

## Guidance on standby vessels

### Introduction

A standby vessel is a vessel located at an offshore installation and forming part of the offshore installation's emergency preparedness. The standby vessel is arranged and equipped so that it is capable of retrieving persons from the water, providing first aid and temporarily accommodating everyone from the offshore installation or drilling ship.

The guidance, primarily, addresses shipowners and masters of standby vessels as well as the surveyors of the Danish Maritime Authority (DMA). It contains information about the measures to be taken for the DMA to find a vessel suitable for operating as a standby vessel.

Guidance no. 4 of 7 June 1991 on the arrangement and equipment of standby vessels issued by the DMA is repealed.

### 1. Application

1.1 This guidance applies to standby vessels carrying out standby vessel functions in accordance with Order no. 539 of 29 November 1985 on emergency measures to avoid accidents on certain offshore installations, etc.: standby vessels issued by the Danish Ministry of Energy.

### 2. General remarks

2.1 Depending on its size and trade area, the standby vessel is to comply with the provisions of Notice B from the DMA or Notice C from the Danish Shipping Inspectorate. Foreign vessels must comply with the provisions of the SOLAS, LL, MARPOL and STCW Conventions for cargo ships.

2.2 The standby vessel must be suited for navigation in the waters in which it is intended to be used.

2.3 The standby vessel must have a satisfactory ability to manoeuvre, position itself and navigate to carry out the intended tasks. When assessing this, special consideration must be paid to the sea and wind conditions that may be expected in the waters in which the standby vessel is to operate. As regards testing of the standby vessel and its functions, please see appendix 4.

2.4 The standby vessel must be capable of sailing at a speed of at least 10 knots and must be provided with:

.1 *either* a single-propeller propulsion system and a 360-degree azimuth thruster, where the thruster is capable of providing the vessel with a speed of at least 4 knots and is independent of the main machinery,

.2 *or* two propellers and two propulsion systems as well as side thrusters so that the vessel is capable of sailing ahead at a speed of at least 4 knots with one propulsion system out of function.

Standby vessels with a valid standby vessel certificate at the time of the publication of this guidance must comply with item 2.4 no later than 5 years after the date of the guidance.

- 2.5 The signing-on period of each individual crewmember on a standby vessel should not exceed 28 days.
- 2.6 All crewmembers must be capable of communicating in English.

### **3. Navigation bridge, rescue zone and helicopter retrieval zone**

3.1 The navigation bridge must be located and arranged so that the master of the standby vessel has a full view at all times of the rescue zone, the ship's side in the rescue zone, the helicopter retrieval zone and the area for landing the rescue basket while manoeuvring the standby vessel. The propellers must be manoeuvred directly from the bridge. Manoeuvring through a changeover of machines is not acceptable. The view afore from the place or the places from where the vessel can be manoeuvred must be such that a horizontal line drawn from the lower side of the windows in the wheelhouse is free of the upper side of the forecastle and the upper side of any breakwater on the forecastle regardless of the vessel's trim under normal seagoing conditions.

3.2 The rescue zone must primarily be located amidships and at a secure distance from the standby vessel's propellers. The rescue zone must take up at least one-third of the standby vessel's length; however, it need not be longer than 10 m. The rescue zone must be clearly marked on the standby vessel's sides by vertical lines indicating the longitudinal dimensions of the zone. Between the lines, "RESCUE ZONE" must be clearly written in block letters. The lines must have a width of about 1 m and extend from the rescue zone deck to close to the waterline. The marking must be of a highly visible colour. If the standby vessel has a red or an orange outboard colour, the rescue zone may be marked by being painted white from the bulwark to the waterline over the entire width of the zone.

3.3 Over the entire rescue zone and as far forward of and abaft this that boats may call at the rescue zone unhindered, the ship's side must be totally smooth and free of fender lists, fenders, mountings and the like that may harm survivors in the water or calling boats.

3.4 The width of the deck in the rescue zone must be at least 3 m on each side of the vessel. However, cargo rails may be accepted in the rescue zone if they do not hamper the rescue operations. The height of the deck above the surface of the water in the rescue zone may not exceed 2.5 m. The deck in the rescue zone must be anti-slip.

3.5 In the rescue zone, the bulwarks must have opening devices or other measures to ease the retrieval of persons from the water. On each side of the vessel, there must be at least two openings, each of about 2 m with pillars in the middle. In ships with a gross tonnage of less than 350, there may be two openings in the one side and one opening in the other.

3.6 The standby vessel must at any time have sufficient open space on deck to carry out helicopter retrieval operations and handle the offshore installation's personnel basket. The helicopter retrieval area must have a diameter of at least 5 m. The area must be free of any upright hindrances/objects and must be painted in a clearly visible, yellow colour. The area must be anti-slip. The area must be so far away from masts, antennas and other upright objects that it is possible to carry out helicopter retrieval operations in a secure way and that the area is at a sufficient distance from the rescue zone.

