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AIDS HELPLINE: 0800-123-22 Prevention is the cure

GOVERNMENT NOTICES
GOEWERMENTSKENNISGEWINGS

DEPARTMENT OF LABOUR
DEPARTEMENT VAN ARBEID

No. R. 10

11 January 2002

OCCUPATIONAL HEALTH AND SAFETY ACT, 1993 (ACT NO. 85 OF 1993)**DIVING REGULATIONS, 2001**

The Minister of Labour has, under section 43 of the Occupational Health and Safety Act, 1993 (Act No. 85 of 1993) and after consultation with the Advisory Council for Occupational Health and Safety, 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—

"air" includes normal compressed air;

"approved inspection authority" means an inspection authority approved by the chief inspector for the verification, surveillance and certification of the design, manufacture, testing, inspection and repair of compression chambers and bells;

"bail-out system" means an independent supply of the appropriate breathing mixture carried and activated by the diver, which is of sufficient capacity to allow the diver to reach a place of safety in emergency situations;

"bell" means a compartment, either at ambient pressure (open bell) or pressurised (closed bell), by means of which a diver can be transported to and from the underwater work site, which allows the diver access to the surrounding environment and which is capable of being used as a refuge during diving operations;

"bottom time" means the time in minutes which elapses from the time when the diver dives from the surface of the water towards the underwater working place until such time as he

or she commences his or her ascent from the underwater working place towards the surface of the water;

"breathing mixture" means air or gas which is safe for breathing at ambient pressure;

"buddy line" means a line not exceeding five metres in length, which has a breaking strength of at least five hundred Newton and which is used for securely connecting two divers to each other during a dive;

"class I saturation diver" means a class II surface-supplied mixed gas diver who has been trained in all aspects of mixed gas, saturation and bell diving to a depth of at least one hundred metres;

"class II surface-supplied mixed gas diver" means a class II surface-supplied air diver trained in all aspects of mixed gas diving using surface-supplied diving equipment with open bell and diving stage, limited by decompression tables utilised (non-saturation dive), to depths not exceeding seventy metres;

"class II surface-supplied air diver" means a class III surface-supplied air diver trained in all aspects of air diving using scuba and surface-supplied diving equipment, wet bell, stage and surface decompression procedures to a depth not exceeding fifty metres;

"class III surface-supplied nitrox diver" means a class III surface-supplied air diver trained in all aspects of nitrox diving using surface-supplied diving equipment to a depth not exceeding thirty metres, without the use of a surface compression chamber;

"class III surface-supplied air diver" means a class IV scuba air diver trained in all aspects of air diving using scuba and surface-supplied diving equipment to a depth not exceeding thirty metres, without the use of a surface compression chamber;

"class IV scuba nitrox diver" means a class IV scuba air diver trained in all aspects of nitrox diving using scuba to a depth not exceeding thirty metres, without the use of a surface compression chamber;

"class IV scuba air diver" means a class IV scuba air diver trained in all aspects of air diving using scuba to a depth not exceeding thirty metres, without the use of a surface compression chamber;

"compression chamber" means a pressure vessel for human occupation having internal dimensions sufficient to accommodate at least one diver lying in a horizontal position as well as one other person, and which allows the ingress and egress of personnel while the occupants are under pressure;

"compression chamber dive" means the simulation of an actual dive to specific depths by using a compression chamber;

"Council" means the Council for Diving established in terms of regulation 11 of these Regulations;

"decompression stop" means a pause, calculated with the aid of decompression tables, which must be observed at a specific depth below the surface of the water during a diver's ascent from the underwater working place, in order to release excess nitrogen or other inert gases absorbed by his or her body, and for a compression chamber dive it has a corresponding meaning;

"designated medical practitioner" means a registered medical practitioner designated in terms of regulation 4 of these Regulations to establish whether divers are fit to dive;

"dive" means every dive performed by divers from the control point on the surface of the water to any point under the surface of the water and back to the control point;

"diver" means any person registered as a diver in accordance with the provisions of regulation 14 of these Regulations and includes a diving supervisor;

"diver's logbook" means the logbook in the form set out in Annexure A to these Regulations;

"diving apparatus" means any type of diving equipment that can assist a person to take part in any diving operation, which excludes snorkel type apparatus;

"diving mode" means a dive requiring scuba air, scuba nitrox, surface-supplied air, surface-supplied mixed gas or saturation diving apparatus, with related procedures and techniques;

"diving operation" means all activities of a diving team in preparation for, during and after a dive;

