

GENERAL MACHINERY REGULATIONS

[These regulations were first published in GN R1521 of 5 August 1988.]

The Minister of Manpower has, under section 35 of the Machinery and Occupational Safety Act, 1983 (Act 6 of 1983), made the regulations in the Schedule.

Schedule

Definitions

1. In these Regulations any word or expression to which a meaning has been assigned in the Act, shall have the meaning so assigned and, unless the context otherwise indicates-

"building work" means building work as defined in the General Administrative Regulations, published under Government Notice R.2206 of 5 October 1984;

"certificated engineer" means any person to whom a certificate of competency referred to in regulation E1 (1) of the Regulations, published under Government Notice R.929 of 28 June 1963, has been granted and includes any person who is the holder of a certificate of competency in mechanical or electrotechnical engineering issued before 1 January 1966 under the Mines and Works Act, 1956 (Act 27 of 1956);

"competent person" in relation to machinery, means any person who-

(a) has served an apprenticeship in an engineering trade which included the operation and maintenance of machinery, or has had at least five years' practical experience in the operation and maintenance of machinery, and who during or subsequent to such apprenticeship or period of practical experience, as the case may be, has had not less than one year's experience in the operation and maintenance appropriate to the class of machinery he is required to supervise;

(b) has obtained an engineering diploma in either the mechanical or electrotechnical (heavy current) fields with an academic qualification of at least T3 or N5, or of an equivalent level, and who subsequent to achieving such qualification has had not less than two years' practical experience in the operation and maintenance appropriate to the class of machinery he is required to supervise;

(c) is a graduate engineer and has had not less than two years' post-graduate practical experience in the operation and maintenance appropriate to the class of machinery he is required to supervise and who has passed the examination on the Act and the regulations made thereunder, held by the Commission of Examiners in terms of regulations E5 (2) of the regulations published under Government Notice R.929 of 28 June 1963; or

(d) is a certificated engineer;

"divisional inspector" means the divisional inspector referred to in regulation 1 of the General Administrative Regulations, published under Government Notice R.2206 of 5 October 1984;

"electrical installation" means any electrical installation as defined in regulation 1 of the Electrical Installation Regulations, published under Government Notice R.2270 of 11 October 1985;

"elevator" means any lift, hoist or other appliance used for the conveyance of persons and goods by means of a car, cage, cradle or other receptacle in a hatchway on fixed guides, but does not include a builder's hoist or a hoist worked by hand power;

"escalator" means any power-driven inclined continuous stairway with moving steps and hand rails which is intended for the conveyance of persons from one level to another;

"goods elevator" means any elevator used solely for the conveyance of goods and such attendants and operators as are necessary and authorised to travel therein, but does not include a hoist worked by hand power;

"graduate engineer" means any person who has obtained a degree in mechanical or electrotechnical engineering at a South African university, or a degree recognised by the Department of National Education as equivalent to any such degree;

"live" or "alive" means electrically charged;

"shiftsman" means any person employed to supervise the use of machinery and who has the necessary knowledge and experience to ensure the safe use of such machinery;

"the Act" means the Machinery and Occupational Safety Act, 1983 (Act 6 of 1983).

Supervision of Machinery

2. (1) In order to ensure that the provisions of the Act and these Regulations in relation to machinery are complied with, an employer or user of machinery shall, subject to this regulation, in writing designate a person in a full-time capacity in respect of every premises on or in which machinery is being used.

(2) The chief inspector may, subject to such conditions as he may impose, permit an employer or user of machinery to designate more than one person in terms of subregulation (1).

(3) Subject to the provisions of this regulation, an employee designated in terms of subregulation (1) shall be a competent person.

(4) (a) If-

(i) the sum of the power generated by machinery on or in the premises in question and the power derived from other sources, including the generation of steam for process purposes, exceeds 1200 kW, but is less than 3000 kW, the person designated in terms

of subregulation (1) shall be a person as referred to in paragraph (b), (c) or (d) of the definition of "competent person";

(ii) any such sum is 3000 kW or more, the person so designated shall be a person as referred to in paragraph (c) or (d) of the said definition.

(b) For the purpose of paragraph (a), the power derived from the generation of steam by any particular boiler shall be calculated in kW by dividing the manufacturer's rated evaporative capacity (in kg of water per hour at 100°C) by 21 or, in the absence of any such rated evaporative capacity, by multiplying the heating surface of that boiler (in m²) by 0,8.