3.7 It must be possible to light up the rescue zone, helicopter retrieval area and the sea around the standby vessel by means of fixed sources of light. The sources of light must be located such that the helicopter crew is not blinded during helicopter retrieval operations.

### **4. Accommodation and treatment rooms**

4.1 The accommodation must include

- .1 a reception room with point of registration;

- .2 a room with shower facilities, including an external shower for cleaning and removing any oil;
- .3 toilets;
- .4 treatment rooms for injured persons;
- .5 a room with seats and berths; and
- .6 a separately shielded area or room for any deceased persons.

4.2 The accommodation for rescued persons may cover:

- .1 The ordinary accommodation of the standby vessel, excluding a large cabin close to the bridge;
- .2 corridors with a width of at least 1200 mm and a passage width of 900 mm with tip-up seats that are tipped-down; and
- .3 spaces through which passage is not necessary of a width of at least 900 mm.

4.3 It must be possible for at least 20% of the number of rescued persons for which the vessel has been approved to lie down. The rest of them must have a permanent seat.

4.4 When determining the number of persons for which the vessel is to be approved to rescue, 0.5 m<sup>2</sup> free floor area must be available per person. Floor areas where people cannot stay due to, for example, tables, lockers or other fixed arrangements can, however, not be included. However, legroom below tables that is suitably occupied by seated persons is not to be excluded.

4.5 It must be possible to carry sick and injured persons securely on stretchers between the rescue zone, treatment rooms, berths and helicopter retrieval area. Doors and passageways between treatment rooms, the rescue zone, berths and the helicopter retrieval area must have a width of at least 73 cm.

4.6 The treatment room must be arranged and equipped for providing first-aid to injured persons. The floor area must not be less than 15 m<sup>2</sup>, must be easy to clean and must not be slippery. The room must be equipped with medicaments, equipment and furniture in accordance with appendix 1.

4.7 There must be one toilet, one washbasin and one shower for every 50 rescued persons or part hereof. The toilets must be located conveniently in relation to the accommodation for those rescued. Toilets and shower facilities must be sufficiently shielded.

## **5. Lighting, heating, ventilation and public address system**

5.1 In places where sick and injured persons are treated, the normal lighting must be at least 300 lux. Power taps for the supply of electricity to portable, electric apparatuses and sources of light must be available in the treatment room and in all rooms in the accommodation. It must be possible to lower the lighting in the accommodation. In addition, the lighting must comply with the requirements of the DMA.

5.2 A suitable heating system must be available for those rescued in the accommodation. The heating system must comply with the following requirements:

- .1 The capacity must be sufficient to maintain a temperature in the room of at least 20 degrees C at all times.
- .2 Heating by open fire is not permitted.

.3 Radiators and other heating systems must be located and shielded so that they do not present any danger or inconvenience.

.4 Electric furnaces and gas furnaces must be of an approved type or be approved by the surveyor surveying the vessel.

5.3 The accommodation must be ventilated so that a sufficient change of air is ensured under all conditions when doors, portholes, skylights and the like are closed. In addition, the following requirements apply:

.1 The ventilation must be mechanical, and the change of air must comply with the following requirements:

a) The ventilation of the rooms must be in the form of the blowing in of air, corresponding to six changes of air per hour.

b) The air outlet must lead to either the corridor or directly to open air.

c) Re-circulation of up to 50% of the supply of air may be permitted. However, the supply of fresh air to cabins and rooms where persons are lying down must be at least 30 m<sup>3</sup> per hour per person for which the room is intended.

d) The inlets must be located in a suitable way relative to the arrangement of the rooms and must not give rise to inconvenient draught above a berth.

.2 Toilets and bathrooms must be ventilated by means of a separate extraction system directly to the open air. The extraction system must be designed for ten changes of air per hour. The supply of air to toilets and bathrooms with outlets from an adjoining cabin or room in which persons are lying down may be through the door leading to this room.

.3 In treatment rooms, the ventilation must be such that air from here cannot penetrate other rooms in the accommodation. Doors to corridors leading to other accommodation rooms must not be fitted with ventilation openings and any ventilation ducts must be fitted with a non-return flap or other measures must have been taken to ensure that the air does not penetrate into the rest of the accommodation. This system must have such a capacity that it is possible to ensure ten changes of air per hour.

.4 Ventilation systems must be fitted with suitable filters at air inlets and must be arranged in consideration of the special conditions characteristic of operation at sea and must not lead to inconvenient noise or vibrations.

