

34. Examination of winding ropes, etc.

(1) A competent person shall carefully examine—

(a) at least once in every day—

- (i) the winding ropes and their attachments to the cages, skips or other receptacles in a shaft; and
- (ii) the brakes; and
- (iii) the depth indicators; and
- (iv) the cages and their safety catches; and
- (v) the head sheaves; and
- (vi) all external parts of the winding arrangements on the proper working of which safety to life depends; and

(b) at least once in every week—

- (i) the guides and the winding compartments generally; and
- (ii) the signalling arrangements; and
- (c) at least once in every month—the structure of the rope, for the purpose of discovering the amount of deterioration; and
- (d) at least once in every year—the winding engine, as to the condition of its working parts.

(2) Tests shall be made—

- (a) before the installation of any new, remodelled, or repaired skip, cage or other receptacle in a shaft; and
- (b) after any alteration to free travel in any part of a shaft in use up to the detaching thimble.

35. Maintenance of ropes.

Winding or hoisting ropes shall be treated with a suitable rope compound at least once every month.

36. Defects in ropes.

(1) If any weakness or defect in the rope or winding appliances is discovered—

- (a) it shall be immediately reported to the person in charge; and
- (b) a person shall not be raised or lowered by the rope or appliance until the defect is properly and adequately remedied.

(2) Immediately any defect is discovered in a rope, it shall no longer be used for the transport of persons, unless—

- (a) the damaged part is at the end and is cut off; and
- (b) the rope is otherwise safe for use.

37. Use of chains for lowering persons.

(1) Subject to Subsection (2), a chain shall not be used for raising or lowering persons in a shaft.

(2) Short coupling chains of two single-link chains of uniform size, each having a breaking strain of not less than eight times the weight of the load on them, may be attached to the cage, skip or other receptacle used for lowering men or materials in a shaft.

38. Winding after stopping.

After any stoppage of winding exceeding four hours in duration (whether for repairs or for other reasons), and after any stoppage in the operation of changing levels, each cage or other receptacle used for lowering men in a shaft shall be run a complete trip up and down the working portion of the shaft to ensure that the shaft is clear and the machinery in working order, before any person is allowed to travel in the cage or other receptacle.

39. Guides in shafts.

In vertical shafts in which men are raised or lowered by machinery, other than machinery operated by hand labour—

- (a) guides shall be provided to within not less than 18.288 m¹ from the bottom of the shaft; and
- (b) efficient means and appliances for steadying the load shall be provided, to the satisfaction of the Departmental Head.

40. Signalling.

(1) A shaft in which a cage is used, and every division of such a shaft in which a person is raised or lowered, shall be provided with a signal line for communicating distinct and definite signals from the bottom of the shaft to the engine room.

(2) A signal line shall be so balanced as to be easily worked by hand without the aid of a lever.

(3) An underground travelling way in which materials are transported shall be provided with proper means of communicating distinct and definite signals between the regular stopping places.

(4) Signals shall be distinctly given.

(5) Only a standard code of signals, approved by the Departmental Head, may be used.

(6) The code of signals used in a shaft shall be clearly printed or painted on a metal plate and posted in a conspicuous place in full view of the engine driver.

(7) If directed by the Departmental Head, the code of signals shall be displayed at such other places as he directs.

(8) A person shall not—

- (a) give a wrong signal; or
- (b) ride on a cage, skip or other receptacle used in a shaft at a time when signals have informed the driver that no person is so to ride.

41. Knowledge of signals.

(1) A person employed as a platman, skipman, bracman or lander in a tunnel or shaft shall have sufficient knowledge of the code and system of signals used as to enable him to use and understand them and to perform efficiently his duties and obligations.

¹ Metricated editorially. The original measurement was 60 ft.

(2) A person shall not be employed as a platman, skipman, bracman or lander in a tunnel or shaft unless he has the knowledge referred to in Subsection (1).

42. Speaking to drivers.

A person shall not speak to the driver of a hoist or winding engine while his machine is in motion, except for the purpose of stopping the hoist or engine in an emergency.

43. Power-indicating gauges.

(1) Each winch shall be provided with an indicating gauge or other suitable device in proper working order to indicate to the person in charge that power is available.

(2) The motive power shall not be cut off until it is safe to do so.

PART IV.—LADDERS AND TRAVELLING WAYS.

44. Travelling way clearance.

On each underground travelling way in which materials are transported, there shall be—

(a) a clearance of at least 457.2 mm¹ maintained between the sides and the conveyance; or

(b) a clearance of 609.6 mm² on one side; or

(c) clearly marked manholes each 30.48 m³, kept clear.

45. Lining of shafts.

Ladders and working shafts shall be securely timbered, lined or otherwise made secure, to the satisfaction of the Departmental Head.

46. Ladders, etc., in shafts.

(1) A proper ladder or footway shall be provided in each shaft or tunnel for men ascending or descending, whether or not machinery is used.

(2) A ladder used for the ascent or descent of persons in a shaft shall—

(a) be securely fixed; and

(b) be inclined at the most convenient angle that the space in which the ladder is fixed allows,

but shall not be fixed in an overhanging position.

(3) The ladder shall have substantial platforms at intervals of not more than 9.144 m⁴.

(4) Unless the ladder extends above the top of the opening or platform, as the case may be, suitable fixtures for the hand grip shall be placed above the ladder for the use of the persons ascending or descending the ladder.

(5) Ladders shall be so placed that there is not less than 127 mm⁵ of foothold between the rungs and the wall against which they are placed.

(6) Construction of the ladders shall conform with the requirements of the Standards Association of Australia Code for the construction of ladders.

¹ Metricated editorially. The original measurement was 18 in.

² Metricated editorially. The original measurement was 24 in.

³ Metricated editorially. The original measurement was 100 ft.

⁴ Metricated editorially. The original measurement was 30 ft.

⁵ Metricated editorially. The original measurement was 5 in.

(7) A person shall not ascend or descend any portion of a shaft by ladder when the haulage portion is in use, unless the haulage portion is securely fenced off from the ladder compartment.

47. Doors on shafts.

(1) Doors of a type approved by the Departmental Head shall be installed where a shaft is sunk from the surface.

(2) Doors shall be—

- (a) hinged to the frame set off the shaft; and
- (b) so balanced that they close automatically when the lever operating them is released.

(3) The doors shall be kept closed at all times when men are working in the shaft except when opened for—

- (a) the passage of the bucket or other receptacle used in the shaft; or
- (b) the passage of men or materials.

(4) The doors shall be kept locked when no work is being carried out in the shaft.

PART V.—SPECIAL SAFETY AND PROTECTION.

48. Withdrawal of workmen in case of damage.

(1) If it is found by the person for the time being in charge of a shaft or tunnel, or of any part of the shaft or tunnel, that for any reason the shaft or tunnel, or part of the shaft or tunnel, is dangerous—

- (a) every workman shall be withdrawn from the shaft or tunnel, or the part of the shaft or tunnel, found to be dangerous; and
- (b) a competent person appointed for the purpose by the person in charge shall—
 - (i) inspect the shaft, tunnel or part found to be dangerous; and
 - (ii) make a true report of the condition of the shaft, tunnel or part.

(2) A workman shall not, except so far as is necessary for—

- (a) inquiring into the cause of danger; or
- (b) the removal of the danger; or
- (c) exploration,

be re-admitted into the shaft or tunnel, or the part of the shaft or tunnel, found to be dangerous until the person appointed in accordance with Subsection (1) reports that the shaft or the tunnel is not dangerous.

(3) Every report and action taken in accordance with this section shall be notified to the Departmental Head.

