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Order no. 1481 of 14 December 2010 issued by the Danish Ministry of Climate and Energy

Order on mobile offshore installations, etc.: Construction, arrangement and equipment¹

In pursuance of section 4a, section 18(6), sections 43-44, section 61(4) and section 72(1) of act no. 1424 of 21 December 2005 on the safety, etc. of offshore installations for the exploration, production and transportation of hydrocarbons (the offshore safety act) (*offshoresikkerhedsloven*), as amended by act no. 1400 of 27 December 2008 and act no. 287 of 15 April 2009, the following provisions are laid down by authority pursuant to section 61(3):

Part I **Introductory provisions** Chapter 1 *Scope, etc.* *Scope*

Section 1. This order shall apply to mobile offshore installations as defined in section 2(3) of the offshore safety act (*offshoresikkerhedsloven*) that have or shall have a permit to operate in Danish territorial waters or the Danish continental shelf area, cf. section 3(1) of the offshore safety act (*offshoresikkerhedsloven*).

Subsection 2. This order shall also apply to ships and arrangements covered by section 3(5) of the offshore safety act (*offshoresikkerhedsloven*) (special purpose vessels) to the extent that the

¹ This order contains provisions implementing parts of Council Directive 89/391/EEC of 12 June 1989, Official Journal no. L 183, p. 1, as amended most recently by Directive 2007/30/EC of the European Council and of the Council of 20 June 2007, Official Journal 2007 no. L 165, p. 21, parts of Council Directive 92/91/EEC of 3 November 1992, Official Journal 1992 no. L 348, p. 9, as amended by Directive 2007/30/EC of the European Parliament and of the Council of 20 June 2007, Official Journal 2007 no. L 165, p. 21, parts of Council Directive 2009/104/EC of 16 September 2009, Official Journal 2009 no. L 260, p. 5, parts of Council Directive 92/85/EEC of 19 October 1992, Official Journal no. L 348, p. 1, parts of Council Directive 75/324/EEC of 20 May 1975, Official Journal 1975 no. L 147, p. 40, as corrected in Official Journal 1975, L 299, p. 27, and as amended by Commission Directive 94/1, Official Journal 1994, L 23, p. 28, and Commission Directive 2008/47/EC, Official Journal 2008, L 96, p. 15, parts of Council Directive 76/767/EEC of 27 July 1976, Official Journal 1976 no. L 262, p. 153, as amended most recently by Council Directive 2006/96/EC of 20 November 2006, Official Journal 2006 no. L 363, p. 81, parts of Council Directive 84/525/EEC of 17 September 1984, Official Journal 1984 no. L 300, p. 1, parts of Council Directive 84/526/EEC of 17 September 1984, Official Journal 1984 no. L 300, p. 20, parts of Council Directive 84/527/EEC of 17 September 1984, Official Journal 1984 no. L 300, p. 48, parts of Council Directive 87/404/EEC of 25 June 1987, Official Journal 1987 no. L 220, p. 48, as amended most recently by Council Directive 93/68/EEC of 22 July 1993 amending Directive 87/404/EEC (simple pressure vessels), 88/378/EEC (safety requirements for toys), 89/106/EEC (building goods), 89/336/EEC (electromagnetic compatibility), 89/392/EEC (machinery), 89/686/EEC (personal protective equipment), 90/384/EEC (non-automatic scales), 90/385/EEC (active, implantable medical devices), 90/396/EEC (gas apparatuses), 91/263/EEC (terminal equipment), 92/42/EEC (new hot water boilers using liquid or gaseous fuel) and 72/23/EEC (electrical material intended for use within certain voltage limits), Official Journal 1993 no. L 220, p. 1, parts of Directive 98/37/EC of the European Parliament and of the Council of 22 June 1998, Official Journal 1998 no. L 207, p. 1, as amended most recently by Directive 2006/42/EC of the European Parliament and of the Council of 17 May 2006, Official Journal 2006 no. L 157, p. 24, parts of Council Directive 1999/36/EC of 29 April 1999, Official Journal 1999 no. L 138, p. 20, as amended most recently by Commission decision 2003/55/EC of 18 July 2003, Official Journal 2003 no. L 183, p. 45, and parts of Directive 2006/95/EC of the European Parliament and of the Council of 12 December 2006, Official Journal 2006 no. L 374, p. 10.

construction, arrangement and equipment affects the safety and health conditions on associated offshore installations, cf. section 3 of order no. 1186 of 9 October 2007 on extension of the scope of the offshore safety act issued by the Danish Energy Agency.

Subsection 3. This order shall also apply to the accommodation facilities on ships and arrangements that are not covered by the definition stipulated in section 2(1) of the offshore safety act (*offshoresikkerhedsloven*) and where persons working on an offshore installation are accommodated to the extent that it is of importance to the safety and health of those accommodated, cf. section 2 of order no. 1186 of 9 October 2007 on extension of the scope of the offshore safety act issued by the Danish Energy Agency.

Definitions

Section 2. When using the provisions of this order, the following definitions shall be used:

- 1) Working room: Any room on the offshore installation containing work stations.
- 2) Working station: A place on the offshore installation where work is carried out.
- 3) Drilling equipment: Equipment included in the drilling process or other well operations as well as piping between these.
- 4) Design: An overall description of the offshore installation.
- 5) Auxiliary equipment: Equipment not directly included in the drilling or manufacturing process, cf. items 13 and 14, such as generators, emergency generators, lifting equipment and pumps.
- 6) Accommodation: The part of the offshore installation or on associated ships containing accommodation spaces.
- 7) Arrangement: Location of equipment, furnishings and installation parts in relation to each other on the offshore installation.
- 8) Furnishings: Loose parts that cannot be characterised as equipment.
- 9) MODU Code: Code for the Construction and Equipment of Mobile Offshore Drilling Units drawn up by the IMO (International Maritime Organization).
- 10) Offshore installation: Mobile offshore installation.
- 11) Construction of the offshore installation: The design, dimensioning and construction of elements for installation parts as well as the assembly of installation parts with one another.
- 12) Accommodation spaces: The sleeping quarters, dining rooms, toilets, bathrooms and recreational spaces for use by those on board.
- 13) Person-carrying lift: Fixed lifting apparatus for the carriage of persons or goods or persons and goods between fixed levels by means of a cabin the dimensions and arrangement of which clearly provide access for persons.
- 14) Production equipment: Equipment included in the production process where the offshore installation is used for the production of hydrocarbons.
- 15) Safety and health account: Account as mentioned in the order on the management of safety and health, etc. on offshore installations issued by the Danish Energy Agency.
- 16) Pressure-carrying equipment: Pressure tanks as defined in the order on certain EC directives on pressure tanks issued by the Danish Working Environment Authority, simple pressure tanks as defined in the order on simple pressure tanks issued by the Danish Working Environment Authority, aerosol containers as defined in the order on aerosols issued by the Danish Working Environment Authority and portable pressure-carrying equipment as defined in the order on portable pressure-carrying equipment issued by the Danish Working Environment Authority.

17) Equipment

- a) Machinery, containers, apparatuses, tools, and any other similar arrangement used when processing a product or for producing a work result, including for carriage and storage, or serving for carrying out a technical process.
- b) Parts for such arrangements, prefabricated structures and any other manufactured object intended for – together with other objects – forming part of a finished unit.

Section 3. Where the owner or the user is mentioned in the orders referred to in this order, the owner or user shall mean the company responsible for the operation.

General

Section 4. The construction, arrangement and equipment of the offshore installation, including electrical systems, software, hardware, etc., shall be such that the safety and health risks are reduced as much as is reasonably practicable in consideration of use and maintenance.

Subsection 2. Production equipment shall meet the regulations on fixed offshore installations, cf. the order on the construction, arrangement and equipment of fixed offshore installations and pipelines issued by the Ministry of Climate and Energy.

