Regulations of 4 September 1987 No. 856 on the construction of mobile offshore units

Legal basis: Laid down by the Norwegian Maritime Authority on 4 September 1987 under the Act of 9 June 1903 No. 7 relating to public control of the seaworthiness of ships etc. Legal basis amended to Act of 16 February 2007 No. 9 relating to ship safety and security (Ship Safety and Security Act) sections 7, 8, 9, 11, 14, 21, 28a and 45 cf. Formal Delegation of 16 February 2007 No. 171, Formal Delegation of 31 May 2007 No. 590 and Formal Delegation of 19 August 2013 No. 1002.

EEA references: EEA Agreement Annex XIII point 6 (Directive 89/336/EEC as amended by Directive 92/31/EEC), Annex II Chapter XXXII point 1 and Annex XIII point 56d (Directive 96/98/EC), Annex II Chapter XIX point 1 (Directive 83/189/EEC replaced by Directive 98/34/EC).

Amendments: Amended by Regulations of 21 December 1987 No. 1110, 22 August 1988 No. 760, 12 May 1989 No. 344, 22 May 1990 No. 468, 1 November 1990 No 927, 20 December 1991 No. 982, 7 December 1993 No. 1305, 28 February 1994 No. 153, 11 October 1996 No. 980, 28 January 1997 No. 122, 18 February 1997 No. 142, 29 December 1998 No. 1467, 2 March 1999 No. 402, 11 April 2003 No. 496, 28 June 2004 No. 1042, 28 June 2004 No. 1046, 29 June 2007 No. 1006, 14 March 2008 No. 305, 12 December 2008 No. 1325, 18 January 2011 No. 56, 19 August 2013 No. 1036, 5 September 2014 No. 1158, 19 January 2016 No. 37, 5 July 2016 No. 897, 19 December 2017 No. 2322, 20 December 2017 No. 2379, 24 January 2022 No. 118, 27 March 2023 No. 459, 26 June 2025 No. 1372.

Section 1

Definitions

For the purpose of the present Regulations the following definitions shall apply:

1. *Unit:* Mobile platforms, including drilling ships, equipped for drilling for subsea petroleum deposits, and mobile platforms for other use than drilling for subsea petroleum deposits.
2. *Recognised classification society:* Any classification society with which the Ministry has entered into an agreement pursuant to section 41 of the Ship Safety and Security Act:
    1. American Bureau of Shipping (ABS)
    2. Bureau Veritas (BV)
    3. DNV
    4. Lloyd's Register of Shipping (LR)
    5. Nippon Kaiji Kyoaki (Class NK)
    6. Rina Service S.p.A (RINA).
3. *MOU classification society:* A recognised classification society with which there is a supplementary agreement for carrying out inspections and surveys, etc. on mobile offshore units. The following societies are MOU classification societies:
    1. American Bureau of Shipping (ABS)
    2. DNV
    3. Lloyd's Register of Shipping (LR).
4. *Functional loads:* Constant static loads (aggregate weight of structure and fixed equipment). Movable static loads (weight of equipment, etc.). Variable static loads (weight of supplies, ballast, etc.). Dynamic loads (loads from cranes, etc.).
5. *Environmental loads:* Waves, wind, current, tide, marine growth, temperatures, seabed conditions.
6. *Water level:* Depth as given in the chart.
7. *Company:* Cf. the definition given in section 4 of the Ship Safety and Security Act.
8. *Safety Management System:* All systematic efforts which the company is required to make to ensure that activities are planned, organised, performed and maintained in accordance with requirements laid down in or pursuant to Act of 16 February 2007 No. 9 relating to ship safety and security.
9. *Special purpose containers:* Containers to be used for purposes other than transport and/or storage of goods (such as test containers, workshop containers, diesel generator containers etc.).
10. *Fire-resistant cable:* Fire-resistant according to the International Electrotechnical Commission – 331 (IEC-331).
11. *Certified:*
    a) In respect of equipment and materials: Equipment which satisfies the requirements specified or materials complying with a recognised standard which are certified, approved or type-approved by:
        – a Notified Body,
        – an accredited certifying body,
        – a recogn**ise**d classification society,
        – other public or private institution which is recognised by the Norwegian Maritime Authority, or
        – the administration of a country that has ratified the Safety of Life at Sea (SOLAS) Convention.
    b) In respect of the execution of work: Personnel who according to regulatory requirements are required to hold special qualifications for performing specific tasks and certified by:
        – a recognised classification society,
        – an accredited certifying body, or
        – other public or private institution which is recognised by the Norwegian Maritime Authority.

Amended by Regulations of 29 December 1998 No. 1467 (in force on 1 January 1999), 2 March 1999 No. 402 (in force on 1 September 1999), 11 April 2003 No. 496 (in force on 1 July 2003), 29 June 2007 No. 1006 (in force on 1 July 2007), 12 December 2008 No. 1325, 18 January 2011 No. 56, 5 July 2016 No. 897, 27 March 2023 No. 459.

Section 2

Scope of application

1. These Regulations apply to mobile offshore units which are or will be registered in a Norwegian ship register.
2. Mobile offshore units which are registered in a Norwegian ship register may, until the next certificate issue, comply with the requirements that applied at the time of the last certificate issue.
3. For units which will be used in areas outside the North Sea for some length of time or which are built especially for operation in such areas, other solutions than those prescribed in these Regulations may be accepted if local conditions indicate that this is justifiable. A prerequisite of such solutions is that the safety of crew and equipment corresponds to that which applies to operation in the North Sea for units constructed and operated in accordance with the provisions governing such activities. In this connection the Norwegian Maritime Authority may certify mobile offshore units according to IMO's Code for the Construction and Equipment of Mobile Offshore Drilling Units, 1989 (1989 MODU Code, A.649(16)).
4. The company shall make a general evaluation of the total safety and document that alternative solutions as referred to under item 3 above will give satisfactory safety.

Amended by Regulations of 28 Feb 1994 No. 153, 11 Oct 1996 No. 980 (in force 1 July 1997), 2 March 1999 No. 402 (in force 1 Sept 1999), 11 April 2003 No. 496 (in force 1 July 2003), 28 June 2004 No. 1042.

Section 3

Duties

The company, employer, offshore installation manager and others who have their work on board shall perform their duties in accordance with the Ship Safety and Security Act and the supplementary provisions laid down in these Regulations.

Amended by Regulations of 11 April 2003 No. 496 (in force on 1 July 2003), 29 June 2007 No. 1006 (in force on 1 July 2007), 19 August 2013 No. 1036 (in force on 20 August 2013).