49. Workmen approaching dangerous places.

(1) In the case of a working in a tunnel or shaft near a place that is likely to be dangerous, the person in charge shall notify the Departmental Head.

(2) When notification is received under Subsection (1), the Departmental Head may issue any directions that he thinks suitable for the safe working of the place concerned.

50. Men working alone.

(1) In any shaft, tunnel, quarry or deep excavation works where men are required to work alone, whether above or below ground, it is the responsibility of the person in charge to make arrangements to ensure that they are visited at intervals of not more than two hours during each working shift.

(2) A workman shall not be employed alone in dangerous ground.

51. Safety helmets.

A person shall not work or pass in or about any tunnel, shaft, quarry or deep excavation unless he is wearing a hard hat, of the type approved by the Departmental Head.

52. Fencing of shafts and protection of excavations.

(1) All entrances to shafts shall be securely fenced off to the satisfaction of an Industrial Safety Officer.

(2) An excavation of any kind shall be securely protected and made safe for persons employed in or about it.

53. Safety of machinery.

Machinery shall be maintained in good working order, and shall be suitable and safe for the work for which it is to be used.

54. Safety inspection.

(1) The person in charge, or a competent person appointed by the person in charge, shall—

(a) once in every week carefully examine—

(i) the buildings, machinery, tunnels, shafts and excavations; and

(ii) all other places used in the working of the tunnels, shafts and excavations.,

as to their safety; and

(b) report on any alterations or repairs necessary to ensure the safety of persons employed in places referred to in Paragraph (a).

(2) Alterations or repairs necessary to ensure safety to persons shall be carried out without delay.

55. Guarding of machines.

All exposed or dangerous parts of machinery shall be kept securely and safely fenced.

56. Lights.

Lights approved by the Departmental Head shall be provided for the use of the workmen in any underground working.

57. Safety belts and ropes.

Where the Departmental Head so directs—

(a) safety belts and safety ropes shall be provided; and

(b) workmen shall wear safety belts and safety ropes where necessary to ensure safety.

58. Working on power lines.

Where men are engaged on electric power lines, suitable danger notices shall be attached to the switchboard.

59. Fire-fighting equipment.

Fire-fighting equipment, to the satisfaction of the Departmental Head, shall be provided and maintained in or about a tunnel, shaft or excavation.

60. Inflammable refuse.

(1) Inflammable refuse—

- (a) shall be removed from the workings at least once each week; and
- (b) shall not be allowed to accumulate below ground level.

(2) Refuse removed under Subsection (1) shall be disposed of in a suitable manner away from the workings.

(3) Oil and grease kept underground shall be stored in suitable metal containers.

61. Open cuts.

Where any excavation work is in operation—

- (a) if the face of the cut is more than 19.812 m¹ in height it shall be worked in benches, unless otherwise approved by the Departmental Head; and
- (b) all unconsolidated matter (such as clay, earth, sand, gravel and loose rock) lying within 1.829 m² from the rim of the cut shall be removed; and
- (c) beyond 1.829 m² from the rim of the cut, all overburden shall be sloped at an angle of repose; and
- (d) a person shall not be permitted to work near the wall of the cut until the person in charge, or a competent person appointed by him, has examined the wall and pronounced it safe; and
- (e) where the wall of the cut is found to be unsafe, a person shall not be permitted to do other work on the cut until all dangers have been removed; and
- (f) each person engaged in work on the wall shall wear a substantial and adequate lifeline that is securely fastened above the working place; and
- (g) a person shall not be lifted or lowered, or allow himself to be lifted or lowered, by means of a crane or derrick; and
- (h) a person shall not ride on a conveyor or belt.

62. Report of dangerous conditions.

(1) A person in or about a shaft, tunnel or excavation work who witnesses any circumstance, manner or thing that may be likely to cause danger of any kind shall immediately notify it to the person under whose immediate direction or control he is.

(2) A person on duty as a shift boss or leading hand in any shaft, tunnel or excavation workings shall, on changing his shift, inform the person appointed to relieve him of the state of the workings in the part of the shaft, tunnel or excavation workings in which he is employed.

¹ Metricated editorially. The original measurement was 65 ft.

² Metricated editorially. The original measurement was 6 ft.

63. Intoxicating liquor.

A person who is under the influence of, or carrying, intoxicating liquor shall not—

- (a) enter any shaft, tunnel or excavation workings; or
- (b) be in the proximity of any working place on the surface or near machinery that is in motion.

PART VI.—INTERNAL COMBUSTION ENGINES UNDERGROUND.**64. Use of internal combustion engines underground.**

(1) An internal combustion engine other than an internal combustion engine driven by diesel fuel shall not be installed underground.

(2) An internal combustion engine shall not be installed underground without the approval of the Departmental Head.

65. Inspection of engines.

(1) All internal combustion engines used underground—

- (a) shall be inspected daily and examined by—
 - (i) the person in charge; or
 - (ii) a competent person, other than the driver, appointed for the purpose; and
- (b) shall be inspected at least once in every week by a competent diesel engineer or mechanic,

as to the safe operation of the engine.

(2) An engine shall not be used underground if it has any defect that may affect its safe operation.

66. Fuel for diesel engines.

Fuel for diesel-engined machines used underground shall—

- (a) have a flash point of not less than 65.6°C^1 ; and
- (b) be conveyed into underground workings in approved strong receptacles that—
 - (i) do not leak; and
 - (ii) are regularly tested and examined for leakage by the person in charge or a competent person appointed for the purpose by the person in charge; and
- (c) be conveyed underground only in quantities approved by an Industrial Safety Officer; and
- (d) be stored underground only as approved by an Industrial Safety Officer; and
- (e) be placed in the engine of the vehicle at a place and in a manner approved by an Industrial Safety Officer.

¹ Metricated editorially. The original temperature was 150° Fahrenheit.

67. Fire extinguishers, etc.

Fire extinguishers of a type and capacity approved by the Departmental Head shall be installed on all diesel-engined machines and at all fuel rooms and service points, and buckets of dry sand shall be provided at all fuel rooms and service points.

68. Exhaust scrubbers, etc.

(1) If approved by the Departmental Head, exhaust gas scrubbers or other apparatus, suitable for—

(a) making toxic exhaust gases harmless; or

(b) reducing the toxic content of such gases so as to comply with this Order,

shall be fitted to all diesel-engined machines used underground.

(2) The tanks of the exhaust gas scrubbers shall be cleaned and filled daily with fresh water.

(3) Any other apparatus for making toxic exhaust gases harmless shall be examined daily and cleaned as frequently as is necessary.

69. Running of engines when stationary.

Diesel-engined machines used under ground shall not be left running while the machine is not being operated, except for short periods when necessary.

70. Engine exhausts.

Engine exhaust gases shall be discharged at a point remote from the engine operator.

71. Ventilation.

(1) Diesel-engined machines may be used underground only in places where the following standards of ventilation are maintained:—

(a) air for the ventilation shall be drawn from the purest possible source and contain—

(i) not less than 20% by volume of oxygen; and

(ii) not more by volume than—

(A) 0.025% of carbon dioxide (CO₂); or

(B) 0.01% of carbon monoxide (CO); or

(C) 0.0025% of nitrous oxide or sulphuretted hydrogen; and

(b) the exhaust gases of diesel-engined vehicles do not contain more than 0.15% of carbon monoxide; and

(c) the quantity of air passing through is not less than 1.415 m³¹ per minute per brake horsepower or 141.58 m³² per minute whichever is the greater.

(2) For the purposes of Subsection (1)(c), the total power of the maximum number of vehicles working in any place at any one time shall be used as the power for computing the quantity of air in accordance with that paragraph.