Norms and standards

Section 5. Recognised norms and standards of safety and health importance to the construction, arrangement and equipment of the offshore installation shall be observed, cf. section 42(1) of the offshore safety act (*offshoresikkerhedsloven*).

Subsection 2. Mobile offshore installations used as mobile offshore drilling units shall as a minimum meet the provisions of the MODU Code, consolidated edition 2001, cf. however section 120.

Subsection 3. Movable drilling units constructed after 1 January 2001 shall, in addition to the requirements of subsection 2, as a minimum meet the supplementary requirements stipulated in the annex to the order on technical regulation on the construction and equipment, etc. of movable drilling units.

Subsection 4. Norms and standards under subsection 1 may, however, be deviated from in cases where it is appropriate to acquire a higher safety and health level or as a consequence of the technical development. In connection with the deviation, it is presupposed that the safety and health risks are reduced as much as is reasonably practicable, cf. section 42(2) of the offshore safety act (*offshoresikkerhedsloven*).

Subsection 5. If recognised norms and standards are not available as stipulated in subsection 1, the safety and health risks associated with the construction of the offshore installation be identified, assessed and reduced as much as is reasonably practicable, cf. section 33 of the offshore safety act (*offshoresikkerhedsloven*).

Part II
Construction
Chapter 2
General provisions
Design

Section 6. Equipment, working rooms, working stations and accommodation, etc. on offshore installations shall be located in relation to each other in consideration of the risk of fire, explosion and the risk of accumulation of substances harmful to the health so that the safety and health risks are reduced as much as reasonably practicable.

Section 7. The offshore installation shall be made in accordance with the technical and social development in society.

Bearing constructions

Section 8. Bearing constructions shall be designed and constructed so that they can resist the loads to which they may be exposed during installation and operation.

Subsection 2. Bearing constructions shall be designed so that defects in individual elements or the transgression of water cannot lead to unacceptable consequences.

Subsection 3. The carrying capacity of the constructions shall be sufficient to:

- 1) make an evacuation possible in case of an accident; and
- 2) protect against structural collapse until the evacuation has been carried out in case of an accident.

Subsection 4. Bearing constructions shall be designed so that the consequences of any explosions have been taken into consideration.

Part III
Arrangement
Chapter 3
The offshore installation
Arrangement of the offshore installation

Section 9. Safety and health risks in connection with the arrangement of the offshore installation shall, cf. section 4, be identified and assessed with a view to both an individual and an overall assessment of the conditions in the working environment that may, in the short or the long term, have an effect on physical or mental health and so as to avoid effects that are harmful to the health.

Section 10. The arrangement of the offshore installation, including major alterations comparable hereto, shall be planned and carried out so that the safety and health risks in connection with the performance of the work as a whole are as low as reasonably practicable. In this connection, it shall especially be observed that working rooms and working stations, etc. are dimensioned, arranged and located in relation to each other so that:

- 1) it is possible to establish a working procedure, including conditions for carriage and storage by using equipment to a sufficient extent so that the safety and health risks are as low as reasonably practicable;
- 2) it is possible to reduce any risks and inconvenience as much as possible and avoid unnecessary effects in connection with working processes, including the generation of vapours, dust or any other air pollution, radiation, extreme temperatures, etc.;
- 3) it is possible to use installations, etc., including to clean, maintain and inspect them etc. in a way so that the safety and health risks of both those carrying out the work and others in the place are as low as reasonably practicable;
- 4) constructions and materials are used of such a nature that sufficient insulation is acquired in consideration of the use of the rooms as well as satisfactory sound, climate and lighting conditions;
- 5) materials are not used that release vapours or dust that may generate concentrations that are harmful to health or cause inconvenience or vapour or dust that may accumulate static electricity;
- 6) constructions or materials are not used that may accumulate pollution or that are difficult to clean where the work may result in great dust development or pollution that is harmful to the health;
- 7) work that, by nature should be carried out outdoors, can take place in appropriate working rooms unless this would be clearly unreasonable or inappropriate; and
- 8) the safety and health risks related to clearing, cleaning and maintenance are reduced as much as is reasonably practicable.

Section 11. The offshore installation shall be arranged so that working stations, furnishings and equipment are, in consideration of the technological development, adjusted to the employees and so that the safety and health risks are reduced as much as is reasonably practicable.

Access ways

Section 12. On the offshore installation, sufficient access ways and areas shall be arranged of such a size and nature that it is possible for the employees to move about without hindrance and carry out their work without any safety or health risk and with the use of equipment to the extent necessary.

Section 13. Offshore installations with more than one level shall be arranged with a suitable number of staircases.

Subsection 2. The offshore installation shall be arranged with equipment, including especially mechanical equipment, in such a way that it is avoided that the employees are to carry burdens manually, cf. the order on the manual handling of burdens on offshore installations issued by the Danish Energy Agency.

Subsection 3. Staircases and equipment shall be located in consideration of the intended use, cf. however subsections 1 and 2.

Section 14. To the extent required in consideration of safe information and in consideration of the employees being able to move about safely, access ways and areas as well as escape routes shall be clearly marked with directions, exits and unexpected differences in level.

Section 15. The location, number and dimensions of doors, ports, hatches, etc. shall be such that the safety risks in connection with use of passage are reduced as much as is reasonably practicable considering the nature of the work and other conditions.

Section 16. Transparent doors shall be rendered visible.

Subsection 2. Swing doors and ports shall be transparent or have transparent panels.

Subsection 3. If transparent or semi-transparent doors and ports are not made of safety material and if there is a risk of those on board being injured if doors or ports splinter, these surfaces shall be protected against splintering.

Section 17. Transparent or semi-transparent partition walls and especially partition walls exclusively made of glass in working rooms or in the vicinity of working stations or access ways shall be clearly marked and made by safety materials or be separated from these working stations and access ways in such a way that those on board can neither get in contact with the partition walls nor be hit if the walls splinter.

Section 18. Lighting installations in connecting routes shall be located so that the chosen type of lighting does not present a risk of accident to the employees.

Section 19. Access ways on offshore installations shall be arranged so that it is possible to carry sick and injured persons on stretchers to treatment rooms and evacuation stations in an effective way.

Escape routes, etc.

Section 20. The offshore installation shall be arranged so that the safety and health risks in connection with escape, evacuation and rescue of those on board in case of fire and other accidents are as low as reasonably practicable. This shall be proven through an evacuation analysis, cf. the order on the management of safety and health on offshore installations issued by the Danish Energy Agency.

Section 21. At any time, easy and unimpeded access to escape routes and emergency exits shall be provided, and they shall as directly as possible lead to a safe assembly station or a safe evacuation station.

Subsection 2. Depending on the nature of the work and general conditions, a sufficient number of escape routes and emergency exits shall be provided of such design, dimensions and location as to provide a safe possibility of everyone on the offshore installation reaching safety in case of danger.

Subsection 3. From areas where employees are normally engaged in work, there shall be two escape routes independent from each other leading to an evacuation station or a safe assembly station.

Section 22. When locating stairs, consideration shall, among other things, be taken of the fact that all escape routes from all parts of the offshore installation shall be short and logical.

Subsection 2. Doors and ports in escape routes shall open in the escape direction in consideration of subsection 3 or, if this is not possible, be designed as sliding doors, and it shall be possible to operate them in an easy and safe way without using a key.

Subsection 3. Doors and ports may not block the escape route when being opened.

Section 23. Escape routes and emergency exits where there is a need for lighting shall be fitted with sufficient emergency lighting under all conditions.

Subsection 2. Escape routes shall be fitted with clear and appropriately located signing and marking showing the way to a safe assembly station or evacuation station.

Section 24. Sufficient measures shall be taken to shield escape routes, evacuation stations and assembly stations against heat and smoke as well as – to the extent possible – against the effects of explosions and to ensure that escape routes to and from the evacuation stations and assembly stations are useable.