.5 Documentation must be available for room volume and blowing capacity.

5.4 The standby vessel must be fitted with a public address system (command system) with loud-speakers at the rescue zone and the helicopter retrieval point. It must be possible to operate the system from all engine platforms. In addition, a portable, electrically driven megaphone must be available.

## **6. Life-saving appliances, radio, etc.**

6.1 The standby vessel must be equipped with at least:

.1 One rescue boat built in accordance with the International Maritime Organisation's recommendations for "Fast Rescue Boats"<sup>1</sup> with the following additions:

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<sup>1</sup> IMO Resolution A 656(16).

- a) The boat must be placed with a launching arrangement permitting fast launching and retrieval under adverse weather conditions. The retrieval arrangement must be capable of lifting the boat at a speed of at least 50 m per minute and include a suitable mounting rack for the boat.
- b) It must be capable of navigating at a speed of at least 20 knots in quiet water with three persons on board.
- c) It must be equipped as stipulated in appendix 2.
- d) All batteries and any engine heater must be connected to the standby vessel's electrical system when the boat is not in use.
- e) Buoyancy tanks that have been pressure-tested and leakage-tested are accepted.
- f) Polyester that has not been made fire-retarding may be used.

.2 Suitable, approved immersion suits or anti-exposure suits of a number corresponding to the number of crewmembers.

.3 Rescue nets for fitting on each side of the standby vessel for use in the rescue zone. The nets must be fitted with fenders on the inner side to ease climbing. The nets must extend for at least 1 m below the surface of the sea and be fitted with weights at the lower end.

.4 Four lines with helicopter harnesses to bring persons along the ship's side.

.5 An efficient device to lift at least five persons on board at the same time, such as a crane and a rescue basket.

.6 Liferafts for everyone, both the crew and those rescued. The liferafts must be located on ramps that have a 20-degree inclination against the side or in racks from which it is easy to push the rafts into the sea. They must be fitted clear of railings and bulwarks.

.7 Two extra lifebuoys, each with a line of 30 m length in each side.

.8 20 life-jackets in addition to the number normally required for the ship's crew as well as an approved inflatable working vest for each crewmember.

.9 Equipment for at least two surface swimmers.

.10 Handlines or mountings and safety harness with a line fitted with a safety hook for coupling to the handlines or the mountings in the rescue zone.

6.2 In addition, the standby vessel must be equipped with:

.1 At least two powerful halogen projectors, one of which must have an effect of at least 5,000 W and be fully remote-controlled from the bridge (other sources of light with similar lighting properties are accepted);

.2 Two sets of fire-man's outfits, cf. Notice B from the DMA, II-2, regulation 17, with spare bottles;

.3 Equipment to connect a tow warp to an abandoned ship (for example SAVE gun with equipment);

.4 One set of equipment for towing small vessels, lifeboats and liferafts that comply with the provisions on towing hooks or towing winches;

.5 Two radar installations one of which must at least be operable in the 9 Hz tape (3 cm tape);

- .6 Clamps, eyelets and the like in a number suitable for fastening painters, rescue nets, etc.;
- .7 Four suitable boathooks of at least 2.5 m with a blunt hook;
- .8 Four poles of 4 m which are fitted at one end with a suitable ring with a diameter of about 50 cm to help persons in the water along the ship's side; and
- .9 A line-throwing apparatus with four projectiles and four lines.

6.3 The standby vessel must be equipped with radio installations as follows:

- .1 Radio installations in accordance with Notice B from the DMA, chapter IV (radiocommunication GMDSS), regardless of the vessel's size.
- .2 Until 1 February 1999, standby vessels the keel of which is laid before 1 February 1995 may be equipped with radio telephony installations in accordance with Notice B from the DMA, chapter IV (radiotelegraphy and radiotelephony) instead of the requirements stipulated in item .1 above; however, NAVTEX receiver and satellite EPIRB must be installed.
- .3 A radio direction finder for the maritime VHF channels as well as for the frequency 121.5 Mhz.
- .4 At least one extra fixed, approved maritime VHF system that is located on the bridge.
- .5 Radio equipment for life-saving appliances in accordance with Notice B from the DMA, chapter III, regulations 6.2.1 and 6.2.2 (two-way VHF radio telephone apparatuses and radar transponders (SART)).

## **7. Medicaments, blankets and stores**

- 7.1 The standby vessel must be equipped with medicaments, etc. in accordance with appendix 1.
- 7.2 In the accommodation, there must be one blanket, one towel, one pair of socks and a thermal suit for all the persons the vessel has been approved to rescue.
- 7.3 It must be possible to make and distribute hot drinks to those rescued.