(3) The quantity of air for the vehicles referred to in Subsection (1)(c) is in addition to any quantity of air required for any other purpose.

¹ Metricated editorially. The original measurement was 50 cu.ft.

² Metricated editorially. The original measurement was 5 000 cu.ft.

72. Analyses of air.

(1) Analyses, by methods approved by the Departmental Head, of—

- (a) the air in places where diesel-engined vehicles are used underground; and
- (b) the exhaust gases of such vehicles,

shall be made at four-weekly intervals or more frequently as directed by an Industrial Safety Officer.

(2) The results of analyses under Subsection (1) shall be recorded, and the records shall be made available to an Industrial Safety Officer.

73. Devices to indicate air circulation.

Where required by an Industrial Safety Officer, suitable devices to show that a sufficient quantity of air is circulating shall be installed in all places where diesel-engined machines are used underground.

PART VII.—TRENCHES.**74. Trenches in hard compact ground.**

(1) This section applies in respect of trenches over 2.438 m¹ in length or 1.524 m² in depth in hard compact ground.

(2) The trenches shall be braced at intervals not exceeding 1.829 m³ with runners of 31.75 mm⁴ hardwood or heavier material, placed vertically in the trench opposite each other against the trench wall.

(3) The runners shall, if possible, extend to the bottom of the trench, and otherwise as low as possible to clear the top of the pipe, sewer, conduit or other material to be placed in the bottom of the trench.

(4) The runners shall be supported by walings placed horizontally and held in position by screw jacks or struts, and side and end walings abutting at the corners of excavations shall be joined by halving one to the other so that each waling sustains its correct proportion of any external load imposed on them.

(5) The cross sectional dimensions of hardwood walings shall not be less than 152.4 mm x 76.2 mm,⁵ and walings of other materials or timbers shall be at least of strength equivalent to that of hardwood walings.

(6) Walings shall be spaced not more than 0.914 m⁶ apart measured vertically from centre to centre of walings.

(7) Struts or screw jacks shall be spaced not more than 1.829 m⁷ apart, except at the joints of walings where they shall be closer.

¹ Metricated editorially. The original measurement was 8 ft.

² Metricated editorially. The original measurement was 5 ft.

³ Metricated editorially. The original measurement was 6 ft.

⁴ Metricated editorially. The original measurement was 1½ in.

⁵ Metricated editorially. The original measurement was 6 in x 3 in.

⁶ Metricated editorially. The original measurement was 3 ft.

⁷ Metricated editorially. The original measurement was 6 ft.

(8) The cross-sectional dimensions of struts relative to the width of the trench shall not be less than the dimensions shown in the following table:—

Width of trench. ¹	Dimensions of strut. ¹
0.304 m but less than 0.914 m	101.6 mm x 76.2 mm
0.914 m but less than 1.524 m	152.4 mm x 76.2 mm
1.524 m but less than 2.133 m	152.4 mm x 101.6 mm
2.133 m or more	152.4 mm x 152.4 mm

(9) All struts, braces and walings in any excavation works shall be properly and adequately secured so as to prevent their accidental displacement or fall.

75. Trenches in saturated, etc., ground.

(1) This section applies in respect of trenches in saturated, filled or otherwise unstable ground.

(2) The trenches shall be close timbered.

(3) The cross-sectional dimensions of the runner shall not be less than 152.4 mm x 38.1 mm² for hardwood timber runners.

(4) The cross-sectional dimensions for hardwood timber walings shall not be less than 152.4 mm x 177.8 mm³.

(5) The walings shall be spaced as required by Section 74(6).

(6) Struts shall be of the cross-sectional dimension specified in Section 74(8).

76. Use of heavier timbers.

In exceptional circumstances, if the Departmental Head thinks that heavier timber is necessary he may order heavier timbering than prescribed in Section 74 or 75.

77. Disposal of excavated material.

(1) Excavated material shall not be placed nearer than 0.609 m⁴ to the edge of the trench.

(2) Where the excavated material is unstable or of running consistency, no material shall be placed nearer than 0.914 m⁵ to the edge of the trench except with the approval of an Industrial Safety Officer.

78. Egress from trenches.

Trenches 1.524 m⁶ or more in depth shall be supplied with one ladder for each 60.96 m⁷ or fraction of 60.96 m⁷ of trench, and each ladder shall extend from the bottom of the trench to at least 1.067 m⁸ above the top of the trench.

¹ Metricated editorially. Running from left to right across the table, the respective original measurements were:

1 ft; 3 ft; 4 in; 3 in.

3 ft; 5 ft; 6 in; 3 in.

5 ft; 7 ft; 6 in; 4 in.

7 ft; —; 6 in; 6 in.

² Metricated editorially. The original measurements were 6 in x 1½ in.

³ Metricated editorially. The original measurements were 6 in x 7 in.

⁴ Metricated editorially. The original measurement was 2 ft.

⁵ Metricated editorially. The original measurement was 3 ft.

⁶ Metricated editorially. The original measurement was 5 ft.

⁷ Metricated editorially. The original measurement was 200 ft.

⁸ Metricated editorially. The original measurement was 3 ft 6 in.

79. Safety hats.

A person working in a trench over 1.524 m¹ in depth or where there is any danger of material falling from the top of the trench shall wear a hard safety hat of approved design.

80. Barriers about trenches.

Trenches into which a person is liable to fall shall be provided with a suitable barrier to a height of at least 0.914 m² and as close as is reasonably practicable to the edge of the trench.

¹ Metricated editorially. The original measurement was 5 ft.

² Metricated editorially. The original measurement was 3 ft.

INDEPENDENT STATE OF PAPUA NEW GUINEA.

CHAPTER NO. 175.

Industrial Safety (Explosive-powered Tools) Order.

ARRANGEMENT OF SECTIONS.

1. Interpretation—
 - "authorized repairer"
 - "cartridge"
 - "defect"
 - "explosive-powered tool"
 - "high-tensile steel"
 - "projectile"
 - "qualified operator"
 - "repair"
 - "supervisor".
2. Application.
3. Restrictions on explosive-powered tools and cartridges.
4. Requirements to be observed by operators.
5. Assistants and trainees.
6. Responsibilities of employers and supervisors.
7. Inspection of permits, etc., of operators of explosive-powered tools.
8. Requirements for explosive-powered tools.
9. Requirements for projectiles.
10. Use of explosive-powered tools and cartridges.
11. Repairs.
12. Protective devices.
13. Storage of explosive-powered tools and cartridges.

INDEPENDENT STATE OF PAPUA NEW GUINEA.

CHAPTER NO. 175.

Industrial Safety (Explosive-powered Tools) Order.

MADE under the *Industrial Safety, Health and Welfare Act.*

1. Interpretation.

(1) In this Order, unless the contrary intention appears—

“authorized repairer” means—

(a) a maker of explosive-powered tools, a competent person employed by a maker of explosive-powered tools or a person not employed by the maker but authorized by him to repair explosive-powered tools; or

(b) a gunsmith or a competent person employed by a gunsmith;

“cartridge” means a cartridge made for an explosive-powered tool;

“defect” means a defect that might impair the safe operation of an explosive-powered tool;

“explosive-powered tool” means a tool by means of which a projectile may be driven against, into or through any substance by means of an explosive, and includes—

(a) an attachment to or an accessory of an explosive-powered tool; and

(b) a device that is adapted or intended to be used with an explosive-powered tool;

“high-tensile steel” means steel the nominal ultimate tensile value of which exceeds 695 MPa;¹

“projectile” means a stud, pin, dowel, screw, rivet, spike or other object driven against, into or through a substance by means of an explosive-powered tool, or adapted or intended to be so driven;

“qualified operator” means a person who is approved under this Order to operate an explosive-powered tool;

“repair” means to repair, modify, alter, adjust or maintain, or attempt to repair, modify, alter, adjust or maintain, but does not include the making or attempted making of minor adjustments by a qualified operator, or by a person under the direct supervision of a qualified operator, that are incidental to the ordinary operation of the tool;

“supervisor” means a foreman or other person employed to direct workmen on a job site, and includes a person training another person to become a qualified operator whether or not on a job site.

