Occupational Health and Safety Act, 1993 Driven Machinery Regulations, 1988 8. Grinding Machines

- 1. The user of a power-driven grinding machine shall cause such machine to be marked in a conspicuous place with the manufacturer's rated speed or speeds of the spindle in revolutions per minute.
- 2. No user shall require or permit a grinding wheel of a power-driven grinding machine to be operated at a speed exceeding that of the manufacturer of such wheel: Provided that a grinding wheel larger than 100 mm in diameter shall only be used if the recommended operating speed there for is distinctly marked on it.
- 3. The user shall cause every grinding wheel of a power-driven grinding machine to be mounted concentrically on the spindle by means of robust metal flanges with annular peripheral bearing surfaces of adequate breadth which shall bear upon the wheel, and a layer of suitable compressible material shall be fitted between the flanges and the wheel: Provided that grinding wheels for specialised application which cannot be fixed by flanges shall be so secured that displacement or rupture of the wheel in motion is eliminated as far as possible.
- 4. Having regard to the nature of the work which is performed, the user shall cause every power-driven grinding machine to be provided with a substantial guard which shall enclose the grinding wheel as far as practicable and which shall be of sufficient strength to withstand the force of impact of a rupturing wheel.
- 5. Having regard to the nature of the work which is performed, the user shall cause a power-driven grinding machine where the work piece is applied to the wheel by hand, to be provided with a substantial adjustable work rest, which shall be securely fixed in position and adjusted to within 3 mm from the grinding face of the wheel.
- 6. The user shall cause every power-driven grinding machine to be provided with a strong transparent shield which shall be kept adjusted to as to protect the operator's eyes: Provided that such shield may be omitted if every operator of the machine is personally issued with suitable eye protection and is obliged to wear it.
- 7. The user shall cause a notice to be posted in a conspicuous place at every power-driven grinding machine, prohibiting persons from carrying out, inspecting or observing grinding work without using suitable eye protection.

Occupational Health and Safety Act, 1993 Driven Machinery Regulations, 1988 18. Lifting Machines and Lifting Tackle

- 1. No user shall use or permit the use of a lifting machine unless
 - a. it has been designed and constructed in accordance with a generally accepted technical standard;
 - b. it is conspicuously and clearly marked with the maximum mass load which it is designed to carry with safety:
 Provided that when this mass load varies with the conditions of use a table showing the maximum mass load
 with respect to every variable condition shall be posted up by the user in a conspicuous place easily visible to
 the operator; and
 - c. it has at all times at least three full turns of rope on the drum of each winch which forms part of such a machine when such winch has been run to its lowest limit.
 - 2. The user shall, where practicable, provide every power-driven lifting machine with-
 - a brake or other device capable of holding the maximum mass load should the power supply fail, or which is such that it will automatically prevent the uncontrolled downward movement of the load when the raising effort is interrupted; and
 - b. a limiting device which will automatically arrest the driving effort when -
 - the hook or load attachment point of the power-driven lifting machine reaches its highest safe position;
 and
 - ii. in the case of a winch-operated lifting machine with a lifting capacity of 5000 kg or more, the load is greater than the rated mass load of such machine.
 - 3. The user shall cause every chain or rope which forms an integral part of a lifting machine to have a factor of safety as prescribed by the standard to which such machine was manufactured: Provided that in the absence of such prescribed factor of safety, chains, steel-wire ropes and fibre ropes shall have a factor of safety of at least four, five and ten, respectively, with respect to the rated carrying capacity of the lifting machine.
 - 4. The user shall cause every hook or any other load-attaching device which forms and integral part of a lifting machine to be so designed or proportioned that accidental disconnection of the load under working conditions cannot take place.
 - 5. The user shall cause the whole installation and all working parts of every lifting machine to be thoroughly examined and subjected to a performance test, as prescribed by the standard to which the lifting machine was manufactured, by a person who has knowledge and experience of the erection and maintenance of the type of lifting machine involved or similar machinery and who shall determine the serviceability of the structures, ropes, machinery and safety devices, before they are put into use following every time they are dismantled and re-erected, and thereafter at intervals not exceeding 12 months: Provided that in the absence of such prescribed performance test the whole installation of the lifting machine shall be tested with 110 % of the rated mass load, applied over the complete lifting range of such machine and in such a manner that every part of the installation is stressed accordingly.

- 6. Notwithstanding the provisions of sub regulation (5), the user shall cause all ropes, chains, hooks or other attaching devices, sheaves, brakes and safety devices forming an integral part of a lifting machine to be thoroughly examined by a person contemplated in sub regulation (5) at intervals not exceeding six months.
- 7. Every user of a lifting machine shall at all times keep on his premises a register in which he shall record or cause to be recorded full particulars of any performance test and examination prescribed by sub regulation (5) and (6) and any modification or repair to the lifting machine, and shall ensure that the register is available on request for inspection by an inspector.
- 8. No user of machinery shall require or permit any persons to be moved or supported by means of a lifting machine, unless such machine is fitted with a cradle approved for that purpose by an inspector.
- 9. No user shall use or permit any person to use a jib-crane with a lifting capacity of 5 000 kg or more at minimum jib radius, unless it is provided with -
 - a load indicator that will indicate to the operator of the jib-crane the mass of the load being lifted: Provided that such a device shall not require manual adjustment, from application of a load to the jib crane until the release of that load, using any motion or combination of motions permitted by the crane manufacturer to ensure safe lifting; or
 - b. a limiting device which will automatically arrest the driving effort whenever the load being lifted is greater than the rated mass load of the jib-crane, at that particular radius, using any motion or combination of motions permitted by the crane manufacturer to ensure safe lifting: Provided that such a device shall not arrest the driving effort when the jib-crane is being operated into a safer condition.
- 10. No user shall use or allow the use of any lifting tackle unless the following conditions are complied with, namely that
 - a. every item of lifting tackle is well constructed of sound material, is strong enough and is free from patent defects and is in general constructed in accordance with a generally accepted technical standard;
 - b. every lifting assembly consisting of different items of lifting tackle is conspicuously and clearly marked with identification particulars and the maximum mass load which it is designed to lift with safety;
 - c. ropes of chains have a factor of safety with respect to the maximum mass load they are designed to lift with safety of
 - i. ten for natural-fibre ropes;
 - ii. six for man-made fibre ropes or woven webbing;
 - iii. six for steel-wire ropes except for double part spliced endless sling legs and double part endless grommet sling legs made from steel-wire rope, in which case the factor of safety shall be at least eight;
 - iv. five for steel chains; and
 - v. four for high-tensile or alloy steel chains:
 - Provided that when the load is equally shared by two or more ropes or chains the factor of safety may be calculated in accordance with the sum of the breaking strengths taking into consideration the angle of loading;
 - d. steel-wire ropes are discarded and not used again for lifting purposes if the rope shows signs of excessive wear, too many broken wires, corrosion or other defects that have made its use in any way dangerous:
 - e. such lifting tackle is examined at intervals not exceeding three months by a person contemplated in subregulation (5) who shall enter and sign the result of each such inspection in a book kept for this purpose; and
 - f. such lifting tackle is stored or protected so as to prevent damage or deterioration when not in use.
- 11. The user shall ensure that every lifting machine is operated by an operator specifically trained for a particular type of lifting machine: Provided that in the case of a lift truck with a lifting capacity of 750 kg or more and jib-cranes with a lifting capacity of 5000 kg or more at minimum jib radius, the user shall not require or permit any person to operate such a lifting machine unless the operator is in possession of a certificate of training, issued by a person or organisation approved for the purpose by the Chief Inspector.

Occupational Health and Safety Act, 1993 Electrical Machinery Regulations, 1988 9. Portable electric tools

- 1. No user shall permit the use of and no person shall use a portable electric tool the operating voltage of which exceeds 50 to earth unless -
 - a. it is connected to a source of electrical energy incorporating an earth leakage protection device, the
 construction of which meets the requirements of a safety standard incorporated for this purpose in these
 regulations under section 36 of the Act; or
 - b. it is connected to a source of electrical energy through the interposition between each tool and the source of an individually double-wound isolating transformer, the secondary winding of which is not earthed at any point and the construction of which meets the requirements of a safety standard incorporated for this purpose in these regulations under section 36 of the Act; or

- c. it is connected to a source of high frequency electrical energy derived from a generator which is used solely for supplying energy to such portable electric tool and which arrangement is approved by the chief inspector; or
- d. it is clearly marked that it is constructed with double or reinforced insulation.
- 2. No person shall sell a portable electric tool constructed with double or reinforced insulation referred to in sub regulation (1) (d) unless
 - a. it is clearly marked that it is constructed with such insulation; and
 - b. its insulation is constructed in accordance with a safety standard incorporated for this purpose in these regulations under section 36 of the Act.
- 3. No person shall use or permit the use of a portable electric tool which is not fitted with a switch to allow for easy and safe starting and stopping of the tool.
- 4. The user shall maintain every portable electric tool, together with its flexible cord and plug, in a serviceable condition.