"diving operations record" means the record contemplated in Annexure B to these Regulations;

"diving stage" means a suspended platform designed to carry one or more divers and used for lowering divers into the water and bringing them to the surface when underwater decompression is undertaken or standard diving dress is used;

"diving supervisor" means any person registered as a diving supervisor in terms of regulation 15 of these Regulations;

"diving team" means the divers, standby divers, and diver support personnel involved in a diving operation, including the diving supervisor, line attendant, life-support technician and such other persons as are necessary to man any machinery and equipment which may be required before, during and after a dive;

"diving time" means the time in minutes which elapses from the time when a diver dives from the surface of the water until he or she is again exposed to atmospheric pressure after a dive and includes all decompression stops;

"gas" means any pure gas or mixture of gases, other than air, suitable for underwater breathing;

"hookah" means diving equipment comprising of an air supply, air line, diver safety harness, demand regulator or full face mask which may be used only by scientific, archaeological and shellfish divers, limited to a maximum depth of fifteen metres;

"in-date diver" means a learner diver or diver who is the holder of a valid medical certificate of fitness certifying that he or she is fit to dive, and whom, subsequent to the date of issue thereof and with intervals of not more than six months, has successfully participated in an in-water diving operation of not less than half an hour duration;

"learner diver" means any person registered as a learner diver in terms of regulation 13 of these Regulations;

"life-line" means a line or something similar, at least eight millimetres in diameter and with a minimum breaking strength of five kN, one end of which is fastened at the control point on the surface of the water and the other end of which is secured to the diver during a dive;

"life-support technician" means a person trained in the physics, physiology, medical and technical aspects of supporting life in high-pressure environments;

"line attendant" means a person who has been trained in the use of diving signals, and life-lines, and were required service telephone and other cables;

"medical certificate of fitness" means a certificate issued by a designated medical practitioner in terms of regulation 4 of these Regulations;

"medical examination" means a medical examination of a diver or a learner diver conducted by a designated medical practitioner;

"nitrox" means a mixture of oxygen and nitrogen where the percentage of oxygen in the mixture is greater than that of normal air and does not exceed a partial pressure of 1.6 atmospheres absolute of oxygen at any given time;

"provincial director" means the provincial director as defined in regulation 1 of the General Administrative Regulations published under Government Notice No.R.1449 of 6 September 1996;

"SANOP96A" means the South African Naval Operational Publication number 96A;

"saturation dive" means a dive executed by a diver whose tissues are saturated with the inert gas in the breathing mixture so as to allow an extension of bottom time without additional decompression;

"scuba" means self-contained underwater breathing apparatus in which the supply of breathing mixture carried by the diver is independent of any other source;

"shot line" means a line of at least fifteen millimetres in diameter, one end of which is fastened at the control point on the surface of the water and which extends to the underwater working place where the other end is fastened or anchored and along which the diver must dive to the underwater working place and again return to the surface of the water;

"standard diving dress" means a heavyweight surface-supplied diving outfit for deep diving;

"standby diver" means an in-date diver, other than a learner diver, who is fully qualified and prepared to dive immediately to the maximum depth required by the particular diving operation with the aid of the diving equipment in use, and who is not prevented from diving by an excess of inert gas in his or her system;

"surface control panel" means a panel used to control diving operations which supplies and indicates by separate pressure gauges the independent primary and secondary gas supplies;

"surface-supplied diving equipment" means diving equipment which includes a bail-out system, a full body diver safety harness, an underwater voice communication system, a surface control panel, an umbilical cord and a full-face mask or helmet in which the supply of suitable breathing mixture is dependant on a continuous supply from the surface of the water;

"the Act" means the Occupational Health and Safety Act, 1993 (Act No. 85 of 1993);

"umbilical cord" means a life support line, comprising of a gas supply, pneumofathom meter, and communicator's cable which has a strength equivalent to or greater than that of a life line;

"under water voice communication system" means an under water voice communication system that must allow the diver direct voice contact with the supervisor on the surface and *vice versa*;

"warning signal" means, by day, flag A as defined in the International Code of Signals and by night, the lights as defined in the International Regulations for Preventing Collision at Sea, 1983.

Scope of application

2. (1) Subject to subregulation (2), these Regulations shall apply to all diving operations and all persons engaged in diving operations in the Republic of South Africa or the territorial waters thereof: Provided that all diving operations performed by the South African National Defence Force in terms of SANOP96A and all persons involved in those operations, shall be deemed to have complied with these Regulations.

