

Translation. Only the Danish version is authentic.

Technical Regulation no. 2 of 10 March 2003 issued by the Danish Maritime Authority

Technical regulation on the coastal rescue vessels of the Royal Danish Administration of Navigation and Hydrography*

In pursuance of Section 1(3), Sections 3-5, Section 17(5) and Section 32 of the Act on Safety at Sea, cf. Consolidated Act no. 627 of 26 July 2002, and by the authority of the Danish Minister of Economic and Business Affairs, the following provisions are laid down:

Administrative provisions

Section 1. This technical regulation shall apply to the types of coastal rescue vessels of the Royal Danish Administration of Navigation and Hydrography defined in Section 2, the keels of which are laid after the entry into force of this technical regulation. However, the radio provisions shall also apply to vessels the keels of which were laid before the entry into force, cf. chapter 1, regulation 5.

Definitions

Section 2. For the purposes of this technical regulation, the following definitions shall apply:

- 1) "Port-based coastal rescue vessels" shall mean the seagoing coastal rescue vessels of the coastal rescue service stationed at a rescue station in a port.
- 2) "Light coastal rescue vessels" shall mean the open, fast vessels of the coastal rescue service of solid construction or of a combination of solid and foam construction for rescue operations in coastal areas.
- 3) "Coastal rescue vessels of the fast rescue boat type" shall mean the rescue vessels of the coastal rescue service that, fundamentally, meet the requirements for fast rescue boats (FRB) in ro-ro passenger ships.

Construction

Section 3. A coastal rescue vessel shall be suitable for its purpose with regard to its entire construction and equipment, etc.

Subsection 2. Rules for construction and equipment, etc. are contained in the annex to this technical regulation.

Subsection 3. Exemptions may be granted from these rules provided that the Royal Danish Administration of Navigation and Hydrography and the rescue service agree to this,

* This technical regulation has been notified in draft form in accordance with European Parliament and Council Directive 98/34/EC (information procedure directive), as most recently amended by Directive 98/48/EC.

and provided that the Danish Maritime Authority is satisfied that safety is not thereby impaired.

Equivalents, etc.

Section 4. The provisions of this technical regulation shall not prevent the use on board of any other fitting, material, appliance, apparatus, etc. or the implementation of any other measures that provide at least the same degree of safety as stipulated by this technical regulation.

Subsection 2. The Danish Maritime Authority shall accept tests carried out by recognised test institutes, including test institutes in other EU member states as well as in countries signatory to the EEA Agreement providing appropriate and satisfactory guarantees of a technical, professional and independent nature.

Penalty and entry into force clauses, etc.

Section 5. Contraventions of Sections 3(1) and 3(2) shall be punishable by fine or imprisonment for a period not exceeding 1 year.

Subsection 2. The penalty may be increased to imprisonment for a period not exceeding 2 years if

- 1) the contravention has caused damage to life or health or risk of such damage,
- 2) an injunction or order has previously been issued in connection with the same or equivalent situations, or
- 3) the contravention has produced or has been intended to produce financial benefits to the contravener or others.

Subsection 3. It shall be considered especially aggravating circumstances if the violation has resulted in damage to the life or health or risk of such damage to young persons below the age of 18, cf. subsection 2(1).

Subsection 4. If the financial benefit achieved is not confiscated, special consideration shall be paid to the size of the achieved or intended financial benefit when determining fines, including supplementary fines.

Subsection 5. Companies etc. (legal personalities) may be liable to punishment according to the provisions of Chapter 5 of the Penal Code.

Section 6. This technical regulation shall enter into force on 1 April 2003.

Subsection 2. At the same time, the following technical regulations shall be repealed:

- 1) Technical regulation no. 10 of 15 December 1995 on port-based coastal rescue vessels.
- 2) Technical regulation no. 8 of 6 August 1993 on open, light coastal rescue vessels.