(2) For the purposes of this Order, a person shall be deemed to use an explosive-powered tool if he loads, unloads or fires, or attempts to load or fire, the tool.

2. Application.

This Order applies to and in relation to the use, inspection, testing and repair of explosive-powered tools in any trade, occupation or process.

¹ Metricated editorially. The original value was 45 tons per sq.in.

3. Restrictions on explosive-powered tools and cartridges.

(1) Subject to Subsection (2) and to Sections 5 and 11, a person other than a qualified operator shall not—

- (a) use, inspect or test an explosive-powered tool; or
- (b) handle cartridges, open a container holding cartridges or place any thing in a container holding cartridges.

(2) For the purposes of Subsection (1), a person shall not be deemed to handle cartridges merely by virtue of—

- (a) the purchase or taking of delivery by him of cartridges on behalf of his employer; or
- (b) the movement by him from one place to another at the direction of his employer, or of a supervisor, of a container of cartridges.

4. Requirements to be observed by operators.

A qualified operator—

- (a) shall not use an explosive-powered tool or a projectile unless it complies with Section 8 or 9, as the case requires; and
- (b) shall comply with the requirements of Section 10.

5. Assistants and trainees.

(1) Where a person—

- (a) is assisting a qualified operator, or is training to become a qualified operator; and
- (b) is under the direct supervision of a qualified operator at the relevant time,

he may—

- (c) use, inspect or test an explosive-powered tool; and
- (d) handle cartridges or open a container holding cartridges.

(2) A person assisting a qualified operator or training to become a qualified operator shall comply with Section 10 as if he were a qualified operator.

6. Responsibilities of employers and supervisors.

An employer or a supervisor shall not direct or permit a person in his employment or under his supervision, as the case may be, to do any work or any thing in contravention of this Order.

7. Inspection of permits, etc., of operators of explosive-powered tools.

The Departmental Head may, by written notice, require an operator of an explosive-powered tool to produce his certificate of registration or permit, as the case may be, under the *Firearms Regulation Act 1963* (Adopted), and the operator shall comply with the notice.

8. Requirements for explosive-powered tools.

An explosive-powered tool—

- (a) shall be of a make or design approved by the Departmental Head by notice in the *National Gazette*; and

- (b) shall be permanently engraved or embossed on a metal part—
 - (i) with the clearly legible words—

“DO NOT REMOVE TOOL FROM WORK SURFACE FOR AT
LEAST 10 SECONDS IF TOOL FAILS TO FIRE”;
 - and
 - (ii) with a clearly legible serial number by which it can be readily identified; and
- (c) shall have permanently attached at its muzzle end a protective shield or device designed to stop the ricochet of projectiles and the free flight of other objects and particles liberated by the firing of the tool.

9. Requirements for projectiles.

- (1) Subject to the succeeding provisions of this section, a projectile shall be capable of undergoing the following test without cracking or breaking:—
 - (a) in the case of a smooth-shanked projectile, the projectile shall be bent through an angle of 60°; and
 - (b) in the case of a knurled-shanked projectile, the projectile shall be bent through an angle of 30°.
- (2) The test shall be carried out by—
 - (a) bending the shank of the projectile about a pin of a diameter equal to that of the shank; and
 - (b) applying a continuous steady load to the projectile until the required deformation has been reached.

10. Use of explosive-powered tools and cartridges.

- (1) Before an explosive-powered tool is used—
 - (a) there shall be displayed on the site of the work, so as to be clearly legible by all persons who are at or near it, a notice with the words—

“WARNING—EXPLOSIVE-POWERED TOOL IN USE”;

and
 - (b) the tool shall be inspected each day for defects; and
 - (c) the operator and each person assisting him or being trained by him shall wear a protective device for the protection of eyes from missiles and flying particles.
- (2) After each period of seven working days, an explosive-powered tool shall, before further use, be dismantled and thoroughly examined for defects.
- (3) An explosive-powered tool shall not be used where the operator—
 - (a) is aware that it has a defect; or
 - (b) would have been aware of a defect if he had given it a reasonable inspection.
- (4) An explosive-powered tool shall not be used for a purpose for which it is not properly suited.
- (5) An explosive-powered tool shall not be loaded at a place other than the place at which it is to be used.

(6) A projectile, explosive charge, breech plug, barrel extension or adaptor that is not of a type suited to—

- (a) the particular tool; and
- (b) the purpose for which the tool is being used,

shall not be used in an explosive-powered tool.

(7) The explosive charge used in an explosive-powered tool shall not be of greater strength than is necessary for the purpose for which the tool is being used.

(8) An explosive-powered tool shall not be used—

- (a) on high-tensile steel, steel hardened by heat treatment, cast-iron or any other unusually hard or unyielding substance; or
- (b) on hard tile, hard terra cotta, glazed brick, glass, marble, granite, thin slate or other readily shattered substance; or

(c) to drive a projectile into—

- (i) any substance at a point so close to an edge of the substance or to any hole in the substance that, by reason of—

- (A) the nature of the substance; or
- (B) the size and shape of the projectile; or
- (C) the strength of the charge to be used,

there is a likely risk that the substance might crack or break or the projectile fly from the substance; or

(ii) steel, within 12.7 mm¹ of an edge of the steel; or

(iii) brick, concrete or the like, within 76.2 mm² of an edge of the substance; or

(d) in the presence of any explosive or inflammable gas, dust or vapour, in compressed air or in a place where the explosive charge might be exploded or made dangerous by heat.

(9) Where it seems likely that the whole of a projectile will pass through the surface of the substance on which an explosive-powered tool is being used, the substance shall be backed with a protective material capable of fully absorbing the energy.

(10) An explosive-powered tool shall not be fired unless—

- (a) the operator is in a safe, well-balanced position so that inadvertent tilting or misalignment of the tool will not occur at the time of firing; and
- (b) the tool is held perpendicular to the surface on which it is being used and, subject to Subsection (11), the muzzle end of its barrel is in contact with it.

(11) Where the muzzle end of the barrel of an explosive-powered tool cannot be brought into contact with the surface at the point where the projectile driven from the tool is to strike or penetrate it, an effective barrel extension shall, subject to Subsection (12), be used to extend the barrel into contact with the surface at that point.

(12) The length of a barrel extension to an explosive-powered tool shall not exceed by more than 12.7 mm¹ the maximum length that is required to clear the obstruction that makes the use of the barrel extension necessary.

¹ Metricated editorially. The original distance was $\frac{1}{2}$ in.

² Metricated editorially. The original distance was 3 in.

(13) After an explosive-powered tool has been fired, it shall be carefully examined and all pieces of projectile or cartridge and other foreign matter removed.

(14) Where an explosive-powered tool fails to fire, it shall be held in a perpendicular position and in contact with the surface for at least 10 seconds, and if the tool has not then fired it shall be unloaded or placed in such a position that it will do no harm if it fires.

(15) The open end of an explosive-powered tool that is being used or carried while loaded shall at all times be kept clear of the operator and other persons.

(16) The utmost care shall be exercised where—

- (a) an explosive-powered tool is being used or, while loaded, is being carried; or
- (b) cartridges are being handled.

(17) An explosive-powered tool shall not be fired in such a manner as to cause the projectile to fly free.