(2) These Regulations shall not apply to persons who—

- (a) use no diving apparatus;
- (b) are engaged in diving other than as employees at work;
- (c) are engaged in recreation diving activities; or
- (d) are medical personnel who have to take part in compression chamber dives for the purpose of therapeutic treatment.

Training of divers

3. (1) No person shall train another person to dive unless he or she has been approved as a diving school in terms of subregulation (2).

(2) Any person who has at his or her disposal such staff, plant, equipment and other ancillary facilities as to enable him or her to offer the curriculum of instruction and training for learner divers framed by the chief inspector, may apply in writing to the chief inspector for approval as a diving school to train learner divers and the chief inspector may approve such application subject to such conditions as he or she may impose.

(3) A learner diver shall—

- (a) undergo underwater diving training for the periods prescribed in subregulation (5) and in accordance with the curriculum of training framed by the chief inspector;
- (b) be under the personal supervision of a diving supervisor and whilst diving be accompanied by a person registered as a diver in terms of regulation 14 of

these Regulations: Provided that if the diving supervisor is satisfied that the learner diver is sufficiently experienced, the learner diver may be permitted to undertake dives, unaccompanied, to a diving depth of not more than ten metres, or deeper than ten metres if attached to a life-line.

(4) A diving supervisor shall ensure that every learner diver, within twenty four hours of completion of a dive performed by him or her, enters full particulars of such dive in his or her diver's logbook and signs the entry, where after the diving supervisor must countersign the entry.

(5) A learner diver shall undergo underwater diving training of not less than—

- (a) fifteen hours' bottom time, to depths not exceeding thirty metres, so as to qualify for registration as a class IV scuba air diver;
- (b) five hours' bottom time, using nitrox gas, additional training to a class IV scuba air diver, to depths not exceeding thirty metres, so as to qualify for registration as a class IV scuba nitrox diver;
- (c) twenty hours' bottom time, to depths not exceeding thirty metres, so as to qualify for registration as a class III surface-supplied air diver;
- (d) seven hours' bottom time additional training, using nitrox gas, to a class III surface-supplied air diver, to depths not exceeding thirty metres, so as to qualify for registration as a class III surface-supplied nitrox diver;
- (e) thirty five hours' bottom time, to depths not exceeding fifty metres, so as to qualify for registration as a class II surface-supplied air diver; and
- (f) ten hours' bottom time additional training to a class II surface-supplied air diver, to depths greater than thirty metres but not exceeding seventy metres, with the use of an open bell and diving stage, so as to qualify for registration as a class II surface-supplied mixed gas diver.

(6) No person shall be trained as a class I saturation diver unless he or she has since his or her registration as a class II surface-supplied air diver spent at least fifty hours of bottom time in diving operations, at least fifteen hours of which were spent at depths greater than thirty metres.

(7) To qualify for registration as a class I saturation diver, a diver shall undergo underwater diving training of not less than fifty hours' bottom time at depths at least one hundred metres below the surface.

(8) No person shall be registered as a class I saturation, class II surface-supplied mixed gas, class II surface-supplied air, class III surface-supplied air, class IV scuba nitrox or class IV scuba air diver, unless he or she has attained a satisfactory standard of competence in respect of the additional matters set out in Annexure C to these Regulations.

Designated medical practitioners, medical examinations and medical certificates of fitness

4. (1) The chief inspector may designate medical practitioners to undertake the medical examination of divers or prospective divers: Provided that only medical practitioners who are registered with the Health Professions Council of South Africa and who have completed a course in underwater medicine recognized by the chief inspector, shall be designated.

(2) A designation in terms of subregulation (1) shall lapse after a period of four years, unless the designated medical practitioner concerned furnishes proof before the expiry of such period that he or she has completed a refresher course in underwater medicine recognised by the chief inspector.

(3) A designated medical practitioner shall, if so requested—

- (a) carry out a medical examination, including such tests as are required by the chief inspector, and
- (b) issue a medical certificate of fitness to the diver or learner diver based on the results of the medical examination or endorse such certificate subsequent to each medical re-examination prescribed in subregulation (4).

(4) A diver shall report for a medical examination to a designated medical practitioner at least once every twelve months and the designated medical practitioner shall examine the diver in respect of such aspects as are required by the chief inspector: Provided that when an examination of a specialised nature is required, the designated medical practitioner need not personally perform such examination.