Subsection 2. These measures shall be of such a nature that they protect those on board for sufficiently long time for an evacuation and rescue action to be carried out safely, if relevant.

Lighting

Section 25. The offshore installation shall be fitted with so sufficient lighting that the safety and health risks connected with the work and with moving about on the installation are as low as is reasonably practicable.

Subsection 2. As regards the distribution of the light, the luminosity and its quality, the lighting shall be adjusted to the conditions and to the nature of the work.

Subsection 3. The lighting may not in itself give rise to effects that are harmful to health, cf. the order on protection against the risks of artificial optical radiation from offshore installations issued by the Danish Energy Agency.

Subsection 4. The lighting shall be arranged so that it does not cause annoying blinding or reflexes or annoying heat.

Subsection 5. The lighting shall be such that operational control stations, escape routes, assembly stations, embarkation stations and risk areas remain lit.

Section 26. If the work is of such a nature that it may be connected with special risk if the lighting fails, emergency lighting shall be arranged so that the safety risk following from failure of the lighting is as low as reasonably practicable.

Chapter 4

Areas representing special risks

Section 27. Areas that may represent a risk of falling or falling objects or which are otherwise associated with especially great safety or health risks shall be secured by means of railing, shielding, barrier, covering or other suitable measure.

Subsection 2. Areas where pressure-testing of equipment is carried out or where other especially risky activities are carried out shall be barred.

Subsection 3. The areas mentioned in subsections 1 and 2 shall be marked and fitted with warning signs.

Section 28. Areas representing a risk of substances that are harmful to health accumulating shall be arranged so that these substances are captured at the source and removed.

Section 29. Combustion air shall be taken from an unclassified area.

Subsection 2. Combustion from combustion engines and heating units shall be led to an unclassified area.

Subsection 3. Combustion gases shall, insofar as possible, be carried away from the offshore installation so that they do not harm those on board or create dangerous situations in connection with helicopter activities.

Chapter 5 *Working rooms* *General*

Section 30. Working rooms shall be arranged and located in consideration of the processes that are to take place in the working room so that the safety and health risks are as low as reasonably practicable.

Subsection 2. Furthermore, working rooms shall be arranged so that unnecessary effects from substances that are harmful to health, radiation, extreme temperatures, draught or vibrations, etc. from other parts of the offshore installation and the general surroundings are avoided insofar as possible.

Section 31. Work stations shall be located in the working room so that the safety and health risks are as low as reasonably practicable.

Subsection 2. If there are special safety or health risks in a room due to the nature of the work, special work processes, etc., the working room shall be located, arranged and equipped so that the risks are reduced as much as reasonably practicable.

Section 32. In consideration of the nature of the work as well as the physical activity of those employed, working rooms shall be insulated so that the safety and health risks are kept as low as reasonably practicable.

Indoor climate

Section 33. Working rooms shall be arranged with sufficient installations for suitable heating, cooling, ventilation and extraction. These installations may not liberate annoying radiation or draught.

Subsection 2. The temperature in working rooms shall be suitable for the human body in consideration of the work methods used and the physical load.

Section 34. Enclosed working stations shall, considering the work methods and the physical load that the employees may be exposed to, be provided with fresh air of sufficient quantities.

Subsection 2. A defect in the ventilation or extraction system shall release an alarm if the defect is of importance to the employees' safety or health.

Section 35. The temperature in accommodation spaces, rooms for employees with watchkeeping duty, sanitary rooms, dining rooms and rooms intended for first-aid shall be arranged for the specific purposes of these rooms.

Conditions of light

Section 36. Working rooms shall be well-lit, insofar as possible by means of daylight and otherwise by means of suitable artificial lighting.

Subsection 2. Windows, overhead light and partition walls of glass shall be designed in such a way that too powerful sunlight on the working station is avoided in consideration of the nature of the work and the working station.

Subsection 3. Lighting installations in working rooms shall be located so that the type of lighting chosen does not represent any risk of accident to the employees.

Section 37. Working rooms shall be adequately arranged with emergency lighting.

Dimensions, surfaces and air spaces

Section 38. The floor area, room height and air space shall be adjusted to the nature of the work, the equipment, the materials and the furnishings in the working room as well as the number of employees normally moving about or accommodated there with a view to making it possible for the employees to carry out the work with as low a safety and health risk as reasonably practicable.

Subsection 2. The floors in working rooms shall be free of dents, holes and differences in level that may represent a safety risk. The flooring shall be adjusted to the work carried out in the working room and have appropriate stability and anti-slip features in consideration of the nature of the work.

Subsection 3. The surfaces of the working room may not liberate vapours or dust to the working room or give rise to the development of static electricity so that the employees are exposed to effects that are harmful to health or greatly annoying. In working rooms that may represent a risk of explosion, the flooring shall be suitable and not produce sparks.

Subsection 4. The surfaces of floors, walls and ceilings in working rooms shall be such that it is ensured when clearing and cleaning them that the health risks related to the surfaces are as low as reasonably practicable.

Section 39. Working rooms and their equipment and furnishings shall, insofar as possible, be arranged with non-combustible or fire-retardant materials.

Subsection 2. If combustible materials are used, they may not be able to develop hazardous smoke when burning.

Chapter 6 *Working station General*

Section 40. The working station of each individual person shall be appropriately arranged according to ergonomic principles and such that the employee can follow relevant processes from his working station.

Section 41. The working station shall be located and arranged so that the employee is not affected unnecessarily by substances and materials, radiation, extreme temperatures, draught or vibrations, etc.

Furnishings, auxiliary equipment and materials

Section 42. Suitable furnishings shall be located at the working station so that the safety and health risks related to the work is reduced as much as reasonably practicable.

Subsection 2. Chairs, worktables and the like used in connection with changing tasks or by different employees shall be adjustable to the extent necessary.

Subsection 3. Furnishings shall be made of materials that do not represent health risks. The design and materials shall be of such a nature that it is possible to keep the furnishings clean effectively in an appropriate way in relation to the pollution to which they are exposed.

Section 43. The working station shall be so spacious that it is possible to place the necessary furnishings, auxiliary equipment and materials so that all safety and health risks in connection with the performance of the work are reduced as much as is reasonably practicable.

Subsection 2. Where it is possible to carry out the work seated, a suitable working station shall be available for this. In connection with work carried out while walking or standing, seats shall insofar as possible be available for use when the work is interrupted.

Subsection 3. Access ways and escape routes in connection with the working station shall be arranged so that the safety risk when using it in normal situations and in emergencies is reduced as much as reasonably practicable.

Ventilation

Section 44. The working station shall be provided with sufficient fresh air, if necessary by means of mechanical ventilation.

Section 45. If it cannot be prevented that gases, dust or the like are generated through a work process that are harmful to health or explosive, or that smoke, micro-organisms, aerosols, foul smells or other annoying air pollution are developed, mechanical extraction shall be established that will, insofar as possible, remove the pollution at the place where it is developed. At the same time, fresh substituting air shall be supplied of suitable temperature.

Subsection 2. If it is not possible to remove the pollution effectively at the place where it is generated, the work process shall be carried out in a special room, cabin or the like where other work is not carried out and which is fitted with sufficient mechanical ventilation.

Subsection 3. The air extracted may not be led back to the working station, cf. however subsection 4.

Subsection 4. Extracted air that originates exclusively from sand blasting where there is a requirement for using air-supplied breathing apparatuses may, however, be led back to the same working room, cf. subsection 6, following effective cleaning as well as a supply of a sufficient quantity of fresh air.

Subsection 5. It is a condition that it can be documented that the extracted air, cf. subsection 4, has – before being led back – been effectively cleaned so that the air's content of mineral dust

(inert, respirable) does not exceed 10 per cent of the limit value. In addition, the necessary measurements shall be made constantly to check that the air blown-in meets the requirements.