(18) An explosive-powered tool or a cartridge—

- (a) shall not be taken from its usual container unless required for use, inspection, testing or repair and in the case of cartridge containers the container shall be locked; and
- (b) shall not be left unattended unless effective precautions are taken to ensure that it will not be taken away, used or handled by unauthorized persons.

(19) A loaded explosive-powered tool shall not be taken from place to place unless, by reason of mechanical failure, it cannot be unloaded.

(20) At the end of each working day, or at any earlier time at which the work for which he required the tool is finished, the person who uses an explosive-powered tool shall return the tool and all unused cartridges to their respective places of storage.

(21) No objects other than cartridges shall be placed in a cartridge container.

(22) Subject to Subsection (23), where there appears—

- (a) on the container of an explosive-powered tool; or
- (b) in printed matter supplied with an explosive-powered tool,

instructions, advice or recommendations by the manufacturer of the tool that—

- (c) are not inconsistent with this Order; and
- (d) relate to the safe use of the tool or the use with the tool, for reasons of safety, of any substance or thing,

the tool, substance or thing shall be used in accordance with those instructions, advice or recommendations.

(23) Subsection (22) does not require the use of a particular make of a substance or thing.

11. Repairs.

(1) Subject to Subsection (2), a person shall not repair an explosive-powered tool unless he is an authorized repairer.

(2) A person training to become an authorized repairer may repair an explosive-powered tool, but only under the direct supervision of an authorized repairer.

(3) An authorized repairer, or a person training to become an authorized repairer who is under the direct supervision of an authorized repairer at the relevant time, may fire an explosive-powered tool for the purpose of testing it, and may handle cartridges.

(4) A person shall not employ, or contract with, another person to repair an explosive-powered tool unless the other person is an authorized repairer.

12. Protective devices.

An employer shall provide, in a clean and serviceable condition, for the use of each person employed by him who—

- (a) operates an explosive-powered tool; or
- (b) assists an operator; or
- (c) is training to become a qualified operator,

an effective device for the protection of his eyes from missiles and flying particles.

13. Storage of explosive-powered tools and cartridges.

(1) Subject to Subsection (3), an employer or a person who is self-employed shall provide and maintain suitable containers for the storage of explosive-powered tools and suitable containers for the storage of cartridges.

(2) Each container for the storage of cartridges shall be—

- (a) marked with the clearly legible word "EXPLOSIVE"; and
- (b) capable of being locked.

(3) Subsection (1) does not apply to the employer of an authorized repairer.

INDEPENDENT STATE OF PAPUA NEW GUINEA.

CHAPTER NO. 175.

Industrial Safety (Lifts) Order.

ARRANGEMENT OF SECTIONS.

1. Interpretation—
"the Lift Code".
2. Liability of operators, etc.
3. Application of Lift Code.
4. Approvals for lifts.
5. Lifts over thoroughfares.
6. Operation of lifts.
7. Loads.
8. Inspection, etc.

INDEPENDENT STATE OF PAPUA NEW GUINEA.

CHAPTER NO. 175.

Industrial Safety (Lifts) Order.

MADE under the *Industrial Safety, Health and Welfare Act*.

1. Interpretation.

(1) In this Order "the Lift Code" means the Australian Standard Rules for the design, installation, testing and operation of lifts, escalators and moving walks known as the *S.A.A. Lift Code AS CA3*.¹

(2) Expressions used in this Order that are also used in the Lift Code have the same respective meanings in this Order as they have in that Code.

2. Liability of Operators, etc.

(1) A person shall not allow a lift to be operated in any building under his control unless the lift is operated and maintained at all times in accordance with the provisions of this Order and the Lift Code.

(2) A person who, directly or by his servants or agent, authorizes a person—

(a) to operate a lift; or

(b) to carry out any work installing, maintaining, repairing or inspecting a lift or any of the parts of a lift as defined in this Order or the Lift Code,

shall ensure that this Order is complied with.

(3) Subsection (2) does not relieve a person from liability under any other provision of this Order.

(4) It is a defence to a charge of a contravention of this Order if the defendant proves that—

(a) he was not aware, and could not with the exercise of reasonable diligence, have become aware, of the relevant non-compliance with this Order; and

(b) he took all reasonable steps to ensure that no such non-compliance took place.

3. Application of Lift Code.

Unless otherwise provided in this Order, the Lift Code applies—

(a) to the design, construction, installation or testing of lifts, lift enclosures, liftwells, liftwell enclosures, buffers, lift machinery and lift machinery enclosures; and

(b) to any alteration or repair to, or maintenance or testing of, a lift, lift enclosure, liftwell, liftwell enclosure, buffer, lift machinery or lift machinery enclosure; and

(c) to the operation of lifts and lift machinery.

¹ See, now, *S.A.A. Lift Code (AS1735-1975)*.

4. Approvals for lifts.

(1) A lift or lift machinery shall not be constructed, installed, erected or altered without the prior approval of the Departmental Head or a person appointed by the Departmental Head for the purpose.

(2) An application for approval under Subsection (1) to construct, install, erect or alter a lift or lift machinery shall include—

- (a) a plan showing the proposed location of the liftwell on the ground floor of the building; and
- (b) drawings of the lift and of the liftwell and its enclosures; and
- (c) a full description of the lift machinery and its enclosures.

5. Lifts over thoroughfares.

A lift, or lift machinery shall not be constructed, installed, erected or altered in or over a thoroughfare where persons would pass under the lift or lift machinery.

6. Operation of lifts.

(1) A person, other than a lift mechanic engaged in installing, erecting or inspecting a lift, shall not—

- (a) work or operate, from any floor or place other than the car, a lift that comprises a car operated by means of a rope in the well; or
- (b) work or operate an electric lift from the control board of the machine room.

(2) All automatically controlled lifts shall be operated by the car or door control button switches.

(3) A person shall not operate a lift by means of the enclosure gate contacts or fastenings.

(4) An attendant in charge of a lift shall not move the car from any floor unless the enclosure doors or gates on the floor are closed and fastened.

(5) Unless the lift is automatically controlled, a person, other than an attendant, shall not operate a lift.

(6) The names of attendants authorized to operate a lift shall be posted in a conspicuous place in the car of the lift.

7. Loads.

(1) There shall be posted up in a lift that is designed and constructed for the purposes of carrying goods or passengers—

- (a) the certified maximum load (if any); and
- (b) the certified number of passengers (if any),

that the lift is authorized to carry, in accordance with the provisions of the Lift Code.

(2) A lift shall not be loaded in excess of the certified maximum load.

(3) A person shall not represent a lift to be capable of raising or lowering a greater load than that for which it has been designed.

8. Inspection, etc.

At least once in each 12 months, each lift shall be inspected and certified to be in order by a person approved by the Departmental Head as competent to inspect and issue a certificate that the lift is in order.

INDEPENDENT STATE OF PAPUA NEW GUINEA.

CHAPTER NO. 175.

Industrial Safety (Monocrotophos) Order.

ARRANGEMENT OF SECTIONS.

1. Application.
2. Liability of employers, etc.
3. Approved method of spraying.
4. Dilution of monocrotophos.
5. Concentration of spraying.
6. Use of monocrotophos.
7. Supervisory duties.
8. Medical safeguards.
9. Blood examinations.
10. Prohibition of certain operations.

INDEPENDENT STATE OF PAPUA NEW GUINEA.

CHAPTER NO. 175.

Industrial Safety (Monocrotophos) Order.

MADE under the *Industrial Safety, Health and Welfare Act.*

1. Application.

This Order applies to the use of monocrotophos as a spray in cacao plantations throughout the country.