The Danish Maritime Authority, 10 March 2003
Ib Matthiesen / Peter Lauridsen

Annex to the technical regulation on the coastal rescue vessels of the Royal Danish Administration of Navigation and Hydrography issued by the Danish Maritime Authority

This annex has been divided into the following chapters:

Chapter 1 – Common rules for coastal rescue vessels covered by this technical regulation

Chapter 2 – Port-based coastal rescue vessels

Chapter 3 – Light coastal rescue vessels

Chapter 4 – Coastal rescue vessels of the fast rescue boat type

Chapter 1

Common rules for coastal rescue vessels covered by this technical regulation

Regulation 1 Definitions

For the purposes of this annex, the following definitions shall apply:

- .1 The "length (L)" shall be calculated as 96% of the total length on a waterline at 85% of the least moulded depth measured from the top of the keel, or the length from the foreside of the stem to the axis of the rudder stock on that waterline, if that be greater. In ships designed with a rake of keel the waterline on which this length is measured shall be parallel to the designed waterline.
- .2 The "overall length" means the vessel's overall length expressed in metres, excluding any fenders if they do not contribute to buoyancy.
- .3 "B" means the vessel's maximum breadth expressed in metres, excluding any fenders.
- .4 "D" means the vessel's moulded depth amidships at the side from the lower edge of the deck to the inner edge of the keel or rabbet line expressed in metres.
- .5 "d" means the vessel's draught amidships from the deepest operating waterline to the inner edge of the keel or rabbet line expressed in metres.
- .6 A "decked vessel" means a vessel with a continuous watertight deck above the waterline at the deepest operating waterline and efficient weathertight means of closing all openings.
- .7 "Approved" means approved by the Danish Maritime Authority, cf. however, section 4 of this technical regulation on equivalents and approval of tests, etc.
- .8 "Open vessels" means vessels that are not decked and with no houses, cabins or other kinds of enclosed spaces in which those on board may reside.
- .9 "Maximum number of persons" means the number of persons who can be seated in the vessel inside of the gunwale, allowing for a circle with a diameter of 0.50 m for each person.
- .10 "One person" corresponds to a person with an average weight of 75 kg.
- .11 "DSC" means digital selective calling, which is a technique using digital codes which enables a radio station to establish contact with, and transfer information to, another station or group of stations, and complying with the relevant recommendations of the International Telecommunication Union (ITU-R).
- .12 "INMARSAT" means the Organisation established by the Convention on the International Maritime Satellite Organization adopted on 3 September 1976.
- .13 "EPIRB" (Emergency Position Indicating Radio Beacon) is an emergency satellite radio beacon.
- .14 "MMSI" (Maritime Mobile Service Identity) is a 9-digit number that identifies the vessel on, among other things, DSC equipment and EPIRBs.
- .15 "Float-free EPIRB" means an EPIRB placed in a holder arranged so that the EPIRB automatically floats free and is activated if the vessel sinks.
- .16 "SART" (Search and Rescue Transponder) is a transmitter/receiver that is activated by signals from a 3-cm radar and that transmits signals registered by a 3-cm radar. It is used for locating purposes in emergencies.
- .17 "NAVTEX" is a receiver for the automatic reception of maritime safety information (MSI) in English on 518 kHz.

- .18 "Sea area A1" means an area within the radiotelephone coverage of at least one VHF coast station in which continuous DSC alerting is available, as may be defined by a Contracting Government.
- .19 "Sea area A2" means an area, excluding sea area A1, within the radiotelephone coverage of at least one MF coast station in which continuous DSC alerting is available, as may be defined by a Contracting Government.
- .20 "Sea area A3" means an area, excluding sea areas A1 and A2, within the coverage of an INMARSAT geostationary satellite in which continuous alerting is available.
- .21 "Sea area A4" means an area outside sea areas A1, A2 and A3.
- .22 "Continuous watch" means that the radio watch concerned shall not be interrupted other than for brief intervals when the vessel's receiving capability is impaired or blocked by its own communications or when the facilities are under periodical maintenance or checks.