Subsection 6. The ventilation systems mentioned in subsections 2 and 3 shall be fitted with a control device indicating insufficient functioning. Ventilation systems covered by the exception in subsection 5 shall, furthermore, be designed so that the recirculation is automatically disconnected or the work process stopped if the cleaning is insufficient.

Conditions of light

Section 46. The conditions of light at each individual working station shall be of such a nature that it contributes to reducing the safety and health risks related to the performance of the work as much as reasonably practicable.

Subsection 2. The working stations shall, in consideration of the special conditions on mobile offshore installations, insofar as possible have sufficient natural lighting and, in addition, be fitted with sufficient artificial lighting.

Substances and materials that are harmful to health

Section 47. Where there is a risk of pollution by materials that are infectious or by substances or materials that it is important to have removed from the skin fast or to prevent being spread in consideration of safety or health, suitable and sufficient means for this shall be available in the vicinity of the working station.

Outdoor working stations

Section 48. In connection with work carried out outdoors for longer periods of time, measures shall be established, insofar as possible, for protecting the employees against the weather and, if necessary, against falling objects.

Chapter 7

Sanitary conditions at working stations

Changing rooms and wardrobes

Section 49. Suitable changing rooms shall be available for the employees if they are to carry special work clothes and it cannot be required, for reasons of health or decency, that they change their clothes in other places.

Subsection 2. The changing rooms shall be easily accessible, have sufficient capacity and be fitted with seats.

Subsection 3. The changing rooms shall be sufficiently large and be equipped so that all employees get a possibility of locking their clothes up during working hours.

Subsection 4. If the conditions so necessitate, there shall be separate lockers for work clothes and private clothes.

Subsection 5. Facilities shall be available so that each employee can dry his wet work clothes.

Section 50. There shall be separate changing rooms or separate use of these by men and women.

Subsection 2. If changing rooms are not necessary under subsection 1, each employee shall have a place at his disposal for his clothes.

Showers and washbasins

Section 51. In addition to the facilities available in the accommodation, the employees shall, if necessary, have access to a sufficient number of showers and washbasins in the vicinity of their working stations.

Toilets and washbasins

Section 52. In addition to the facilities available in the accommodation, the employees shall, if necessary, have access to toilets and washbasins in the vicinity of their working stations.

Subsection 2. Separate toilet rooms shall be available that it shall be possible for both genders to use.

Chapter 8

Arrangement with a view to emergencies

General

Section 53. The offshore installation shall be divided into areas according to the risk of fire and explosion, and risky areas shall be classified.

Section 54. Electrical installations, electrical material and mechanical equipment on the offshore installation shall be explosion-proof for the level for which the area is classified.

Prevention of explosion risk

Section 55. The offshore installation shall be arranged with all necessary measures for preventing the occurrence and generation of an atmosphere presenting a potential risk of explosion.

Subsection 2. In areas presenting a potential risk of explosion, all necessary measures shall have been taken to prevent ignition of the atmosphere presenting a potential risk of explosion.

Fire detection and fighting

Section 56. Appropriate measures shall have been taken laid down in the safety and health account of the offshore installation to prevent, detect and fight the outbreak and spread of fire.

Subsection 2. If necessary, fire sectioning shall have been made to separate areas presenting a special fire risk.

Section 57. On the offshore installation, suitable system shall be available for detecting and securing against fire as well as fire-extinction systems and alarms to counter the risks identified in the safety and health account of the offshore installation.

Subsection 2. These systems may include, but shall not be limited to:

- 1) fire-detection systems;
- 2) fire alarms;
- 3) main fire water systems;
- 4) fire hydrants and hoses;
- 5) flooding systems and monitors;
- 6) automatic sprinkler systems;
- 7) systems for extinguishing gas flames;
- 8) extinguishing systems using gases as extinguishants;
- 9) extinguishing systems using foam as extinguishant;
- 10) portable fire-extinguishers; and
- 11) fire-fighters' equipment.

Subsection 3. Non-automatic fire-extinguishing devices shall be easily accessible, uncomplicated to operate and, if necessary, protected against being damaged.

Subsection 4. Emergency systems shall be separated or in some other way protected against accidents so that the emergency functions remain operational in emergencies.

Subsection 5. If necessary, two co-ordinated emergency systems shall be provided.

Subsection 6. Suitable facilities shall be provided where the fire-fighting team of the offshore installation can don their fire-fighter's outfits.

Section 58. Working rooms of importance to the fighting of accidents shall be especially protected against fire and explosion so that they can be operational, insofar as possible, until evacuation has taken place.

Emergency lighting

Section 59. On offshore installations where the employees are especially exposed to risk if the artificial lighting fails, sufficiently strong emergency lighting shall be established.

Treatment rooms

Section 60. In the accommodation, a suitable number of rooms shall be arranged and equipped for extended first-aid treatment.

Subsection 2. The treatment room shall be arranged so that it can contain appropriate facilities as well as, cf. the order on emergency etc. issued by the Danish Energy Agency pursuant to the offshore safety act (*offshoresikkerhedsloven*), medical equipment and medicaments.

Chapter 9

Employees with special needs

Section 61. Especially sensitive risk groups, including pregnant and breast-feeding women, shall be protected against the risks that are especially severe for them.

Subsection 2. The protective measures shall, insofar as possible, consist in technical measures on the offshore installation.

Section 62. Pregnant women shall have a possibility of resting while lying down under appropriate conditions.

Section 63. The offshore installation shall, if necessary, be arranged taking consideration of handicapped employees.

Chapter 10
Accommodation
Conditions of accommodation

Section 64. The accommodation shall, unless otherwise stipulated in this order, observe the provisions on accommodation spaces stipulated in Notice B from the Danish Maritime Authority, technical regulation on the construction and equipment, etc. of ships.

Section 65. The accommodation shall, to the widest possible extent, be separated from areas with drilling or production activities, classified areas and other risky areas.

Subsection 2. Sleeping rooms and recreational rooms shall, with a view to ensuring undisturbed rest and restitution, be suitable located in relation to the other activities of the accommodation.

Section 66. The accommodation as a whole and each individual accommodation space shall be insulated and protected against heat and cold as well as noise, vibrations and air pollution.

Section 67. The accommodation shall be arranged so that the safety and health risks connected with cleaning and other service work are reduced as much as reasonably practicable.

Section 68. At each level, the accommodation shall be fitted with at least two exits independent from each other with direct access to escape routes leading to a safe area, a safe assembly station or a safe evacuation station.

Section 69. At a suitable place in the accommodation, a lockable locker shall be located for use by safety representatives for storing documents, etc. for use in their job.

Section 70. The employees shall have access to the internet and to a telephone so that they have a possibility of reasonable communication under private conditions.

Indoor climate

Section 71. The accommodation shall be fitted with sufficient installations for heating, cooling, ventilation and lighting. These installations may not give of annoying radiation, noise or draught.

Daylight and lighting

Section 72. Sleeping rooms, dining and recreational rooms shall, insofar as possible, have access to daylight.

Materials and furnishings

Section 73. The accommodation shall be arranged with incombustible or fire-retardant materials.

Subsection 2. Furnishings in the accommodation shall be of incombustible or fire-retardant materials insofar as is reasonably practicable.

Subsection 3. If combustible materials are used, they may not be capable of developing noxious smoke when burning.

Subsection 4. Furthermore, the accommodation shall be arranged with suitable located and dimensioned fire-separations.

Sleeping rooms

Section 74. The accommodation shall be arranged with a number of berths adjusted to the number of persons who are expected to spend the night on the offshore installation at the same time in connection with normal operation and maintenance.

Subsection 2. The number of sleeping rooms shall, insofar as possible, be such that each of the persons spending the night has been given his own room.