2. Liability of employers, etc.

A person employing another person in or in connexion with the use of monocrotophos, and a person supervising or charged with the supervision of the use of monocrotophos, shall ensure that this Order is complied with at all times.

3. Approved method of spraying.

Monocrotophos shall be used only by the low-volume application of diluted monocrotophos by motorized back-pack spraying machines.

4. Dilution of monocrotophos.

Monocrotophos for use in spraying shall be diluted to a concentration not exceeding 12.47g ¹ by weight of the active ingredient per litre of—

(a) water; or

(b) a mixture of water and superior white oil in the proportion of three parts of water to one part of oil.

5. Concentration of spraying.

An application of monocrotophos to any area shall not be in a concentration exceeding 22.4 l² of the diluted mixture per ha.

6. Use of monocrotophos.

(1) A person wishing to use monocrotophos may apply to the Departmental Head for approval to do so.

(2) If the Departmental Head is satisfied that the applicant has sufficient knowledge and experience to make safe the use of monocrotophos as a spray by him or under his supervision, the Departmental Head may grant approval.

(3) A person, other than a person approved under Subsection (2) or a person acting under the immediate supervision of such a person, shall not use monocrotophos as a spray, or permit it to be so used.

(4) A person shall not carry out spraying with monocrotophos for more than four hours in any period of 28 days, whether on the one plantation or more than one plantation, and a person shall not permit another person to do so.

(5) Monocrotophos for use in spraying shall not be stored or kept in any way or for any period in containers exceeding 1 136.5 ml³ capacity.

¹ Metricated editorially. The original concentration was 2 oz. per gal.

² Metricated editorially. The original concentration was 2 gal per acre.

³ Metricated editorially. The original volume was 40 fl.oz.

7. Supervisory duties.

(1) A person who employs another person in connexion with the use of monocrotophos, and a person supervising the use of monocrotophos, shall ensure that—

- (a) the spraying operations are adequately supervised at all times; and
- (b) no spillage of monocrotophos, whether in concentrated or in diluted form, onto the skin or clothing of any person occurs; and
- (c) adequate supplies of clean water and soap are readily available at the site of the spraying; and
- (d) all persons engaged in the spraying shower thoroughly with soap and water and completely change their clothing immediately after ceasing spraying operations; and
- (e) no person engaged in the spraying smokes or eats while so engaged.

(2) Where any spillage of monocrotophos occurs, the employer, the person in charge of the place where the spillage occurs and any person supervising the spraying shall ensure that—

- (a) the matter is immediately reported to the nearest medical officer; and
- (b) any person onto whose skin or clothing the monocrotophos is spilled is immediately taken to a hospital or sick-ward approved by the Director of Public Health for the purposes of this Order.

8. Medical safeguards.

A person employing another in connexion with the use of monocrotophos, and a person supervising the use of monocrotophos, shall ensure that—

- (a) a person trained in the administration of Atropin and P.A.M. antidotes and similar antidotes is available to give immediate treatment as required at the site of the spraying operations; and
- (b) transport is available at all times to remove a person affected by monocrotophos to a hospital or sick-ward approved by the Director of Public Health for the purposes of this Order; and
- (c) where a person is engaged in spraying operations, details—
 - (i) of the operations in which the person is engaged; and
 - (ii) of the dates, times, period and degree of exposure,is immediately forwarded in the quickest available manner to the nearest Employment Office.

9. Blood examinations.

(1) A person shall not be engaged in spraying operations with monocrotophos on any day unless within the preceding 48 hours a blood specimen has been taken from him and the result of a cholinesterase examination is known.

(2) A person employing others in connexion with the use of monocrotophos, and a person supervising the use of monocrotophos, shall ensure that, in accordance with procedures laid down by the Director of Public Health, immediately after any person ceases on any day to be engaged in the spraying operations a blood specimen is taken and forwarded to a laboratory approved by the Director of Public Health for cholinesterase examination.

(3) A Medical Officer of the Public Service may at any time order that a blood specimen be taken from a person engaged or about to be engaged in or in connexion with spraying operations with monocrotophos.

(4) A person in relation to whom an order under Subsection (3) has been given shall not be engaged in spraying operations with monocrotophos until the result of a cholinesterase examination is known.

(5) Where a Medical Officer of the Public Service thinks that a person is, or may be, injuriously affected by monocrotophos, he may prohibit the engagement of the person in or in connexion with spraying operations with monocrotophos for such period or until such time as, in the opinion of the Medical Officer, it would be safe for him to be so engaged.

(6) A person shall not employ any other person, or permit any other person to be employed, in or in connexion with spraying operations with monocrotophos contrary to the provisions of this section, or of a prohibition under Subsection (5).

10. Prohibition of certain operations.

(1) Where in the opinion of a Medical Officer of the Public Service any operations in or in connexion with spraying with monocrotophos are being conducted in such a manner or in such circumstances as to make their continuance dangerous to persons engaged in them, he may prohibit their continuance until—

(a) he is satisfied that they may be continued with safety to persons engaged in them; or

(b) the Departmental Head otherwise orders.

(2) A person shall not employ any other person, or permit any other person to be employed, in or in connexion with spraying operations with monocrotophos contrary to the provisions of a prohibition under this section.

INDEPENDENT STATE OF PAPUA NEW GUINEA.

CHAPTER NO. 175.

*Industrial Safety (Tractors and Earthmoving and Mobile Construction
Equipment) Order.*

ARRANGEMENT OF SECTIONS.

1. Interpretation—
 "approved"
 "equipment to which this Order applies"
 "operator".
2. Logging operations.
3. Excavation operations.
4. Protective clothing, etc.
5. Unattended equipment.
6. Unauthorized persons riding on equipment.
7. Maintenance.
8. Fuelling.
9. Warning signs.

INDEPENDENT STATE OF PAPUA NEW GUINEA.

CHAPTER NO. 175.

Industrial Safety (Tractors and Earthmoving and Mobile Construction Equipment) Order.

MADE under the *Industrial Safety, Health and Welfare Act.*

1. Interpretation.

In this Order, unless the contrary intention appears—

“approved” means approved by an Industrial Safety Officer;

“equipment to which this Order applies” means—

(a) a tractor; or

(b) any earthmoving machine or apparatus; or

(c) a mobile construction machine or apparatus,

and includes any other machine or apparatus of a similar nature;

“operator”, in relation to any equipment to which this Order applies, includes the driver and any other person engaged in the operation of the equipment.

2. Logging operations.

Equipment to which this Order applies that is used in logging operations shall be provided with an approved guard or canopy sufficient to protect the operator, as far as practicable, from falling timber, flying debris and broken or whipping winch cables.

3. Excavation operations.

(1) In this section, “high working face, side face or bank” means a working face, side face or bank from which debris or material may be dislodged so as to strike the operator from above.

(2) Equipment to which this Order applies used in excavation or construction operations in the vicinity of—

(a) a high working face, side face or bank; or

(b) timbered terrain,

shall be provided with an approved guard or canopy sufficient to protect the operator, as far as practicable, from falling or flying debris or broken or whipping winch cables.

4. Protective clothing, etc.

An operator employed in operations referred to in Section 2 or 3 shall be provided with—

(a) an approved pattern safety helmet; and

(b) such other approved protective clothing and equipment as is reasonably necessary to protect him from the hazards of those operations.

5. Unattended equipment.

Equipment to which this Order applies shall not be left unattended unless—

(a) it is stationary on firm level ground; and

- (b) the brakes are applied; and
- (c) the engine or motive power is switched off or disconnected; and
- (d) all attachments to it are so arranged that there is no possibility of the equipment or attachments being inadvertently moved.