(5) If, in the case where machinery on or in the premises in question is used solely for the distribution of electricity-

(a) the maximum demand over any continuous period of 30 minutes is 3000 kVA or less, the person designated in terms of sub-regulation (1) shall be a person as referred to in paragraph (a) of the definition of "competent person" and registered as an installation electrician in terms of regulation 11 (1) of the Electrical Installation Regulations, promulgated under Government Notice R.2270 of 11 October 1985;

(b) any such demand exceeds 3000 kVA, but is less than 10000 kVA the employee so designated shall be a person as referred to in paragraph (b), (c) or (d) of the said definition;

(c) any such demand is 10000 kVA or more, the employee so designated shall be a person as referred to in paragraph (c) or (d) of the said definition.

(6) Notwithstanding the provisions of subregulations (3), (4) and (5), the chief inspector may, subject to such conditions as he may impose, permit an employer or user of machinery to designate a person who holds any qualification other than that of a competent person in terms of subregulation (1).

(7) (a) An employer or user of machinery may designate one or more competent persons to assist a person designated in terms of subregulation (1).

(b) The chief inspector may by written notice direct any employer or user of machinery to designate within the period specified in the notice the number of persons so specified holding the qualifications so specified to assist a person designated in terms of subregulation (1).

(8) Except with the approval of an inspector, no person designated in terms of subregulations (1) or (7) shall supervise machinery on or in any premises other than the premises in respect of which he had been designated.

(9) When an employer or user of machinery designates a person referred to in subregulations (4) (a), (5) (b) or (c), he shall forthwith forward to the divisional inspector a copy of the letter of appointment of that person.

(10) (a) Notwithstanding the provisions of subregulation (1), no employer or user of machinery needs to designate a person in terms of that subregulation in respect of any elevator, goods elevator, escalator or electrical installation in any shop or office or on, or in, any domestic premises, any domestic appliance used as such, any machinery used in connection with building work, any vehicle or earth moving plant or any refrigeration, cooling, air-conditioning or freezing plant inspected and maintained by a duly qualified person in pursuance of an agreement entered into by any such employer or user of machinery.

(b) The chief inspector may by written notice direct any employer or user of machinery referred to in paragraph (a) to designate within the period specified in the notice a person holding the qualifications so specified in terms of subregulation (1).

(11) Any employer or user of machinery who applies for exemption from the provisions of this regulation under section 32 of the Act shall furnish the Minister with the following particulars, namely-

(a) the grounds for the application;

(b) the number of employees employed on or in the premises in question;

(c) the nature of the work performed on or in the premises in question;

(d) the number and type of incidents reported in terms of section 17 (1) of the Act during the preceding three years;

(e) the safety management system in force in respect of the premises in question; and

(f) such other particulars as the chief inspector may require.

(12) Notwithstanding the provisions of this regulation, machinery required to be supervised by a person referred to in paragraph (b), (c) or (d) of the definition of "competent person" may be used in the absence of any such person for a period not exceeding one month in any continuous period of six months, if it is due to circumstances beyond the control of the employer or user of machinery concerned or in the opinion of an inspector, impracticable to comply with the provisions of this regulation: Provided that a person referred to in paragraph (a) of the said definition shall in writing be designated to supervise the machinery in question during such absence.

Safeguarding of Machinery

3. (1) Every employer or user of machinery shall-

(a) ensure that all machinery used by him, is suitable for the purpose for which it is used, and that it is installed, operated and maintained in such a manner as to prevent the exposure of persons to hazardous or potentially hazardous conditions or circumstances;

(b) in particular cause every exposed and dangerous part of machinery which is within the normal reach of a person to be effectively safeguarded by means of insulation, fencing, screening or guarding, except where an inspector has granted written permission for the omission of such safeguarding;

(c) ensure that all safety equipment is kept in a good working condition and is properly used; and

(d) ensure that the quality of material used in, and the construction, of the machinery or safety equipment is suitable for the purpose for which it was intended.

(2) Where machinery constitutes a danger to persons, the employer or user of machinery concerned shall cause the premises in question to be enclosed, and where such premises are unattended the designated entrances to such premises shall be kept closed and locked.

(3) Unless he has been authorised thereto by the employer or user of machinery, no person shall remove any safety equipment which relates to the machinery in question.

Operation of Machinery

4. (1) An employer or user of machinery shall ensure that every person authorised to operate machinery is fully aware of the dangers attached thereto and is conversant with the precautionary measures to be taken or observed to obviate such dangers.

(2) If a person operates any machinery which requires constant attention in order to avoid accidents, he shall under no circumstances leave his post while such machinery is in operation, unless he is relieved by a person who is authorised and competent to operate such machinery.

(3) An employer or user of machinery shall ensure that any machinery which requires constant attention in order to avoid accidents is under the supervision of a shiftsman, who shall at all times be present on the premises while such machinery is in operation, and no person shall attend to or operate such machinery, except under the general supervision of a shiftsman.