Section 4

Documentation

1. The company shall be able to document that the requirements of these Regulations are complied with. Documentation shall be sent to the Norwegian Maritime Authority on request. The contents, scope and type of documents and the time of submission shall be decided by the Norwegian Maritime Authority.
2. For units being built for classification in a MOU classification society, drawings, specifications, information, etc. concerning those matters (control areas) that are delegated shall be submitted to the MOU classification society in question. The classification society shall report to the Norwegian Maritime Authority in accordance with the terms of the agreement between the two parties.
3. For units which are not classed by a MOU classification society, the company shall be able to document a safety standard that is equivalent to that of units having such class.
4. The company shall be able to document that electrical installations and area classification (hazardous areas) comply with the regulations in force on maritime electrical installations laid down by the Norwegian Directorate for Civil Protection. The contents, scope and type of documents and the time of submission shall be decided by the Norwegian Directorate for Civil Protection, which upon request shall receive the requested documentation directly.[1]

Amended by Regulations of 18 Feb 1997 No. 142 (in force on 1 January 1998), 2 March 1999 No. 402 (in force on 1 September 1999), 11 April 2003 No. 496 (in force on 1 July 2003), 28 June 2004 No. 1046, 29 June 2007 No. 1006 (in force on 1 July 2007).

1 The regulations implement Directive 89/336/EEC (EMC Directive) of 3 May 1989 as amended by Directive 92/21/EEC. The EMC Directive applies to all pieces of equipment on mobile offshore units which may cause electromagnetic disturbance or whose functioning can be influenced by such disturbance. Among others, EMC Directive require CE-marking of all such equipment.

Section 5

Requirements for a Safety Management System for design and construction

1. The company shall ensure that a Safety Management System is established, implemented and developed to ensure that design and construction are in accordance with the requirements laid down in or pursuant to the Act of 16 February 2007 No. 9 relating to ship safety and security.
2. The following elements, inter alia, shall form part of the Safety Management System:

2.1. Description of the goals of the organization in the areas of safety and protection of the environment.

2.2. Procedures, instructions or other routines describing the planning and carrying out of activities to reach the goals of the organization.

2.3. The organization, planning and carrying out of operations with associated activities.

2.4. Specification of the distribution of responsibilities, authority and tasks, as well as command structure.

2.5. An overview of relevant rules and regulations, as well as a description of how the organization keeps itself updated with regard to the consequences of new or amended legislation.
2.6. Description of and requirements for documentation and information systems, as well as procedures for the control and management of these
2.7. Procedures and/or instructions for non-conformance treatment and reporting.
2.8. Plans for the following up and further development of the Safety Management System.
2.9. Procedures and/or instructions to ensure that contractors involved in activities associated with mobile offshore units observe the requirements laid down in or pursuant to the Act of 16 February 2007 No. 9 relating to ship safety and security.
2.10. Procedures and/or instructions to ensure that competent personnel are used during the planning and carrying out of activities.
2.11. Procedures and/or instructions to ensure that the company's employees and the contractor's employees receive training as required.
3. All sections of the company shall be provided with all relevant parts of the Safety Management System.
4. Responsibility for supervision of the Safety Management System shall lie within a separate section of the organization. This section shall have sufficient freedom to supervise all systems and shall normally be without operative responsibility. The section shall be in direct contact with the highest level of management.
5. At regular intervals, the section assigned responsibility for supervision of the Safety Management System shall perform system audits, report any non-conformities and follow up the carrying out of corrective action.
6. At regular intervals, the other parts of the organization covered by the Safety Management System shall perform verification. The unit carrying out the verification shall have the necessary independence in relation to the domain which is the subject of verification.
7. The company shall ensure that sufficient resources are available for the establishment, following up and further development of the Safety Management System.

Repealed by Regulation of 11 April 2003 No. 496 in force on 1 July 2003. Added by regulation of 14 March 2008 No. 305 (in force on 24 March 2008).

Section 6

Construction and strength, etc.

1. General
1.1. The unit shall be constructed in such a manner as to be strong enough to withstand the weather and wind conditions which may be anticipated in the areas in which the unit shall operate. The unit shall be of sufficient strength to withstand the most unfavourable combination of maximum environmental and functional loads.
1.2. When dimensioning load-bearing structures, simultaneous environmental loads with an annual probability of 10^{-2} for wind and waves and an annual probability of 10^{-1} for current shall as a minimum be used. As an alternative to load combination with a given probability, response with the same probability may be used.
2. Calculations
2.1. A calculation of the unit, including hull, deck, legs, leg supports, elevating and locking system for legs, deck houses and other main structural members, shall be carried out.
2.2. The calculations shall be carried out in accordance with the design criteria and calculation methods currently in force, as set out in the rules of an MOU classification society. The calculations shall take into account the following:
2.2.1 The calculations shall be carried out for the relevant loading conditions with the least favourable combination of the maximum local environmental and functional loads.
2.2.2. When dimensioning load-bearing structures, the buckling resistance shall be the same for permanent loads, functional loads, environmental loads and deformation loads, or combinations of these loads.
2.2.3. The elevating machinery for self-elevating units shall be designed to lift 50% above normal load. The locking system for the legs shall be designed for 3 times the normal load. Normal load means maximum elevated weight, with a centre of gravity causing the largest axial stress on one leg. The pre-load condition is not included in the term.
2.2.4. For submersible and self-elevating unit a calculation shall be carried out showing that the unit has a safety factor of 1.5 against capsizing (proportion between stabilising and overturning moment). When calculating the capsizing moment the most unfavourable combination of environmental and functional loads shall be taken into account. The moment shall be calculated around the maximum stressed edge of the foundation of the legs.
2.2.5. In selecting steel materials for hull and legs, temperature conditions which may be expected shall where necessary be taken into consideration. In constructions exposed to special stresses, such as legs etc., steel of good resistance capability against brittle fracture and which is certified by a recognised classification society shall be used.
2.2.6. Where material fatigue may occur due to variable load, this must be taken into account during the design stage.
2.2.7. Vibration due to wind, waves, and propulsion machinery etc. and which can cause damage to unit or legs, shall be examined and if possible avoided.

2.2.8. The unit shall be calculated for the stresses which may be anticipated from fenders and other mooring attachments.

2.2.9. The maximum wave height and related wave period or similar criteria which the unit is intended to tolerate during jacking down, short hauls (less than 12 hours between positions where it is safe and possible to jack up the unit) and long hauls, and under what maximum conditions jacking up can be commenced to avoid damage to the unit, shall be calculated. Similar calculations shall be carried out for submersible and semisubmersible units in order to establish under what maximum conditions the unit can be towed/sailed before it has to be submerged.

