## 1983 No. 209

### HEALTH AND SAFETY

# Diving Operations at Work Regulations (Northern Ireland) 1983

Made			•	•	3rd August 1983
Coming into operation					1st January 1984

### ARRANGEMENT OF REGULATIONS

- 1. Citation and commencement
- 2. Interpretation
- 3. Application of these Regulations
- 4. Duty to ensure compliance with these Regulations
- 5. Diving contractors
- 6. The diving supervisor
- 7. Divers
- 8. Diving team
- 9. Diving rules
- 10. Qualifications of divers
- 11. Certificate of medical fitness to dive
- 12. Plant and equipment
- 13. Maintenance, examination and testing of plant and equipment
- 14. Exemption certificates
- 15. Transitional provisions
- 16. Revocations and modifications
- SCHEDULE 1. Matters in respect of which provision is to be made in diving rules
- SCHEDULE 2. Matters to be entered in the diving operations log book
- SCHEDULE 3. Matters to be entered in the diver's log book
- SCHEDULE 4. Matters in respect of which a diver has to attain a satisfactory standard of competence
- SCHEDULE 5. Surface compression chambers
- SCHEDULE 6. Diving bells

The Department of Economic Development being the Department concerned(a) in exercise of the powers conferred on it by Articles 17(1), (2), (3), (4) and (5), 54(1), (2) and (5) and 55(2) of, and paragraphs 1(1) and (2), 3(1), 5, 6, 7, 8, 9, 10, 13, 14, 15, 19, 20 (a), (b) and (c) of Schedule 3 to the Health and Safety at Work (Northern Ireland) Order 1978(b) ("the Order of 1978") and of every other power enabling it in that behalf, after consultation with the Health and Safety Agency for Northern Ireland and such other bodies as appear to it to be appropriate hereby makes the following Regulations:—

# Citation and commencement

1. These Regulations may be cited as the Diving Operations at Work Regulations (Northern Ireland) 1983 and shall come into operation on 1st January 1984.

<sup>(</sup>a) See Article 2(2) of S.I. 1978/1039 (N.I. 9)

<sup>(</sup>b) S.I. 1978/1039 (N.I. 9)

# Interpretation

- 2.—(1) In these Regulations—
- "breathing mixture" means air or any other mixture of gases which is fit for breathing;
- "concession owner" means a person who has been granted a licence pursuant to the Petroleum Production (Licences) Regulations (Northern Ireland) 1965(a);
- "the Department" means the Department of Economic Development;
- "diver" shall be construed in accordance with paragraph (2)(b);
- "diving bell" means any compression chamber which is capable of being manned and is used or designed for use under the surface of water in supporting human life being a chamber in which any occupant is or may be subjected to a pressure of more than 300 millibars above atmospheric pressure during normal operation; and "bell diving" shall be construed accordingly;
- "diving contractor" has the meaning assigned by Regulation 5(4);
- "diving operation" shall be construed in accordance with paragraph (2)(a) and (c);
- "diving rules" means the rules required by Regulation 5(1)(b);
- "diving supervisor" referred to in Regulation 6, means, in relation to any diving operation, the person who has been appointed in relation to that operation by the diving contractor in accordance with Regulation 5(3);
- "emergency" means an emergency affecting or likely to affect the health or safety of a diver engaged in a diving operation;
- "off shore installation" means any installation or part of an installation, whether floating or not, which—
  - (a) is intended for underwater exploitation of mineral resources or exploration with a view to such exploitation; and
  - (b) is at, or within 500 metres of, its working station;
- "pipe-line" and "pipe-line works" have the meanings assigned respectively by section 26(2) of the Petroleum and Submarine Pipe-lines Act 1975(b) with the addition of the provision of internal or external protection for a pipe-line;
- "self-contained" in relation to any diving plant and equipment, means diving plant and equipment in which the supply of breathing mixture is carried by the diver independently of any other source.
- (2) For the purposes of these Regulations-
- (a) a diver shall be deemed to be engaged in a diving operation from the time when he commences to prepare to dive until—
  - (i) if he entered the water he has left it and returned to a place from which the diving operations are being carried on, and
  - (ii) he is no longer subject to raised pressure, and
  - (iii) it may reasonably be anticipated that he will not need therapeutic recompression,

except that heads (ii) and (iii) shall not apply when for the purposes of receiving medical treatment he has been transferred to a hospital or other place which is not under the control of the diving contractor or the diving supervisor;

- (b) a person shall be deemed not to be a diver if he—
  - (i) is in a submersible chamber or craft or in a pressure-resistant diving suit, and is not exposed to a pressure exceeding 300 millibars above atmospheric pressure during normal operation, or

<sup>(</sup>a) S.R. & O. (N.I.) 1965 No. 47

<sup>(</sup>b) 1975 c. 74

- (ii) uses no underwater breathing apparatus or uses only snorkel type apparatus, or
- (iii) is taking part in the diving operation in a capacity other than as an employee or self-employed person, or
- (iv) is on duty as a member of the armed forces of the Crown or visiting forces and is engaged in operations or operational training;
- (c) a person who is engaged in any activity as a diving supervisor, or as a member of a diving team or in connection with the recompression or decompression of a diver engaged in a diving operation shall be deemed to be engaged in a diving operation.