(4) No person supervising machinery and no person operating machinery shall, without the permission of his superior, authorise any other person to do his work.

(5) If machinery threatens or is likely to threaten the safety of persons when it is unexpectedly set in motion or made electrically alive, the employer or user of machinery concerned shall take all reasonable precautionary measures in order to ensure that such machinery cannot be so set in motion or made electrically alive, and any person intending to set such machinery in motion or make it electrically alive shall take all reasonable precautionary measures in order to ensure that the safety of a person is not threatened or likely to be threatened.

(6) If machinery in operation threatens or is likely to threaten the safety of persons, the person supervising or operating such machinery or the employer or user of machinery concerned shall stop such machinery or cause it to be stopped.

Working on Moving or Electrically Alive Machinery

5. (1) No employer or user of machinery shall permit or require any person other than a competent person or a person who has been trained to the satisfaction of an inspector to do any work on or near moving or electrically alive machinery if such work may endanger him: Provided that this subregulation shall not apply in respect of the operation of machinery under the general supervision of a shiftsman.

(2) An employer or user of machinery shall in respect of work performed on or near machinery which is in motion or is electrically alive including the operation of such machinery, take all reasonable precautionary measures in order to ensure that persons who perform such work are not injured: Provided that an inspector may at any time require of the employer or user of machinery to take such further precautionary measures as that inspector may deem necessary in the interest of safety.

(3) No person working in close proximity to moving machinery shall wear, or be permitted by the employer or user of machinery concerned to wear any loosely fitting outer clothing, any jewellery or ornament; any watch or key-chain, any long loose-hanging hair or anything which may be caught up in the moving parts of such machinery.

Devices to Start and Stop Machinery

6. (1) An employer or user of machinery shall provide devices to start and stop machinery, and these devices shall-

(a) be in a position where they can readily and conveniently be reached by the person who operates such machinery; and

(b) be so constructed and arranged as to prevent the accidental starting of such machinery.

(2) An employer or user of machinery shall provide positive means for rendering the controls of machinery driven by an electric motor inoperative while repairs or adjustments are being made, and such means shall not only be the mere tripping of a switch.

(3) If machinery is simultaneously operated by two or more persons, the employer or user of machinery concerned shall provide such machinery-

(a) at every operation point with a stopping device which locks out when it is used and requiring manual resetting before such machinery can be restarted; and

(b) with an audible warning device to be sounded before the machinery is set in motion: Provided that an inspector may grant written permission for alternative precautionary measures whereby the safety of those persons is ensured.

Reporting of Incidents in Connection with Machinery

7. Each incident in which-

- (a) the fracture or failure of any part of machinery resulted in a falling or flying object;
- (b) machinery ran out of control as a result of the failure of a control or safety equipment and could have caused an injury to a person who had been conveyed on or in such machinery or had been in the vicinity thereof; or
- (c) the fracture or failure of any part of machinery in which gas is under pressure resulted in the sudden release of such gas,

shall be reported forthwith to an inspector by the employer or user of machinery concerned.

Notifiable Substances

8. (1) An employer or user of machinery who has any substance set out in column 1 of Schedule A of these Regulations or any mixture thereof, in a quantity which at any time is equal to or in excess of the quantity specified opposite that substance in column 2 on his premises in a single fixed storage vessel, shall forthwith notify the divisional inspector thereof on the form set out in Schedule B of these Regulations.

(2) When the use of any substance referred to in subregulation (1) is discontinued, the employer or user of machinery shall forthwith notify the divisional inspector thereof in writing.

Information Regarding Regulations

9. (1) An employer or user of machinery shall furnish each person designated in terms of regulation 2 (1), free of charge, with a copy of the Act and the regulations made thereunder.

(2) Any employer or user of machinery shall affix-

(a) in respect of a boiler, a notice in the form set out in Schedule C to these Regulations; or

(b) in respect of any machinery other than a boiler, a notice in the form set out in Schedule D to these Regulations,

in both official languages and in legible form in a conspicuous place on or in the premises in question.

(3) Any employer or user of machinery shall cause any notice referred to in subregulation (2) to be explained to all employees who are not conversant with an official language.

Offences and Penalties

10. Any person who contravenes or fails to comply with a provision of regulation 2 (1), (4), (5), (8), (9) or (12), 3, 4, 5, 6, 7, 8 or 9 or contravenes a notice under regulation 2 (7) (b) or (10) (b) or (12) shall be guilty of an offence and liable on conviction to a fine not exceeding R1000 or to imprisonment for a period not exceeding six months, and, in the case of a continuous offence, with an additional fine of R5 of additional imprisonment of one day for each day on which the offence continues: Provided that the period of such additional imprisonment shall in no case exceed 90 days.