Practical information on the limitations established by these calculations shall be included in the operation manual for use on board. Where it is practicable to take action to reduce the risk of damage to the unit during towing/sailing, for instance by altering speed and/or course, lowering of legs, etc., necessary practical information on these precautions shall be included in the operation manual.

2.2.10. All decks for cargo shall be calculated for a certain maximum deck load per m^2 in addition to loads from constant static loads. The operation manual shall contain practical information about the maximum allowable deck loadings.

3. Meteorological data (M data) and unit performance data (P data)

3.1. All units shall have equipment and instruments on board for the collection of the following M data:

– air temperature and atmospheric pressure
– humidity
– wind force and direction (mean values for a 10-minute period)
– weather since previous observation
– sea temperature and state

3.2. The Norwegian Maritime Authority may require that the company send in M data to the Norwegian Meteorological Institute.

3.3. For units of a novel construction (design), the Norwegian Maritime Authority may require that the company collect experience data for the unit's performance and movements (P data).

4. Construction and control

4.1. Only welders certified according to NS-E1-287 part 1 or to an equivalent standard shall carry out welding of main structures.

4.2. A 100% welding control of all important joints and other important connections and welding constructions shall be carried out by means of x-ray, ultrasonic, magnaflux or similar methods. Furthermore, the welding control shall be carried out to such extent as to ensure that the work has been satisfactorily carried out.

4.3. Construction connections and joints and other important details shall be so constructed that stress concentrations are avoided as far as practicable.

4.4. Plates in main structures loaded in directions of the thickness shall be ultrasonically tested after welded into the construction. In addition, ultrasonic checks shall be made after welding to ensure that the plate has not been laminated during welding.

4.5. There shall be good alignment between scantlings on each side of transverse members.

5. Elevating system of jack-up units

5.1. The elevating system of the unit shall be so constructed that the relative position of legs and unit can be controlled during a cut-off of the power supply to the elevating installation or one of the elevating installations of a leg.

5.2. The elevating system shall be constructed in such a manner that it is possible to preload each of the legs with a load which is heavier than the load which will occur during all operational conditions in a jacked-up position.

5.3. Self-elevating units shall have spud cans suitable for the seabed conditions at the site

6. Drainage from decks

The decks of the unit shall be constructed in such a manner that shipped water easily drains off.

7. Securing of superstructures and equipment during heeling

7.1. The unit's superstructures and fixed equipment shall be constructed and mounted in such a manner that they will be able to withstand heeling corresponding to the most unfavourable angle of heel in any direction which the unit could get following damage as defined in section 21 of the Stability Regulations.[1]

7.2. The unit shall be so constructed that all equipment which is not fixed, and which may block escape routes or represent a danger for the persons on board by displacement or heeling, may be secured in a safe manner in order to withstand the above-mentioned angle of heel.

Amended by Regulations of 2 March 1999 No. 402 (in force on 1 Sept 1999), 11 April 2003 No. 496 (in force on 1 July 2003), 29 June 2007 No. 1006 (in force on 1 July 2007), 19 December 2017 No. 2322 (in force on 1 January 2018).

1 Cf. Regulations of 20 December 1991 No. 878 on stability, watertight subdivision and watertight/weathertight means of closure on mobile offshore units.

Section 6a

Electrical installations and equipment

Electrical installations and equipment shall be in accordance with the regulations in force on maritime electrical installations, and the regulations on electrical equipment.[1,2]

Added by Regulations of 11 April 2003 No. 496 (in force on 1 July 2003), 28 June 2004 No. 1046.
1 Cf. the Norwegian Directorate for Civil Protection.
2 The regulations implement Directive 89/336/EEC (EMC Directive) of 3 May 1989 as amended by Directive 92/21/EEC. The EMC Directive applies to all pieces of equipment on mobile offshore units which may cause electromagnetic disturbance or whose functioning may be influenced by such disturbance. Amongst other things, the EMC Directive provides that all such equipment must be CE-marked.

Section 6b

Machinery systems

1. Machinery, appurtenant systems and components shall be in accordance with the rules of the MOU classification society pertaining to mobile offshore units. This includes:
   - machinery, appurtenant systems and single components in general;
   - main and auxiliary machinery;
   - propulsion and steering arrangement;
   - boilers, pressure vessels, thermal oil installations and incinerators;
   - pumps and piping related to the machinery systems and the hull; and
   - ventilation of machinery spaces with combustion machinery.
2. Machinery installations in hazardous areas shall be in accordance with chapter 6.7 of the MODU Code (1989).

Added by Regulation of 11 April 2003 No. 496 (in force on 1 July 2003).

Section 7

Operation in areas with temperatures considerably lower than 0°C

1. For units which are desired to be able to operate in areas with a daily mean temperature below 0°C, it shall be possible to document that the unit will be able to operate safely under the environmental conditions in question.
2. On 22 August 1988, the Norwegian Maritime Authority laid down requirements for fixed, battery-operated emergency lights to be installed on units which shall be able to operate in areas with temperatures considerably lower than 0°C. Those requirements are included as Appendix III to these Regulations. The company shall supply information about the maximum environmental conditions (temperature in air and sea, air humidity, etc.) under which it is desired to operate.
3. Documentation

3.1. The documentation for operation under these environmental conditions shall be possible to submit as:
   - Technical documentation
   - Operation instructions

3.2. It is a condition that under technical documentation all documentation of the unit as such has been included, as well as documentation that all relevant equipment and systems have been constructed to operate under the specified environmental conditions. Grouping of the documentation may for instance be:

3.2.1. Construction of the unit as such. (For instance hull, crane pedestal, derrick foundation, helicopter deck, etc.).

3.2.2. Systems and equipment for daily normal operation of the unit. (For instance cranes, ballast systems, anchoring systems, fresh water systems, air, systems, ventilation etc.).

3.2.3. Systems and equipment for operation during emergency situations. (For instance alarm systems, battery emergency lighting, life-saving equipment, fire line, rapid release of anchor winches etc.).

3.2.4. Structural strength consequence of formation of ice loads on components and equipment. (For instance under helicopter decks, on crane arms, pipelines, cable conduits, etc.).

3.2.5. Estimate of maximum assumed ice loads as well as load condition with this ice load included. With regard to stability the result shall satisfy the KG limit value in question.

3.2.6. Arrangement and equipment for keeping certain areas of the unit free of ice. (For instance defrosting system for escape routes, life-saving equipment, work areas, etc.).

3.2.7. Protection in order to prevent critical conditions in the working environment. (For instance wind screens or walls, heating).

3.2.8. Equipment to compensate for the safety consequences represented by a closed construction. (For instance gas alarm systems, ventilation systems etc.).

3.2.9. Use of materials in equipment and systems. (For instance cold critical materials in anchor winches and counter measures, e.g. heating).