Regulation 2 Miscellaneous provisions

- .1 Gas installations may not be found on board.
- .2 All machinery, including electrical components and fittings, shall be capable of functioning following a 360 roll.¹ All shall be fixed and properly secured taking into account the effects to which the vessel may be expected to be exposed.
- .3 Depending on the type and method of launching, the rescue service organisation and the Royal Danish Administration of Navigation and Hydrography shall jointly draw up a list of equipment and any special measures required for each individual vessel.
- .4 In general, all equipment, etc. on board shall be fixed, lashed, placed in fittings, compartments or the like, and no equipment may have been placed unsecured on board.
- .5 On the outside of all lockers and compartments for equipment as well as next to holders, signs shall have been affixed indicating in an appropriate way what equipment is found in the locker or for what component the holder is intended.
- .6 No equipment may be stowed in engine spaces or steering gear spaces.
- .7 Operating instructions for machinery, equipment, etc. shall be available on board.
- .8 Fuel with a flash point below 50 C may not be used unless provided otherwise in connection with each individual type of rescue vessel.
- .9 A coastal rescue vessel shall be painted in highly visible colours.

Regulation 3 Surveys and certificates

Survey intervals

- 3.1 All port-based and light coastal rescue vessels shall be subjected to the following surveys:
 - .1 "An initial survey" before the vessel is put into service as a new vessel.
 - .2 "A periodical survey" at intervals not exceeding five years.
 - .3 "A conversion survey" in connection with conversions or replacement of the engine.
- 3.2 In addition, port-based coastal rescue vessels shall be subjected to the following surveys:

¹ This may, for example, be tested using the procedure for an "engine inversion test" for rescue vessel engines in IMO resolution MSC.81(70).

- .4 "An equipment survey" not less than 27 and not more than 33 months after the most recent main survey.
- .5 "A bottom survey" not less than 27 and not more than 33 months after the most recent main survey. This provision shall, however, not apply to light coastal rescue vessels and coastal rescue vessels of the FRB type stored indoors.
- .6 "A radio survey" at intervals not exceeding 12 months. This shall, however, apply only to port-based coastal rescue vessels. In the case of light coastal rescue vessels, radio surveys shall be carried out in connection with the equipment survey, cf. subparagraph (4) above.

(Provisions on surveys of coastal rescue vessels of the FRB type can be found in chapter 4.)

Tests

3.3 In connection with the initial survey, the following tests shall be carried out in addition to those to which a cargo ship of the same size is subjected:

- .1 An inclining test.
- .2 Vessels built as automatically self-righting shall be subjected to a self-righting test verifying that the intact vessel is capable of righting itself from any angle of heel from 180°. The test may be carried out by means of a continuous, slow release of the heel wire. During the test, engines, instruments, etc. may be replaced by models of the same weight, cubic capacity and location of the centre of gravity.
- .3 A sea test of at least six hours' duration and, insofar as possible, in adverse weather conditions. However, in the case of light coastal rescue vessels and vessels of the FRB type, a duration of only four hours is required.
- .4 Pressure, leakage and spray tests.

All spaces, tanks, watertight boundaries and watertight and weathertight hatches and doors as well as profile rudders and propeller nozzles, etc. shall be pressure and leakage tested or spray tested in accordance with the current standards and practices applied by a recognised classification society.

Conversions of existing coastal rescue vessels

3.4 When conversions are made to a vessel that affect its weight or centre of gravity, the Danish Maritime Authority shall be contacted to assess the influence of the modifications on the vessel's stability. The assessment of the modifications will result in one of the following measures being taken:

- .1 Insignificant modifications: The vessel's original stability calculations may continue to be used unaltered.
- .2 Minor weight modifications (typically, replacement of the engine for a lighter type): The existing calculations may be corrected by means of a weight-moment calculation, and extra ballast may be applied, if necessary, to achieve the same stability as prior to the modification.
- .3 Significant weight modifications: If the weight modifications are deemed to have a significant influence on the vessel's stability, a new inclining test shall be carried out as the basis for a correction of the original calculations.
- .4 Conversions leading to changes in hydrostatic and isocline data: When such conversions are made, complete calculations shall be made under all

circumstances as for a newly constructed vessel and the stability information shall be updated.