## **8. Machinery installations, etc.**

- 8.1 Danish vessels must comply with the provisions stipulated in Notice B from the DMA or with Notice C from the Danish Ships Inspectorate, dependent on size and trading area.
- 8.2 Foreign vessels must comply with the provisions stipulated in SOLAS and MARPOL for cargo ships with the following supplementary requirements:
  - .1 All diesel engines located in rooms protected by fixed fire-fighting systems with fire-extinguishing gases must be fitted with an emergency stop operable from a place outside the engine room. It must be possible to stop the diesel engines instantly by means of this emergency stop.
  - .2 If the vessel has a periodically unmanned engine room, a fully automatic fire-detection system must be installed in the engine room.

.3 The vessel's fire pumps must be located and power-supplied in such a way that a fire in one of the rooms cannot put all the fire pumps out of function. If this is not the case, the vessel must be fitted with an emergency fire pump with a capacity of at least 25 m<sup>3</sup>/hour. In vessels with a gross tonnage below 500 a portable diesel-driven pump may be used.

8.3 In both Danish and foreign vessels, the electric emergency power supply must have a sufficient capacity to maintain the operation of prescribed emergency power users for six hours as well as the lighting at the rescue zone, the sea outside the rescue zone, the helicopter retrieval area, treatment rooms and large rescue rooms.

8.4 Fuel with a flash point below 45 degrees C must not be used on board standby vessels.

## **9. Guidelines for standby vessel masters on operational conditions**

9.1 When carrying out standby vessel operations in the Danish socle area, the Order of the Danish Ministry of Energy on emergency measures to fight accidents on certain offshore installations, etc.: standby vessels must be available on board. Attention is especially drawn to section 2.

9.2 While functioning as a standby vessel for an offshore installation, a standby vessel may not carry out other operations, such as loading, unloading, towing, diving operations, etc., which may affect the vessel's emergency preparedness, cf. however item 15.

9.3 When a standby vessel initiates its service at an offshore installation where a standby vessel is required, cf. the above-mentioned Order, section 1, it must take down the date and time in the ship's log. In the same way, the date and time of the guard duty must be taken down. If the vessel is substituted by another standby vessel, the name of this vessel must be noted.

9.4 In connection with the above, attention is drawn to the fact that the owner or user of an offshore installation, normally the operator, is responsible to the Danish Energy Authority that the required permits under the Order are available, cf. especially section 2(4).

9.5 The drills that are made with the equipment and crew on board must be carefully recorded. If the standby vessel has not carried out the prescribed drills during the previous two weeks due to other service than standby vessel operations, the weekly programme of drills, cf. item 10, and the weekly inspections, cf. item 11, must be carried out before the service as a guard vessel is resumed.

## **DRILLS AND INSPECTIONS**

### **10. Drills**

10.1 The following drill programme must be carried out every week:

#### **.1 SEA RESCUE DRILLS**

- a) Rescue boat drills, with more launches and retrievals. Shift of crew with rescue boat may be included as one drill.
- b) Salvage drills with persons in the water.
- c) Drills with rescue basket with crane and line.
- d) MOB boat drill.

- e) A buoy that has been thrown out with the same drift as a person, both with and without buoyancy, is salvaged with a ring pole, boat hook or by throwing a lifebuoy or a rescue net.
- f) The crew is trained in work on deck in adverse weather, always wearing immersion suits, lifejackets/working vests.
- g) The above-mentioned drills a)-e), which form part of salvage operations at sea together with the use of ring poles, heaving rings, boat hooks and lifebuoys, must be combined in various ways in accordance with the master's choice.
- h) All drills must be carried out wearing immersion suits and lifejackets (or working vests).
- i) If adverse weather conditions hinder the above-mentioned drills, the manoeuvring of the standby/rescue vessel is trained.
- j) The master must be prepared for drills being released from the installation to which the standby vessel is connected.

## .2 OTHER DRILLS ON BOARD

- a) First-aid and stretcher drills for treatment rooms, rescue rooms and helicopter deck.
- b) Fire drills, including fire pump drills.
- c) Pollution prevention drills if the vessel has also been designated for this, cf. items 12.4 and 15.4.

## 11. Inspections

11.1 The following must be checked weekly:

- .1 The vessel's supplies of fuel for the rescue and MOB boat.
- .2 The safety device on the crane (crane functions).
- .3 The battery charger for the rescue boat and check of accumulator and electric installations.
- .4 The water lights on lifebuoys.
- .5 Fire-extinguisher pressure.
- .6 Fixed emergency lighting.
- .7 Battery emergency light.
- .8 Immersion suits.

11.2 The following must be checked at two-week intervals, as a maximum:

- .1 Equipment in rescue and MOB boat.
- .2 Crane wires.