Occupational Health and Safety Act, 1993 Electrical Machinery Regulations, 1988 10. Portable electric lights

- 1. No person shall use a portable electric light the operating voltage of which exceeds 50 unless
 - a. it is fitted with a substantial handle which is made of non-hygroscopic, non-conducting material;
 - b. all live metal parts or parts which may become live owing to a faulty circuit is completely protected against accidental contact;
 - c. the lamp is protected by means of a substantial guard firmly fixed to the insulated handle; and
 - d. the cable lead-in is such that the insulation can withstand rough use.
- 2. No person shall use a portable electric light in wet or damp conditions or in closely confined spaces inside metal vessels or when he is in contact with large masses of metal, unless, subject to the provisions of sub regulation (1) -
 - a. the lamp is connected to a source of electrical energy incorporating an earth leakage protection device the construction of which meets the requirements of a safety standard incorporated for this purpose in these regulations under section 36 of the Act; or
 - b. the operating voltage of the lamp does not exceed 50V, and where this electrical energy is derived from a transformer such transformer shall have separate windings.

Occupational Health and Safety Act, 1993 Environmental Regulations for Workplaces, 1987 2. Thermal requirements

- 1. Subject to the provisions of sub regulation (2), no employer shall require or permit an employee to work in an environment in which the time-weighted average dry-bulb temperature taken over a period of four hours is less than 6°C, unless the employer takes reasonable measures to protect such employee against the cold and further takes all precautions necessary for the safety of such employee: Provided that, where outdoor work is performed, the employer shall take such measures and such precautions in an environment in which the actual dry-bulb temperature is less than 6°C at any time.
- 2. No employer shall require or permit an employee to work in a refrigerated environment in which the actual dry-bulb temperature is below 0°C unless
 - a. the maximum exposure of the employee does not exceed the periods as indicated in the following table:

Temperature °C	Maximum exposure
0° to -18°	No limit.
Lower than -18° but not lower than -34° degrees	Maximum continuous exposure during each hour = 50 minutes. After every exposure in a low-temperature area at least 10 minutes must be spent, under supervisions, in a comfortably warm environment.
Lower than -34° but not lower than -57°	Two periods of 30 minutes each, at least 4 hours apart. Total low-temperature exposure: 1 hour per day.
Lower than -57°	Maximum permissible exposure = 5 minutes during any 8-hour period.

- b. the employee is provided with the following protective clothing:
 - i. A nylon freezer suit or equivalent and, where the said temperature is below -34°C, such suit or equivalent shall be of double layer;
 - ii. a woollen Balaclava or equivalent;
 - iii. fur-lined leather gloves or equivalent;
 - iv. waterproof outer gloves with knitted woollen or equivalent inners as well as a waterproof apron where wet or thawing substances are handled;
 - v. woollen socks; and
 - vi. waterproof industrial boots or equivalent;

Provided that an employee who works in a low-temperature area in which the temperature is not lower than -18°C for periods not exceeding five minutes in every hour need only be provided with an ordinary overall, gloves shoes, or equivalent;

- c) the employee is, beforehand and thereafter, at intervals not exceeding one year, certified fit to work in such environment by a registered medical practitioner or a registered nurse according to a protocol prescribed by such practitioner, and such employee is issued with a certificate to that effect; and
- d) all the clothing worn by the employee is dry prior to entering the low-temperature area.
- 3) Where hand-held tools which vibrate at a frequency of vibration of less than 1 000 Hz are used at an actual dry-bulb temperature below 6°C, the employer shall provide an employee operating such tools with lined gloves, and ensure that he wears them.
- 4) Where the time-weighted average WBGT index, determined over a period of one hour, exceeds 30 in the environment in which an employee works, the employer of such employee shall
 - a. if practicable, take steps to reduce the said index to below 30; or
 - b. where it is not practicable to reduce the said index to below 30 and where hard manual labour is performed
 - i. have every such employee beforehand and thereafter, at intervals not exceeding one year, certified fit to work in such environment by a registered medical practitioner or a registered nurse according to a protocol prescribed by such practitioner, and every such employee shall, if found fit to work in such environment, be issued with a certificate to that effect by such practitioner or nurse;
 - ii. ensure that every such employee is acclimatised to such working environment before he is required or permitted to work in such environment;
 - iii. inform every such employee of the need to partake of at least 600 millilitres of water every hour;
 - iv. train every such employee in the precautions to be taken to avoid heatstroke; and
 - v. provide the means whereby every such employee can receive prompt first-aid treatment in the event of heatstroke:

Provided that, where the question arises as to whether any particular type of work does in fact constitute hard manual labour, the decision of an inspector shall be decisive.

Occupational Health and Safety Act, 1993 Environmental Regulations for Workplaces, 1987 3. Lighting

- Every employer shall cause every workplace in his undertaking to be lighted in accordance with the luminance values specified in the Schedule to these regulations: Provided that where specialized lighting is necessary for the performance of any particular type of work, irrespective of whether that type of work is listed in the Schedule or not, the employer of those employees who perform such work shall ensure that such specialized lighting is available to and is used by such employees.
- 2. The chief inspector may, by notice in the Gazette, from time to time modify the Schedule to these regulations as he deems necessary.
- 3. With respect to the lighting to be provided in terms of sub regulation (1), the employers shall ensure that -
 - a. the average luminance at any floor level in a workplace within five meters of a task is not less than one fifth of the average luminance on that task;
 - b. glare in any workplace is reduced to a level that does not impair vision:
 - c. lighting on rotating machinery in such that the hazard of stroboscopic effects is eliminated; and
 - d. luminaries and lamps are kept clean and, when defective, are replaced or repaired forthwith.

- 4. With a view to the emergency evacuation of indoor workplaces without natural lighting or in which persons habitually work at night, every employer shall, in such workplaces, provide emergency sources of lighting which are such that, when activated, an luminance of not less than 0.3 lux is obtained at floor level to enable employees to evacuate such workplaces: Provided that where it is necessary to stop machinery or shut down plant or processes before evacuating the workplace, or where dangerous materials are present or dangerous processes are carried out, the luminance shall be not less than 20 lux.
- 5. An employer shall ensure that the emergency sources of lighting prescribed by sub regulation (4)
 - a. is capable of being activated within 15 seconds of the failure of the lighting prescribed by sub regulation (1);
 - b. will last long enough to ensure the safe evacuation of all indoor workplaces;
 - c. are kept in good working order and tested for efficient operation at intervals of not more than three months; and
 - d. where directional luminaries are installed, these are mounted at a height of not less than two meters above floor level and are not aimed between 10° above and 45° below the horizontal line on which they are installed.
- 6. An employer engaged in building work shall cause all rooms, stairways, passageways, gangways, basements and other places where danger may exist through lack of natural light, to be lighted such that it will be safe.

Occupational Health and Safety Act, 1993 Environmental Regulations for Workplaces, 1987

4. Windows

- 1. In order to effect visual contact with areas outside a workplace, where employees work the majority of their shift in a room of which the floor area is less than 100 square meters, the employer of such employees shall cause every such room to be provided with windows in such a way that
 - a. the total glazed area of such windows is not less than three fifths of the square root of the floor area of the room, both areas measured in square meters;
 - the window sills are not higher and the window heads are not lower than one and a half meters above the floor level of the room; and
 - c. such windows are glazed with transparent material.
- 2. Unless an inspector otherwise directs, the provisions of sub regulation (1) shall not apply under conditions where natural light will have an adverse effect on the process or material used in a room, or where the process in a room has to be conducted under critical conditions of light, temperature, humidity or air movement, or where the judgement of texture or colour in a room has to be done under conditions of constant lighting quality and intensity, or where, for reasons of safety, privacy or security, compliance with the intended provisions becomes impracticable.
- 3. Where the penetration of direct sunlight into any workplace may pose a threat to the safety of persons in such workplace, the employer concerned shall ensure that such workplace is screened to avoid such penetration, but retaining, as far as is practicable, outside visual contact.