3.2.10. Drilling equipment.

4. Operation manual

An operation manual shall be worked out, including the measures necessary for safe and secure operation in areas with a daily mean temperature below 0°C. The instructions shall draw clear lines for when operative measures must be taken, for instance at low temperatures during a long period of time, low temperatures combined with high air humidity (danger of ice formation) etc. The operation manual shall also state necessary measures to take in the event that the design criteria are exceeded, for instance in case of greater ice formation than presupposed in the stability calculations, or lower temperatures than those for which the unit has been documented.

Amended by Regulations of 22 august 1988, 1 Nov 1990, 11 April 2003 No. 496 (in force on1 July 2003), 29 June 2007 No. 1006 (in force on 1 July 2007).

Sections 8–9

Repealed by Regulation of 2 March 1999 No. 402, in force on 1 Sept 1999.

Section 10

Distance between sea level and deck

1. The lower deck of the unit shall be at a safe distance from the sea level.

1.1. Semi-submersible units

1.1.1. The distance between the lower deck and the sea level is governed by the freeboard. For provisions on freeboard and load line conditions, reference is made to section 29 of the Stability Regulations.[1]

1.1.2. If the unit is intended to pump over board ballast in heavy weather in order to increase the distance between the lower deck and the sea level, the procedure on when and how such operation shall be carried out shall be included in the operation manual.

1.1.3. By means of model tests or by calculation it shall be shown that the unit has a safe movement and immersion characteristic in all probable wave spectra and up to wave heights being at least 10% higher than the maximum wave height for which the unit is designed. If the unit with superstructures, deckhouses, etc. has not been designed for wave forces, there shall be a distance of 1.5 m between the lower deck and the maximum wave crest elevation.

1.2. Self-elevating units

In the elevated condition, the distance between the underside of the lower deck and the maximum wave crest shall be positive for the highest wave crest with an annual probability of 10^{-4} including seasonal adjustment. The calculation of the maximum design wave crest shall be based on maximum water level. The environmental effects shall be combined in accordance with the below table.

	Wind	Waves	Current	Water level*
Combination of environmental effects acc. to section 10.1.2. (return period)	10^{-4}	10^{-4}	10^{-1}	10^{-2}

* Maximum water level (maximum storm surge and highest astronomical tide).

Amended by Regulations of 11 April 2003 No. 496 (in force on 1 July 2003), 19 December 2017 No. 2322 (in force on 1 January 2018).

1 Regulations of 20 December 1991 No. 878 on stability, watertight subdivision and watertight/weathertight means of closure on mobile offshore units.

Section 11

Emergency power supply

1. Units shall be equipped with an independent emergency power supply which is arranged and designed to be capable of maintaining a maximum continuous output for at least 18 hours at the most unfavourable angle of heel pursuant to section 21 of the Stability Regulations. [1]
2. Emergency sources of power shall be certified. In connection with the certification of the emergency sources of power (generator with driving machinery), a prototype test shall be performed while it is heeling at least:
   - 25 degrees in any direction for semisubmersible units;
   - 15 degrees in any direction for jack-up units; and
   - 22.5 degrees combined with 10 degrees' trim for units of ship type.

   This prototype test shall be performed with maximum load for at least 4 hours.
3. The capacity of the emergency power supply shall be sufficient to simultaneously serve the following emergency power consumers:
   - Emergency lighting as prescribed by section 12.
   - Navigational lights, light and sound signals in accordance with regulations in force.
   - Fire and gas alarm and detection systems.
   - Lifeboat alarm.
   - Communications.
   - One of the fire pump systems, as well as the control of remote-operated valves.
   - Any one ballast pump with control and valve system which is required to be connected to an emergency source of power.
   - Diving equipment, including derrick for diving bell if it requires electricity, if such equipment does not have a separate emergency source of power.
   - Helideck edge lighting.
   - Charging devices for battery installations serving as an emergency source of power.
   - High-pressure compressor for the recharging of compressed-air bottles to be used with the firefighter's outfit.

– Consumers other than those mentioned above, if considered to be necessary in an emergency.

4. The emergency generator room shall be located above the waterline in the greatest and most unfavourable damage condition in accordance with section 21 of the Stability Regulations, and shall be easy to access from the open deck following such damage.

   Special consideration shall be given to the positions of openings for ventilation, air cooling system, combustion air and exhaust in relation to the waterline referred to above.

   The emergency switchboard and transformer shall be located in the emergency generator room. The emergency switchboard can normally be supplied from the main switchboard, provided that this does not influence the emergency switchboard if faults or breakdown should occur in the main switchboard.

   On units where the main generators are located in two or more engine rooms with independent switchboards separated from each other in respect of fire safety, one or more of the generators in at least two of the independent engine rooms may be used as an emergency source of power. In such cases, each emergency source of power with appurtenant panel shall be self-sufficient and completely independent of any other emergency source of power. The fire barrier to any adjacent machinery space shall be at least either:
   – a class A-60 division plus cofferdam, or
   – a steel bulkhead insulated to class A-60 on both sides.

   Emergency sources of power shall be located in spaces outside damage areas defined by the Stability Regulations[1].

   An emergency source of power shall be so located in relation to the engine room of category A or explosive areas that fire or explosion in those areas does not jeopardise the operation of the emergency source of power.
5. Any occurrence of damage to or failure of the emergency source of power or emergency generator room shall not influence the main power supply.
6. The main and emergency power supply shall not be carried through the same space if the space is a machinery space of category A or a service space with a high fire risk.
7. Cables to emergency power consumers as provided in item 3 shall to the largest possible extent be laid outside engine rooms of category A and service spaces with a high risk of fire. Where that is not possible, the cables shall be fire-resistant.

   Cables for emergency power and lighting shall as far as possible be separated from cables for other purposes and shall be separated from pipes used for the transport of hydrocarbons.
8. Cables to emergency power consumers and safety-critical equipment shall not be carried through a hazardous area outside the area where the equipment itself is located.
9. As emergency sources of power may be used generators with a diesel motor or gas turbine as driver, or accumulator batteries, or a combination of these, as for example where the generator delivers power to big consumers, and accumulator batteries shall give the necessary energy for the required time to smaller consumers without recharging and without the voltage dropping below 12% of the battery's nominal voltage.
10. There shall be a separate fuel oil tank for the emergency source of power's diesel motor or gas turbine which is located in the same room as the emergency source of power. The oil shall have a flame point not less than 43 degrees Celsius.
11. Starting arrangement.
   – The driving machinery shall have an automatic starting device.
   – The source of starting power shall be stored in two separate units which each shall be capable of at least 6 starting attempts. One of the units shall be reserved for manual operation. Stored energy may be either automatically charged batteries or automatically charged compressed-air bottles.
   – The number of automatic starting attempts shall be between 3 and 6.
   – The charging devices shall be connected to the emergency switchboard.
12. Emergency sources of power shall at their installation and subsequently every two years be tested for at least 4 hours with the greatest load which the source of power may be exposed to on board.
13. A drill comprising the start-up of the emergency generator shall be carried out every six months. The drill shall include a load of consumers, cf. item 3. The load shall be adapted to the operation.
14. A simulated autostart shall be carried out at least once every month.