Periodical stability check

- 3.5 The stability conditions shall be checked periodically when carrying out an inclining test and determining the lightweight. The stability conditions on board shall be corrected if they are found not to comply with the minimum criteria. This check, which shall be carried out in the presence of the Danish Maritime Authority or an institution authorised by the Danish Maritime Authority, shall be carried out periodically at intervals not exceeding 10 years.
- 3.6 If conversions are made to the vessel and the stability calculations are corrected on the basis of a new inclining test and determination of the lightweight, the conversion date shall, however, be regarded as coinciding with the date of the above-mentioned periodical check.
- 3.7 If conversions are made to the vessel and the stability calculations are corrected on the basis of a ballast-moment calculation or the like that cannot be compared to a complete stability examination, this shall not be accepted as coinciding with the above-mentioned periodical check.

Regulation 4 Type approval

- 4.1 It will be possible to type approve small coastal rescue vessels on special conditions laid down by the Danish Maritime Authority.
- 4.2 Coastal rescue vessels of the Fast Rescue Boat (FRB) type shall be conformity marked as FRB, cf. the technical regulation on marine equipment.

Regulation 5 Radio equipment in coastal rescue vessels

Application

- 5.1 This regulation shall apply to new and existing vessels covered by this technical regulation.

Entry into force

- 5.2 The provisions shall be complied with no later than one month after the entry into force of this technical regulation.
- 5.3 The provisions of this chapter shall not prevent a vessel using whatever means at its disposal for attracting attention in an emergency, making its position known and obtaining help.

Equipment requirements

- 5.4 The equipment requirements can be found in the following chapters relating to the various types of coastal rescue vessels.

Watches

- 5.5 Every vessel, while at sea, shall maintain a continuous watch:
- .1 on VHF DSC channel 70, if the vessel is fitted with a VHF DSC;
 - .2 on the distress and safety DSC frequency 2187.5 kHz, if the vessel is fitted with an MF DSC;
 - .3 for satellite shore-to-ship distress alerts, if the vessel is fitted with an INMARSAT-C station.

- 5.6 Every vessel, while at sea, shall maintain a radio watch for broadcasts of maritime safety information (MSI) on the appropriate frequency or frequencies on which such information is broadcast for the area in which the vessel is navigating.
- 5.7 Every vessel, while at sea, shall maintain, when practicable, a continuous listening watch on VHF channel 16. This watch shall be kept at the position from which the vessel is normally navigated.

Electrical sources of energy

- 5.8 There shall be available at all times, while the vessel is at sea, a supply of electrical energy sufficient to operate the radio installations and to charge any batteries used as part of a source or sources of energy for the radio installations.
- 5.9 The radio installations shall be connected to the vessel's main source of energy and to a separate radio battery by means of an automatic reverser.
- 5.10 An alarm shall be fitted next to the radio equipment which is activated when the radio equipment is being driven solely by the separate radio battery.
- 5.11 The lighting and navigational equipment required which is connected to the vessel's radio equipment shall be connected to the same source of energy as the radio equipment.
- 5.12 If the vessel is engaged on voyages in sea area A2, the VHF-DSC and the MF-DSC shall be capable of simultaneously being supplied by the radio battery for at least 6 hours.

Maintenance requirements

- 5.13 Adequate technical documentation shall be provided on board to enable the equipment to be properly operated and maintained.
- 5.14 Adequate tools and spares shall be provided on board for carrying out the maintenance which the rescue crew can reasonably carry out themselves while the vessel is at sea, e.g. fuses, spare bulbs, etc.
- 5.15 The equipment shall be kept in good working order.

Radio personnel

- 5.16 Every vessel shall carry personnel qualified for distress and safety radiocommunication purposes. The personnel shall be holders of the relevant radio certificates, any one of whom shall be designated to have primary responsibility for radio communications during distress incidents.

