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**[1958.** 

Crown Law Department, Perth, 30th June, 1958.

THE undermentioned regulations made by the Governor under the provisions of the Factories and Shops Act, 1920-1957, and published in the *Government Gazette* on the 15th October, 1957, are reprinted pursuant to the Reprinting of Regulations Act, 1954, by authority of the Minister for Justice.

R. C. GREEN, Under Secretary for Law.

Reprinted pursuant to the Reprinting of Regulations Act, 1954, by authority of the Minister dated 24th June, 1958.

# WELDING AND CUTTING REGULATIONS, 1957.

Part I.--Preliminary.

1. These regulations may be cited as the Welding and Cutting Regula-tions, 1957, and shall apply to factories or parts of factories where gas welding and cutting, electric arc welding and cutting and resistance welding are carried on, but shall not affect any process or operation being carried on in those factories or parts of factories to which process or operation the Electric Accumulator Regulations, 1931, or the Factories (Poisonous Substances) Regu-lations, 1022, apply lations, 1932, apply.

2. In these regulations subject to the context-

- "confined space" means a boiler, tank, vessel, drum, barrel, receiver or other similar enclosed space; "distant breathing air mask" means an arrangement of face mask equipped with the necessary valves and fitted with a hose con-nected in such a way and of such a length that the distal end of the hose is placed in fresh air;
- "positive pressure air mask" means an arrangement of face mask or hood and a hose connected to the face mask or hood through which fresh air is supplied to the wearer by a compressed air cylinder or compressor;

"welder" means any person engaged in gas welding or cutting, electric arc welding or cutting, or resistance welding.

3. These regulations are divided into parts as follows:-

Part I.—Preliminary, Regulations 1-3.

Part II.—Gas Welding and Cutting, Regulations 4-9.

Part III.-Electric Arc Welding and Cutting, Regulations 10-13.

Part IV.—Resistance Welding, Regulations 14-15.

Part V.-General, Regulations 16-24.

### Part II.-Gas Welding and Cutting.

4. A person employed or engaged in a factory shall not under any circumstance introduce oxygen into a confined space for the purpose of ventilation.

5. A person employed or engaged in a factory shall not use oxygen to dust or dry clothing or work or as a substitute for compressed air.

6. A person working with or handling oxygen equipment in a factory shall at all times keep such equipment free of grease and oil.

7. Where a person is carrying on welding or cutting operations in a confined space in a factory, the occupier of the factory shall—

- (a) station a person outside the confined space whose duty it is to keep the welder or cutter under observation; and
- (b) shall place the necessary gas cylinders and generators in charge of the person so stationed.

8. When a welder enters a confined space in a factory through a manhole or opening, the occupier of the factory shall arrange that the manhole or opening is kept clear while the welder is in the confined space and that effective means are provided for quickly removing him in case of emergency and that lifelines of cotton or nylon not more than  $\frac{1}{2}$  in. or less than  $\frac{3}{2}$  in. diameter be provided for this purpose.

9. Where a person welding or cutting in a confined space leaves the work for a period of ten minutes or more, he shall remove all hand pieces, torches or gas lines from the confined space and make sure that there can be no escape of oxygen or acetylene in the confined space.

## Part III.-Electric Arc Welding and Cutting.

10. A person employed or engaged in welding in a confined space in a factory shall use a fully insulated electrode holder.

11. Where a person is carrying on electric arc welding or cutting operations in a confined space in a factory, the occupier of the factory shall—

- (a) station a person outside the confined space whose duty it is to keep the welder or cutter under observation; and
- (b) shall place the necessary gas cylinders and generators in charge of the person so stationed.

12. When a welder enters a confined space in a factory through a manhole or opening, the occupier of the factory shall arrange that the manhole or opening is kept clear while the welder is in the confined space and that effective means are provided for quickly removing him in case of emergency and that lifelines of cotton or nylon not more than  $\frac{1}{2}$  in. or less than  $\frac{3}{2}$  in. diameter be provided for this purpose.

13. The occupier of a place where electric arc welding or cutting is carried on shall arrange that all electric arc welding or cutting or similar operations shall be screened by screens approved by the Chief Inspector of Factories and provided by the occupier to prevent the dangerous effects of stray radiation to persons employed in the vicinity of the operation.