Subsection 3. To the extent that subsection 2 cannot be met, the number of sleeping rooms not given to one person alone shall be such that each sleeping room is not given to more than two persons.

Subsection 4. Sleeping rooms shall be appropriately arranged so that they are suitable for both spending the night, relaxation and paperwork, just as room shall be provided for storing the employee's clothes and belongings.

Subsection 5. Each sleeping room shall, insofar as possible, have immediate access to toilet rooms with a washbasin and a bath arranged for use by this sleeping room only.

Subsection 6. Where it is not reasonably practicable to meet the requirement of subsection 5, it may be permitted to instead have immediate access to one toilet room under subsection 5 arranged for use by this sleeping room and an adjoining sleeping room alone.

Recreational area, dining rooms, etc.

Section 75. Employees who are not on duty shall have access to a lockable locker in the accommodation for storing their personal equipment.

Section 76. The accommodation shall contain an appropriate recreational area which shall be arranged so that the employees have a possibility of recreating and exercising in their spare time.

Section 77. The accommodation shall include dining rooms (mess rooms) that shall be arranged with room so that an appropriate number of the persons who are intended to use the dining room can have their meals without unnecessary waiting time.

Subsection 2. In association with the dining room, a galley shall be arranged with the possibility of preparing hot and cold meals to the number of persons who are intended to use the dining room of the offshore installation.

Subsection 3. Furthermore, a room shall be arranged where the employees can have hot and cold drinks and, possibly, lights meals without changing from their work clothes. This room shall be in the accommodation or in any other suitable place on the offshore installation at a convenient distance from the working stations of the offshore installation and with immediate access from these.

Section 78. In connection with the recreational area, access shall be provided to a suitable number of toilet rooms with one or more washbasins.

Subsection 2. It shall possible for men and women to use the toilet rooms separately.

Subsection 3. The toilet rooms shall be located appropriately in relation to recreational, dining and changing rooms.

Laundry

Section 79. When arranging the offshore installation, consideration shall be paid to the employees' possibility of having their clothes laundered.

Part IV

Equipment

Chapter 11

General provisions on equipment

General

Section 80. Equipment shall be arranged so that the safety and health risks are reduced as much as reasonably practicable.

Subsection 2. In this connection, it shall be ensured that

- 1) the foundation, support, securing and stability does not lead to safety risks considering the weight, form and use of the equipment;
- 2) noise, vibrations or other oscillations from the equipment have been countered as effectively as possible by mounting the equipment on softening foundation, shielding or other measures;
- 3) the risks and inconvenience caused by heat, dust, smoke, vapours and gases, etc. led away from the equipment and any other risk associated with it are effectively countered;
- 4) the location and way of mounting are sound and secure considering the surrounding conditions; and
- 5) the location and way of mounting do not hinder the operation and carrying out of other work at the equipment so that the safety and health risks are reduced as much as reasonably practicable.

Section 81. To the extent that it is of importance to safety and health in connection with the use of the equipment, user instructions shall be available.

Subsection 2. The user instructions shall be easily accessible and, to the extent possible, given directly on the equipment.

Subsection 3. If operational interruptions, failure of the automatics or other extraordinary situations about the equipment may involve a risk to safety or health, the user instructions shall contain a warning to this effect and, to the extent possible, instructions about what safety measures to take in the situations concerned.

Subsection 4. User instructions shall be in one or more languages so that all the relevant persons on board understand the contents. User instructions shall be continuously updated, among other things on the basis of the experience gained with the use of the equipment.

Mechanical equipment and mechanical installations

Section 82. Mechanical equipment and mechanical installations shall have sufficient strength, be free of considerable defects and suited for the purposes for which they are used.

Electrical installations and electrical material

Section 83. Electrical installations and electrical material shall, as regards capacity and effect, be adjusted to the purpose.

Subsection 2. Electrical installations and electrical material shall be in accordance with recognised norms and standards in the offshore field, cf. section 5.

Construction, manufacture and design

Section 84. Equipment shall be designed and constructed of suitable materials considering the effects that it may be expected to be exposed to so that it has the necessary strength and durability so that the safety and health risks associated with the equipment and its use are reduced as much as is reasonably practicable.

Section 85. Equipment in which there are or may occur pressure, temperatures, material tensions or other effects that may involve safety or health risks shall be so designed and constructed or be fitted with such equipment for limiting the effects that the sound and possibly determined limits hereof are not exceeded. If necessary, the equipment shall be fitted with warning equipment that will automatically be activated if these limits are exceeded.

Section 86. The construction of the equipment shall consider securing against safety risks associated with the equipment. In this connection, it shall be ensured that:

- 1) persons cannot get in touch with dangerous machinery parts or substances or materials that are harmful to health;
- 2) tools, objects or parts hereof, splashes and the like cannot be emitted and thereby pose a risk to health and safety; and
- 3) heat, cold, radiation, noise, vibrations, dust, dampness, smoke, vapours, gases or other things generated when using the equipment are not released in such a way as to present health or safety risks.

Subsection 2. If the necessary securing cannot be gained through the constructed, it shall be made in a safe way through shielding, extraction, other safety equipment or other safety-technical measures.

Subsection 3. Shielding and other protective devices:

- 1) shall be solidly made;
- 2) may not cause further risk;
- 3) may not easily be moved or put out of function;
- 4) shall be at a sufficient distance from the risky area;
- 5) may not obstruct the view during work more than necessary; and
- 6) shall make absolutely necessary intervention possible for placing and replacing parts as well as carrying out maintenance work, while limiting access to the area where work is carried out and, insofar as possible, without dismantling the shielding or any other protective device.

Section 87. Equipment for energy supply shall be designed, constructed and mounted so that it does not present a risk to health and safety.

Section 88. Equipment shall be designed, constructed and arranged so that operation of the equipment and other work at the equipment may take place so that the health and safety risks are reduced as much as reasonably practicable.

Section 89. The way in which energy for the equipment is supplied, managed and interrupted or any other kind of effect on functions or work processes in the equipment is made shall, to the extent possible, ensure that a risk to health or safety does not arise.

Subsection 2. In this connection, it shall be ensured that the operation may take place under the best possible conditions of view and control and, if necessary, the equipment shall be provided with equipment that will automatically sound a signal prior to being started, stopped or prior to other effects. It may be possible to start it only through a deliberate action made on a control system intended for this purpose.

Subsection 3. It shall be possible to stop functions or work processes fast from suitable places on or at the equipment unless interruption hereof may involve health or safety risks.

Subsection 4. Where reasons of safety so warrant, stopping shall be capable of being effectuated automatically. If necessary, stopping shall be combined with braking.

Subsection 5. An order to stop shall have higher priority than an order to start.

Subsection 6. If abnormal operational conditions, including variations in or interruption of the energy supply to the equipment, may present a health or safety risk, the equipment shall be effectively secured against this.

Subsection 7. If necessary, the equipment shall be fitted with an automatic and appropriately functioning warning device.

Section 90. Lighting that is built in or fitted on equipment shall be suitably designed and, among other things, be anti-dazzling.

Section 91. Operating devices and control systems shall be designed, constructed and made in such a way that the risk is prevented or countered of inadvertent or incorrect release, change in or stopping of functions whereby a health or safety risk may occur.

Subsection 2. Control systems shall be safe and be chosen in consideration of the failure, disturbances and loads that may be envisaged in connection with the intended use.

Subsection 3. Operating devices shall be easily accessible, inconspicuous, easy to spot, suitably marked and be located and made ergonomically suitably and be well lit.

Special equipment

Section 92. Automatically driven, operated or monitored equipment shall, to the extent that it may be of safety importance, be fitted with devices for regulating down the processes, disconnecting the automatic operation and equipment for manual operation as well as emergency stops, if relevant.