# Applications of these Regulations

834

- 3.—(1) Subject to paragraph (2), these Regulations shall apply to and in relation to all diving operations in which any diver taking part is at work as an employee or a self-employed person within the meaning of Article 2 of the Order of 1978.
- (2) These Regulations shall apply to a diving operation only if at least one of the persons going under water is a diver for the purposes of the Regulations.
- (3) Where a person is exposed to a pressure greater than 300 millibars above atmospheric pressure in a surface compression chamber in connection with—
  - (a) any diving operation, or
  - (b) the testing or evaluation of any plant or equipment designed for use in diving operations,

then these Regulations shall apply to, and in relation to, him as if he were a diver engaged in a diving operation except Regulations 5(3)(b)(ii), 7(1)(a), 8(2), (3) and (4), 10 and 12(1)(b), (f), (g), (i) and (j); but this paragraph shall not apply to a diver engaged in a diving operation or to a person to whom Regulation 2(2)(b)(iv) applies.

# Duty to ensure compliance with these Regulations

- 4.—(1) In addition to any specific duty placed on him by these Regulations—
- (a) every diving contractor and every other person who to any extent is responsible for, has control over or is engaged in a diving operation, and
- (b) in the case of—
  - (i) an offshore installation, the owner,
  - (ii) a proposed offshore installation, the concession owner,
  - (iii) a pipe-line, the owner,
- (iv) a proposed pipe-line, the person who will be the owner when it is laid, shall ensure so far as is reasonably practicable—
  - (c) that these Regulations are complied with, and
  - (d) that they are complied with in such a way that persons involved are not exposed to risks to their health or safety.
  - (2)(a) An employer shall not permit any employee of his to take part in a diving operation as a diver unless there is a diving contractor for that operation.
    - (b) A person employed under a contract for services or who would be diving on his own account shall not take part in a diving operation as a diver unless there is a diving contractor for that operation.

## Diving contractors

- 5.—(1) Every diving contractor shall in respect of each diving operation—
- (a) appoint one or more diving supervisors in accordance with paragraph (3) to be in immediate control of the operation;

- (b) issue diving rules in accordance with Regulation 9 and Schedule 1 for regulating the conduct of all persons engaged in the diving operation;
- (c) provide a diving operations log book, which is to be maintained in accordance with Regulation 6, and shall keep it for at least two years after the date of the last entry in it;
- (d) ensure that all plant and equipment, including any plant and equipment required by Regulation 12, which is necessary for the safe conduct of the diving operation is available for immediate use;
- (e) not permit the use of compressed natural air as the breathing mixture in any diving operation at a depth exceeding 50 metres except where the use is for therapeutic purposes.
- (2) Every diving contractor shall so far as is reasonably practicable ensure that—
- (a) each diving operation is carried out from a suitable and safe place with the consent of any person having control of that place;
- (b) emergency services are available including in particular in the cases of diving—
  - (i) using saturation techniques, or
  - (ii) at a depth exceeding 50 metres,

facilities for transferring the divers safely under a suitable pressure to a place where treatment can be given safely under pressure;

- (c) there are effective means of communication between the place at which operations are being or are to be carried out and—
  - (i) persons having control of that place, and
  - (ii) the emergency services.

### In this paragraph—

- "saturation techniques" means procedures by means of which a diver avoids repeated decompressions to atmospheric pressure by being continuously subjected to an ambient pressure greater than atmospheric pressure so that his body tissues and blood becomes saturated with inert elements of the breathing mixture.
- (3)(a) Each diving supervisor shall be appointed in writing and where two or more diving supervisors are appointed in respect of any diving operation, the diving contractor shall specify which part or parts of the diving operation each is to supervise at any one time; except that the diving contractor may permit two duly appointed supervisors to arrange between themselves the time at which one is to take over from the other.
- (b) A person shall not be appointed to be a diving supervisor unless—
  - (i) he is a competent person with adequate knowledge and experience of the diving techniques to be used in the diving operation for which he is appointed, and either—
  - (ii) he has qualified as a diver, in respect of the diving techniques to be used, under these Regulations or under any of the Regulations revoked or modified by Regulation 16 or under the Submarine Pipe-lines (Diving Operations) Regulations 1976(a), or
  - (iii) during the period of two years immediately preceding the coming into operation of these Regulations he acted as a diving supervisor of a diving operation in which the same diving techniques were used,

- except that heads (ii) and (iii) shall not apply where the diving operation is to be carried on in water which is not more than 1.5 metres deep.
- (4) For the purposes of these Regulations, "diving contractor" in relation to any diving operation, means—
  - (a) in any case where any of the divers taking part are employees—
    - (i) their employer, or
    - (ii) if there is more than one employer, such one of them as those employers may appoint in writing;
  - (b) if there is no diving contractor by virtue of the preceding sub-paragraph and the operation is carried on—
    - (i) from or in connection with an offshore installation, the manager of the installation appointed pursuant to section 4 of the Mineral Workings (Offshore Installations) Act 1971(a) or where no such manager has been appointed, the person made responsible by the owner for health and safety on the installation.
    - (ii) in connection with a proposed offshore installation, the concession owner,
    - (iii) in connection with a pipe-line, the owner of the pipe-line,
    - (iv) in connection with a proposed pipe-line, the person who will be the owner of the pipe-line when it is laid;
  - (c) if there is no diving contractor by virtue of either of the preceding sub-paragraphs, any diver employed under a contract for services or diving on his own account and if there is more than one such person, such one of them as they may appoint in writing.