Occupational Health and Safety Act, 1993 Environmental Regulations for Workplaces, 1987 5. Ventilation

- 1. An employer shall ensure that every workplace in his undertaking is ventilated either by natural or mechanical means in such a way that
 - a. the air breathed by employees does not endanger their safety;
 - b. the time-weighted average concentration of carbon dioxide therein, taken over an eight-hour period, does not exceed one half per cent by volume of air;
 - c. the carbon dioxide content thereof does not at any time exceed three per cent by volume of air;
 - d. the prescribed exposure limits for airborne substances therein are not exceeded; and
 - e. the concentration therein of any explosive or flammable gas, vapour or dust does not exceed the lower explosive limit of that gas, vapour or dust.
- 2. Where the measures prescribed by sub regulation (1) are not practicable, or where there is a danger of unsafe air in the breathing zone of an employee, the employer shall provide every such employee with, and ensure that he correctly uses, respiratory protective equipment of a type that reduces the exposure of the employee to a safe level and the employer shall, further, inform him of the dangers of and the precautionary measures against excessive exposure.
- 3. The provisions of sub regulation (1) (b) and (c) shall not apply in respect of workplaces where the ambient pressure differs by more than 20 percent from atmospheric pressure at sea level.

Occupational Health and Safety Act, 1993 Environmental Regulations for Workplaces, 1987 6. Housekeeping

- 1. A user of machinery shall provide and maintain sufficient clear and unobstructed space at every machine to enable work to be carried out without danger to persons.
- 2. An employer shall
 - a. with the exclusion of workplaces where building work is performed, make at least 2.25 square meters of effective open floor area available for every employee working in an indoor workplace;
 - b. make available and maintain an unimpeded work space for every employee;
 - c. keep every indoor workplace clean, orderly and free of materials, tools and similar things which are not necessary for the work done in such work place;
 - d. keep all floors, walkways, stairs, passages and gangways in a good state of repair, skid-free and free of obstructions, waste or materials.
 - e. keep the roof and walls of every indoor workplace sound and leak-free;
 - f. board over or fence, or enclose with rails or guards, or take other measures which may be necessary under the circumstances to ensure the safety of persons, all openings in floors, all hatchways and all stairways and any open sides of floors or buildings through or from which persons are liable to fall: Provided that such boarding or guarding may be omitted or removed for the time and to the extent necessary for the access of persons or the movement of material; and
 - g. erect a catch platform or net above an entrance or passageway or above a place where persons work or pass, or fence off the danger area if work is being performed above such entrance, passageway, place or danger area and there is a possibility of persons being struck by falling objects.
- 3. No employer shall require or permit any person to, and no person shall, dispose of any article from a high place except by hoist or chute unless arrangements have been made to secure the safety of those who may be struck by falling objects.

Occupational Health and Safety Act, 1993 Environmental Regulations for Workplaces, 1987 7. Noise and hearing conservation

- This regulation shall apply to all employers (herein referred to as employer) at a workplace where the equivalent noise level (equivalent sound pressure level) resulting from activities at such workplace, to which any person in such workplace is exposed, is 85 dB (A) or higher.
- 2. Subject to the provisions of sub regulations (3) and (4), no employer shall require or permit an employee to work in an environment in which he is exposed to an equivalent noise level equal to 85 dB(A) or higher.
- 3. The employer shall reduce the equivalent noise level to below 85 dB (A) or, where this is not reasonably practicable, he shall reduce the level to as low as is reasonably practicable and take all reasonable steps to isolate the source of the noise acoustically.
- 4. Where the equivalent noise level in any workplace cannot be reduced to below 85 dB (A), as contemplated in sub regulation (3), the employer shall -
 - demarcate the boundaries of all noise zones in such workplace by posting up notices to that effect in conspicuous places along such boundaries and at all entrances to and exits from any room where the whole of such room constitutes a noise zone; and
 - b. prohibit any person from entering a noise zone unless such person wears hearing protectors.
- 5. In the case of building work where it is not reasonably practicable to comply with the provisions of sub regulation (4) (a) owing to the nature or extent of the premises, the employer shall post up such notices at all exits from and entrances to such premises or where this is not reasonably practicable, display such notices in a conspicuous place as close as possible to the actual workplace or in such place as an inspector may direct.
- 6. Whenever an inspector is of the opinion that the employer has omitted or failed to reduce the equivalent noise level in a noise zone to as low as is reasonably practicable or to isolate the source of the noise acoustically, he may require such employer, by notice in writing, to take such further steps as such inspector considers reasonable and practicable for the purpose of conserving the hearing of employees entering or working in such noise zone.
- 7. The employer shall provide, free of charge, hearing protectors to each employee who works in or, to any person who is required or permitted to enter a noise zone, and no employer shall require or permit any person to work in or enter such noise zone, and no person shall work in or enter such noise zone, unless he wears such hearing protectors in the correct manner: Provided that where the equivalent noise level to which employees are exposed, is such that the attenuation of the hearing protectors does not reduce the said noise to below 85 dB(A) the employer concerned shall limit the time during which employees work in that noise zone in such a way that they are not exposed to an equivalent noise level equal to 85 dB(A) or higher.

- 8. The hearing protectors which the employer shall provide in terms of sub regulation (7), shall be
 - a. for the sole use of a specific person: Provided that if an inspector is satisfied that the employer has taken adequate precautionary measures to ensure that the common use of hearing protectors will not result in the spreading of infectious or contagious diseases, he may in writing, authorize the common use of hearing protectors:
 - b. maintained by the employer in an efficient and hygienic condition at all times; and
 - c. stored in a clean, dust-free container provided by the employer when not in use.
- 9. The employer shall properly instruct any person who is required to wear hearing protectors in the use of such protectors and inform him of noise zones where the wearing thereof is compulsory.
- 10. The employer shall
 - a. ensure that every employee employed in a noise zone is subjected to audiometric examinations conducted in accordance with section 7 of SABS 083, by an audiometrist approved by the chief inspector;
 - b. keep records of the results of each audiometric examination and make such records available for inspection by an inspector if he so requires; and
 - c. keep such records for a minimum period of 30 years after termination of employment: Provided that if the employer ceases activities all such records shall be forwarded to the regional director.
- 11. In order to comply with the provisions of sub regulation (4)(a), the employer shall obtain the services of an approved inspection authority, or an employee whose ability is verified by an approved inspection authority to ensure that noise zones are determined in accordance with section 4 of SABS 083.

Occupational Health and Safety Act, 1993 Environmental Regulations for Workplaces, 1987 8. Precautions against flooding

- 1. Where a substantial risk exists that a workplace may be flooded, the employer shall take measures to be informed forthwith of any imminent flooding.
- 2. Every employer shall take measures to be informed forthwith of any imminent flooding from constructions for conserving water, or which may cause water to converge or accumulate on his premises, and shall, prior to the erection of such a construction, give notice in writing to all persons situated in the danger zone below such construction of the possibility of flooding owing to such construction.

Occupational Health and Safety Act, 1993 Environmental Regulations for Workplaces, 1987 9. Fire precautions and means of egress

- 1. In order to expedite the evacuation of a workplace in case of fire, every employer shall ensure that
 - a. any emergency escape door from any room or passage or at a staircase shall, as far as is practicable, be hung so as to open outwards;
 - every door of a room in which persons may be present, and every door of a passage or at a staircase serving as a means of exit from such room, shall be kept clear and capable of being easily and rapidly opened from inside so as to ensure quick and easy evacuation;
 - c. the provisions of paragraphs (a) and (b) shall also be complied with in respect of the outer escape exit from the workplace;
 - staircases and steps leading from one floor to another or to the ground shall be provided with substantial handrails;
 - e. staircases intended to be used as fire escapes shall
 - i. be constructed of non-combustible material;
 - ii. be kept clear of any material or other obstruction; and
 - iii. not terminate in an enclosed area;
 - f. staircases, passages and exits intended for escape purposes shall be of a width and of a gradient which will facilitate the quick and safe egress of the number of persons intended to make use of them; and
 - g. having regard to the size, construction and location of a workplace, the number of persons, and the activity therein, such workplace is provided with at least two means of egress situated as far apart as is practicable.

2. Having regard to the size, construction and location of the workplace, and the amount and type of flammable articles uses, handled or stored on the premises, an employer shall provide on the premises an adequate supply of suitable fire-fighting equipment at strategic locations or as may be recommended by the fire chief of the local authority concerned, and such equipment shall be maintained in good working order.