Subsection 2. Such equipment shall, furthermore, be fitted with instructions, diagrams, plans or similar documentation that may, in case of failure of the automatics or other extraordinary situations, form the basis of completely assessing the safety-related importance hereof and carrying out the measures or interventions that may be necessary to counter any health or safety risks.

Subsection 3. The documentation text and the instructions associated herewith shall be in one or more languages so that the contents may be understood by all the relevant persons on board.

Subsection 4. The documentation shall be given on the equipment or in association with this in a way that is appropriate for its use.

Section 93. Equipment the safety of which depends on the operating condition shall, to the extent necessary, be fitted with components for monitoring, control and operation hereof.

Subsection 2. Monitoring and control equipment shall be constructed and located so that it cannot inadvertently be put out of its adjustment. The indication shall be correct, clear and well lit. It shall be possible to carry out readings and adjustments from an easily accessible and safe place from it shall be possible to carry out the necessary adjustments or replacements.

Section 94. Where persons have to move about or be at or on equipment in order to operate, maintain, inspect or in any other way take care of it, suitable access ways as well as working platforms shall be arranged to the extent necessary.

Subsection 2. They shall be designed and made, secured and lit so that the safety risk associated with their use is reduced as much as reasonably practicable.

Design

Section 95. Where the form or colour of an equipment or parts hereof may be of health and safety importance, consideration shall to the widest extent possible be taken hereof.

Section 96. Marking colours and symbols shall be distinct and durable and, due to the visual experience, a suitable form and colour shall be sought for the equipment.

Section 97. Accessible parts of the equipment shall, to the extent that its use under the provision so permits, be so designed that sharp corners, edges, rough surfaces and the like that may lead to personal injury do not occur.

Subsection 2. The design shall, insofar as possible, ensure that the equipment is easy to clean and that the cleaning of it and around it may be carried out without any risk to health or safety.

Section 98. Equipment that may be expected to be moved, transported, mounted and erected shall be designed taking this into account and, if necessary, be fitted with devices so that the health and safety risks associated with the removal, etc. are reduced as much as reasonably practicable.

User instructions and marking

Section 99. When equipment is being delivered, it shall be accompanied by sufficient instructions and guidance in the form of user instructions that are necessary for reducing the health and safety risks associated with the use, transport and mounting of the equipment as much as reasonably practicable and for keeping the equipment in the condition required. This includes the necessary instructions, plans, diagrams and the like for the arrangement and functioning of the equipment, information about health or safety risks or other special conditions about the equipment, including limitations to its use that may be of importance to health and safety and that are not generally known.

Subsection 2. The user instructions shall, furthermore, contain information about any special safety measures that are necessary in connection with the use, transportation, mounting and maintenance of the equipment.

Subsection 3. If personal protective equipment is necessary, the user instructions shall provide information about its nature and use, which is in accordance with the regulations that may have been laid down hereon.

Subsection 4. The user instructions shall be exhaustive and easily understandable to those who may be expected to use them.

Subsection 5. The user instructions shall be in one or more languages so that the contents are understood by all relevant persons on board.

Subsection 6. To the extent that it may be of health or safety importance, the user instructions, important parts hereof or references to them shall be given directly on the equipment or on signs, placards or the like to be posted at the equipment.

Subsection 7. Any machinery delivered for use on the offshore installation shall be fitted with the manufacturer's or – in the case of imported machinery – the importer's name and address or with any other marking that makes it easy to identify the manufacturer or the importer, respectively.

Additional minimum requirements

Section 100. Additional minimum requirements for equipment are found in the annex to this order.

Chapter 12

Pressure-carrying equipment

Pressure tanks, inspection, etc.

Section 101. Pressure tanks covered by Council Directive 76/767/EEC of 27 July 1976 on the approximation of the laws of the Member States relating to common provisions for pressure vessels and methods for inspecting them, as amended by Council Directive 88/665/EEC of 21 December 1988, Council Directive 84/525/EEC of 17 September 1984 on the approximation of the laws of the Member States relating to seamless, steel gas cylinders, Council Directive 84/526/EEC of 17

September 1984 on the approximation of the laws of the Member States relating to seamless, unalloyed aluminium and aluminium alloy gas cylinders as well as Council Directive 84/527/EEC of 17 September 1984 on the approximation of the laws of the Member States relating to welded unalloyed steel gas cylinders, shall be in accordance with sections 1-3 of order no. 564 of 1 July 1997 on certain EC Directives on pressure tanks issued by the Danish Working Environment Authority.

Section 102. Simple pressure tanks covered by Directive 2009/105/EC of the European Parliament and of the Council of 16 September 2009 on simple pressure vessels shall be in accordance with sections 1 and 2 of order no. 565 of 24 June 1994 on simple pressure tanks issued by the Danish Working Environment Authority or similar legislation implementing the directive in other EU or EEA member states.

Section 103. Portable pressure-carrying equipment covered by Council Directive 1999/36/EC of 29 April 1999 on portable pressure-carrying equipment, as amended most recently by Commission decision 2003/525/EC of 18 July 2003, shall be in accordance with sections 1-19, section 29, section 30(1), sections 32-34, 36-39, 41-44 and 54 of order no. 289 of 24 April 2001 on portable pressure-carrying equipment, as amended, issued by the Danish Working Environment Authority.

Section 104. Aerosol containers covered by Council Directive 75/324/EEC of 20 May 1975 on the approximation of the laws of the Member States relating to aerosol dispensers, as amended by Commission Directive 94/1/EC of 6 January 1994 and by Commission Directive 2008/47/EC of 8 April 2008, shall be in accordance with sections 1-5 of order no. 1003 of 26 October 2009 on aerosols issued by the Danish Working Environment Authority, cf. section 35 of order no. 289 of 24 April on portable pressure-carrying equipment issued by the Danish Working Environment Authority.

Drilling equipment and piping

Section 105. The drilling equipment shall be designed, dimensioned and made so that the equipment can treat liquids and gases in the equipment in a safe and effective manner in connection with all the conditions that may occur.

Subsection 2. The equipment shall be located and built up on the offshore installation so that the safety and health risks are reduced as much as reasonably practicable.

Section 106. Pipe systems shall be clearly and unambiguously marked. They shall be arranged so that they are ease to control, operate and maintain.

Subsection 2. Pipe systems under pressure shall be arranged so that they may be pressure-relieved, emptied, ventilated and filled with inert gas, if relevant.

Subsection 3. Pipe systems shall be dimensioned according to the greatest pressure and the most dangerous temperatures that may occur in any operational condition, including when starting up and closing down the drilling process as well as when starting and stopping pumps.

Control equipment for the drilling process

Section 107. The drilling process shall be fitted with the relevant alarms, which shall be released when the operating mode exceeds the alarm limits determined for the process in normal operation.

Section 108. Drilling equipment shall be fitted with a stop valve system (blow-out-preventer) for shutting off the well in emergencies.

Subsection 2. The stop valve system shall be designed so that no individual defect in the system will render it incapable of functioning.

Subsection 3. The stop valve system shall be independent of the drilling process regulating system.

Section 109. A system for remote-control of equipment in case of emergency shall be made.

Subsection 2. The system shall cover control stations located in suitable places that may be used in emergencies, including if necessary control stations at safe assembly stations and embarkation stations.

Subsection 3. Equipment capable of being remote-controlled, cf. subsection 1, shall at least cover systems for:

- 1) ventilation;
- 2) emergency stops of equipment that may lead to ignition;
- 3) prevention of leakages of combustible liquids and gases;
- 4) fire-protection; and
- 5) control of drillings.

Chapter 13 *Additional equipment*

Section 110. Passenger lifts shall be in accordance with sections 2-6 and section 7(2) of the order on technical regulation on passenger lifts in ships issued by the Danish Maritime Authority.