# In this paragraph—

- "in connection with an offshore installation" and "in connection with a proposed offshore installation" does not include any pipe-line works;
- "in connection with a pipe-line" and "in connection with a proposed pipe-line" means in connection with that part of it with which the diving operation is concerned and includes pipe-line works; and "the owner" means the owner of that part.

# The diving supervisor

- **6.**—(1) Every diving supervisor shall, so far as is reasonably practicable, ensure that each diving operation for which he is appointed is carried out in accordance with the diving rules and under his immediate control.
  - (2) In relation to each diving operation the diving supervisor shall—
  - (a) ensure that plant and equipment is not used unless Regulation 13(1)(c) and (d) have been complied with;
  - (b) comply with Regulation 9(4);
  - (c) enter in the diving operations log book provided under Regulation 5(1)(c) an accurate record of the matters specified in Schedule 2 and shall sign the entries daily during the course of the diving operation;
  - (d) countersign the entries relating to the diving operation in the diver's log book of each diver who took part in that operation.
- (3) A person shall not dive while he is the diving supervisor for the time being in charge of a diving operation or any part of it.

# Divers .

- 7.—(1) A person shall not take part in any diving operation as a diver unless he—
- (a) has a valid certificate of training issued under Regulation 10, and
- (b) has a valid certificate of medical fitness to dive issued under Regulation 11,
- (c) is competent to carry out safely the work which he is called upon to perform in that operation;

but sub-paragraph (b) shall not apply to a person who enters a compression chamber in order to provide treatment in an emergency.

- (2) Every diver engaged in a diving operation shall inform the diving supervisor appointed in respect of that operation if he is unfit or if there is any other reason why he should not go or remain under water or in a compression chamber as the case may he.
  - (3)(a) Every diver engaged in a diving operation shall maintain a personal log book ("diver's log book") in which he shall enter his name and which shall contain his signature and a photograph which is a reasonable likeness of him.
    - (b) On every day on which he takes part in a diving operation a diver shall record in his log book the matters set out in Schedule 3, and he shall sign each entry and it shall be countersigned by the diving supervisor.
- (4) Every diver shall present his diver's log book to the doctor examining him for the purposes of Regulation 11.
- (5) Every diver shall retain his diver's log book for at least two years from the date of the last entry in it.

### Diving team

- 8.—(1) At all times when any diving operation is, or is about to be, carried out there shall be present a sufficient number of divers and other competent persons ("the diving team") necesseary to—
  - (a) ensure that so far as is reasonably practicable the operation can be undertaken safely;
  - (b) operate plant, equipment or other facilities necessary for the safe conduct of the operation.
- (2) Subject to paragraphs (4) and (5), in addition to the diver or divers who will be diving in a diving operation—
  - (a) there shall be another diver ("the standby diver") who shall—
    - (i) where a diving bell is being used, descend in the bell to the depth from which work is to be carried out and shall remain in the bell to monitor the diver or divers who leave it and be in immediate readiness to render assistance to them;
    - (ii) in all other cases, be in immediate readiness to dive except that two divers in the water at the same time who are near enough to be able to communicate with and to render assistance to each other in an emergency may each be regarded as the standby diver for the other;
  - (b) in the following cases there shall be an extra diver on the surface in addition to the standby diver—
    - (i) where diving stops are required for the purposes of routine decompression,
    - (ii) where the diving will be at a depth of 30 metres or more,
    - (iii) where there is a special hazard and in particular where a diver will be

endangered in a current or where there is a risk of a diver being trapped or his equipment entangled.

- (3) The standby diver and any diver required by paragraph (2)(b) shall be in addition to—
- (a) any members of the team required to attend or work any plant, equpiment or other facilities;
  - (b) the diving supervisor;
- except that the standby diver and the extra diver required by paragraph (2)(b) may perform other duties in the diving team where to do so would not prejudice the safety of any person in the water if he is called upon to dive.
- (4) Paragraph (2) shall not prevent the standby diver or any diver required by paragraph (2)(b) from going to the assistance of any other diver in an emergency.
- (5) Paragraph (2) shall not apply where the diving operation is to be carried on in water which is not more than 1.5 metres deep.

# Diving rules

- 9.—(1) The diving rules required by Regulation 5(1)(b) shall include provisions for securing the health and safety of persons engaged in the diving operation and in particular shall—
  - (a) make provision relating to such of the matters specified in Schedule 1 as are relevant to the diving operation to be undertaken;
  - (b) require the use of such of the plant and equipment specified in Regulation 12 as is relevant to the diving operation to be undertaken.
- (2) The diving contractor shall, if an inspector appointed pursuant to Article 21 of the Order of 1978 so requires, supply the inspector with a copy of the diving rules issued by him for any diving operation or intended operation or such part of those rules as the inspector may require.
- (3) The diving contractor shall supply the diving supervisor with a copy of the diving rules.
- (4) The diving supervisor shall make available to each member of the diving team a copy of the part or parts of the diving rules relevant to that member.