Occupational Health and Safety Act, 1993 Facilities Regulations, 1990 2. Sanitation

- 1. Every employer shall provide sanitary facilities at the workplace in accordance with the provisions of Parts F, P and Q of the National Building Regulations.
- Notwithstanding the provisions of sub regulation (1), an employer may, where less than 11 persons are employed on one premises, make written arrangements for such persons to use closets and washbasins on adjoining premises: Provided that
 - a. such facilities are freely and readily accessible; and
 - b. the facilities comply with the provisions of these Regulations as well as with SABS 0400 with respect to -
 - c. the total number of employees who will be using the facilities; and
 - d. the condition of such facilities.
- 3. Every employer shall
 - a. make toilet paper available to employees;
 - b. provide every water closet pan designed to have a seat, with a seat;
 - c. supply a towel to every employee for his sole use or disposable paper towels or hot air blowers or clean portions of continuous cloth towels, at the washbasins; and
 - d. provide toilet soap or a similar cleansing agent to employees.
- 4. Every employer shall, under the circumstances contemplated in Table 4 of Part P of SABS 0400, provide showers for the use of his employees, and he shall
 - a. provide running hot and cold or premixed hot and cold water for the washbasins and showers;
 - b. ensure that the walls of that part of a room in which there are showers, are smooth and impermeable, and that the floor thereof is slip-free and sloped for effective drainage; and
 - ensure that where showers are provided in a room with windows, such windows are glazed in obscure glass or similar material.
- 5. In respect of each room in which there are closets, urinals, showers or washbasins every employer shall
 - a. provide a conspicuous sign outside the entrance to such a room to indicate the sex of the persons for whom the room is intended;
 - b. ventilate such rooms in accordance with the provisions of Part O of the National Building Regulations;
 - c. provide the necessary screen walls partitions or doors in order to ensure privacy; and
 - d. ensure that water feeding to showers or washbasins on his premises which is not obtained from the water supply system of a local authority, complies with SABS 241.

Occupational Health and Safety Act, 1993 Facilities Regulations, 1990

4. Change-rooms

- 1. In respect of employees
 - a. for whom showers are prescribed, or
 - b. who need to undress, the employer shall provide separate change- rooms for males and females respectively, in accordance with the provisions of Part C of SABS 0400.
- 2. An employer contemplated in sub regulation (1) shall -
 - ensure that a change-room is not connected directly by means of a door or any other opening to any room in which the exposure to a high risk substance is equal to or above the action level for such high-risk substance or in which untanned hides or skins or unwashed wool or mohair are treated, processed or stored;
 - b. provide adequate seating in the form of chairs or benches in every change-room for the maximum number of employees that will be using such change-room at any one time;
 - c. not store any materials, tools or other goods not related to the use of a change-room in such change-room or allow such items to be stored therein;

- d. where a change-room has windows, glaze such windows in obscure glass or similar material;
- e. screen the entrance to every change-room in order to afford privacy; provide a conspicuous sign at the entrance to a change-room to indicate the sex of the persons for whom the change-room is intended;
- f. provide a conspicuous sign at the entrance to a change-room to indicate the sex of the persons for whom the change-room is intended;
- g. provide facilities for the drying of wet clothes, if clothes of the employees for whom a change-room has been provided, may become wet in the course of their work;
- h. ensure that every change-room is naturally or artificially ventilated in accordance with the provisions of Part O
 of the National Building Regulations; and
- i. ensure that no employee referred to in sub regulation (1) changes his clothing at any other place at a workplace that in a change- room provided for him.
- 3. Subject to the provisions of regulation 5 an employer may allow a change-room to be used for the partaking of meals provided that
 - a. an obscure partition of at least two meters high is installed between showers and eating places; and
 - b. there is no direct communication between the change-room and toilet facilities.

Occupational Health and Safety Act, 1993 Facilities Regulations, 1990

5. Dining-rooms

- 1. Notwithstanding the provisions of regulation 4 (3), every employer of employees who at a workplace:
 - a. are exposed to a high risk substance in a quantity equal to or above the action level for such high-risk substance;
 - b. come into physical contact with any known poisonous substance which may cause illness if taken orally;
 - c. are exposed to dirt, dust, soot or similar filth: Provided that when the question arises as to what constitutes dirt, dust, soot or similar filth, the decision of an inspector shall be conclusive; or
 - d. handle or process untanned hides or skins, or unwashed wool or mohair, shall provide a separate dining-room or eating place on the premises which in respect of the maximum number of employees who will be using it at any one time, shall be in accordance with part C of SABS 0400.
- 2. The employer referred to in sub regulation (1) shall
 - a. provide tables and chairs in every dining-room for the maximum number of employees that will be using the dining-room at any one time;
 - b. ensure that a dining-room or eating place is not connected directly by means of a door or any other opening with any room in which the exposure to a high-risk substance is equal to, or above the action level for such high-risk substance or in which untanned hides or skins or unwashed wool or mohair are treated, processed or stored:
 - c. not store any materials tools or other goods not related to the use of a dining-room in such dining-room or allow such items to be stored therein; and
 - d. ensure that every dining-room is naturally or artificially ventilated in accordance with the provisions of Part O of the National Building Regulations.

Occupational Health and Safety Act, 1993 Facilities Regulations, 1990 6. Prohibition

Every employer shall -

- a. prohibit smoking and the consumption of food or drink at all work places contemplated in regulation 5(1) and shall ensure that no person smokes, eats or drinks in any such place; and
- b. display conspicuous signs or notices at such workplaces prohibiting smoking, eating or drinking.

Occupational Health and Safety Act, 1993 Facilities Regulations, 1990 7. Drinking water

Every employer shall -

a. make available an adequate supply of drinking water for his employees at their workplace; and

b. clearly and conspicuously mark as such, taps and pipes containing water which is not fit for human consumption.

Occupational Health and Safety Act, 1993 Facilities Regulations, 1990

8. Seats

Every employer shall -

- a. where reasonably practicable, provide a seat for every employee whose work can be efficiently performed while sitting:
- b. where reasonably practicable, permit an employee whose work is ordinarily performed standing to take advantage of any opportunity for sitting which may occur, and for this purpose the employer shall provide seating facilities; and
- c. provide seats with back rests where the nature of the work performed by employees is such that such seats can be used.

Occupational Health and Safety Act, 1993 Facilities Regulations, 1990 9. Condition of room and facilities

Every employer shall maintain all rooms and facilities which are prescribed or provided for in terms of the provisions of these regulations, in a clean, hygienic, safe, whole and leak-free condition, and in a good state of repair: Provided that an inspector may, by notice in writing, direct an employer to take such steps as the inspector deems necessary for the employer to comply with this regulation and the decision of an inspector in this regard shall be conclusive.

Occupational Health and Safety Act, 1993 General Administration Regulations, 2003 4. Copy of the Act

Every employer with five or more persons in his employ shall have a copy of the Act and the relevant regulations readily available at the work place: Provided that, where the total number of employees is less than five, the employer shall, on request of an employee, make a copy of the Act available to that employee.

Occupational Health and Safety Act, 1993 General Administration Regulations, 2003 5. Health and safety committee

- 1) Where a health and safety committee has been established in terms of section 19 of the Act, an employer shall
 - a) make available a suitable meeting place to such committee; and
 - b) ensure that the records, as contemplated in section 20(2) of the Act, are kept for a period of at least three years.

Occupational Health and Safety Act, 1993 General Administration Regulations, 2003 8. Reporting of incidents and occupational diseases

- 1) An employer or user, as the case may be, shall
 - a) within seven days of any incident referred to in section 24(1) (a) of the Act, give notice thereof to the provincial director in the form of WCL1 or WCL2; and
 - b) where a person, in consequence of such an incident, dies, becomes unconscious, suffers the loss of a limb or part of a limb, or is otherwise injured or becomes ill to such a degree that he or she is likely either to die or to suffer a permanent physical defect, such incident, including any other incident contemplated in section 24(1)(6) and (c) of the Act, shall forthwith also be reported to the provincial director by telephone, facsimile or similar means of communication.
- 2) If an injured person dies after notice of the incident in which he or she was injured was given in terms of sub regulation (1), the employer or user, as the case may be, shall forthwith notify the provincial director of his or her death.
- 3) Whenever an incident arising out of or in connection with the activities of persons at work occur to persons other than employees, the user, employer or self-employed person, as the case may be, shall forthwith notify the provincial director by facsimile or similar means of communication as to the-

- a) name of the injured person;
- b) address of the injured person;
- name of the user, employer or self-employed person; c)
- d) address of the user, employer or self-employed person;
- telephone number of the user, employer or self-employed person; e)
- f) name of contact person;
- g) details of incident:
 - i) What happened;
 - ii) where it happened (place);
 - iii) when it happened (date and time);
 - iv) how it happened;
 - v) why it happened; and
- h) names of witnesses.
- Any registered medical practitioner shall, within 14 days of the examination or treatment of a person for a disease 4) contemplated in section 25 of the Act, give notice thereof to the chief inspector and the employer in the form of WCL22.
- 5) Any other person not contemplated in this regulation may in writing give notice of any disease contemplated in section 25 of the Act, to the employer and chief inspector.