(5) A medical certificate of fitness shall indicate—

- (a) the name and identity number of the person to whom it relates;
- (b) the date of the medical examination;
- (c) the date of any X-ray photograph taken for the purpose of the examination;
- (d) whether the person is considered fit to dive;
- (e) any limitation on the diving or compression for which the person is considered fit;
- (f) the period, not exceeding twelve months, for which the person is considered fit;
- (g) the name, address, telephone number and Health Professions Council of South Africa registration number of the designated medical practitioner issuing the certificate, as well as the year in which he or she last attended a course in underwater medicine;
- (h) the signature of the medical practitioner issuing the certificate.

(6) If, on account of indisposition or injury, a diver has been unfit to dive for a period of fourteen days or more, he or she shall not again participate in diving and no person shall require or permit him or her to participate in diving unless he or she furnishes the employer with a medical certificate indicating the nature of his or her indisposition or injury and in which a medical practitioner certifies that he or she has recovered from such indisposition or injury: Provided that if in the opinion of the diving supervisor the indisposition or injury of a diver is of such a nature as to make an examination by a designated medical practitioner desirable, such diver shall not participate in diving work until a designated medical practitioner has certified that he or she is again fit for diving.

(7) Where the medical examination of a diver is required in terms of this regulation his or her employer shall be responsible for the arrangements and costs connected with such examination: Provided that such employer shall not be responsible in respect of examinations regarding indisposition or injuries not sustained during the execution of the diver's normal duties.

(8) If a medical certificate of fitness is lost or destroyed, the learner diver or diver concerned shall resubmit him or herself for a medical examination in terms of sub-regulation (3).

Diving supervisor

5. (1) Unless an employer is a diving supervisor and personally takes charge of all diving operations performed by him or her, he or she shall in writing designate one or more persons to exercise control of his or her diving operations and ensure that the provisions of these Regulations are complied with.

(2) A person designated in terms of subregulation (1) shall be a diving supervisor: Provided that an employer may, for such reason and for such period as may be approved beforehand by an inspector, designate a diver in writing to act as a diving supervisor.

(3) A diving supervisor or person designated in terms of subregulation (2) shall—

- (a) at all times be available to deal with emergencies at the site where diving operations are carried out;
- (b) not dive while he or she is supervising other divers;
- (c) if another supervisor is not available when he or she has to dive for purposes of inspection and planning, ensure that an experienced diver acts as supervisor for the duration of the dive; and
- (d) not act as standby diver unless another supervisor is available to take charge of the diving operation: Provided that he or she may act as standby diver for diving operations undertaken to a depth of not more than thirty metres or for dives not requiring decompression stops.

Operations manual

6. (1) An employer shall, after consultation with the employees, ensure that an operations manual is compiled and made available to each diving team at the diving location before the commencement of each diving operation.

(2) An operations manual shall contain directions regarding the health and safety of employees, including—

- (a) the assignments and responsibilities of each member of the diving team for each diving mode used;
- (b) safety procedures and checklists for each diving mode used;

- (c) procedures and checklists for the use, checking and maintenance of equipment for each diving mode used;
- (d) emergency procedures in the case of—
 - (i) fire;
 - (ii) equipment failure; and
 - (iii) adverse changes in environmental conditions;
- (e) procedures for—
 - (i) emergency signalling;
 - (ii) emergency assistance under water and on the surface;
 - (iii) decompression, including therapeutic recompression and decompression, and the availability of a compression chamber for such purposes;
 - (iv) first-aid;
 - (v) obtaining medical assistance, with specific reference to the need for consultation with a designated medical practitioner if decompression sickness should occur;
 - (vi) calling for assistance from emergency services, including advance liaison with those services where appropriate;
 - (vii) emergency evacuation of the work site; and
 - (viii) the provision of emergency supplies.

Control of diving operations

7. (1) Prior to commencing diving operations, an employer shall ensure that—

- (a) a risk assessment and a hazard identification is conducted to identify the risks and hazards to the health and safety of any person taking part in a diving operation;
- (b) the personnel necessary for rendering assistance to a diver, as well as those members of the personnel who may be required in the case of an emergency, are on standby and that all equipment which may be required for use in the case of an emergency is ready for immediate use;
- (c) persons who have been trained to operate compression chambers take charge of such chambers and remain on duty while such chambers are in use and are available while diving operations are in progress;