Repeal of Regulations

11. (a) Regulations C1, C4, C8, C9, including Annexure F11 and F13, C, 19, C21, C22, C23, C24, C25, C26, C27, C28, C51, C53 and C54 of these Regulations, promulgated under Government Notice R.929 of 28 June 1963, are hereby repealed.

(b) Regulation D2 of the Regulations, promulgated under Government Notice R.1934 of 13 December 1963, is hereby repealed.

Short Title

12. These Regulations shall be called the General Machinery Regulations, 1988.

Schedule A

Notifiable Substances

(Regulation 8)

United Nations Organisation Identification Number	Column 1 Substance	Column 2 Quantity in Tonnage
1001	Acetylene (dissolved)	2
1005	Ammonia (anhydrous, liquified and solutions containing over 50% ammonia)	20
1010	Butadiene	25
1031	Carbon disulphide	20
1017	Chlorine	10
1154	Diethylamine	20
1155	Diethyl Ether	20
1033	Dimethyl Ether	20
1032	Dimethylamine (anhydrous)	20

1160	Dimethylamine (solution)	20
1035	Ethane (compressed)	15
1961	Ethane (refrigerated liquid)	15
1962	Ethylene (compressed)	15
1038	Ethylene (refrigerated liquid)	15
1036	Ethylamine	25
1040	Ethylene oxide	5
1050	Hydrogen Chloride (anhydrous)	10
1051	Hydrogen Cyanide (anhydrous)	10
1052	Hydrogen Fluoride (anhydrous)	10
1969	ISO-Butane	25
1055	ISO-Butylene (Isobutene)	25
1075	L.P.G. (Liquid Petroleum Gas)	25
1971	Methane (compressed)	15
1011	n-Butane	25
1012	n-Butylene (Butene)	25
1076	Phosgene	2
1978	Propane	25
1077	Propylene	25
1079	Sulphur Dioxide (liquified)	15
1829	Sulphur Trioxide (liquified)	15
1083	Trimethylamine (anhydrous)	25
1086	Vinyl Chloride	25

Schedule B

Notice Regarding Notifiable Substances

(Regulation 8)

- 1.Name of employer or user of machinery
 - 2.Address of premises where substance is held
 - 3.Name and UNO No. of substance
- Date

Signature of employer or user of
machinery

Schedule C

Notice in respect of Boilers under Regulation 9 (2) of the General Machinery Regulations, 1988

1. Every employer or user of machinery is required by law to provide safety equipment in connection with machinery, and it is an offence for any person to fail to use such properly or to interfere with them.
2. No boiler shall be worked at a higher pressure than the authorised working pressure.
3. Unless steam is drawn for the operation of the boiler's auxiliary apparatus, no person shall draw steam from the boiler otherwise than through the main steam stop valve.
4. No person shall enter a boiler or its flues, unless it is safe and the steam-stop valve, feed valve, blow-off valve and all other valves or cocks are blanked off.
5. Portable electric lights used during the cleaning, repair or inspection of a boiler shall not exceed 50V.
6. No person shall cause water to come into contact with hot flue dust or ashes if it threatens or is likely to threaten the safety of employees.
7. Any accident or other incident which threatens or is likely to threaten the safety of employees shall be reported immediately to the employer or user of machinery.

Schedule D

Notice in respect of Machinery other than a Boiler under Regulation 9(2) of the General Machinery Regulations, 1988

1. Every employer or user of machinery is required by law to provide safety equipment in connection with machinery, and it is an offence for any person to fail to use such equipment properly or to interfere with them.
2. No person working in close proximity to moving machinery shall wear any loosely fitting outer clothing, any jewellery or ornament, any watch or key chain, and long loose-hanging hair or anything which may be caught up in the moving parts of such machinery.

3. Unless an apparatus approved by an inspector is used, no driving belt shall be shipped or unshipped whilst machinery is in motion, except in the case of a light belt which may be shipped on the coned pulley of a machine tool in order to alter the working speed of such tool.
4. Machinery in motion shall not be cleaned, repaired, adjusted or oiled, unless such machinery is cleaned, repaired, adjusted or oiled by a competent person when it is impracticable to stop such machinery.
5. No person other than a competent person shall enter the safeguarded area of machinery in motion, and then only if it is impracticable to stop such machinery.
6. No person under the influence of alcohol or drugs shall enter any premises where machinery is used.
7. Any accident or other incident which threatens or is likely to threaten the safety of employees shall be reported immediately to the employer, or user of machinery.
8. No person supervising machinery and no person operating machinery shall, without the permission of his superior, authorise any other person to do his work.
9. Any person intending to start a machine shall before doing so satisfy himself that no other person is endangered.