Occupational Health and Safety Act, 1993 General Administration Regulations, 2003

- 9. Recording and investigation of incidents
- 1) An employer or user shall keep at a workplace or section of a workplace, as the case may be, a record in the form of Annexure 1 for a period of at least three years, which record shall be open for inspection by an inspector, of all incidents which he or she is required to report in terms of section 24 of the Act and also of any other incident which resulted in the person concerned having had to receive medical treatment other than first aid.
- An employer or user shall cause every incident, which must be recorded in terms of sub regulation (1), to be investigated 2) by the employer, a person appointed by him or her, by a health and safety representative or a member of a health and safety committee within 7 days from the date of the incident and finalised as soon as is reasonably practicable, or within the contracted period in the case of contracted workers.
- 3) The employer or user shall cause the findings of the investigation contemplated in sub regulation (2) to be entered in Annexure 1 immediately after completion of such investigation.
- An employer shall cause every record contemplated in sub regulation (1) to be examined by the health and safety 4) committee for that workplace or section of the workplace at its next meeting and shall ensure that necessary actions, as may be reasonable practicable, are implemented and followed up to prevent the recurrence of such incident.

Occupational Health and Safety Act, 1993 **General Machinery Regulations, 1988** 3. Safeguarding of machinery

- - 1. Every employer or user of machinery shall
 - 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;
 - 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;
 - ensure that all safety equipment is kept in a good working condition and is properly used; and
 - 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.
 - Unless he has been authorised thereto by the employer or user of machinery, no persons shall remove any safety equipment which relates to the machinery in question.

Occupational Health and Safety Act, 1993 General Machinery Regulations, 1988

4. Operation of machinery

- 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 shifts man, 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 shifts man.
- 4. No person supervising machinery and no person operating machinery shall, without the permission of his superior, authorize 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.

Occupational Health and Safety Act, 1993 General Machinery Regulations, 1988

5. Working on moving or electrically alive machinery

- 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 sub regulation shall not apply in respect of the operation of machinery under the general supervision of a shifts man.
- 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.

Occupational Health and Safety Act, 1993 General Safety Regulations

2. Personal safety equipment and facilities

- 1. Subject to the provisions of paragraphs (f), (g), (h) and (i) of regulation 5 of the General Administrative Regulations published under Government Notice R. 2206 of 5 October 1984, every employer and every user of machinery shall make an evaluation of the risk attached to any condition or situation which may arise from the activities of such employer or user, as the case may be, and to which persons at a workplace or in the course of their employment or in connection with the use of machinery are exposed, and he shall take such steps as may under the circumstances be necessary to make such condition or situation safe. (Replaced by GAR, 1994 by Government Notice R. 17403 of 6 September, 1996.)
- 2. Where it is not practicable to safeguard the condition or situation contemplated in sub regulation (1), the employer or user of machinery, as the case may be, shall take steps to reduce the risk as much as is practicable, and shall provide free of charge and maintain in a good and clean condition such safety equipment and facilities as may be necessary to ensure that any person exposed to any such condition or situation at a workplace or in the course of his employment or on premises where machinery is used is rendered safe.
- 3. Taking into account the nature of the hazard that is to be countered, and without derogating from the general duties imposed on employers and users of machinery by sub regulations (1) and (2), the safety equipment and facilities contemplated in sub regulation (2) shall include, as may be necessary -
 - a. suitable goggles, spectacles, face shields, welding shields, visors, hard hats, protective helmets, caps, gloves, gauntlets, aprons, jackets, capes, sleeves, leggings, spats, gaiters, protective footwear, protective overalls, or any similar safety equipment or facility of a type that will effectively prevent bodily injury;

- b. waterproof clothing, high-visibility clothing, chemical-resistant clothing, low temperature clothing, chain mail garments, waders, fire retardant or flame-proof clothing, ice-jackets, or any similar safety equipment of a type that will effectively protect the wearer thereof against harm;
- belts, harnesses, nets, fall arresters, life lines, safety hooks, or any similar equipment of a type that will effectively protect persons against falls;
- d. mats, barriers, locking-out devices, safety signs, or any similar facility that will effectively prevent slipping, unsafe entry or unsafe conditions;
- e. protective ointments, ear-muffs, ear-plugs, respirators, breathing apparatus, masks; air lines, hoods, helmets, or any similar safety equipment or facility of a type that will effectively protect against harm;
- f. suitable insulating material underfoot where persons work on a floor made of metal stone, concrete or other similar material; and
- a. generally, such safety equipment or facilities as may be necessary to render the persons concerned safe.
- 4. An employer or a user of machinery, as the case may be, shall take steps to ensure that no safety equipment or facility provided as required by this or any other regulation is removed from a workplace or from premises where machinery is used, except for purposes of cleaning, repair, maintenance, modification, mending or replacement, and no person shall remove any such safety equipment or facility from a workplace or premises where machinery is used, except for the aforesaid purposes.
- 5. An employer shall instruct his employees in the proper use, maintenance and limitations of the safety equipment and facilities provided.
- 6. An employer shall not require or permit any employee to work unless such an employee uses the required safety equipment or facility provided in terms of this or any other regulation.
- 7. The provisions of this regulation shall not be construed as derogating from the provisions of any specific regulation prescribing specific safety equipment or facilities.

Occupational Health and Safety Act, 1993 General Safety Regulations 2A. Intoxication

- 1) Subject to the provisions of sub regulation (3), an employer or a user, as the case may be, shall not permit any person who is or who appears to be under the influence of intoxicating liquor or drugs, to enter or remain at a workplace.
- 2) Subject to the provisions of sub regulation (3), no person at a workplace shall be under the influence of or have in his or her possession or partake of or offer any other person intoxicating liquor or drugs.
- 3) An employer or a user, as the case may be, shall, in the case where a person is taking medicines, only allow such person to perform duties at the workplace if the side effects of such medicine do not constitute a threat to the health or safety of the person concerned or other persons at such workplace.

Occupational Health and Safety Act, 1993 General Safety Regulations 2C. Admittance of persons

- Subject to section 8 of the Act, an employer or user, as the case may be, shall not permit a person to enter a workplace where the health or safety of such person is at risk or may be at risk, unless such person enters such workplace with the express or implied permission of and subject to the conditions laid down by such employer or user: Provided that such express or implied permission shall not apply in respect of a person entitled by law to enter such workplace or premises.
- 2) An employer or a user, as the case may be, shall, if he deems it necessary in the interests of health and safety, post up a notice at every entrance to a workplace prohibiting the entry of unauthorised persons to such workplace and no person shall enter or remain at such workplace without the permission of the employer or user, as the case may be.

Occupational Health and Safety Act, 1993 General Safety Regulations 3. First aid, emergency equipment and procedures

- 1. An employer shall take all reasonable steps that are necessary under the circumstances, to ensure that persons at work receive prompt first aid treatment in case of injury or emergency.
- Where more than five employees are employed at a workplace, the employer of such employees shall provide a first aid box or boxes at or near the workplace which shall be available and accessible for the treatment of injured persons at that workplace.