Section 111. Equipment for use in atmospheres presenting a potential explosion risk shall comply with the provisions of chapter 6 of the MODU Code, consolidated edition 2001, or similar norms and standards.

Section 112. The offshore installation shall be fitted with an emergency power system complying with the provisions of chapters 5.3 and 5.4 of the MODU Code, consolidated edition 2001, or similar norms and standards.

Subsection 2. Accommodation spaces, control rooms, working stations, escape routes, embarkation stations and helicopter decks shall be fitted with emergency lighting connected to the emergency power system.

Section 113. The offshore installation shall be fitted with:

- 1) an acoustic and optical system capable of transferring alarm signals to all manned parts of the offshore installation, if necessary;
- 2) an acoustic system clearly audible everywhere on the parts of the offshore installation where persons on board are frequently present; and

- 3) a communication system making it possible, among other things, to constantly have a connection ashore and to emergency services both ashore and at sea and in the air.

Subsection 2. The systems mentioned in subsection 1 shall be capable of remaining operational in emergencies.

Subsection 3. The acoustic system shall be supplemented by communication systems that are independent of vulnerable power supply systems.

Subsection 4. At suitable places, there shall be a possibility of sounding the alarm.

Part V **Additional provisions**

Chapter 14

Authorised bodies, inspection, etc.

Authorised bodies

Section 114. When designating authorised bodies, third party bodies and approved bodies to be reported to the European Commission for carrying out the fixed procedures for compliance assessments, etc. of the products covered by section 102 and section 103 on simple pressure tanks and portable pressure-carrying equipment, sections 2-6, section 10 and section 12(3) of order no. 674 of 30 June 2005 on the designation of authorised bodies, etc. issued by the Danish Working Environment Authority shall apply.

Inspection, etc.

Section 115. The Danish Energy Agency and the Danish Maritime Authority shall inspect conditions covered by this order's provisions and take care of the tasks ascribed to the Danish Working Environment Authority in the orders stipulated in sections 101-104 and 114.

Subsection 2. The distribution of tasks between the Danish Energy Agency and the Danish Maritime Authority shall be decided following common agreement pursuant to the order on the Danish Maritime Authority's tasks issued by the Danish Ministry of Climate and Energy.

Subsection 3. Inspection tasks as regards equipment as well as examinations and control tasks requiring special expertise may be carried out by authorised bodies, inspection bodies or expert companies to the extent that other provisions are not laid down in this order on the performance of the tasks concerned. Authorised bodies shall mean companies as mentioned in section 114.

Subsection 4. Authorised bodies, etc. designated by the Danish Working Environment Authority under the legislation on occupational health shall also be considered designated under section 114.

Subsection 5. Inspection bodies and expert companies shall mean companies as defined in the order on pressure-carrying equipment issued by the Danish Working Environment Authority.

Chapter 15

Exemptions, penalty and entry into force, etc.

Equivalence and exemptions

Section 116. The Danish Energy Agency may grant exemptions from sections 5-114 of this order to the extent that it is compatible with the directives implemented by this order if the Danish

Energy Agency finds it proven that the exemptions provide such advantages that the health and safety conditions as a whole have at least the same level as the application of the provisions of this order would entail.

Section 117. The Danish Energy Agency may, where special conditions apply and it is assessed reasonable, grant exemptions from this order when it is assessed that the health and safety risks are not considerably increased as well as to the extent that it is compatible with the directives implemented by this order.

Penalty provisions

Section 118. Unless stricter penalty is liable under the offshore safety act (offshoresikkerhedsloven) or other legislation, anyone shall be liable to punishment by fine who:

- 1) contravenes section 4, section 5(1)-(3) and section 5, sections 6-44, section 45(1)-(3), (5) and (6), sections 46-56, section 57(1) and (3)-(6) and sections 58-63, sections 65-100, 105-109 and 111;
- 2) contravenes the provisions referred to in sections 64, 101-104, 110 and 114 to the extent that the contraventions of the provisions are liable to punishment pursuant to the orders referred to; or
- 3) disregards the conditions of permits, designations and authorisations granted pursuant to the provisions of this order.

Subsection 2. Companies, etc. (legal entities) may be liable to punishment under the provisions of chapter 5 of the penal code.

Entry into force, interim provisions, etc.

Section 119. This order shall enter into force on 1 January 2011.

Section 120. For an offshore installation that has been granted en permit covered by the offshore safety act (*offshoresikkerhedsloven*) before 1 January 2011, the permit shall continue to be valid as regards conditions covered by this order until the permit is to be renewed, lapses or expires, cf. section 75(1) of the offshore safety act (*offshoresikkerhedsloven*).

Subsection 2. If changes are made to an offshore installation for which a permit shall be acquired under section 29 of the offshore safety act (*offshoresikkerhedsloven*), the changes shall be in accordance with this order, cf. section 75(1) of the offshore safety act (*offshoresikkerhedsloven*).

Subsection 3. Applications for permits under section 28 or 29 the offshore safety act (*offshoresikkerhedsloven*) that have been sent or delivered to the Danish Energy Agency before 1 January 2011, will be considered by the Danish Energy Agency according to the regulations in force until now.

Section 121. The designation of authorised bodies, third party bodies or approved organisations by the Danish Energy Agency before 1 January 2011 will remain valid until they expire or lapse pursuant to the interim provisions.

Section 122. International adoptions mentioned in section 2(xvi), section 5(2) and sections 111-112 shall not be promulgated in the Danish Law Gazette, but shall be promulgated by the

concerned international adoptions being available for reading at the Danish Energy Agency or the Danish Maritime Authority.

Ministry of Climate and Energy, 14 December 2010

Lykke Friis / Ib Larsen

Additional minimum requirements for equipment, cf. section 100

1. Introductory remarks

1.1 The obligations determined in this annex shall apply when complying with the provisions of the order when the relevant risks are present in connection with the equipment concerned. As regards whether the minimum requirements below apply to equipment in use, the same measures do not necessarily apply as the considerable requirements applicable to new equipment.

2. General minimum requirements applicable to equipment

2.1 Equipment shall be installed, arranged and used in such a way that the risks to the user of the equipment and other employees are reduced, for example by ensuring that sufficient space is provided between the mobile parts of the equipment and permanent or mobile parts in the vicinity and so that any type of energy and all substances used or produced may be added and/or extracted in a safe manner.

2.2 Equipment shall be mounted and dismantled in a safe manner and especially any instructions by the manufacturer shall be observed.

2.3 Equipment that may be hit by lightning when used shall, by means of suitable devices or measures, be protected against the consequences of strokes of lightning.

2.4 Operating systems on equipment shall, where safety aspects are involved, be distinct and easy to spot and, if available, appropriately marked. The operating systems shall be located outside the risky areas, except for certain operating devices, if necessary, and so that the operation does not involve any additional health or safety risk. They may not involve a risk as a consequence of inadvertent release.

The operator shall, if necessary from the main control station, be able to ascertain that no one on board is located in the risky areas. If this is impossible, a safe system shall be launched prior to each start, such as a sound and/or light signal. Employees shall have time and/or a possibility of quickly avoiding risks in connection with the starting and/or stopping of the equipment. The control systems shall be safe and shall have been chosen in consideration of the failures, disturbances and loads that may be envisaged in connection with the intended use.

2.5 The starting of the equipment may only be possible through a deliberate action on an operating system intended for this purpose.

The same shall apply to

- a) re-coupling following a stop, irrespective of the reason of this; and
- b) control of an important change of the functional conditions (such as speed and pressure), except if this re-coupling or change does not involve any risk to the employees.

Re-coupling or any change of the conditions of functioning as a consequence of the normal sequence in an automatic cycle shall not be covered by this requirement.