- (d) a diver who participates in a dive is provided with all the necessary diving equipment in order to safeguard his or her health and safety;
 - (e) a diver who participates in a dive is, according to his or her logbook, qualified to use the diving equipment concerned ;
 - (f) all diving equipment used for any diving operation is checked and tested before use by the diving team so as to determine whether it is in good working order;
 - (g) the maximum bottom time of a dive, the decompression schedule and the technique to be used in any diving operation are made known to and are understood by the diving team;
 - (h) the diving team has systematically and thoroughly been informed and trained with regard to the procedures to be followed in the case of an emergency; and
 - (i) when diving operations are undertaken, sufficient stored quantities of medical oxygen is available at the dive site so that an emergency may be dealt with effectively.
- (2) During the performance of diving operations, an employer shall ensure that—
- (a) good discipline is continuously maintained and that diving operations are carried out safely and strictly in accordance with the manner planned by the diving supervisor and that the bottom time and decompression schedule referred to in subregulation (1)(g) are strictly adhered to;
 - (b) for each diving operation at least the persons as per Annexure D to these Regulations are present, together with the standby diver who shall be in immediate readiness to dive and whom shall remain on duty at the control point on the surface of the water during the diving operation: Provided that where two divers are in the water at the same time and near enough to each other to communicate with and render assistance to each other in an emergency, the one may be deemed to be a standby diver for the other: Provided further that where a diving bell is used, the standby diver (bellman) shall descend in the bell to the depth from which work is carried out and shall remain in the bell so as to be able to immediately render assistance to the diver working from the bell;

- (c) for any dive there is—
- (i) at least one person who is qualified and has a valid first aid certificate to render first-aid and who has a thorough knowledge of the first-aid treatment to be applied and the use of all equipment used in drowning, decompression sickness and other ailments associated with diving operations; and
 - (ii) a person who is qualified as a life-support technician when saturation or closed bell dives are undertaken;
- (d) only in-date divers participate in diving;
- (e) no diver who on account of indisposition or physical or mental infirmity considers him or herself unfit to participate in diving, or who is considered unfit therefor by the diving supervisor, participates in any diving or is permitted or required to participate in any diving;
- (f) when scuba diving is performed, life-lines, buddy lines and surface markers are used, unless both the diving supervisor and the diver considers the use thereof hazardous or impracticable at the dive location, after which they may dispense with the use thereof: Provided that an underwater voice communication systems is then used, except in the case of the standby diver, when a life-line shall be used: Provided further that in the case of divers breathing gas mixtures containing helium a speech processing system shall be used;
- (g) a shot line is used when the diver is not lowered to the underwater working place by means of a diving bell, unless the use of a shot line is impracticable;
- (h) all voice communications must be recorded and the recordings must be kept for a period of at least forty eight hours and be made available to an inspector for inspection purposes;
- (i) for diving at a depth exceeding fifty metres, a diving stage is used, except when a bell is provided: Provided that a bell shall be used for all diving operations at a depth exceeding seventy metres, except when a diver uses standard diving dress or dives in a physically confined space: Provided further that a closed bell shall be used for all diving operations at a depth exceeding one hundred metres;
- (j) no diver undertakes a dive—

- (i) in contravention of any condition or restriction imposed on him or her in terms of these Regulations; and
 - (ii) unless he or she is fully conversant with such machinery and the use of such tools and equipment as may be required in the performance of his or her work at the underwater working place;
- (k) no diver undertakes a dive to a depth greater than that for which the equipment he or she is using is suitable;
- (l) no diver dives to a depth greater than that for which he or she is qualified: Provided that a class III surface-supplied nitrox diver, class III surface-supplied air diver, class IV scuba nitrox diver and class IV scuba air diver may undertake dives to a depth not exceeding fifty metres if the decompression time does not exceed twenty minutes;
- (m) no diver uses air or nitrox for any diving operation at a depth exceeding fifty metres, except where such use is for therapeutic or training purposes in a compression chamber;
- (n) for all diving modes, a sufficient supply of the appropriate breathing mixture is readily available at the required pressure to provide for all the activities of the diving team for the duration of the diving operation, excluding the divers' bail-out cylinder;
- (o) all reasonable steps are taken to ensure that air supplies to divers are pure and that such air complies with the requirements of the South African Bureau of Standards' Code of Practice for Portable Metal Containers for Compressed Gases No. 019-1985;
- (p) where a diving operation is to be carried out at night—
 - (i) a lamp or other device is attached to the diver to indicate his or her position when he or she is on the surface, and
 - (ii) the place on the surface or the bell from which the diving is carried out, is illuminated: Provided that where such illumination is undesirable, it may be switched off during the diving operation;
- (q) depth measuring devices must be used by all divers: Provided that where surface-supplied diving equipment is used the depth of the diver must be monitored by pneumofathom meters from the surface;
- (r) a diving operations record is kept as contemplated in Annexure B to these Regulations and is completed within twenty four hours of completion of the