6. Unauthorized persons riding on equipment.

(1) Subject to Subsection (2), a person, other than an operator, shall not ride on any equipment to which this Order applies.

(2) Subsection (1) does not prevent—

- (a) authorized maintenance personnel from riding on the equipment to which this Order applies in the course of their duties; or
- (b) persons riding on the equipment while being trained as operators when they are provided with approved seating on the equipment.

7. Maintenance.

Equipment to which this Order applies shall not be used unless—

- (a) it is maintained in good mechanical condition and kept free of oil and fuel leaks; and
- (b) the exhaust stack is mounted so as to direct the exhaust fumes away from the operator.

8. Fuelling.

Equipment to which this Order applies shall not be fuelled unless—

- (a) the engine is stopped; and
- (b) smoking is prohibited; and
- (c) no naked lights are exposed within 15.25 m¹ of the fuelling operation.

9. Warning signs.

Where equipment to which this Order applies is employed in or about a place where vehicular traffic may be expected, signs indicating that the equipment is employed shall be placed in such a manner as to ensure that warning of the presence of the equipment is given.

¹ Metricated editorially. The original measurement was 50 ft.

INDEPENDENT STATE OF PAPUA NEW GUINEA.

CHAPTER NO. 175.

Industrial Safety, Health and Welfare.

SUBSIDIARY LEGISLATION.

1. Act, Section 3—Declaration of factories.

All buildings or places in the country where employees of the State or of Australia, or of an authority established by or under a law of Papua New Guinea or Australia, are engaged directly or indirectly in a process that, if it were carried on for trade, sale or gain, or as an ancillary to a business, would be a manufacturing process within the meaning of the Act.

2. Act, Section 5—Appointment of Industrial Safety Officer.

Officers of the Department of Public Works—

Institutional Engineering Works Supervisor.

Mechanical Workshop Foreman—

Alotau

Daru

Kavieng

Kerema

Lorengau

Popondetta

Vanimo.

Mechanical Workshop Supervisor—

Goroka

Kieta/Arawa

Kimbe

Kundiawa

Mendi.

Regional Mechanical Engineer—

Lae

Madang

Rabaul.

Regional Works Engineer—

Port Moresby.

Regional Workshop Supervisor—

Mount Hagen.

Senior Technical Officer Local Government—

Port Moresby.

Senior Technical Officer Plant—

Port Moresby.

(All positions as at 28 May 1973).

3. Act, Section 42—Declaration of dangerous trades, occupations and processes.

Buildings and other civil engineering works, construction of: specially hazardous occupations (*see Industrial Safety (Building Works) Order*).

Excavation works, tunnelling and shaft sinking, operation in: specially hazardous occupations (*see Industrial Safety (Excavation Works, Shafts and Tunnels) Order*).

Explosive-powered tools, trade, occupations or processes involving the use, inspection, testing and repair of: specially hazardous trades, occupations or processes (*see Industrial Safety (Explosive-powered Tools) Order*).

Lifts, installation, operation and maintenance of: specially hazardous trade, occupation or process (*see Industrial Safety (Lifts) Order*).

Monocrotophos (otherwise known as Azodrin (R) or Nuvocron (R)), spraying of, in and about cacao plantations: specially hazardous occupation (*see Industrial Safety (Monocrotophos) Order*).

Preservative treatment of timber by the use of chemicals and the working of chemically treated timber, operations in relation to: specially hazardous occupations (*see Industrial Safety (Chemical Treatment of Timber) Order*).

Tractors, earthmoving and mobile construction equipment, operation of: specially hazardous occupations (*see Industrial Safety (Tractors and Earthmoving and Mobile Construction Equipment) Order*).

INDEPENDENT STATE OF PAPUA NEW GUINEA.

CHAPTER NO. 175.

Industrial Safety, Health and Welfare.

APPENDIXES.

APPENDIX 1.

SOURCE OF THE INDUSTRIAL SAFETY, HEALTH AND WELFARE ACT.

Part A.—Previous Legislation.

Industrial Safety, Health and Welfare Act 1961 (No. 54 of 1961)

as amended by—

Industrial Safety, Health and Welfare (Hazardous Trades) Act 1969 (No. 85 of 1969)

Industrial Safety, Health and Welfare (Amendment) Act 1970 (No. 9 of 1971)

Statute Law Revision (Metric Conversion) Act 1974 (No. 49 of 1974)

Industrial Safety, Health and Welfare (Amendment) Act 1976 (No. 5 of 1976).

Part B.—Cross References.

Section, etc., in Revised Edition.	Previous Reference ¹ .	Section, etc., in Revised Edition.	Previous Reference ¹ .
1	5	22	18(12)
2	6	23	22
3	5(1) (in part) 18(10), (11), (13)	24	18(14)
4	7	25	19
5	8	26	20
6	9	27	21
7	10	28	18(8)
8	11	29	23
9	12	30	24
10	13	31	25
11	14	32	26
12	15	33	27
13	16	34	28
14	17	35	29
15	18(1)	36	30
16	18(2)	37	32
17	18(3)	38	33(1)
18	18(4)	39	33(2), (3)
19	18(5), (6)	40	33(4), (5)
20	18(7)	41	31
21	18(9)	42	34(1)
		43	34(2)

¹Unless otherwise indicated, references are to the Act set out in Part A.

Part B.—Cross References—*continued*.

Section, etc., in Revised Edition.	Previous Reference.	Section, etc., in Revised Edition.	Previous Reference.
44	34(3)	48	38
45	35	49	39
46	36	50	40
47	37		

APPENDIX 2.

SOURCE OF THE INDUSTRIAL SAFETY, HEALTH AND WELFARE REGULATION

Part A.—Previous Legislation.

1. *Industrial Safety, Health and Welfare Regulations* 1965 (Statutory Instrument No. 2 of 1965)

as amended by—

Statute Law Revision (Metric Conversion) Act 1974 (No. 49 of 1974).

2. *Industrial Safety (Sawmilling and Woodworking) Regulations* 1965 (Statutory Instrument No. 3 of 1965)

as amended by—

Statute Law Revision (Metric Conversion) Act 1974 (No. 49 of 1974).

Part B.—Cross References.

Note.—In this Table, a reference "S & W" is a reference to the *Industrial Safety (Sawmilling and Woodworking) Regulations* 1965 set out in Part A.

Section, etc., in Revised Edition.	Previous Reference ¹ .	Section, etc., in Revised Edition.	Previous Reference ¹ .
1	3	18	21
2	4	19	22
3	5	20	23
4	6	21	29
5	7, 8	22	24
6	9	23	25
7	10	24	26
8	11	25	27
9	12	26	28
10	13	27	30
11	14	28	31
12	15	29	32
13	16	30	33
14	17	31	S & W 3
15	18	32	S & W 4(1)
16	19	33	S & W 4(2)
17	20	34	S & W 4(3)

¹Unless otherwise indicated, references are to the *Industrial Safety, Health and Welfare Regulations* 1965 set out in Part A.