- a. Taking into account the type of injuries that are likely to occur at a workplace, the nature of the activities performed and the number of employees employed at such workplace, the employer shall make sure that the first aid box or boxes contemplated in sub-regulation (2) contain suitable first aid equipment which include at least the equipment listed in the Annexure hereto.
- b. Such an employer shall make sure that only articles and equipment contemplated in sub regulation (a) or other similar equipment or medicine is kept in the first aid box or boxes.
- 4. Where more than 10 employees are employed at a workplace, the employer of such employees shall take steps to ensure that for every group of up to 50 employees at that workplace, or in the case of a shop or an office as contemplated in the Basic Conditions of employment Act, 1983 (Act No. 3 of 1983), for every group of up to 100 employees, at least one person is readily available during normal working hours, who is in possession of a valid certificate of competency in first aid, issued by
 - a. the SA Red Cross Society
 - b. the St. John Ambulance;
 - c. the SA First Aid League; or
 - d. a person or organization approved by the chief inspector for this purpose.
- 5. An employer shall at a workplace where a high risk substance or toxic, corrosive or similar hazardous substances are used, handled, processed or manufactured, ensure that the first aid worker contemplated in sub regulation (4) is trained in the first aid procedures that are necessary for the treatment of injuries that may result from such activities, including the acute detrimental effects of exposure to such substances, and in the emergency procedures which are necessary in the case of accidental leakage or dumping of such substances.
- 6. An employer shall affix a prominent notice or sign in a conspicuous place at a workplace, indicating where the first aid box or boxes are kept as well as the name of the person in charge of such first aid box or boxes.
- 7. An employee with an open wound, cut, sore or any similar injury, who works in a workplace where a substance contemplated in sub regulation 5 is used, handled, processed or manufactured, shall report such injury to his employer forthwith. The employer may not permit such employee to continue working before the injury has been cleaned with soap and water or with a diluted disinfectant.
- 8. Where an employee is exposed or can be exposed to a potential hazard of injury to the eye through contact with a biological or chemical substance, the employer concerned shall make sure that there is an eyewash fountain or any similar facilities, in the immediate vicinity of the workplace of such employee and that the employee is trained in the use thereof.
- 9. Where an employee at a workplace is exposed or can be exposed to a potential hazard of injury to or absorption through the skin as a result of sudden contact with a large amount of toxic, corrosive, high risk or similar hazardous substance, the employer concerned shall make sure that there is a fast-reacting deluge-shower with clean water or a similar facility in the immediate vicinity of the workplace of such employee and that the employee is trained in the use thereof.

Occupational Health and Safety Act, 1993 General Safety Regulations

4. Use and storage of flammable liquids

- 1. No employer shall require or permit any person to work in a place where the vapour of any flammable liquid is generated to such an extent that it constitutes an actual or potential fire or explosion hazard or endangers the safety of any person, unless the provisions of sub regulations (2) to (12) of this regulation are complied with.
- 2. No employer shall require or permit a flammable liquid to be used or applied other than in a room, cabinet or other enclosure specially constructed for this purpose of fire-resisting material or in a place which, owing to its situation or construction or any other feature or circumstance, is of such a nature that
 - a. no fire or explosion hazard is, can or may be created thereat;
 - b. any vapour resulting from such use or application is efficiently dispersed and diluted into the atmosphere subject to the provisions of the Air Pollution Prevention Act, 1965 (Act 45 of 965); and
 - c. no other workplace can or may be contaminated by such vapour.
- 3. An employer shall cause every room, cabinet or enclosure contemplated in sub regulation (2) to be fitted with an efficient intake and exhaust ventilation system to remove any vapour therefrom and to prevent its recirculation in a manner which may lead to the contamination of any other workplace of the creation of a fire or explosion hazard: Provided that, notwithstanding any other provision of this regulation, an employer shall provide every employee doing spraying with a respirator, mask or breathing apparatus of a type approved by the chief inspector, and that any such employee shall while spraying use such apparatus provided to him.
- 4. Where spraying is done in any room the employer concerned shall cause the ventilation system contemplated in sub regulation (3) to conform to the following requirements:
 - a. if the air supply and extraction is horizontal, the average air speed measured at a level of 1.5 meters above the floor, or at the level of the platform on which persons stand to work, shall not be less than 0.5 meters per second:

- b. if the air supply is vertical and the extraction thereof is done through slits or a grill along the side walls at floor level, the average air speed measured as a level of 1.5 meters above the floor, or at the level of the platform on which persons stand to work, shall not be less than 0.4 meters per second; or
- c. if the air supply is vertical and the extraction thereof is done through a grill over the whole of the floor area, the average air speed measured at a level of 1.5 meters above the floor, or at the level of the platform on which persons stand to work, shall not be less than 0.3 meters per second.
- 5. Where spraying is done into any cabinet or enclosure as contemplated in sub regulation (2), the employer concerned shall cause the ventilation system contemplated in sub regulation (3) to comply with the following requirements:
 - a. where the area of the open face of the cabinet is not more than one square metre, the average speed of air movement through the said face shall not be less than one metre per second;
 - b. where the area of the open face is more than one square metre but less than two square meters, the average speed of air movement through the said face shall not be less than 0.75 meters per second; or
 - c. where the area of the open face is equal to or exceeds two square meters, the average speed of air movement through the said face shall not be less than 0.5 meters per second.
- 6. With regard to the ventilation system contemplated in sub regulation (3) the employer shall cause -
 - a. all ducts, trunks and enclosures of the system to be of fire resistant material with a smooth interior finish and to be constructed in such a manner as to facilitate the cleaning thereof:
 - b. the system to be kept in operation during working hours as well as for at least the period of time thereafter that may be necessary to clear the vapour from the atmosphere of the room, cabinet or enclosure to below 25 per cent of the lower explosive limit of that vapour; and
 - c. the work to be so organized that the flow of air towards the intake of such ventilation system is not obstructed and draws the spray or vapour of the flammable liquid away from any employee operating the equipment.
- 7. With regard to any room contemplated in sub regulation (2) the employer shall cause every such room --
 - with a floor area exceeding 20 square meters to have at least two separate entrances at opposite ends of the room, which shall be fitted with doors openings outwards that cannot be locked; and
 - b. to be fitted with an inspection window of strengthened and shatterproof glass that cannot be opened.
- 8.
- a. An employer shall not permit-
 - i. any fire, flame or naked light or anything which may generate static electricity or any other thing which may ignite a flammable liquid or its vapour, to be used in or taken into any room, cabinet or enclosure contemplated in sub regulation (2) in which any such flammable liquid is used, sprayed or stored, and shall affix a suitable and conspicuous sign prohibiting any such act at all the entrances to any such room, cabinet or enclosure:
 - ii. any person to, and no person shall, smoke in any place in which flammable liquid is used or stored, and such employer shall affix a suitable and conspicuous notice prohibiting such smoking at all the entrances to any such place; and
 - iii. any process capable of causing sparks or fire, or the application of any heat for the drying of sprayed or treated articles, to take place in any room, cabinet or enclosure used for spraying, before the space or atmosphere has been cleared of all vapour.
- b. No person shall contravene any prohibition made known as contemplated in subparagraph (i) or (ii) of paragraph (a).
- 9. With respect to any room, cabinet or enclosure contemplated in sub regulation (2), the employer concerned shall cause -
 - a. discarded cotton waste, cleaning rags or similar material to be removed daily and safely disposed of:
 - b. only that quantity of flammable liquid needed for work on one day to be taken into or kept in such room, cabinet or enclosure: Provided that partially consumed stock may be stored in a properly marked, fireproof wall cabinet inside the work place:
 - all drums, cans, canisters or similar containers holding flammable liquids to be kept tightly closed when not in
 actual use and, after their contents have been used up, to be removed from the workplace and safety disposed
 of daily; and
 - d. every such room, cabinet or enclosure to be kept clean and all fans, ducts, trunks and enclosures of the ventilation system contemplated in sub regulation (3) to be kept clean and in good working order: Provided that any cleaning, scraping or scouring shall be done with implements that cannot cause sparking if the concentration of the vapour exceeds 25 per cent of the lower explosive limit of that vapour.
- 10. An employer shall cause every flammable liquid store to be -
 - a. separated by means of fire-resisting material with a fire-resistance of two hours from any room, cabinet or enclosure contemplated in sub regulation (2):
 - b. constructed of fire-resisting material with a fire-resistance of two hours;
 - c. constructed in such a way that, in case of spillage, a volume of the flammable liquid in question equal to the quantity of flammable liquid ordinarily kept in store plus 10 per cent of that quantity, can be contained;

- d. ventilated to the open air in such a manner that vapour cannot accumulate inside the store; and
- e. clearly marked with a sign indicating that it is such a store and also indicating the amount of flammable liquid which may be stored therein.
- 11. Taking into account the construction and location of the premises in question and the quantity and types of flammable liquids involved, an employer shall install an adequate amount of efficient fire-fighting equipment in suitable locations in and around every building in which such substances are used, handled or stored, or as may be recommended by the fire chief of the local authority concerned.
- 12. The provisions of this regulation shall not be construed as applying to the use of flammable liquids in the course of or in connection with building work: Provided that every employer engaged in building work shall ensure that, where flammable liquids are used or applied at the workplace concerned, this is done in such a manner that no fire or explosion hazard is created, and that the workplace is effectively ventilated: Provided further that where the workplace cannot be ventilated effectively the employer shall provide every employee involved with a respirator, mask or breathing apparatus of a type approved by the chief inspector, and shall take steps to ensure that every such employee, while using or applying flammable liquid, uses the apparatus supplied to him.