Amended by Regulations of 2 March 1999 No. 402 (in force on 1 Sept 1999), 11 April 2003 No. 496 (in force on 1 July 2003), 28 June 2004 No. 1042, 19 January 2016 No. 37 (in force on 1 February 2016), 26 June 2025 No. 1372.

1 Cf. Regulations of 20 December 1991 No. 878 on stability, watertight subdivision and watertight/weathertight means of closure on mobile offshore units.

Section 12

Emergency lighting

1. Permanently fitted emergency lighting connected to the emergency source of power shall be arranged on the unit to an extent that provides sufficient lighting for safe escape from all areas on board. Emergency lighting shall be fitted in the accommodation, in corridors, in staircases, along escape routes, on both sides of all watertight closing of access openings and emergency exits, in closets for the storage of firefighter's outfits in engine rooms, in control rooms, lift cars and places of work, on the open deck, at helicopter decks, emergency stations, mustering stations, lifeboat stations and liferaft stations.

In the wheelhouse or other places where the light may disturb the navigation, emergency lighting may be connected to a switch that is operated in the wheelhouse.

2. The emergency lighting at lifeboat stations and liferaft stations shall be capable of illuminating life-saving appliances while they are being prepared for launching. The sea where lifeboats or liferafts are launched shall also be possible to illuminate.
3. Emergency lighting requirements:
   – Emergency lights shall be certified.
   – Emergency lights shall be designed to withstand vibrations and other environmental requirements in accordance with IEC 60092-504 or an equivalent standard.
   – Emergency lights shall have such enclosure rating (IP) as is required for the intended type and place of use, however not lower than IP 56 on the open deck.
   – Additionally, emergency lights shall be so designed or arranged that there will be no condensation.
4. In addition to emergency lighting connected to the emergency source of power, permanently fitted separate or combined emergency lights with a built-in battery source of power shall be arranged in the places referred to in item 1 above. The following additional requirements shall apply to such battery-operated emergency lights:
   – The battery source of power shall be continuously charged and immediately start to operate in the event of failure of the emergency source of power.
   – The emergency lights shall provide continuous light for at least one hour at the temperature limit in question provided in section 7.
   – The emergency lights shall not have lower protection from explosion than zone 2, cf. section 26 of the Fire Regulations.[1]
   – The emergency lights shall have a built-in rectifier/charger provided with a built-in alarm function in the event of failure of the battery's charging circuit or voltage.
5. As an alternative to the requirement of item 4 regarding permanently fitted emergency lighting with built-in battery source of power, permanently fitted emergency lighting connected to uninterruptible power supply (UPS) may be used. An analysis of coverage, number of UPSs and routing of cables shall be carried out in order to ensure coverage as set out in item 1, even after a failure/incident in a room/area, cf. sections 22 and 24 of the Regulations of 22 December 1993 No. 1239 on risk analyses for mobile offshore units.
6. Battery-operated transportable lamps shall be located in readily accessible places in the control rooms and in the offices of the offshore installation manager, drilling manager and technical section leader and at the driller's control panel. Such lamps shall be of a type that is constantly charged and be certified for use in a hazardous area, zone 1.

Amended by Regulations of 2 March 1999 No. 402 (in force on 1 Sept 1999), 11 April 2003 No. 496 (in force on 1 July 2003), 19 December 2018 No. 2322 (in force on 1 January 2018), 24 January 2022 No. 188 (in force on 24 January 2022), 27 March 2023 No. 459, 26 June 2025 No. 1372.

1 Cf. Regulations of 31 January 1984 No. 227 on precautionary measures against fire and explosion on mobile offshore units.

Section 13

Marking and navigational aids

1. The unit shall be marked with the name of the unit and the name of the licensee. The marking shall be such as to make identification readily possible from vessels as well as from aircraft. The marking shall be easily visible in daylight as well as at night. Letters and figures shall be at least 1 metre high.
2. The unit shall be equipped with:

2.1. One or more white lights placed so as to ensure that at least one light is visible from any direction. Lights shall be placed not more than 30 metres and not less than 12 metres above sea level and shall be visible – in a dark night with good visibility – for at least 15 nautical miles. There shall be arranged an emergency system with a nominal visibility of at least 10 nautical miles. The lights shall give a signal in the shape of the Morse letter U every 15 seconds. The lenses of the lights shall be so constructed as to ensure that the light – in addition to being visible for the above-mentioned distance – is visible from anywhere in the vicinity of the unit.

2.2. One or more synchronised devices which are so constructed and installed as to emit sound signals that are audible in all directions. The sound devices shall be audible at a distance of at least 2 nautical miles in calm weather. The character of the fog signal shall be the Morse letter U every 30 seconds. The sound signals shall be given when the visibility is less than 2 nautical miles.

2.3. A separate and continuously charged battery source of power with capacity for 4 days' continuous operation of backup U lights and the sound signalling system as referred to in items 2.1 and 2.2. The battery source of power shall come into operation automatically. The above-mentioned light and sound signalling devices shall be such that they function without attendance in the event that the unit is evacuated.

3. Units shall be equipped with lights in accordance with the International Rules of the Road at Sea.
4. Equipment referred to in items 2.1 and 2.2 shall be certified. Equipment referred to in item 3 shall be type-approved by a notified body and marked in accordance with the Regulations of 30 August 2016 No. 1042 on marine equipment.

Amended by Regulations of 11 Oct 1996 No. 980 (in force on 1 July 1997), 28 Jan 1997 No. 122 (in force on 1 July 1997), 2 March 1999 No. 402 (in force on 1 Sept 1999), 11 April 2003 No. 496 (in force 1 July 2003), 12 December 2008 No. 1325, 5 September 2014 No. 1158 (in force on 15 September 2014), 19 December 2017 No. 2322 (in force on 1 January 2018), 20 December 2017 No. 2379 (in force on 1 January 2018).

Section 14

Fixed means of access, ladders, stairs, railings etc. outside the accommodation

1. Number, type and location of stairs and ladders.

1.1. Closed rooms which are normally in use shall have at least two exits. Small rooms where the distance from any point in the room to the exit does not exceed 5 metres may in certain cases be constructed with only one exit.