#### Part IV.—Resistance Welding.

14. To prevent injury to a person engaged in welding operations in a factory, the occupier of the factory shall provide adequate shields on all moving parts of resistance welding equipment whether mechanically, pneumatically or electrically operated.

15. In a factory where welding operations are carried on, the occupier of the factory shall provide face shields which shall be used by a person employed as a welder to protect his face and neck when engaged on resistance welding operations in which the welder is exposed to possible injury.

#### Part V.—General.

16. In any factory where welding is carried on, goggles, shields and helmets, fitted with filter lenses to the specifications declared and published from time to time by the Standards Association of Australia, shall be provided by the occupier of the factory and shall be used by persons engaged in welding.

17. Before welding or cutting is carried on in any factory on containers, drums, barrels or tanks, the occupier of the factory shall arrange for tests to be made to establish that there is no danger of fire or explosion.

18. (1) In any factory where a person is engaged in welding or cutting lead or cadmium or their alloys or in welding or cutting lead painted iron or steel, or lead or cadmium coated or plated iron or steel or fiame treatment of lead painted surfaces, or where lead, mercury or cadmium or their compounds are present or where welding operations are carried on in a confined space, the occupier of the factory shall provide local exhaust ventilation to supply each welder with a minimum rate of 350 cubic feet of air per minute.

(2) In any factory where local exhaust ventilation cannot be so provided, a distant breathing apparatus or positive pressure air mask shall be provided by the occupier of the factory and used by the welder.

19. (1) Where welding is carried on in any factory, the occupier of the factory shall display or cause to be displayed in a conspicuous position and in the vicinity of the place where the welding is carried on a poster containing the information set out in the schedule of these regulations.

(2) Where an Inspector is satisfied that the position of the poster referred to in subregulation (1) of this regulation is not sufficiently conspicuous or not sufficiently near to the process, he may order that the poster be displayed in a position to his satisfaction, and the occupier of the factory shall comply with that order.

20. The occupier of a factory shall provide for the use of welders, fire resistant gauntlets, gloves and suitable aprons, in addition to goggles, shields and helmets, referred to in regulation 16 of these regulations, and any other equipment prescribed by these regulations.

21. In any factory every welder shall use the protective equipment provided under regulation 20 of these regulations.

22. In every factory to which these regulations are applicable the occupier of the factory shall provide adequate equipment for the prevention and extinction of fire.

23. (1) A copy of these regulations shall be exhibited by the occupier of every factory in a conspicuous place in the factory or part of the factory in which welding or cutting operations are carried on.

(2) The copy of the regulations shall be maintained by the occupier of every factory in a legible condition.

24. A person who commits a breach of any of these regulations commits an offence. Penalty: Five pounds.

#### Schedule.

### Safety in Welding.

Reg. 19.

Welding is not a hazardous occupation when simple and obvious precautions are taken. It is therefore recommended that all interested make themselves familiar with the Welding and Cutting Regulations, 1957, and the suggestions in this notice and relevant publications of Standards Association of Australia.

Cylinders should be handled with care.

Cylinders should be marked with the name of gas contained therein.

Acetylene should always be referred to by its proper name, "acetylene," and not the word "gas."

Oxygen should always be referred to by its proper name, "oxygen," and not the word "air."

Calcium carbide must be stored where it cannot contact water. In case of fire, water or foam extinguishers must not be used.

Acetylene generators must be only used, cleaned, recharged in a place with ample ventilation away from any source of ignition and where smoking is prohibited. A generator must not be altered to allow it to operate at pressures or production rates higher than for which it was designed.

Acetylene cylinders should be stored and used in an upright position.

Woollen outer clothing is preferable to cotton.

Low cut shoes should not be worn.

Trousers should not have cuffs.

Sleeves and collars should be kept buttoned to prevent lodgment of sparks.

Non-conducting impervious mats will reduce the risk of shock in electric arc or resistance welding.

Prior to entering a confined space, the air should be tested for contamination or oxygen enrichment.

All persons concerned should be instructed in the correct and most efficient use of the fire fighting equipment available.