- diving operation, and is made available to an inspector on request and kept for a minimum of two years after the last entry;
- (s) every diver, within twenty four hours of completion of a dive, enters full particulars of the dive in his or her diver's logbook as contemplated in Annexure A to these Regulations and that the entry is signed by the diver and countersigned by the diving supervisor;
 - (t) the appropriate warning signals are given and the appropriate signs are prominently displayed while diving is in progress;
 - (u) a boat is kept readily available for rescue purposes if the possibility exists that the diver may surface away from the control point in the course of a dive; and
 - (v) all other reasonable safety measures are taken which may be necessary for the safe execution of any particular diving operation and that the safety measures are strictly adhered to.

Decompression

8. (1) An employer shall ensure that no matches, cigarette lighters, smoking requisites or any other flammable articles likely to cause a fire or explosion are at any time taken into or stored in the compression chambers.

(2) No employer shall require or permit any diver in his or her employ to perform a dive, and no diver shall perform a dive, unless decompression is carried out in accordance with the techniques, decompression tables and decompression times determined by the diving supervisor.

(3) An employer shall ensure that a complete copy of the decompression tables contemplated in subregulation (2), together with the relevant explanatory procedures, is available for the information of the diving team on the site where diving operations are being performed: Provided that abstracts from the decompression tables may be made available for the information of the diving team and that the employer shall produce the appropriate identifiable decompression tables when required to do so by an inspector.

(4) Subject to regulation 8 of the General Administrative Regulations published under Government Notice No.R.1449 on 6 September 1996, an employer shall ensure that a

record, which shall be open for inspection by an inspector, is kept of all incidents of decompression illness and shall ensure that all such cases are investigated.

Compression chambers and bells

9. (1) No person shall use, order or permit the use of any compression chamber or bell unless—

- (a) it has been designed and manufactured in accordance with the 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; and
- (c) he or she is in possession of a certificate of manufacture issued by the manufacturer in which it is certified that the compression chamber or bell has been designed, manufactured and tested in every respect in accordance with the standard contemplated in subregulation (1)(a): Provided that such certificate of manufacture shall be countersigned by the approved inspection authority as evidence that the design of such vessel has been manufactured, tested and verified in accordance with the relevant standard.

(2) An employer shall ensure that every compression chamber—

- (a) has an uncontaminated supply of breathing mixture, sufficient for one complete therapeutic compression treatment, available in storage cylinders or other suitable vessels at the compression chamber;
- (b) is equipped with pressure relief devices which are set so as to prevent the internal pressure in any compartment from rising in excess of ten percent above the maximum intended working pressure and which are designed to automatically close when the internal pressure returns to the intended working pressure after pressure relief;
- (c) is equipped with a breathing point for each occupant for ready use during a compression operation, as well as suitable means for avoiding oxygen build-up in the chamber;
- (d) is provided with portholes of sufficient size to enable everyone in the chamber to be observed from outside;

- (e) is equipped for adequate humidity control, heating, cooling and illumination of the interior;
 - (f) is equipped with the necessary valves, gauges and other fittings which indicate and control the internal pressures of each compartment from outside the chamber;
 - (g) is provided with a two-way oral communication system between persons outside and inside the chamber;
 - (h) is designed to limit the risk of fire and equipped to extinguish a fire in the interior;
 - (i) has a minimum design pressure rating of six hundred kPa for diving operations not exceeding a depth of ninety metres: Provided that for diving operations in excess of ninety metres, the design pressure rating of the compression chamber shall be equivalent to the maximum depth of the diving operation: Provided further that where a closed diving bell is used which is equipped to undergo recompression at the surface equivalent to the depth of the diving operation, the minimum design pressure rating of the compression chamber shall be six hundred kPa;
 - (j) is designed to prevent opening under pressure and, where necessary, is equipped with interlocks for this purpose;
 - (k) is equipped for operating all installed locking devices from both sides of a closed hatch;
 - (l) is so designed that, where a closed bell is used, a person can be transferred under pressure from the compression chamber to the bell and from the bell to the compression chamber; and
 - (m) is fitted with adequate equipment and reserve facilities to supply and maintain the correct breathing mixture to everyone inside the chamber.
- (3) An employer shall ensure that every closed diving bell—
- (a) is equipped in such a manner that a diver is able to enter and leave it without difficulty;
 - (b) is equipped with doors that act as pressure seals and that may be opened from either side;
 - (c) is equipped with such valves, gauges and other fittings made of suitable materials as are necessary to indicate and control the pressure within the