Part B.—Cross References—*continued.*

Section, etc., in Revised Edition.	Previous Reference.	Section, etc., in Revised Edition.	Previous Reference.
35	S & W 4(4)		(4), (5), (6), (11),
36	S & W 4(15)		(12), (14)
37	S & W 4(16)	59	S & W 7(3) (in part),
38	S & W 4(5)		(13)
39	S & W 4(6)	60	S & W 7(7)
40	S & W 4(10)	61	S & W 7(8)
41	S & W 4(11)	62	S & W 7(9)
42	S & W 4(12), (13)	63	S & W 7(10)
43	S & W 4(14)	64	S & W 7(15)
44	S & W 4(17)	65	S & W 8(1)
45	S & W 4(18), (19), (20)	66	S & W 8(2), (3)
46	S & W 4(21)	67	S & W 8(4), (5), (6)
47	S & W 4(7), (8), (9)	68	34
48	S & W 5(1)	Schedule—	Schedule—
49	S & W 5(2)	Form 1	Form 1
50	S & W 5(3)	Form 2	Form 2
51	S & W 5(4)	Form 3	Form 3
52	S & W 5(8)	Form 4	Form 4
53	S & W 5(9)	Form 5	Form 5
54	S & W 5(5), (6), (7)	Form 6	Form 6
55	S & W 6	Form 7	Form 7
56	S & W 7(1)	Form 8	Form 8
57	S & W 7(2)	Form 9	Form 9
58	S & W 7(3) (in part)		

APPENDIX 3.

SOURCE OF THE INDUSTRIAL SAFETY (BUILDING WORKS) ORDER.

Part A.—Previous Legislation.

Safeguards and Measures to be taken in Building Works Order No. 1 of 1967
(published in *Territory of Papua and New Guinea Government Gazette* No. 26 of
30 May 1967, at p. 381).

Part B.—Cross References.

Sections, etc., in Revised Edition.	Previous Reference. ¹	Section, etc., in Revised Edition.	Previous Reference. ¹
1	3	28	33(5), (8)
2	4, 5	29	33(1)
3	6	30	33(2), (3)
4	7	31	33(4)
5	8	32	33(6), (7)
6	9	33	33(9)
7	10	34	33(11)
8	11, 22	35	33(10)
9	12	36	34
10	13, 14	37	35
11	15	38	36
12	16	39	37(1)-(4)
13	17	40	37(5)
14	18	41	37(6)
15	19	42	37(7)
16	20	43	38
17	21	44	39
18	23	45	40
19	25	46	41
20	24	47	42
21	26	48	43
22	27	49	44
23	28	50	45
24	29	51	46
25	30	52	47
26	31	53	48
27	32	54	49

¹ Unless otherwise indicated, references are to the Order set out in Part A.

APPENDIX 4.

SOURCE OF THE INDUSTRIAL SAFETY (CHEMICAL TREATMENT OF TIMBER) ORDER.

Part A.—Previous Legislation.

Industrial Safety (Chemical Treatment of Timber and Working of Chemically Treated Timber) Order (notified in National Gazette No. 29 of 11 December 1975, at p.6).

Part B.—Cross References.

Section, etc., in Revised Edition.	Previous Reference ¹ .	Section, etc., in Revised Edition.	Previous Reference ¹ .
1	2	9	10
2	1	10	11
3	3	11	12
4	4	12	13
5	5, 6	13	14
6	7	14	15
7	8	15	16
8	9		

APPENDIX 5.

SOURCE OF THE INDUSTRIAL SAFETY (EXCAVATION WORKS, SHAFTS AND TUNNELS) ORDER.

Part A.—Previous Legislation.

Safety Measures for Excavation Works, Shafts and Tunnels Order No. 2 of 1968
(published in *Territory of Papua and New Guinea Government Gazette* No. 50 of
19 September 1968, at p. 726)

as amended by—

Safety Measures for Excavation Works, Shafts and Tunnels Order No. 1 of 1970
(published in *Territory of Papua and New Guinea Government Gazette* No. 68 of
19 November 1970 at p. 1089).

Part B.—Cross References.

Section, etc., in Revised Edition.	Previous Reference ¹ .	Section, etc., in Revised Edition.	Previous Reference ¹ .
1	3	8	10
2	91	9	11
3	5	10	12, 13
4	4, 7	11	14
5	6	12	15, 16
6	8	13	17
7	9	14	18

¹ Unless otherwise indicated, references are to the Order set out in Part A.

Part B.—Cross References—*continued.*

Section, etc., in Revised Edition.	Previous Reference.	Section, etc., in Revised Edition.	Previous Reference.
15	19, 20	49	59
16	21	50	60
17	22	51	61
18	23	52	62
19	24	53	63
20	25	54	64
21	26	55	65
22	27	56	66
23	28	57	67
24	29	58	68
25	30	59	69
26	31	60	70
27	32, 33	61	71
28	34	62	72
29	35	63	73
30	36	64	74
31	37	65	75
32	38	66	76
33	39	67	77
34	40	68	78
35	41	69	79
36	42	70	80
37	43	71	81
38	44	72	82
39	45	73	83
40	46, 47, 49	74	84
41	48	75	85
42	50	76	86
43	51	77	87
44	52	78	88
45	53	79	89
46	54, 55, 56	80	90
47	57		
48	58		

APPENDIX 6.

SOURCE OF THE INDUSTRIAL SAFETY (EXPLOSIVE-POWERED TOOLS)
ORDER.

Part A.—Previous Legislation.

Industrial Safety (Explosive-Powered Tools) Order No. 1 of 1973 (notified in
Papua New Guinea Government Gazette No. 42 of 17 May 1973, at p. 8)

as amended by—

Industrial Safety (Explosive-Powered Tools) (Amendment) Order No. 1 of 1974
(published in *Papua New Guinea Government Gazette* No. 14 of 21 February
1974, at p. 2).

Part B.—Cross References.

Section, etc., in Revised Edition.	Previous Reference ¹ .	Section, etc., in Revised Edition.	Previous Reference ¹ .
1	3	8	9
2	2	9	10
3	4	10	11
4	5	11	12, 13
5	6	12	14
6	7	13	15
7	8		

¹ Unless otherwise indicated, references are to the Order set out in Part A.

APPENDIX 7.

SOURCE OF THE INDUSTRIAL SAFETY (LIFT'S) ORDER.

Part A.—Previous Legislation.

Industrial Safety (Lifts) Order No. 1 of 1968 (published in *Territory of Papua and New Guinea Government Gazette* No. 46 of 22 August 1968, at p. 638).

Part B.—Cross References.

Section, etc., in Revised Edition.	Previous Reference ¹ .	Section, etc., in Revised Edition.	Previous Reference ¹ .
1	2	5	5
2	8, 10	6	6, 7(1), (3), (5)
3	4	7	7(2), (4), (6)
4	3	8	9

APPENDIX 8.

SOURCE OF THE INDUSTRIAL SAFETY (MONOCROTAPHOS) ORDER.

Part A.—Previous Legislation.

Industrial Safety (Monocrotaphos in Cacao Plantations) Order No. 1 of 1971 (published in *Territory of Papua and New Guinea Government Gazette* No. 35 of 24 June 1971, at p. 616).

Part B.—Cross References.

Section, etc., in Revised Edition.	Previous Reference ¹ .	Section, etc., in Revised Edition.	Previous Reference ¹ .
1	2	6	6
2	11	7	7
3	3	8	8
4	4	9	9
5	5	10	10

¹ Unless otherwise indicated, references are to the Order set out in Part A.

APPENDIX 9.

SOURCE OF THE INDUSTRIAL SAFETY (TRACTORS AND EARTHMOVING
AND MOBILE CONSTRUCTION EQUIPMENT) ORDER.

Part A.—Previous Legislation.

Tractors, Earthmoving and Mobile Construction Order No. 1 of 1965 (published in *Territory of Papua and New Guinea Government Gazette* No. 68 of 30 December 1965, at p. 960).

Part B.—Cross References.

Section, etc., in Revised Edition.	Previous Reference ¹ .	Section, etc., in Revised Edition.	Previous Reference ¹ .
1	2	6	7
2	3	7	8
3	4	8	9
4	5	9	10
5	6		

¹ Unless otherwise indicated, references are to the Order set out in Part A.

3

)

(