2.6 All equipment shall be fitted with a control system making it possible to stop the entire equipment in a safe manner. Each working station shall be fitted with a control system for stopping either all parts of the equipment or merely a part hereof, depending on the risk, so that the equipment is safe. The stop order to the equipment shall have priority over starting orders. When the equipment or its dangerous parts have been stopped, the energy supply for the functioning devices concerned shall be disconnected.

2.7. If relevant in relation to the risks that the equipment present and to the time normally spent stopping it, the equipment shall be fitted with an emergency stop device.

2.8 Equipment presenting safety risks due to falling objects or ejection shall be fitted with suitable safety devices adjusted to the nature of the risk. Equipment presenting risks due to leakages of gas, vapour, liquids or dust shall be fitted with suitable retrieval and/or extraction devices in the vicinity of the sources of danger.

2.9 The equipment and its parts shall be stabilized by means of securing devices or the like if necessary to ensure the health or safety of the employees.

2.10 If there is a risk of parts of equipment bursting or breaking that could present considerable risks to the health or safety of the employees, suitable protective measures shall be taken.

2.11 When moving parts of the equipment present a risk of mechanical contact that may lead to accidents, these parts shall be fitted with shielding or protective devices preventing access to the risky areas or stopping the movement of the dangerous parts before access is provided to the risky areas. Shielding and protective devices:

- a) shall be solidly made;
- b) may not cause additional risks;
- c) may not be easy to move or make inoperable;
- d) shall be at a sufficient distance from the risky area;
- e) may not impede the view during work more than necessary; and
- f) shall make possible absolutely necessary interventions to locate and/or replace parts as well as to carry out maintenance work; the access shall, however, be restricted to the area where work is carried out and, insofar as possible, without dismounting the shielding or protective device.

2.12 The lighting at the working areas and stations where the equipment is used or maintained shall be appropriate in relation to the work to be performed.

2.13 Parts of the equipment with a high or very low temperature shall, if necessary, be shielded so that the employees cannot get in contact with it or in the vicinity of it.

2.14 It shall be possible to easily register and understand the alarm signals of the equipment, which shall be unambiguous.

2.15 It shall be possible to carry out maintenance work when the equipment is stopped. If this is not possible, it shall be possible to take suitable protective measures for the performance of this work or it shall be able to perform it outside the risky areas. When user and maintenance instructions are associated with equipment, they shall be kept updated.

2.16 All equipment shall be fitted with easily recognizable devices making it possible to shield it from each of its sources of energy. Re-coupling is conditional upon there being no health or safety risk to the employees concerned.

2.17 The equipment shall be fitted with the necessary warnings and makings for the safety of the employees.

2.18 In order to carry out production, regulation and maintenance work on the equipment, it shall be possible for the employees to move about and be accommodated in complete safety everywhere necessary.

2.19 All equipment shall be arranged so that it protects the employees against the risk of fire in or heating of the technical aids or against the risk of leakages of gas, dust, liquids, vapour or other substances generated by the equipment or used or stored in it.

2.20 All equipment shall be arranged so that there is no explosion risk of the equipment or substances generated at the equipment or used or stored in it.

2.21 All equipment shall be arranged so that the employees are protected against the risk of direct or indirect contact with electrical installations.

3. Supplementary minimum requirements for special equipment

3.1 Minimum requirements for mobile equipment, including self-propelling equipment.

3.1.1 Equipment on which one or more employees are present shall be arranged so that the risk to the employees is reduced as much as possible when the equipment is moving. This shall also apply as regards the risk of the employees getting in contact with the wheel or tracks or being caught in these.

3.1.2 If an inadvertent blocking of the power transmission parts between a mobile tool and its fittings and/or trailer may involve special risks, it shall be equipped or arranged in a way that will prevent blocking of the power transmission parts.

Where such blocking cannot be avoided, every measure possible shall be taken to prevent any harmful effects to the employees.

3.1.3 If the power transmission parts between a mobile tool would otherwise be soiled or destroyed by being dragged over the ground, they shall be fitted with securing devices.

3.1.4 Mobile equipment on which one or more employees are present shall, depending on the actual conditions of use, be fitted with one of the constructions below in order to reduce the risks in connection with overturning or the like, either:

- a) a safety construction preventing the tool from tilting more than 45 degrees; or
- b) a construction ensuring a sufficient free area around it or the employees on the tool if this can tilt more than 45 degrees; or
- c) any other device with similar purpose.

These safety constructions may be integrated in the tool.

These safety constructions are not required when the tool is stabilized during use or when the design of the tool as such prevents it from overturning or the like. If there is a risk that employees on the tool may be squeezed between parts of the tool and the ground, a system shall be fitted for fastening it or the employees on the tool.

3.1.5 Fork-lift trucks on which one or more employees are present shall be arranged or fitted with, for example, one of the constructions below in order to reduce the risks in relation to overturning, either:

- a) installation of a cab; or
- b) a construction preventing the fork-lift truck from overturning; or
- c) a construction ensuring that, in case of overturning, there is sufficient room between the ground and certain parts of the fork-lift truck for it or the employees on it; or
- d) a construction fastening it or the employees to the driver's seat so that the person concerned is not trapped by parts of the fork-lift truck if it overturns.

3.1.6 If driving a self-propelled tool may involve a risk to the employees, it shall meet the following requirements:

- a) It shall be fitted with a device preventing inadvertent starting.
- b) If the tool includes more elements capable of moving at the same time on rails, it shall be fitted with suitable devices for reducing the consequences of any collision.
- c) There shall be a device for decelerating and stopping the tool. To the extent that considerations of safety so require, there shall be an easily accessible emergency control unit with control elements or an automatic system for decelerating and stopping the tool in case the main control unit fails.
- d) If the driver's direct field of vision is insufficient as regards safety, suitable auxiliary devices shall be installed for improving the field of vision.
- e) If the tool is intended for night use or for use in dark places, it shall be fitted with a lighting device adjusted to the work to be carried out, guaranteeing sufficiently safe conditions for the employees.

- f) If the tool in itself presents a fire risk, or if the trailer and/or cargo involves a fire risk that may expose the employees to safety risks, it shall be fitted with suitable equipment for fire-fighting unless such equipment is already available in an appropriate vicinity of the place of use.
- g) Remote-controlled equipment shall be stopped automatically if it moves outside the control area.
- h) Remote-controlled equipment that, under normal conditions of use, may involve a risk of collision or squeezing shall be fitted with devices protecting against such risks unless suitable devices for controlling the risk of collision are already available.

3.2 Minimum requirements for equipment used to lift burdens.

3.2.1 If equipment used to lift burdens is installed permanently, it shall be ensured that it is solid and stable during use, especially considering the burdens that it is intended to lift and to how the tool is suspended or fastened.

3.2.2 Equipment used to lift burdens, shall be clearly marked with the nominal cargo. In addition, there may be a load plate showing the nominal burdens of the various configurations of the equipment.

Accessories for the lifting material shall be marked in such a way that the technical properties that are of importance to safety are evident.

If the equipment is not intended for lifting persons, this shall – if there is a possibility of making a mistake – be indicated through suitable, distinct signposting.

3.2.3 Fixed equipment shall be installed so that the risk is reduced of the burdens:

- a) hitting persons;
- b) unintentionally making dangerous movements or falling down; or
- c) unintentionally being released.

3.2.4 Equipment used to lifting or moving persons shall be constructed so that:

- a) suitable devices will prevent cabins, baskets or the like from falling down when either of these is present;
- b) the risk that the user falls out of the cabin, basket or the like is avoided when either of these is present;
- c) the risk is avoided that the user is injured, squeezed or shocked as a consequence of inadvertent contact with objects; and
- d) persons who are enclosed in a cabin, basket or the like in case of accidents are not exposed to safety risks and so that it is possible to release them, if necessary. If, due to the working place or the height difference, is not possible to avoid the risks mentioned in (a) above by means of a special device, a cable shall be used with an increased safety factor, and this shall be checked on every workday.

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