1.2. Stairs shall be placed in routes where the difference in level is more than 450 mm.

1.3. Permanent ladders may be permitted in cargo rooms, store rooms, tanks etc. and on cranes where it is impracticable to arrange stairs.

1.4. In principle the ladders shall be inclined. However, vertical ladders in a height up to 18 metres may be arranged where it is impractical to arrange inclined ladders.

1.5. Should it for practical reasons be impossible to arrange fixed ladders/stairs, removable ladders/stairs may be permitted provided they can be securely fastened.

1.6. Fixed ladders shall be placed at all points where it is necessary to climb more than 1.5 metres to carry out inspections.

2. Access openings.

2.1. Access openings to cofferdam, tanks, etc. shall be arranged with a nominal size of at least 600 by 400 mm (NS 2635).

2.2. Access hatches to other rooms than those mentioned in item 2.1 above, as well as access hatches for stairs and ladders shall have a free opening of at least 600 x 600 mm. The openings shall be rounded and free of sharp edges.

2.3. The hatch covers shall be capable of being opened by one person and shall be operable from both sides. An exception is hatches for tanks which is not necessary to operate from both sides. It shall be possible to secure the covers in open position. The covers shall be equipped with counterweights or similar arrangements where this is considered necessary.

2.4. Access hatches with coamings lower than 750 mm shall be equipped with a permanent rigid railing of 1 metre. Where this is difficult to arrange in a practical manner, alternative arrangements providing an equivalent safety level may be used.

2.5. The railing for protection of access openings shall simultaneously afford an effective handhold during ascent or descent through the opening.

2.6. The access and ladder arrangement shall be such as to permit ascent and descent with self-contained breathing apparatus (compressed air apparatus). Furthermore, it shall be possible to get a grown person on a stretcher up from spot where passage or inspection may occur.

2.7. The access to hatches shall be at least 600 mm wide and free of obstructions.

2.8. There shall be a free vertical height of at least 2 metres above inclined ladders.

2.9. Hatch coamings of a height of more than 1 metre shall be furnished with necessary steps and handrail on the outside to give safe access.

2.10. Around openings flush with decks, ramps, etc., there shall be coamings or other equally efficient arrangements with a height of at least 12 cm. The arrangements shall be attached in such a way that they cannot be lifted or moved by the truck forks.

3. Construction requirements for stairs/permanent ladders:

3.1. Stairs shall have railing on both sides and the inclination shall not exceed 50°. The steps shall be at least 150 x 600 mm and shall be slip-proof in all directions. Steps in outside stairs and steps which may be exposed to oil spills, mud, etc., may be required made of self-draining grating. Railings shall have a vertical height above steps of at least 1000 mm and shall be furnished with at least one middle railing.

The projection of the steps shall overlap one another.

3.2. Fixed, vertical ladders shall have a breadth of minimum 350 mm, but of maximum 500 mm, between the bearers, a depth of minimum 150 mm behind the steps and the vertical distance between the steps shall be at least 250 mm, but not more than 350 mm. Between each rest platform and in the entire ladder, all the steps shall be evenly spaced and be in alignment.

3.3. Fixed, inclining ladders shall have a breadth of minimum 400 mm between the bearers and a minimum depth of 150 mm behind the steps. The vertical distance between the steps shall be at least 200 mm, but not more than 250 mm. Between each rest platform and in the entire ladder, the steps shall be evenly spaced. The inclination of the ladder shall not exceed 70°.

3.4. The steps shall be made of minimum 22 mm square steel bar and so mounted that one of the square bar corners will point upwards. Alternatively, an equivalent non-slip solution may be used. There shall be single rungs in the vertical ladders and double rungs in inclined ladders.

3.5. Single steps mounted direct on hatch coamings, bulkheads or similar, shall be of 22 mm square steel bar or equivalent, and have the same depth behind the steps, distance between and breadth as mentioned in item 3.2 above. The steps shall be of a design which effectively stops the foot from slipping sideways and shall be

aligned with the ladders below and above. There shall also be a satisfactory handhold. If necessary a separate handhold shall be arranged.

3.6. The maximum allowed continuous height of a ladder is 9 metres. If the climbing height exceeds this, rest platforms with railing shall be arranged at intervals of maximum 6 metres.

3.7. If the climbing height for vertical ladders is more than 6 metres, and for especially exposed ladders, safety hoops shall be arranged from a height of 2.5 metres and upwards. Wherever possible, safety hoops shall be carried 1 metre above the upper level and have a breadth/depth of at least 600 x 600 mm.

3.8. Platforms and gangways shall be made of slip-proof open grating or the like, be at least 600 mm wide and have a railing at least 1 metre high. If there is a passage or work area underneath, the openings of the grating shall be so small that a ball of 15 mm diameter will not fall through. Alternatively a special, fine grating may be arranged underneath the platforms/gangways.

3.9. When dimensioning ladders and stairs, fastenings, rest platforms and safety hoops, environmental conditions (sea, weather, and wind, etc.) shall be taken into consideration and also possible strain wherever the ladders/stairs are in an exposed position due to the handling of cargo. Platforms and gangways shall be dimensioned for 400 kp/m2. The allowed bending of the gangways shall be maximum 1/250 between the points of support.

3.10. It is not allowed to discontinue the bearers of vertical ladders. The bearers shall be continuous to give a safe handhold.

3.11. Inclined ladders shall have an effective handrail on each side.

3.12. In exposed places, such as masts, deckhouse, cranes, etc. where maintenance work is necessary, effective railing or safety hoops for footing shall be arranged.

3.13. The steps shall be carried through the bearers and have continuous welding on both sides. Other constructions which are just as effective may also be allowed.

3.14. All joints in stairs and ladders and the mounting of same shall have continuous welding of at least 5 mm weld thickness. If, for special reasons, it is necessary to bolt the stair/ladder to fasten it, the bolts shall be effectively secured.

3.15. Single steps shall be fastened so securely that they will be deformed before they loosen.

4. Access to the unit.

The unit shall have a safe and secure access arrangement when alongside the quay or anchored in sheltered waters, so that persons may board in a safe manner.

Amended by Regulations of 11 April 2003 No. 496 (in force on 1 July 2003), 19 December 2017 No. 2322 (in force on 1 January 2018).