# Qualification of divers

- 10.—(1) The certificate of training required by Regulation 7(1)(a) shall be valid only if—
  - (a) it has been issued by the Department or approved by the Department for the purposes of this sub-paragraph, and
  - (b) it states—
    - (i) the name of the individual to whom it relates ("the diver"),
    - (ii) the category or categories of diving to which it relates,
    - (iii) that the person or body issuing the certificate is satisfied that the diver has attained a satisfactory standard of competence (whether by training, experience or a combination of both) in the matters specified in Schedule 4 which are relevant to the category or categories of diving to which the certificate relates, except that where the person or body is not satisfied on all such matters, but nevertheless considers it appropriate to issue a certificate subject to restrictions within a category of diving, those restrictions shall be stated in the certificate;
  - (c) it has not ceased, in accordance with paragraph (2), to be valid.

- (2) If the Department declares a certificate to be no longer valid, whether or not the certificate was issued by the Department, then that certificate shall cease to be a valid certificate for the purposes of paragraph (1).
  - (3) The certificate of training shall be kept in the diver's log book.
- (4) The preceding provisions of this Regulation shall not apply to a person taking part in a diving operation as part of training approved for the time being by the Department for the purposes of this paragraph.
- (5) Without prejudice to the generality of paragraph (1)(a), where the Department—
  - (a) refuses to issue or approve a certificate of training, or
  - (b) declares a certificate of training it has issued or approved to be no longer valid,

the Department, upon application being made to it by the person aggrieved, within 28 days of his being notified of the refusal or declaration as the case may be, shall review that decision and if it satisfied that it should be reversed or altered shall in either case issue a certificate of training.

Certificate of medical fitness to dive

- 11.—(1) The certificate of medical fitness to dive required by Regulation 7(1)(b) shall be valid in respect of a particular diving operation only if—
  - (a) it has been issued by an approved doctor or by the Department in accordance with the following provisions of this Regulation,
  - (b) the diving undertaken does not contravene any limitation contained in the certificate pursuant to paragraph (3)(a)(v),
  - (c) the period mentioned in paragraph (3)(a)(vi) has not expired.
- (2) A certificate of medical fitness shall only be issued for the purposes of paragraph (1) after the person concerned has undergone an examination carried out by an approved doctor in such manner and including such tests as the Department may require either generally or for that case or class of case.
  - (3) The certificate of medical fitness to dive shall—
  - (a) state—
    - (i) the name of the person to whom it relates,
    - (ii) the date of the medical examination,
    - (iii) the date of any X-ray taken for the purposes of that examination,
    - (iv) that the person is considered fit to dive,
    - (v) any limitation on the diving or compression for which the person is considered fit,
    - (vi) the period not exceeding 12 months for which the person is considered fit,
    - (vii) the name, address and telephone number of the approved doctor issuing the certificate:
  - (b) be signed by the doctor issuing it, or on behalf of the Department as the case may be.
- (4) The certificate of medical fitness shall be entered in the diver's log book; and the entry shall be in such form as the Department may approve.
- (5) If an approved doctor decides, after examination, that a person is unfit to dive, he shall enter this fact in the diver's log book together with the information required by paragraph (3)(a)(i)-(iii) and (vii) and shall sign the entry.
- (6) An employment medical adviser may on medical grounds revoke a certificate of medical fitness after, where reasonably practicable, consulting the doctor who issued that certificate.

- (7) Without prejudice to the generality of paragraph (1)(a), where an approved doctor decides—
  - (a) that a person is unfit to dive, or
  - (b) that a person is fit to dive subject to limitations,

the Department, upon application being made to it by that person within 28 days of the decision, shall review the decision and if it is satisfied that it should be reversed or altered shall issue a certificate of fitness to dive subject to such limitations, if any, as it considers appropriate.

(8) In this regulation, "an approved doctor" means a medical practitioner approved for the time being by an employment medical adviser for such purposes of these Regulations as he may specify in the instrument of approval; and "employment medical adviser" means a person appointed under Part III of the Order of 1978 to be such an adviser and who is authorised by the Department to give approvals under this paragraph or to make revocations under paragraph (6) as the case may be.

# Plant and equipment

- 12.—(1) The plant and equipment mentioned in Regulation 5(1)(d) shall—
- (a) include a means of supplying a breathing mixture (including a reserve supply for immediate use in the event of an emergency or for therapeutic recompression or decompression)—
  - (i) suitable in content and temperature and of adequate pressure, and
  - (ii) at an adequate rate,

to sustain prolonged vigorous physical exertion at the ambient pressure for the duration of the diving operations;

- (b) include a lifeline for each diver except—
  - (i) where the nature of the diving operations renders a lifeline unsuitable and an alternative system for ensuring the diver's safety is used, or
  - (ii) in a case where two divers are at a depth not exceeding 30 metres and each is acting as standby diver for the other and one of them is connected to the surface by a lifeline;

and in this sub-paragraph "lifeline" means a rope, gas hose, communication cable or any combination thereof which is adequate in strength and suitable for recovering and lifting the diver and his equipment from the water;

- (c) enable each diver to communicate with the diving supervisor except—
  - (i) where paragraph (1)(b)(i) applies,
  - (ii) where paragraph (1)(b)(ii) applies in which case one of the divers shall be able to communicate with the supervisor,

and in a case where a diving bell is being used enable the diver who leaves the bell to communicate with the diver remaining in it;