- bell and to indicate to the occupants and to the diving supervisor the external pressure on the bell;
- (d) is fitted with equipment and reserve facilities which are adequate for supplying the correct breathing mixture to persons inside or working from the bell;
 - (e) is fitted with an oral communication system which enables contact to be maintained between a diver who leaves the bell, a person remaining in it and the place on the surface from which the diving operation is carried out;
 - (f) is fitted with equipment for lighting and heating the bell;
 - (g) contains adequate first-aid facilities and is fitted with lifting equipment by which an unconscious or injured diver can be hoisted into the bell by a person inside the bell;
 - (h) is equipped in such a manner that—
 - (i) it can send signals through the water for speedy location in an emergency; and
 - (ii) the lives of persons trapped in it can be sustained for at least twenty four hours;
 - (i) is used in conjunction with lifting gear which enables the bell, without excessive lateral, vertical or rotational movement, to be lowered or raised to or maintained at the depth from which the diving operations are to be carried on; and
 - (j) is provided with equipment by which it can be brought to the surface without using the main lifting gear: Provided that where such equipment involves the shedding of weights, such weights shall be capable of being shed by a person inside the bell and the equipment shall be so designed as to prevent accidental shedding.

(4) An employer shall ensure that every compression chamber or bell is inspected, tested and maintained in accordance with the provisions of the Health and Safety Standard used in the design and manufacture of such compression chamber or bell: Provided that where such code or Health and Safety Standard contains no such provisions the inspections, tests and maintenance shall be carried out by a person competent to carry out such inspection, tests and maintenance by virtue of his or her training and experience as provided for in the recognised Rules and Regulations for the Construction and Classification of Submersibles and Diving Systems: Provided further

that where an employer proposes to execute repairs to a compression chamber or bell he or she shall ascertain beforehand from an approved inspection authority the requirements with respect to such repairs and carry out such repairs under the supervision of an approved inspection authority.

Plant and equipment

10. An employer shall ensure that—

- (a) all diving equipment and machinery which is used in connection with any diving operation or underwater work are designed, manufactured and maintained in accordance with Health and Safety Standard, used properly and kept in good working order;
- (b) plants and equipment necessary for divers to safely enter and leave the water are available during diving operations;
- (c) a compression chamber with all necessary ancillary equipment is available for immediate use whenever diving takes place at a depth exceeding—
 - (i) fifty metres;
 - (ii) ten metres, but not exceeding fifty metres where the routine decompression time exceeds twenty minutes; or
 - (iii) ten metres, but not exceeding fifty metres where the routine decompression time is twenty minutes or less and effective arrangements have not been made for a diver requiring therapeutic recompression to be brought to a suitable chamber within two hours from the time when the need for recompression is identified; and
- (d) each compression chamber registered before 4 January 1991, if it is maintained in accordance with regulation 9(4) of these Regulations, may be used until it is no longer useful.

Council for Diving

11. (1) The chief inspector shall establish a Council for Diving consisting of—

- (a) an officer of the Department, who shall be the chairperson;
- (b) one inspector;
- (c) one person representing the Department of Minerals and Energy;
- (d) a designated medical practitioner;

- (e) one diver;
- (f) one employer; and
- (g) one supervisor.

Provided that the chief inspector may authorise the council to co-opt persons who have specialised knowledge of the matters dealt with by the Council.

(2) The chief inspector shall appoint the members of the council for such period as he or she may determine at the time of appointment: Provided that the chief inspector may discharge a member at any time and appoint a new member in his or her place.

(3) The Council shall—

- (a) make recommendations and submit reports to the chief inspector regarding any matter to which these Regulations relate;
- (b) advise the chief inspector regarding any matter referred to the Council by the chief inspector;
- (c) perform such other functions as may be requested by the chief inspector;
- (d) refer appeals against decisions of the Council to the chief inspector; and
- (e) conduct its work in accordance with the instructions and rules of conduct made by the chief inspector.

(4) A person affected by any decision of the Council may appeal against such decision to the chief inspector, and the decision of the chief inspector shall be final and binding.