Section 15

Doors, corridors and passages

1. Doors shall have a free breadth of at least 600 mm and a height of at least 2050 mm above deck level. The height of thresholds in doors in escape routes and in doors with heavy traffic shall not be made unnecessarily high.
2. The dog bolts of steel doors shall be marked with the direction of openings or closing and be arranged so that they are locked in the open position. Doors in escape routes shall have centrally operated dog bolts.
3. It shall not be possible to open doors which give direct access to a stair leading to a lower level, unless a suitable landing has been arranged in connection with the stair.
4. In the accommodation and on deck, corridors and passages shall be free of protruding arrangements and sharp edges which may hinder passage or cause personal injury.
5. All doors, corridors, and passages shall be constructed so that an injured person on a stretcher can be carried through and so that they allow passage with portable breathing apparatus strapped on.
6. It shall be possible to move from the forward to the stern part of the unit without having to cross open decks.

Amended by Regulation of 11 April 2003 No. 496 (in force on 1 July 2003).

Section 16

Decks and flooring

1. At places of manoeuvre, e.g. around winches, cranes, windlasses and the like, where spilling of oil, mud, etc. may occur, there shall be expanded metal or similar material which ensures a good foothold.
2. In areas where people move about there shall be no protruding structures over which a person might stumble or on which he could hurt himself. Wherever it is absolutely necessary to place such structures, they shall be painted in conspicuous colours.
3. Suitable platforms shall be arranged above cable or pipelines which cross passageways.
4. Openings in the deck, passageways, platforms etc. which are more than 100 x 100 mm shall be covered with rigid grating or be protected by railing or the like.

Section 17

Railings and enclosures, etc.

1. Railings.

1.1. Decks, passageways, scaffolding, and platforms which are 800 mm or more above the level below, shall be furnished with fixed strong railing with toeboards along the outer edge. Where it is impractical to arrange a fixed railing, alternative arrangements providing an equivalent safety level may be used.

1.2. The height of railings, handropes, etc. shall be at least 1 metre from deck to upper rail. There shall be two intermediate rails with a distance of maximum 380 mm. The opening below the lower rail in the railing shall not exceed 230 mm at the open part of the deck. The distance between stanchions shall be maximum 1.5 metres.

Amended by Regulation of 11 April 2003 No. 496 (in force on 1 July 2003).

Section 18

Mechanical ventilation outside the living quarters

1. Mechanical ventilation in spaces outside the living quarters shall be calculated in accordance with the calculation method stated in the guidelines from the Norwegian Labour Inspection Authority regarding climate and air quality in the workplace (DLI 444) or an equivalent standard.
2. Inlet of air shall take place through ventilation units to enable regulation of the temperature.
3. In places where the pollution of air may be especially heavy, spot extraction, extract hoods or fume cupboards shall be provided at the source of pollution.
4. Mechanical ventilation in explosion-hazardous areas shall ensure 12 air changes per hour.
5. In the event of loss of ventilation in such hazardous areas, an alarm shall be given in the central control station.

Amended by Regulations of 11 April 2003 No. 496 (in force on 1 July 2003), 28 June 2004 No. 1046, 19 January 2016 No. 37 (in force on 1 February 2016).

Section 19

Lighting

1. Areas which persons on board may have to pass on their way to, from or during their work shall be adequately lighted.
2. The lighting shall be at least 100 lux in stair wells. The sources of illumination shall be so arranged as to avoid shadows on the steps of the stairs. The normal lighting shall be at least 100 lux in vestibules and corridors. The lighting shall be at least 10 lux wherever it is necessary to pass during manoeuvring or navigation of the unit. On the instrument panels in the pilot house etc. the lights must be capable of being regulated by means of rheostat, or screened. The lighting shall be at least 100 lux wherever work is carried out during loading or discharging. This applies to cargo holds, as well as exits from the holds, and the deck.
3. In machinery spaces where persons pass and work, the lighting shall be at least 200 lux. Measuring and control apparatus shall have a lighting of at least 300 lux.
4. For the lighting of tanks for oil and other inflammable liquids, and also of holds where especially inflammable cargo is carried, or of holds and tanks which are not free of gas, the lamps used shall be certified for use in a hazardous area, zone 1.[1]

Amended by Regulations of 11 April 2003 No. 496 (in force on 1 July 2003), 28 June 2004 No. 1046.
1 Cf. the Norwegian Directorate for Civil Protection.

Section 20

Portable electric equipment

Portable electrical equipment (lamps, VHF equipment, etc.) which is to be used outside the living quarter, shall be certified for use in a hazardous area, zone 1.[1]

Amended by Regulations of 11 April 2003 No. 496 (in force on 1 July 2003), 28 June 2004 No. 1046.
1 Cf. the Norwegian Directorate for Civil Protection.

Section 21

Special purpose containers

1. Special purpose containers (cf. section 1) which are brought on board shall as a minimum satisfy the following requirements:

1.1. They shall be built of steel or other equivalent material with regard to strength and fire resistance. Containers with lifting arrangements shall, with regard to strength, be designed for the loads that may occur in offshore handling. The dynamic additional loads may alternatively be taken into consideration by using standard containers with workloads accordingly reduced (reduced load utilization).

1.2. All lining, insulation, and any furnishings, shall be made of non-flammable materials. Surface materials shall have low flame spread characteristics.[1]

1.3. They shall be fitted with alarm, an appropriate automatic fire detection system and a two-way communication system all designed for connection to the corresponding mother systems of the unit – or otherwise be equipped with satisfactory arrangements for detection/warning/communication adapted to each individual case.

1.4. They shall be fitted with at least 1 appropriate fire extinguisher, located at the exit.

1.5. A fixed extinguishing system shall be installed in containers where, for similar spaces on board, such equipment would be required according to the current regulations on precautionary measures against fire and explosion on mobile offshore units. As a minimum requirement, it shall be possible to release the system manually from outside the container. Common precautions against inadvertent release etc. must be taken.

1.6. Containers in which personnel will normally stay and in which no fixed extinguishing system is required, may be fitted with windows.

1.7. At least 1 battery emergency light shall be installed.

1.8 All electrical equipment shall be certified for use in a hazardous area, zone 2.[2] If exceptions have been made for containers located in safe areas, the electricity supply must be connected to the unit's emergency shut-down system. Containers which are not equipped for location in Zone 2 areas shall be clearly marked that they may be located in safe areas only. If the container contains sources of ignition, it shall be equipped for connection to the unit's emergency shut-down system, and be marked that it must be connected to this system, cf. requirements for emergency shut-down etc. in the regulations at any time currently in force on precautionary measures against fire and explosion on mobile offshore units.

1.9. All equipment on and in containers are subject to the same safety, inspection and documentation requirements as similar equipment on the unit where the container is placed.

1.10. The location of containers must be evaluated and be found safe and proper in each individual case.

1.11 Containers shall be mounted in accordance with the regulations so that they will withstand the maximum heeling angle, cf. section 6 item 7.1 above.