- (d) in addition to the means of communication required by sub-paragraph (c) above, include where reasonably practicable a system enabling oral communication to be made between each diver and the diving supervisor;
- (e) include such plant and equipment as may be necessary to ensure that divers may safely enter and leave the water;
- (f) in the case of any of the following diving operations, include a surface compression chamber with all necessary ancillary equipment which shall comply with Schedule 5 in all cases where the diving operation is carried out—
  - (i) at a depth in excess of 50 metres,

- (ii) at a depth exceeding 10 but not exceeding 50 metres where the routine decompression time exceeds 20 minutes.
- (iii) at a depth exceeding 10 but not exceeding 50 metres where the routine decompression time is 20 minutes or less and effective arrangements have not been made for the rapid conveyance of any diver requiring therapeutic recompression from the location of the diving operations to a suitable two-compartment chamber,
- (iv) from or in connection with an offshore installation, a proposed offshore installation or pipe-line works;
- (g) for a diving operation at a depth exceeding 50 metres include a diving bell which shall have all necessary ancillary equipment and shall comply with the requirements of Schedule 6;
- (h) include such plant and equipment, if any, as may be necessary to ensure that each diver's body temperature is kept within safe limits and in all cases where the diving operation is—
  - (i) at a depth exceeding 50 metres there shall be a means of heating the diver, and
  - (ii) at a depth exceeding 150 metres there shall also be a means of heating the diver's breathing mixture;
- (i) where a diving operation is to be carried on during the hours of darkness include—
  - (i) a lamp or other device attached to the diver to indicate his position when he is on the surface, and
  - (ii) such plant and equipment as may be necessary to illuminate adequately
    the place on the surface from which the diving is being carried on, except
    where the nature of the diving operations render such illumination
    undesirable;
- (j) include depth measuring devices which where reasonably practicable shall be suitable for surface monitoring.
- (2) Where a person is deemed to be engaged in a diving operation by virtue of Regulation 3(3), the surface compression chamber and its ancillary equipment shall comply with Schedule 5.
- (3) Where any vessel, hovercraft, floating structure or offshore installation is used in a diving operation there shall be means of securing that it is—
  - (a) at anchor or aground, or
  - (b) made fast to the shore, to a fixed structure or to an offshore installation which is in a fixed position, or
  - (c) maintained in position using its propulsion system or a dynamic positioning system with adequate precautions to secure the safety of the diver from these systems and the flow of water created.
  - (4) All plant and equipment used in a diving operation shall—
  - (a) be properly designed, of adequate strength and of good construction from sound and suitable material:
  - (b) be suitable for the conditions in which it is intended to be used:
  - (c) where its safe use depends on the depth or pressure at which it is used, be marked with its safe working pressure or the maximum depth at which it may be used;
  - (d) at whatever temperature it is to be used, be adequately protected against malfunctioning at that temperature.
- (5) Each gas cylinder used in a diving operation shall be legibly marked with the name and the chemical formula of its contents.

Maintenance, examination and testing of plant and equipment

- 13.—(1) The plant and equipment specified in Regulation 12(1), (2) and (5) shall not be used in any diving operation unless—
  - (a) it is maintained in a condition which will ensure so far as is reasonably practicable that it is safe while it is being used;
  - (b) the register maintained under paragraph (4) contains—
    - (i) a certificate by a competent person that it complies with Regulation 12(4), and
    - (ii) in the case of a surface compression chamber or a diving bell, sufficient information, including information relating to the materials used in its construction, to enable it to be safely used, repaired or altered;
  - (c) there is in force a certificate issued under paragraph (2) by a competent person that it has been examined and tested and that it may be safely used;
  - (d) it has been examined by a competent person within the six hours immediately before the diving operation commenced.
  - (2) The certificate referred to in paragraph (1)(c) shall—
  - (a) state—
    - (i) the plant and equipment to which it relates,
    - (ii) that the competent person has examined it,
    - (iii) that it has been tested by him or under his close supervision,
    - (iv) the pressure, depth or other conditions under which it can be safely used, and
    - (v) the period during which it can be safely used which shall not exceed six months;
  - (b) cease to be valid—
    - (i) when any repair or alteration has to be made to the plant or equipment which affects its safe working,
    - (ii) on the expiration of six months or such shorter period as may be certified under sub-paragraph (a)(v) above.
- (3) For the purposes of paragraph (2)(a)(iii) the competent person need not cause a pressure leak test or an internal pressure test to be repeated—
  - (a) in the case of a surface compression chamber or a diving bell—
    - (i) if a pressure leak test to a safe working pressure has been carried out and certified within the previous two years, or as the case may be,
    - (ii) if an internal pressure test has been carried out and certified within the previous five years;
  - (b) in the case of a seamless gas cylinder not taken under water if either a pressure leak test to a safe working pressure or an internal pressure test has been carried out and certified within the previous five years;
  - (c) in the case of any other item of plant or equipment which will be subjected to an internal pressure in excess of 500 millibars above external pressure, if either a pressure leak test to a safe working pressure or, an internal pressure test has been carried out and certified within the previous two years.
  - (4) The diving contractor shall—
  - (a) enter in, attach to or insert into a register kept for the purpose, the certificates and information required by paragraph (1)(b) and (c);
  - (b) retain each such register—
    - (i) in the case of a register containing certificates relating to any surface

- compression chamber or diving bell or seamless gas cylinder not taken under water, for at least five years from the date of the last such certificate,
- (ii) in any other case, for at least two years from the date of the last certificate it contains.