Rules, syllabi and examinations

12. The chief inspector shall, in consultation with the Council, make or amend rules for the conduct of examinations and syllabi for such examinations as occasion may require.

Registration as learner diver

13. Any person who satisfies the chief inspector that he or she—

- (a) is at least eighteen years old;
- (b) is in possession of a valid medical certificate of fitness in which he or she is certified to be fit to participate in diving; and
- (c) has been admitted to the approved diving school,

shall be registered as a learner diver by the chief inspector and be furnished with a certificate of registration which shall be valid for one year and which may be renewed by the chief inspector at his or her discretion.

Registration as a diver

14. Any person who satisfies the chief inspector that he or she—

- (a) received appropriate training in diving operations with an organisation approved for diver training as contemplated in regulation 3 of these Regulations;
- (b) has passed the relevant examination for divers;
- (c) is in possession of a level I diving first-aid orientated qualification; and
- (d) is in possession of a valid medical certificate of fitness in which he or she is certified to be fit to participate in diving,

shall be registered as a class I saturation, class II surface-supplied mixed gas, class II surface-supplied air, class III surface-supplied nitrox, class III surface-supplied air, class IV scuba nitrox or class IV scuba air diver, as the case may be, and the chief inspector shall furnish him or her with a certificate of registration, subject to such conditions or restrictions as the chief inspector may deem necessary.

Registration as a diving supervisor

15. Any person who satisfies the chief inspector that he or she—

- (a) has acquired at least two years' experience in all aspects of diving operations after having been registered as either a class I saturation diver and life support technician, class II surface-supplied mixed gas or class II surface-supplied air diver and has acquired at least one year of such experience after having been registered as a class III surface-supplied nitrox diver, class III surface-supplied air diver, class IV scuba nitrox diver or class IV scuba air diver;
- (b) is in possession of a level III first-aid qualification; and
- (c) has passed the relevant examination for diving supervisors, shall be registered as a class I saturation, class II surface-supplied mixed gas, class II surface-supplied air, class III surface-supplied nitrox, class III surface-

supplied air, class IV scuba nitrox or class IV scuba air diving supervisor, as the case may be, and the chief inspector shall furnish him or her with a certificate of registration, subject to such conditions or restrictions as the chief inspector may deem necessary.

Applications

16. An application for registration as a learner diver, diver, diving supervisor, or for the re-issue of a certificate that has been lost, damaged or destroyed, shall be made in the form and manner approved by the chief inspector.

Withdrawal of certificate of registration

17. (1) Subject to subregulation (2), the chief inspector may withdraw a certificate of registration issued to a learner diver, diver or diving supervisor if such learner diver, diver or diving supervisor—

- (a) no longer complies with any of the conditions referred to in regulations 13, 14 and 15, respectively; or
- (b) is convicted of an offence as contemplated in regulation 19.

(2) The chief inspector may not withdraw a certificate of registration unless he or she has—

- (a) informed the holder of such certificate of registration of the intended withdrawal thereof and of the grounds upon which it is based; and
- (b) afforded such holder a reasonable opportunity to state his or her case and, if the holder is a person as contemplated in subregulation (1)(a), afforded such holder an opportunity to comply with those conditions within the period specified by the chief inspector.

(3) The chief inspector must, in writing, inform the person concerned of the reasons for his or her decision.

(4) Any person adversely affected by a decision of the chief inspector may, in writing, appeal to Director-General against such decision.

(5) Such appeal must—

- (a) be lodged within sixty days from the date on which the decision was made known; and
- (b) set out the grounds of appeal.

(6) After considering the grounds of appeal and the chief inspector's reasons for his or her decision, the Director-General shall as soon as practicable confirm, set aside or amend the decision.

Fees payable

18. The fees payable in respect of an application contemplated in regulation 16 of these Regulations shall from time to time be determined by the Minister after consultation with the Minister of Finance by notice in the Gazette and shall be payable in the form of uncanceled revenue stamps.

Offences and penalties

19. Any person who contravenes or fails to comply with any of the provisions contained in regulations 3 to 10, shall be guilty of an offence and liable upon conviction to a fine or to imprisonment for a period not exceeding twelve months and, in the case of a continuous offence, to an additional fine of two hundred rands or additional imprisonment of one day for each day which the offence continues: Provided that the period of such additional imprisonment shall not exceed ninety days.

Repeal

20. The Diving Regulations published under Government Notice No. R. 343 of 22 February 1991 is hereby repealed.

Short title

21. These Regulations shall be called the Diving Regulations, 2001.