Occupational Health and Safety Act, 1993 General Safety Regulations 5. Work in confined spaces

- 1. An employer or a user of machinery shall take steps to ensure that a confined space is entered by an employee or other person only after the air therein has been tested and evaluated by a person who is competent to pronounce on the safety thereof, and who has certified in writing that the confined space is safe and will remain safe while any person is in the confined space, taking into account the nature and duration of the work to be performed therein.
- 2. Where the provisions of sub regulation (1) cannot be complied with the employer or user of machinery, as the case may be, shall take steps to ensure that any confined space in which there exists or is likely to exist a hazardous gas, vapour, dust or fumes, or which has or is likely to have, an oxygen content of less than 20 per cent by volume, is entered by an employee or other person only when-
 - a. subject to the provisions of sub regulation (3), the confined space is purged and ventilated to provide a safe atmosphere therein and measures necessary to maintain a safe atmosphere therein have been taken; and
 - b. the confined space has been isolated from all pipes, ducts and other communicating openings by means of effective blanking other than the shutting or locking of a valve or a cock, or, if this is not practicable, only when all valves and cocks which are a potential source of danger have been locked and securely fastened by means of chains and padlocks.
- 3. Where the provisions of sub regulation (2)(a) cannot be complied with, the employer or user of machinery shall take steps to ensure that the confined space in question is entered only when the employee or person entering is using breathing apparatus of a type approved by the chief inspector and, further, that-
 - a. the provisions of sub regulation (2) (b) are complied with;
 - b. any employee or person entering the confined space is using a safety harness or other similar equipment, to which a rope is securely attached which reaches beyond the access to the confined space, and the free end of which is attended to by a person referred to in paragraph (c);
 - c. at least one other person trained in resuscitation is and remains in attendance immediately outside the entrance of the confined space in order to assist or remove any or persons from the confined space, if necessary; and
 - d. effective apparatus for breathing and resuscitation of a type approved by the chief inspector is available immediately outside the confined space.
- 4. An employer or user of machinery shall take steps to ensure that all persons vacate a confined space on completion of any work therein.
- 5. Where the hazardous gas, vapour, dust or fumes contemplated in sub regulation (2) are of an explosive or flammable nature, an employer or user of machinery shall further take steps to ensure that such a confined space is entered only if
 - a. the concentration of the gas, vapour, dust or fumes does not exceed 25 per cent of the lower explosive limit of the gas, vapour, dust or fumes concerned where the work to be performed is of such a nature that it does not create a source of ignition; or
 - b. such concentration does not exceed 10 per cent of the lower explosive limit of the gas, vapour, dust or fumes where other work is performed.
- 6. The provisions of this regulation shall mutatis mutandis also apply, in so far as they can be so applied, to any work which is performed in any place or space on the outside of and bordering on or in the immediate vicinity of, any confined space, and in which place or space, owing to its proximity to the confined space, any hazardous article, oxygen-deficient atmosphere or dangerous concentration of gas, vapour, dust or fumes may occur or be present.

Occupational Health and Safety Act, 1993 General Safety Regulations

8. Stacking of articles

- 1. No employer shall require or permit the building of stacks which consist of successive tiers, one on top of another, unless
 - a. the stacking operation is executed by or under the personal supervision of a person with specific knowledge and experience of this type of work;
 - b. the base is level and capable of sustaining the weight exerted on it by the stack;
 - c. the articles in the lower tiers are capable of sustaining the weight exerted on them by the articles stacked above them:
 - d. all the articles which make up any single tier are consistently of the same size, shape and mass;
 - e. pallets and containers are in good condition; and
 - any support structure used for the stacking of articles is structurally sound and can support the articles to be stacked on it.
- 2. An employer shall not permit -
 - a. articles to be removed from a stack except from the topmost tier or part of that tier; and
 - b. anybody to climb onto or from a stack, except if the stack is stable and the climbing is done with the aid of a ladder or other safe facility or means.
- 3. An employer shall take steps to ensure that --
 - a. persons engaged in stacking operations do not come within reach of machinery which may endanger their safety;
 - b. stacks that are in danger of collapsing are dismantled immediately in a safe manner; and
 - c. the stability of stacks is not endangered by vehicles or other machinery or persons moving past them.
- 4. Unless a stack is otherwise supported an employer shall take steps to ensure that tiers of stacked material consisting of sacks, cases, cartons, tins or similar containers -
 - a. are secured by laying up articles in a header and stretcher fashion and that corners are securely bonded; and
 - b. are stepped back half the depth of a single container at least every fifth tier or that, alternatively, successive tiers are stepped back by a lesser amount: Provided that at least the same average angle of inclination to the vertical is achieved: Provided further that where the containers are of a regular shape and their nature and size are such that the stack will be stable, they may be stacked with the sides of the stack vertical if the total height of the stack does not exceed three times the smaller dimension of the underlying base of the stack.
- 5. Notwithstanding the provisions of sub regulation (4), free-standing stacks that are built with the aid of machinery may, with the approval of an inspector, be built to a height and in a manner permitted by the nature of the containers being stacked: Provided that -
 - a. the stacks are stable and do not overhang; and
 - b. the operator of the stacking machinery is rendered safe as regards falling articles.

Occupational Health and Safety Act, 1993 General Safety Regulations

9. Welding, flame cutting, soldering and similar operations

- 1. No employer or user of machinery shall require or permit welding or flame cutting operations to be undertaken, unless
 - a. the person operating the equipment has been fully instructed in the safe operation and use of such equipment and in the hazards which may arise from its use;
 - effective protection is provided and used for the eyes and respiratory system and, where necessary, for the face, hands, feet, legs, body and clothing of persons performing such operations, as well as against heat, incandescent or flying particles or dangerous radiation;
 - c. leads and electrode holders are effectively insulated; and
 - d. the workplace is effectively partitioned off where practicable and where not practicable all other persons exposed to the hazards contemplated in paragraph (b) are warned and provided with suitable protective equipment.

- No employer or user of machinery shall require or permit welding or name cutting operations to be undertaken in a confined space, unless -
 - a. effective ventilation is provided and maintained; or
 - b. masks or hoods maintaining a supply of safe air for breathing are provided and used by the persons performing such operations.
- 3. No employer or user of machinery shall require or permit electric welding to be undertaken in wet or damp places, inside metal vessels or in contact with large masses of metal, unless -
 - a. the insulation of the electrical leads is in a sound condition;
 - b. the electrode holder is completely insulated to prevent accidental contact with current-carrying parts;
 - c. the welder is completely insulated by means of boots, gloves or rubber mats; and
 - d. at least one other person who has been properly instructed to assist the welder in case of an emergency is and remains in attendance during operations: Provided that the provisions of this sub-regulation shall not apply to a welding process where the maximum voltage to earth does not exceed 50 volts.
- 4. No employer or user of machinery shall require or permit welding, flame cutting, grinding, soldering or similar work to be undertaken in respect of any tube, tank, drum, vessel or similar object or container where such object or container -
 - a. is completely closed, unless a rise in internal pressure cannot render it dangerous; or
 - b. contains any substance which, under the action of heat, may -
 - i. ignite or explode; or
 - ii. react to form dangerous or poisonous substances,

unless a person who is competent to pronounce on the safety thereof has, after examination, certified in writing that any such danger has been removed by opening, ventilating or purging with water or steam, or by any other effective means.

5. Where hot work involving welding, cutting, brazing or soldering operations is carried out at places, other than workplaces which have been specifically designated and equipped for such work, the employer shall take steps to ensure that proper and adequate fire precautions are taken.