# Exemption certificates

- 14.—(1) Subject to paragraph (2), the Department may, by a certificate in writing, exempt any person or class of persons, any diving operation or class of diving operations and any plant and equipment or class of plant and equipment from any requirement or prohibition imposed by any provision of these Regulations, and any such exemption may be granted subject to conditions and to a limit of time and may be revoked at any time.
- (2) The Department shall not grant any such exemption unless, having regard to the circumstances of the case, and in particular to—
  - (a) the conditions, if any, which it proposes to attach to the exemption, and
  - (b) any other requirements imposed by or under any enactment which apply to the case,

it is satisfied that the health and safety of persons who are likely to be affected by the exemption will not be prejudiced in consequence of it.

# Transitional provisions

- 15.—(1) It shall be a sufficient compliance with Regulation 10 if instead of the certificate of training the diver's log book includes a certificate issued by the diving contractor, and approved by the Department, during the first six months immediately after the coming into operation of these Regulations that he is satisfied that the diver's experience during the two years immediately preceding the issue of the certificate is such that he is competent to take part in diving operations of the category stated in the certificate; in this paragraph "the diving contractor" means the first relevant diving contractor after these Regulations come into operation.
- (2) The Department may revoke a certificate issued under paragraph (1) at any time if, after making such enquiries as it considers necessary, it considers that in all the circumstances of the case it is appropriate to do so.
- (3) A certificate of medical fitness issued under any of the Regulations revoked or modified by Regulation 16 or under the Submarine Pipe-lines (Diving Operations) Regulations 1976(a) shall have effect for the purposes of these Regulations as if it had been issued under Regulation 11(1).

## Revocations and modifications

- **16.**—(1) The Diving Operations Special Regulations (Northern Ireland) 1963(b) are hereby revoked.
- (2) The Offshore Installations (Diving Operations) Regulations 1974(c) are hereby revoked as respects Northern Ireland.
- (3) In Regulation 2(1) of the Merchant Shipping (Diving Operations) Regulations 1975(d) after "Diving Operations at Work Regulations 1981" there shall be inserted "and the Diving Operations at Work Regulations (Northern Ireland) 1983.".
- (4) In Regulation 7 of the Health and Safety (First-Aid) Regulations (Northern Ireland) 1982(e) after paragraph (e) there shall be inserted a new paragraph "where the Diving Operations at Work Regulations (Northern Ireland) 1983 apply.".

<sup>(</sup>a) S.I. 1976/923

<sup>(</sup>b) S.R. & O. (N.I.) 1963 No. 84

<sup>(</sup>c) S.I. 1974/1229

<sup>(</sup>d) S.I. 1975/116. Regulation 2(1) was substituted by S.I. 1981/399

<sup>(</sup>e) S.R. 1982 No. 429

Sealed with the Official Seal of the Department of Economic Development for Northern Ireland on 3rd August 1983.

(L.S.)

R. J. O'Hara

Assistant Secretary

Regulations 5(1)(b) and 9

# MATTERS IN RESPECT OF WHICH PROVISION IS TO BE MADE IN DIVING RULES

### **Planning**

- 1. Consideration of-
- (a) meteorological conditions, including forecasted conditions;
- (b) tidal information including local tide tables and indications of speed of current to be expected;
- (c) proposed shipping movements;
- (d) air and water temperatures;
- (e) underwater hazards of the diving site, including any culverts, penstocks, sluice valves or areas where differences in hydrostatic pressure may endanger the diver;
- (f) depth and type of operation;
- (g) suitability of plant and equipment;
- (h) availability and qualifications of personnel;
- (i) the effect on a diver of changes of air pressure if he flies after diving;
- (j) the activities of any person who will be diving in connection with the diving operation whether or not he is a diver for the purposes of these Regulations.

# Preparations

- 2.(a) Consultation with persons having any control over or information related to the safety of any diving operations; and in particular persons having control of lifting appliances or having control of or information about shipping movements;
  - (b) selection of the breathing apparatus and mixtures;
  - (c) check of plant and equipment;
  - (d) allocation of personnel;
  - (e) personal fitness of divers for underwater operations;
  - (f) precautions against cold in and out of the water;
  - (g) signalling procedures;
  - (h) precautions against underwater hazards of the diving site.

#### Procedures during diving

- 3.(a) Responsibilities of diving supervisor, divers and surface support;
  - (b) use of all types of personal diving equipment;
  - (c) supply of gas and gas mixture, including maximum and minimum partial pressure of gases;
  - (d) operations direct from an installation, work site or craft;
  - (e) operations in relation to diving bell;
  - (f) working in different locations;
  - (g) operations and use of equipment under water;
  - (h) limits on depth and time under water;
  - (i) descent, ascent and recovery of divers;
  - (j) descent, ascent and recovery of diving bell;
  - (k) diving tables for use in decompression procedures for both single and repetitive diving and in therapeutic decompression procedures; and for inland waters the need to take account of the effect on pressure of the altitudes at which the diving takes place;
  - (1) control in changing conditions;
  - (m) time for which divers are to remain in vicinity of the surface compression chamber;
  - (n) maintenance of log books.