11.3 The following must be checked at two-week intervals, as a maximum, which may, however, be increased to six months if the equipment is stored in a sealed room and the seal is checked at two-week intervals:

- .1 Emergency supplies;
- .2 Equipment in rescue rooms; and
- .3 Equipment in treatment rooms.

## **12. Size and training of the crew**

12.1 A standby vessel's crew must be of such size and have passed such training that it is capable of retrieving, providing first-aid to and accommodate all those persons for which the vessel is approved to be a standby vessel.

12.2 However, the crew must always consist of six persons, as a minimum.

12.3 It is a precondition for a minimum-size crew of six persons that all tasks have been automated and planned extremely efficiently, including the possibility of carrying out all bridge functions and communication from places in the bridge wings from which there is, at the same time, a view of the places where persons are being rescued (appendix 3 contains a model of the crew's placing and work).

12.4 At least half of the crew on service in standby vessels must have passed a three-week guard ship course (course I) with the following subjects:

- .1 First aid.
- .2 Cardiac massage.
- .3 Supercooling.
- .4 Sea rescue service.
- .5 Swimming in pool, port and the North Sea wearing immersion suit and swimming fins.
- .6 Fire-fighting.
- .7 Oil and chemical pollution prevention.
- .8 Hydrogen sulphide.
- .9 One week's training with standby vessel, rescue boat (Fast Rescue Boat – FRB), rescue basket and helicopter reception.
- .10 Assistance for emergency-landed helicopter.

12.5 The rest of the crew must have passed a six-day course (course II) with the following subjects:

- .1 First aid.
- .2 Cardiac massage.

- .3 Supercooling.
- .4 Sea rescue service.
- .5 Swimming in pool and port wearing immersion suit and swimming fins.
- .6 Drills with inflatable raft.
- .7 Navigation of rescue boat (FRB).
- .8 Retrieval of persons from the water.
- .9 Assistance for emergency-landed helicopter.

12.6 After eight weeks' service on board with course II, status as a crewmember with course I may be acquired on the condition that the relevant crewmember takes part in drills and training on board. Special emphasis must be placed on the following:

- .1 General drills, watch duty and lookout;
- .2 Crane driving during FRB drills;
- .3 FRB launching and retrieval;
- .4 Master of FRB during various weather conditions;
- .5 Rescue basket drills.

12.7 The master or somebody else holding a course I certificate issues a certificate stating that a course I certificate has been acquired on board by holders of course II certificates.

12.8 Everybody on board must hold either a course I or a course II certificate that must not be older than 15 months. Before the expiry of the above-mentioned 15 months, the relevant crewmember must pass a brush-up course (course III).

12.9 Course III must be renewed before the expiry of 15 months.

12.10 Course III consists of eight lessons and contains first aid and cardiac massage.

12.11 At least two crewmembers must have passed an approved smoke-diver's course (STCW).

12.12 At least two crewmembers must have passed an Emergency Medical Aid Course (40 hours).

### **13. Surveys and certification**

13.1 When a survey has been terminated, a certificate is issued documenting the vessel's suitability for carrying out standby vessel operations for a period of two years.

13.2 As regards foreign ships, the validity after one year will, however, be conditional upon the vessel only being involved in standby operations on the Danish socle area.

#### **14. Approval of foreign standby vessels**

14.1 Survey requests for approval of foreign vessels must be forwarded to:

The Danish Maritime Authority

Vermundsgade 38 C

DK-2100 Copenhagen Ø

Tel. +45 39 27 15 15

14.2 The following material must be forwarded to the DMA when requesting approval of a foreign vessel:

- .1 General arrangement.
- .2 Drawing and description of the vessel's rescue arrangement.
- .3 Drawing and description of the vessel's arrangement for the reception and accommodation of rescued persons.
- .4 Copies of the vessel's certificates (international convention certificates) with endorsements.
- .5 Description of the crew and its training as well as description of the crew's organisation during rescue operations. A copy of the flag State's Safe Manning Certificate must be enclosed.
- .6 Description of the vessel's power supply, including emergency power supply for installations used in connection with rescue operations.

14.3 During the survey, a trial navigation must be carried out during which:

- .1 The vessel is operated from all places of operation and the manoeuvrability is demonstrated.
- .2 The rescue boat is launched during navigation and manoeuvred by the crew. Surface swimmers are launched and retrieved by the rescue boat in order to assess the crew's familiarity with its use as well as the swimsuits (see appendix 4).

14.4 As regards the machinery, the survey must show whether the vessel complies with the relevant provisions of SOLAS and MARPOL.