Occupational Health and Safety Act, 1993 General Safety Regulations 13A. Ladders

- 1. An employee shall ensure that every ladder is constructed of sound material and is suitable for the purpose for which it is used, and
 - a. is fitted with non-skid devices at the bottom ends and hooks or similar devices at the upper ends of the stiles which shall ensure the stability of the ladder during normal use; or
 - is so lashed, held or secured whilst being used as to ensure the stability of the ladder under all conditions and at all times.
- 2. No employer shall use a ladder, or permit it to be used, if it
 - a.
- i. has rungs fastened to the stiles only by means of nails, screws, spikes or in like manner; or
- ii. has rungs which have not been properly let into the stiles: Provided that in the case of welded ladder or ladders of which the rungs are bolted or riveted to the stiles, the rungs need not be let into the sides; or
- b. has damaged stiles, or damaged or missing rungs.
- 3. No employer may permit that
 - a. a ladder which is required to be leaned against an object for support be used which is longer than 9 m; and
 - b. except with the approval of an inspector, the reach of a ladder be extended by fastening together two or more ladders: Provided that the provisions of this sub regulation shall not apply to extension of free-standing ladders.
- 4. In the case of wooden ladders the employer shall ensure that -
 - a. the ladders are constructed of straight grained wood, free from defects, and with the grain running in the length of the stiles and rungs; and
 - b. the ladders are not painted or covered in any manner, unless it has been established that there are no cracks or other inherent weaknesses: Provided that ladders may be treated with oil or covered with clear varnish or wood preservative.
- 5. When work is done from a ladder, the employer shall
 - a. take special precautionary measures to prevent articles from falling off; and
 - b. provide suitable sheaths or receptacles in which hand tools shall be kept when not being used.

- 6. An employer shall ensure that a fixed ladder which exceeds 5 m in length and is attached to a vertical structure with an inclination to the horizontal level of 75 or more
 - a. has its rungs at least 150 mm away from the structure to which the ladder is attached; and
 - b. is provided with a cage which -
 - extends from a point not exceeding 2.5 m from the lower level to a height of at least 900 mm above the top level served by the ladder; and
 - ii. shall afford firm support along its whole length for the back of the person climbing the ladder, and for which purpose no part of the cage shall be more than 700 mm away from the level of the rungs:

Provided that the foregoing provisions of paragraph (b) shall not apply if platforms, which are spaced not more than 8 m apart and suitable for persons to rest on, are provided.

Occupational Health and Safety Act, 1993 Vessels under Pressure Regulations, 1996

- 3. Design, construction and manufacture
 - 1. Subject to the provisions of sub regulation (2), no user shall use, require or permit the use of any vessel under pressure unless
 - a. it has been designed and constructed in accordance with a health and safety standard incorporated into these regulations in terms of section 44 of the Act;
 - b. it has been manufactured under the supervision of an approved inspection authority as contemplated in regulation 17(1)(a) or any other inspection authority outside the Republic recognised by the chief inspector; and
 - c. the user is in possession of a certificate of manufacture issued by the manufacturer in which it is certified that the boiler, pressure vessel or portable gas container has been designed, constructed and tested in every respect in accordance with the standard contemplated in sub regulation (1)(a): Provided that such a certificate shall be countersigned by the approved inspection authority as evidence that the design of such a boiler, pressure vessel or portable gas container has been verified and that it has been constructed and tested under their supervision in accordance with the said standard.
 - 2. The certificate required by sub regulation (1)(c) in the case of a pressure vessel or portable gas container may refer to more than one pressure vessel or portable gas container: Provided that each pressure vessel or portable gas container has the same design pressure and dimensions, and that the product of the design pressure in Pascals and the volume in cubic meters of that vessel does not exceed the figure 500 000.

Occupational Health and Safety Act, 1993 Vessels under Pressure Regulations, 1996

- 4. Manufacturer's data plate
 - 1. Every user of a boiler or pressure vessel shall cause a manufacturer's plate with the following minimum particulars to be securely fixed in a conspicuous place to the shell of every such a boiler or pressure vessel:
 - a. Name of manufacturer;
 - b. country or origin;
 - c. year of manufacture;
 - d. manufacturer's serial number;
 - e. name, number and date of the standard of design;
 - f. design gauge pressure in Pascals; (design pressure)
 - g. maximum permissible operating pressure in Pascals;
 - h. operating temperature;
 - i. capacity in cubic meters; and
 - i. mark of an approved inspection authority.
 - 2. No person shall remove such a manufacturer's plate or wilfully damage or alter the particulars stamped thereon, except as provided in regulation 16(4).

Occupational Health and Safety Act, 1993 Vessels under Pressure Regulations, 1996 6. Appurtenances

- 1. No user shall require or permit a vessel under pressure to be used unless it is provided with all the appurtenances as required by the health and safety standard used in the design, construction and manufacture of such a vessel under pressure: Provided that alternative appurtenances other than those required by the standard shall only be fitted with the written approval of the approved inspection authority.
- 2. In the absence of such a requirement in the health and safety standard used in the design, construction and manufacture of such a vessel under pressure, appurtenances shall be provided as required by the approved inspection authority and those appurtenances shall be so selected, arranged and installed as to be safe for the particular purpose for which the vessel under pressure is to be used.
- Every user of a boiler or pressure vessel shall ensure that the boiler or pressure vessel in use is fitted with at least one pressure gauge and the maximum permissible operating pressure shall be clearly marked with a red line on the dial of the pressure gauge.
- 4. Every user of a boiler or pressure vessel shall ensure that the boiler or pressure vessel in use is fitted with at least one safety valve and such a safety valve shall be kept locked, sealed or otherwise rendered inaccessible to any unauthorized person: Provided that the number and capacity of the safety valve shall be to the requirements of the design standard for the boiler or pressure vessel as required under sub regulation (2).

Occupational Health and Safety Act, 1993 Vessels under Pressure Regulations, 1996 7. Automatic controls and indicators

Every user shall ensure that the automatic controls and indicators of a boiler, pressure vessel or pressurised system are arranged, installed, maintained and operated in accordance with the provisions of the health and safety standard used in the design and manufacture of the boiler, pressure vessel or pressurized system: Provided that in the absence of such provisions, where automatic controls and indicators are installed, they shall be selected, arranged and installed subject to the written approval of an approved inspection authority.

Occupational Health and Safety Act, 1993 Vessels under Pressure Regulations, 1996 8. Access

The user shall cause every boiler, pressure vessel or pressurised system to be erected in such a manner that access to and exit from any chamber, flue, manhole, inspection opening, control or appurtenance is safe and unobstructed.

Occupational Health and Safety Act, 1993 Vessels under Pressure Regulations, 1996 9. Door Interlocks

Any user of a pressure vessel or pressurised system shall cause every such vessel or system which for operational purposes is equipped with a removable or hinged door to be provided with an interlock or other effective means for preventing -

- a rise of pressure inside the pressure vessel or pressurised system before the removable or hinged door is in the fully closed and locked position; and
- b. the release of the removable or hinged door from the locked and closed position before the pressure inside the pressure vessel or pressurised system has been reduced to atmospheric pressure.

Occupational Health and Safety Act, 1993 Vessels under Pressure Regulations, 1996 10. Portable gas containers

No user shall use or require or permit a portable gas container to be used, and no user shall fill, place in service, handle, modify, repair, inspect or test any portable gas container, other than in compliance with standards incorporated into these regulations in terms of section 44 of the Act.

Occupational Health and Safety Act, 1993 Vessels under Pressure Regulations, 1996 11. Hand held fire extinguishers

- 1. No user shall use, require or permit the use of a hand held fire extinguisher unless designed, constructed, filled, recharged, reconditioned, modified, repaired, inspected or tested in accordance with a safety standard incorporated into these regulations in terms of section 44 of the Act.
- 2. No person shall fill, recharge, recondition, modify, repair, inspect or test any hand held fire extinguisher unless a holder of a permit issued by the South African Bureau of Standards in terms of SABS 1475.

Occupational Health and Safety Act, 1993 Vessels under Pressure Regulations, 1996 12. Gas fuel use, equipment and systems

- 1. No person shall handle, store or distribute a gas fuel in any manner, including the filling of a container, other than in accordance with a health and safety standard incorporated into these regulations under section 44 of the Act.
- 2. No person shall install a fixed appliance, equipment or system for gas fuel in any manner other than in accordance a health and safety standard incorporated into these regulations under section 44 of the Act.
- 3. No person shall install a fixed appliance, equipment or system for fuel gas as contemplated in sub regulation (2), unless such person is holder of a certificate of registration issued by an organisation approved by the chief inspector: Provided that sub regulations (2) and (3) shall come into effect on 1 August 1997.