## Emergency procedure

- 4.(a) Emergency signalling;
  - (b) emergency assistance under water and on the surface;
  - (c) therapeutic recompression and decompression and the availability of chambers for that purpose;
  - (d) first aid;
  - (e) medical assistance;
  - (f) calling assistance from emergency services including advance liaison with those services where appropriate;
  - (g) precautions in the event of evacuation of the installation, work site, vessel, hovercraft or floating structure;
  - (h) provision of emergency electrical supplies.

Regulation 6

#### MATTERS TO BE ENTERED IN THE DIVING OPERATIONS LOG BOOK

The following matters shall be entered in the diving operations log book in respect of each diving operation:—

- (a) the name of the diving contractor;
- (b) the dates on which and the period during which the diving operation was carried on;
- (c) the name or other designation of the craft or offshore installation or work site in connection with which the diving operation was carried on and the location of that craft or offshore installation or work site;
- (d) the name of the diving supervisor and the period for which he is acting in that capacity in respect of that diving operation;
- (e) the names of the other persons engaged in the diving operation including those operating any diving plant or equivalent and their respective duties;
- (f) the arrangements for emergency support;
- (g) the procedures followed in the course of the diving operation including details of the decompression schedule used;
- (h) the maximum depth reached in the course of the operation for each diver;
- (i) for each diver, in respect of each dive he makes, the time he leaves the surface, his bottom time (that is the period from the time he leaves the surface until he starts to ascend) and the time he reaches the surface;
- (j) the type of breathing apparatus and mixture used;
- (k) the nature of the diving operation;
- any decompression sickness, other illness, discomfort or injury suffered by any of the divers;
- (m) particulars of any emergency which occurred during the diving operation and any action taken;
- (n) any defects that are discovered in any plant or equipment used in the diving operations;
- (o) particulars of any environmental factors affecting the diving operation;
- (p) any other factors relevant to the safety or health of the persons engaged in the operation.

Regulation 7

#### MATTERS TO BE ENTERED IN THE DIVER'S LOG BOOK

The following matters shall be entered in the diver's log book in respect of each diving operation in which he takes part:—

- (a) the name and address of the diving contractor;
- (b) the date;
- (c) the name or other designation and the location of the offshore installation, work site, craft or harbour from which the diving operation was carried on;
- (d) the name of the diving supervisor;
- (e) the maximum depth reached on each occasion;
- (f) the time he left the surface, his bottom time and the time he reached the surface on each occasion;
- (g) where the dive includes time spent in a compression chamber, details of any time spent outside the chamber at a different pressure;
- (h) the type of breathing apparatus and mixture used by him;
- (i) any work done by him on each occasion and the equipment (including tools) used by him in that work;
- (j) any decompression schedules followed by him on each occasion;
- (k) any decompression sickness or other illness, discomfort or injury suffered by him;
- (1) any other factor relevant to his safety or health.

Regulation 10(1)(b)(iii)

MATTERS IN RESPECT OF WHICH A DIVER HAS TO ATTAIN A SATISFACTORY STANDARD OF COMPETENCE

#### PART I

### BASIC AIR DIVING

- 1. The theory of air diving.
- 2. Use of self-contained and surface supplied diving equipment.
- 3. Diving safely and competently in various conditions not exceeding 50 metres in depth, including the safe use of hand tools and hand held power tools and equipment.
- 4. Use of diver communication systems appropriate to air diving.
- 5. Emergency procedures for air diving.
- 6. Surface compression chamber operation, therapeutic recompression, decompression and the decompression tables appropriate to air diving.
- 7. First aid appropriate to emergencies arising in air diving.
- 8. Relevant legislation and guidance.

#### PART II

## MIXED GAS OR BELL DIVING

- 1. All the matters specified in Part 1 of this Schedule.
- 2. The theory of mixed gas and bell diving.
- 3. Gases and gas systems.
- 4. Diving safely and competently to representative depths exceeding 50 metres from a diving bell.
- 5. Use of diver communication systems appropriate to mixed gas and bell diving.
- 6. Diving bell operation, transferring to surface compression chamber, recompression on mixed gas and decompression tables appropriate to mixed gas diving.
- 7. Emergency procedure for mixed gas and bell diving.
- 8. First aid appropriate to emergencies arising in mixed gas and bell diving.
- Legislation and guidance relevant to mixed gas diving not covered under paragraph 8 of Part I of this Schedule.

#### PART III

### AIR DIVING WHERE NO SURFACE COMPRESSION CHAMBER IS REQUIRED ON SITE

- 1. The theory of air diving.
- 2. Use of surface-supplied diving equipment.
- 3. Use of self-contained diving equipment.
- 4. Diving safely and competently in various conditions.
- 5. Use of diver communication systems appropriate to air diving.
- 6. Emergency procedures for air diving.
- Therapeutic recompression, decompression and the decompression tables appropriate to air diving.
- 8. First aid appropriate to emergencies arising in air diving.
- 9. Relevant legislation and guidance.