.1 A check of the general condition of the machinery, electric installations, fire-fighting installations, etc. will be made. This will also include a functional test of:

- a) The emergency stop;
- b) The fire-fighting installations;
- c) Other fire-fighting installations;
- d) The emergency power supply;
- e) MARPOL installations;

- f) Ventilation installations; and
- g) Other installations of which the surveying inspector finds a testing required.

#### 15. Permit to carry out other tasks at the same time as standby vessel operations

15.1 When the vessel is surveyed as a standby vessel, the DMA will, upon the shipowner's request, decide whether the vessel is suitable for carrying out other tasks at the same time as the standby vessel operations.

15.2 The DMA will only consider a standby vessel with cargo on board suitable for other tasks than those described in the emergency preparedness plan if this will not in any way influence the use of the rescue zone, the helicopter retrieval zone, etc. In addition, lashing material and instructions about lashing on board must be available to ensure that the cargo is securely fixed under the worst possible conditions.

15.3 Only the loading of a few objects will be considered secure by the DMA when the vessel is also carrying out standby vessel operations.

15.4 The Danish Energy Authority will assess, in each individual case, whether a vessel can carry out other tasks at the same time as functioning as a standby vessel at an offshore installation. Such a permit must be acquired by the operator.

#### Appendix 1: The standby vessel's supply of medicaments

The quantities stipulated are minimum quantities. Where one product is mentioned, the medicament, etc. may be substituted by another similar product.

#### SURGICAL INSTRUMENTS AND SUTURE MATERIALS

QUANTITY	TYPE
10	Artery clamps, medium-sized, bended
3	Artery clamps, large, bended
3	Needle holders, medium-sized
12	Nylon sutures, atraumatic, FS-1, 3-0, 45 cm
5	Forceps, anatomic
8	Forceps, surgical
2	Wound retractors
5	Scissors, straight
8	Scissors, bended
20	Scalpels, disposable
10	Doctor knives, disposable
1	Alcohol lamp, glass
12	Vicryl sutures, atraumatic, FS-1, 2-0, 70 cm
1	Eye elevator/eyelid turner/Desmarres retractor

**RESUSCITATION EQUIPMENT**

<b>QUANTITY</b>	<b>TYPE</b>
2	AMBU resuscitation bags
3	AMBU suction pumps
1	Blade for laryngoscope, short
1	Blade for laryngoscope, long
4	Bottle baskets for oxygen bottles
10	Heimlich valves, single
20	Oxygen catheters with nose sponge
12	Hypodermic needles for intracardial use
1	Laryngoscope handle
1	Magill pliers
1	Mandrin for tracheal tubes
1	Mini-Trach II Minitracheotomy Kit
8	Oxygen bottles, 4 l
4	Reduction valves, with manometer and flowmeter
10	Pleural drain, Argyle w. Troicart ch. 20
5	Tracheal tubes no. 8
20	Tracheal suction catheters, no. 14 (Foley's catheter)
15	Tongue depressors, several sizes
10	Stomach pumps

**VARIOUS EXAMINATION, SURVEILLANCE AND TREATMENT EQUIPMENT**

<b>QUANTITY</b>	<b>TYPE</b>
10	Bladder catheters w. balloon no. 18, Tiemann
1	Blood pressure apparatus, Aneroid
1	Blood pressure apparatus, electronic, of suitable standard
20	Infusion sets
5	Bottles with atomizer
100	Hypodermic needles, IV (18G)
100	Hypodermic needles, IM (21G)
100	Hypodermic needles, SC (23G)
6	Flashlights, plastic
2	Cuffs, extra
1	Reflex hammer
50	Syringes, 10 ml
100	Syringes, 2 ml
2	Tourniquets
2	Stethoscopes
15	Thermometers, rectal (25.5 degrees to 42 degrees Celsius)
2	Pressure infusion bags
20	Urine bags w. 90 cm tubes
25	Hot water bottles
40	Venflon syringes, 1.20
5	Eye rinsing bottles

**DRESSINGS, BANDAGES, ETC.**

<b>QUANTITY</b>	<b>TYPE</b>
20	Surgical drapes, sterile, disposable, about 75 x 90 cm
20	Slings (Mitella), paper
15	Cramer braces, 10 cm x 1 m
50	Bandages, model 1, sterile
50	Bandages, model 2, sterile
20	Bandages, finger, sterile
2	Gauze bandages (Fixomull), 15 cm x 10 m
200	Gauze compressors, sterile, 10 x 10 cm
5	Collars, hard, various adult sizes
3	Ideal bandages (Benders), 4 cm x 80 m
10	Ideal bandages (Benders), 8 cm x 10 m
50	Jelonet, vaseline gauze, sterile, 10 x 10 cm
120	Safety pins
24	Tape, paper/silk, 1.25 cm x 9.1 m
12	Tape, paper/silk, 2.5 cm x 9.1 m
5	Tensoplast, Doctor's set, various sizes
5	Urias fracture bandages, inflatable
100	Cotton swabs
50	Eye dressings, sterile