1.12. Containers with a length of more than 6.5 metres shall have at least 2 exits, one of which may be an emergency exit. The main exit shall face the escape route which is assumed to be the safest, attention being paid to the prevailing circumstances.

1.13. Containers in which personnel do not normally stay are subject to the above provisions of items 1.1, 1.2, 1.3 (for automatic fire detection systems), 1.5, 1.8, 1.9, 1.10 and 1.11.

Added by Regulations of 22 May 1990. Amended by regulation 11 April 2003 No. 496 (in force 1 July 2003), 28 June 2004 No. 1046.

1 Cf. Regulations of 31 January 1984 No. 227 on precautionary measures against fire and explosion on mobile offshore units, chapter IV.

2 Cf. the Norwegian Directorate for Civil Protection.

Section 22

Drilling installations and equipment

1. Drilling installations shall conform to a safety level that is not lower than that prescribed by Det Norske Veritas, Drilling Plant (DRILL) or any other internationally recognised standard. Such conformance shall be checked and approved by a MOU classification society or in any other way decided by the authority of the state to which the Continental Shelf belongs.
2. The risks of the operation of drilling installations in relation to the other systems of the unit and the risks of the other systems in relation to the operation of drilling installations shall be assessed as part of the risk analysis. Cf. Regulations of 22 December 1993 No. 1239 on risk analyses for mobile offshore units.

Added by Regulation of 2 March 1999 No. 402 (in force on 1 Sept 1999). Amended by Regulation of 11 April 2003 No. 496 (in force on 1 July 2003).

Section 23

Repealed by Regulation of 19 December 2018 No. 2322 (in force on 1 January 2018).

Section 24

Deviations

The Norwegian Maritime Authority may, in individual cases and upon written application, deviate from the requirements of these Regulations. There must be special reasons that make the deviations necessary and they must be justifiable in terms of safety. If the requirements of the coastal state and the requirements of these Regulations are irreconcilable, the Norwegian Maritime Authority may deviate from the requirements insofar as safety considerations allow. Deviations must not contravene international agreements to which Norway has acceded.

Added by Regulation of 22 May 1990. Amended by Regulations of 2 March 1999 No. 402 (in force on 1 Sept 1999) (former section 22), 11 April 2003 No. 496 (in force on 1 July 2003).

Section 25

Mutual recognition

Where the Regulations require that particular fittings, materials, equipment or devices or type of equipment etc. be procured or found on a vessel, or that some specific measure be taken or the construction or design safety specific requirements, the Norwegian Maritime Authority shall permit that other appurtenances, materials, devices or types of such are installed or found on the vessel or that other measures are taken on board or that the vessel is built or designed in another way.

The Norwegian Maritime Authority shall accept this provided that it is documented by testing or other means that the appurtenances, materials, equipment or devices or types of such, or the arrangement, construction or design is at least as effective as specified by the requirements of the Regulations.

The Norwegian Maritime Authority shall accept the results of tests performed by recognised testing institutions, including testing institutions in other EEA countries. Such acceptance will be given on condition that the tests give an appropriate and satisfactory guarantee of a technical, professional, and independent nature.

Added by Regulation of 2 March 1999 No. 402 (in force on 1 Sept 1999).

Section 26

Entry into force

These Regulations enter into force on 1 November 1987.

As from the same date, Regulations of 13 January 1986 on the construction and operation of mobile drilling platforms and other mobile offshore units for use other than drilling for subsea petroleum deposits, which are registered or will be registered in a Norwegian Register of Ships, are repealed.

Section 21, Special purpose containers, of these Regulations enters into force on 22 May 1990 for containers which will be placed on board. Containers which have already been placed on board shall comply with the requirements of section 21 by 1 January 1991.

Amendments of section 2, section 4 first paragraph items 1.3 and 1.4, section 8 and section 9 of these Regulations, concerning stability and freeboard, enter into force on 1 January 1992.

Amended by Regulations of 2 March 1999 No. 402 (in force on 1 Sept 1999, previously section 24), 29 June 2007 No. 1006 (in force on 1 July 2007, previously section 27).

Appendix I

Appendix to section 6 item 2.11.1 – Environmental data, meteorological data, and mobile unit performance data, etc.
Repealed by Regulation of 2 March 1999 No. 402 (in force on 1 Sept 1999).

Appendix II

Appendix to section 8 – Wind tunnel test procedure
Repealed by Regulation of 11 April 2003 No. 496 (in force on 1 July 2003).

Appendix III

Amended by Regulation of 11 April 2003 No. 496 (in force on 1 July 2003).

Requirements for fixed, battery-operated emergency lights with reference to section 7 to be installed on units which shall be capable of operating in areas with temperatures considerably lower than 0°C

1. In accordance with section 12 of Regulations of 4 September 1987 on construction of mobile offshore units, mobile offshore units shall be equipped with emergency lighting. In accordance with section 7 of the present regulations units which shall be able to operate in areas with temperatures considerably lower than 0° C, shall be able to document the reliable operation of the equipment under such conditions.
2. In addition to complying with international provisions and requirements relating to ordinary emergency lights, emergency lights for use in areas with temperatures below -10° C shall comply with the following requirements:

2.1. Emergency lights which are to be used for operation in areas where the monthly mean temperature (see supplement to this appendix) may be as low as -10° C or the 24-hour mean temperature may be as low as -20° C shall be tested and shall function (including battery and fittings) for surrounding temperatures of -20° C to +55° C.

2.2. Emergency lights which are to be used for operations in areas with temperatures lower than those mentioned in item 1 above shall be tested and shall function (including battery and fittings) for surrounding temperatures of -30° C to +55° C.

2.3. For emergency lights which are to be used for mean temperatures below -30° C, each individual case shall be specially considered.

2.4. Emergency lights to be used in heated rooms or in areas with temperatures down to -10° C need not be specially tested for cold provided that satisfactory cold performance has been documented by the supplier.

Supplement for Appendix III

Heading amended by Regulation of 11 April 2003 No. 496 (in force on 1 July 2003).

Calculation of temperatures. Monthly mean temperature is calculated from the following formula:

$M = n – k (n – Min)$

in which n = the mean of the observations at (08.00) – 07.00 – 13.00 – 19.00 (MET) hours
MET = Meteorologic European Time
k = a factor varying with the time of year and from station to station
Min = the mean minimum temperature for every day in a month
The temperature extremes apply to the day calculated from 10.00 to 19.00 hours.

Calculation of the 24-hour mean temperature

$Td = T07 + T19 + Tmin. + Tmax./4$

Td = the 24-hour mean temperature
T07 = the temperature measured at 07.00 hours
T19 = the temperature measured at 19.00 hours
TMin = the minimum temperature of the 24 hours
TMax = the maximum temperature of the 24 hours