# PART IV

AIR DIVING WITH SELF-CONTAINED EQUIPMENT WHERE NO SURFACE COMPRESSION CHAMBER IS REQUIRED ON SITE

All matters specified in Part III except the use of surface-supplied diving equipment.

Regulation 12(1)(f)

#### SURFACE COMPRESSION CHAMBERS

A surface compression chamber shall:—

- (a) have at least two compartments with doors each of which acts as a pressure seal and can be opened from either side ("a two-compartment chamber"); or alternatively a single compartment chamber may be used where—
  - (i) the divers do not go to a depth exceeding 50 metres, and
  - (ii) the diving operations are not carried on form or in connection with an offshore installation or pipe-line works, and
  - (iii) facilities are provided for transferring persons under pressure from that chamber to a two-compartment chamber within four hours:
- (b) in the case of a two-compartment chamber, have sufficient space in at least one of its compartments to enable two adults to lie down inside the chamber without difficulty and if the chamber is to be used in circumstances in which a person is intended to remain inside under pressure for a continuous period of 12 hours or more, excluding any therapeutic decompression, it shall have a minimum internal diameter of two metres, except that in the case of equipment taken into use for the first time before 1st January 1985 the minimum internal diameter shall be 1.75 metres;
- (c) where a diving bell is used, be capable of allowing a person to transfer under pressure from the bell to the surface compression chamber and vice versa;
- (d) provide a suitable environment and suitable facilities for the persons who are to use it, having regard to the kind of operation in connection with which it is used and the period during which the pressure is raised;
- (e) be so designed as to minimise the risk of fire;
- (f) have a lock through which food and medical supplies may be passed into the chamber while its occupants remain under pressure;
- (g) be equipped with such valves, gauges and other fittings (which are to be made of suitable materials and so designed as to minimise the noise inside the chamber during rapid pressurisation) as are necessary to control and indicate the internal pressures of each compartment from outside the chamber;
- (h) be fitted with adequate equipment, including reserve facilities, for supplying and maintaining the appropriate breathing mixture to persons inside it;
- (i) be equipped with a two-way oral communications system;
- (j). be fitted with equipment for heating and lighting the chamber and adequate first aid and sanitary facilities.

Regulation 12(1)(g)

#### DIVING BELLS

A diving bell shall:-

- (a) be equipped with means by which each diver using the bell is able to enter and leave it without difficulty;
- (b) be capable of allowing a person to transfer under pressure from it to a surface compression chamber and vice versa:
- (c) be equipped with doors which act as pressure seals and which may be opened from either side;
- (d) be equipped with such valves, gauges and other fittings (which are to be made of suitable materials) as are necessary to control and indicate the pressure within the bell and to indicate to those inside the bell and to the diving supervisor the external pressure on the bell;
- (e) be fitted with adequate equipment including reserve facilities for supplying the appropriate breathing mixture to persons occupying or working from the bell;
- (f) be equipped with a two-way oral communication system which enables contact to be maintained both with persons at the place from which the diving operation is carried on and with divers while they are outside the bell;
- (g) be fitted with equipment for lighting and heating the bell;
- (h) contain adequate first aid facilities and be fitted with lifting equipment sufficient to enable an unconscious or injured diver to be hoisted into the bell by a person inside it;
- (i) be provided with means by which, in the event of any emergency, it can be rapidly located by through water signals from the stricken bell and the lives of trapped persons can be sustained for at least 24 hours or, where that is not practicable, sustained for as long as is practicable;
- (j) be used in association with lifting gear which enables the chamber to be lowered to the depth from which the diving operations are to be carried on, maintained in its position and raised, in each case without excessive lateral, vertical or rotational movement taking place; and
  - (k) be provided with a means by which, in the event of failure of the main lifting gear, the chamber can be returned to the surface; if those means involve the shedding of weights, they shall be capable of being shed from the bell by a person inside it and a means shall be incorporated to prevent their accidental shedding.

#### EXPLANATORY NOTE

(This note is not part of the Regulations.)

These Regulations apply to diving operations in which the divers are at work in circumstances covered by the Health and Safety at Work (Northern Ireland) Order 1978. They also apply when a surface compression chamber is being used in connection with a diving operation or the testing of equipment for use in a diving operation.

The principal provisions of the Regulations are that for each diving operation there must be a diving contractor whose main duties are to provide safe and suitable plant and equipment, to make diving rules laying down the procedures to be followed in the operation and to appoint a diving supervisor to have immediate control of it. Duties are placed on the diving supervisor, who must have certain qualifications or experience, on the divers themselves and on all persons having any control over the diving operation. Divers are required to have certificates of training in the type of diving to be undertaken and of medical fitness to dive.

Certain divers are excluded from the Regulations (Regulation 2(2)(b)) principally those using snorkel type apparatus or no underwater breathing apparatus at all and those in submersible craft or pressure-resistant suits at less than 300 millibars above atmospheric pressure.

Existing Regulations relating to diving at work are revoked or modified by Regulation 16 or will be revoked separately.

The Regulations also contain transitional and incidental provisions including requirements for the keeping of records.

A person who contravenes the Regulations is guilty of an offence under Article 31 of the Health and Safety at Work (Northern Ireland) Order 1978 and is liable, on summary conviction, to a fine not exceeding £1,000 or, on conviction on indictment to a fine.