**VARIOUS SANITARY EQUIPMENT, SPARE PARTS AND STRETCHERS**

<b>QUANTITY</b>	<b>TYPE</b>
10	Anti-shock blankets
5	Bedpans, plastic
1	Bubble tubes, box w. 30 m
10	Body bags
100	Sick bags
3	Brown soap (floating), of 1 l
6	Electric elements for laryngoscope
1	Flat-nose pliers
25	Towels, pre-washed
24	Hand-cleansing, of 1 l (Svarfega)
2	Hand-washing (disinfecting), of 400 ml
30	Gloves, sterile, size 7 ½, pairs, Latex
100	Gloves, non-sterile, large size
200	Injection swabs
2	Syringe boxes
2	Basket stretchers, model Ferno M-71
1	Double crowfoot for basket stretcher
1	Litre measurer
1	Measuring spoon, 10 ml
2	Bulbs for laryngoscope
50	Cardboard cups, kidney bowls
1	Pipe cleaners, bag w. 100
1	Scissors (cloth scissors), large
1	Scissors, solid
1	Side-cutting nippers, solid
10	Ship's stretchers w. crane strops
1	Thermometer (10 degrees to 42 degrees Celsius), for adjusting bathtub temperature
1	Vacuum mattress

10	Wash basins, plastic, large
10	Y-connections for bubble tubes

**MEDICAMENTS, ETC.**

QUANTITY	TYPE
10	Adrenaline, inj., amp of 1 ml, 1 mg/ml
100	Anautine, suppl.
10	Atropine, inj., of 1 ml, 1 mg/ml
2	Bricanyl Turbohaler, 200 dosages
4	Cinchocaine 0.5% eye ointment
10	Haemaccel, infusion liquid, plastic bottle, of 500 ml
1	Surgical spirits, bottle of 1 l
10	Impugan, inj., amp. of 4 ml, 10 mg/ml
2	Chloride amphenicol eye ointment, tubes of 5 ml
10	Prozin or Largatil, inj., capped vial of 2 ml, 25 mg/ml
200	Kodimagnyl, tablets, NO of 500 mg
6	Morphine, inj., capped vial of 10 ml, 20 mg/ml
88	NaCl isotonic infusion liquid, Viaflex 1,000 ml
25	Penicillin, inj., Leo of 1,000,000 units
10	Sterile water (for penicillin) of 10 x 10 ml
25	Stesolid, inj., amp. of 2 ml, 25 mg/ml
25	Stesolid, suppl., of 5 mg
50	Stesolid, tablets of 5 mg
10	Solu-Cortef, inj., capped vial of 100 mg
5	Xylocain, gel, 2%, tubes of 20 ml
5	Xylocain, inj., 2%, tubes of 20 ml

**FURNITURE, ETC.**

QUANTITY	TYPE
1	Treatment bed
1	Surgical lamp, extended from the ceiling
1	Emergency light with battery back-up above the treatment bed
1	Stool made of stainless steel
1	Pharmacy cupboard
2	Berths (may be substituted by supports for stretchers)
1	Bathtub w. handshower and thermal mixing battery
1	Removable instrument table with litter bin (possible to fasten to the medicine cupboard or treatment table)
1	Folding table or other suitable arrangement at the treatment bed
1	Wash basin with mixing battery to be elbow-operated
1	Table at the wash basin, built-in cupboards and drawers
1	Simple recording system
1	Writing table or desk with archive drawer
1	Telephone connected to the ship's radio installation for direct radio conversation from the treatment room with a doctor ashore, helicopter and platform
1	Extra public address system with switch connected to the telephone in the treatment room
1	Headset connected to the telephone in the treatment room
1	Two-way communication (telephone) with the bridge
1	Clock fitted on the wall with a large second hand for pulse-taking
20	Hooks for fitting infusion sets, etc.

**Appendix 2: EQUIPMENT FOR THE RESCUE BOAT**

A standby vessel's rescue boat must be equipped with:

1. A sufficient number of buoyant oars or paddles to move the boat forward in calm seas. Tholepins, rowlocks or similar arrangements must be available for each oar. Tholepins or rowlocks must be secured to the boat by means of lines or chains.
2. A bailer or a bucket.
3. An efficient, fixed compass in binnacle with necessary means of lighting. It is possible to use a suitable, type-approved compass for use in rented boats with a tonnage below 20.
4. A sea anchor with a line of sufficient strength, which has a length of at least 10 m.
5. A painter of sufficient length and strength for quick release and located in the front part of the boat. A painter may be left out in boats with a low launching height if it is proven that the launching may be secure without a painter.
6. A buoyant line of a highly visible colour, which has a length of at least 50 m. The line must have sufficient strength to tow a fully manned liferaft for 25 persons.
7. A watertight, electrical torch suitable for Morse signalling.
8. A whistle or similar means of making sound.
9. Medicine chest no. 4 and supplementary box for medicine chest no. 4 with analgesics. The supplementary box must not be stored in the rescue boat, but must be stored securely, if possible in connection with the vessel's medicine chest. The supplementary boxes must be handed out only by the master or the person authorised to do so, and such handing out must take place only when required.
10. Two buoyant quoits, each fixed to a line with a length of not less than 30 m. These lines must be buoyant and be of a clearly visible colour.
11. Two searchlights provided with an approved source of energy, capable of providing sufficient energy for the searchlight to lighten up, at night, a light-coloured object with a width of 18 m at work constantly for not less than 3 hours.
12. An effective radar reflector.
13. Thermal rescue bags – thermal protective aids – for seven persons.
14. Two safety knives with luminescent handle.
15. A manually operated pump for filling up the buoyancy rings.
16. A repair set for repairing punctures.
17. Two unsinkable safety boathooks.
18. A suitable fire-extinguisher.

19. Three parachute signals and three handflares of an approved type.
20. A VHF system fitted with headphones with microphone or fixed loudspeaker so that the operator's movements are not impeded. The system must, as a minimum, be provided with VHF channels 6 and 16 as well as a channel for use during rescue operations. The latter is assigned by the Danish Telecom Agency after special application (for foreign ships by foreign authorities).
21. The installation and fuel supply of the propulsion machinery must be approved. Propellers must be fitted with protection devices. The boat must be capable of sailing at a speed of at least 20 knots in quiet seas with three persons on board.

### **Appendix 3: MODEL FOR THE CREW'S PLACING AND WORK ON BOARD STANDBY VESSELS**

#### **PHASE 1a: RETRIEVAL OF SURVIVORS FROM THE SEA**

Master: Wheelhouse. Manoeuvres the boat. Handles all communication.

Chief Mate: Organiser and supervisor on deck.

Mate: Master of rescue boat.

Engineer: Crane operator. Help on deck.

Able Seaman: Crew in rescue boat.

Able Seaman: Helper on deck or surface swimmer in connection with rescue basket.

#### **PHASE 1b: DIRECTLY FROM OFFSHORE UNIT TO SHIP**

Master: Wheelhouse. Manoeuvres the boat.

Chief Mate: Organiser and supervisor on deck.

Mate: Wheelhouse. Handles all communication with relay to the master

Engineer: Helps persons on board.

Able Seaman: Helps persons on board. Perhaps work with fenders.

Able Seaman: Helps persons on board. Perhaps work with fenders.

#### **PHASE 2: TREATMENT – REGISTRATION**

Master: Wheelhouse. Manoeuvres the boat. Handles all communication.

Chief Mate: Organiser and supervisor. Activates the most suitable survivors in the rescue work.

Mate: Treatment. Registration.

Engineer: Provides hot water, ice, towels, track suits, etc.

Able Seaman: Treatment. Stretcher transport. Directions.

Able Seaman: Treatment. Stretcher transport. Directions.

#### **Appendix 4: TESTING OF THE STANDBY VESSEL AND ITS FUNCTIONS**

Before the DMA considers a standby vessel suitable to carry out the tasks described in the emergency preparedness plan, the following tests must be carried out with a satisfactory result in the presence of the DMA:

1. The vessel's manoeuvrability, operated from all engine platforms, must be demonstrated.
2. The rescue boat is launched, and the time that passes from the giving of the order until the boat is in the water with its crew on board wearing immersion suits is recorded. This must not take more than 5 minutes.
3. A lifebuoy is thrown over board while the vessel makes headway and is brought on board by means of the rescue boat. The time that passes until the lifebuoy is on board the standby vessel again is recorded. This must not take more than 10 minutes.
4. A surface swimmer or dummy is taken from the water on board the rescue boat. The time that passes from the boat is launched until the person or dummy is on board the rescue boat is recorded. This must not take more than 5 minutes.
5. The radio communication between the vessel and the rescue boat is tested while the rescue boat is proceeding at full speed.
6. With three persons on board, it is checked that the rescue boat is capable of acquiring a speed of at least 20 knots in quiet sea. In addition, the speed is measured with the maximum number of persons permitted on board.
7. With two surface swimmers in the water, the equipment is checked, and whether the crew is familiar with the surface swimmer function.
8. The intercommunication system between the engine platform on the bridge, the rescue zone and the helicopter retrieval zone is demonstration.