Regulation 6 Emergency control

- 6.1 A plan shall be drawn up for control during navigation with one or more components out of operation.
- 6.2 The crew shall be instructed and trained in emergency control.

Chapter 2

Port-based coastal rescue vessels

Regulation 1 General

- 1.1 Port-based coastal rescue vessels shall, as a starting point, comply with the requirements of Notice F from the Danish Maritime Authority on the construction, equipment, etc. of small commercial vessels. If the vessel has a length L of or above 15 or if the overall length multiplied by the maximum breadth gives a scantling number of or above 100, the vessel shall, as a starting point, comply with the provisions of Notice B from the Danish Maritime Authority. In addition, all port-based coastal rescue vessels shall comply with the supplementary regulations of this chapter.

Regulation 2 Tests

- 2.1 In connection with the initial main survey, the following tests shall be carried out:
- .1 An inclining test and determination of lightweight;
 - .2 A self-righting test as stipulated in chapter 1, regulation 3.2.2; and
 - .3 A sea test of at least six hours' duration carried out under adverse weather conditions to the extent possible shall be completed with a satisfactory result. The first vessel of a new design and/or series shall, furthermore, be subjected to the following:
 - .4 A floating test or calculation to establish that the vessel is unsinkable and floats without major trim or list, cf. regulation 4.2.
 - .5 Self-righting tests which demonstrate that the vessel, in a damaged condition and in the most critical condition predicted in the case in question, is capable of righting itself from any list from 0 to 360 . Righting from intervals of approximately 10 will be deemed satisfactory. Alternatively, damage stability may be calculated in accordance with regulations 6, 7 and 8.
 - .6 In the final condition of a vessel after damage, the vessel shall have a metacentric height of at least 0.30 metres. The final condition shall be obtained within a period of 2 minutes calculated from the point when the wheelhouse is flooded. Wheelhouses shall be self-draining.
 - .7 In a damaged condition and in the most critical loaded condition for the case in question, the vessel's self-righting ability shall be positive within the range 0 to 180 (360).
 - .8 Compliance with items 6 and 7 shall be demonstrated by application of recognised calculation methods carried out by a recognised institution. As a prerequisite for the calculations, the following cases of damage shall be anticipated:
 - .1 The wheelhouse is open to the sea and other spaces are intact.
 - .2 The wheelhouse and remaining superstructure are open to the sea and spaces below deck are intact.
 - .3 All spaces below deck are flooded and the superstructure is intact.

Regulation 3 Construction

3.1 In the dimensioning of the hull, superstructures, etc., the rules of a recognised, authorised classification society shall be used, on condition, however, that the finished construction (hull, superstructure, etc.) obtain a total strength against external stresses corresponding to twice that required pursuant to the classification society's rules and that the required tests are carried out in accordance therewith. In case the requirements pertaining to the total strength of the hull are required to be reduced, this shall be appropriately documented when the necessary tests and specific model tests are carried out. Means of buoyancy which form part of the hull shall be of an approved type² and shall preferably be fitted in enclosed spaces.

Steering arrangements

3.2 The steering gear shall be hydraulic and provided with two cylinders, each dimensioned so that they are, jointly and each of them individually, capable of putting the rudder over from 35° on one side to 35° on the other side with the vessel running ahead at maximum service speed in not more than 10 seconds. A separate power supply shall be arranged for each cylinder. A manually operated pump shall be fitted in the steering console for use as auxiliary steering gear. Cross-over valves for the hydraulic system for use of the emergency steering gear shall be located in the wheelhouse.

Rudder arrangement

3.3 The maximum rudder power determined on the basis of the vessel's maximum speed ahead and astern in accordance with the rules of a recognised classification society, shall be doubled when used for dimensioning the rudder, rudder horn, rudder stock, coupling, bearings, etc.

Mooring fittings

3.4 There shall be at least two mooring fittings and a strong bollard fore and two aft as well as a towing hook or another arrangement designed for towing aft. The towing arrangement shall comply with the general rules of the Danish Maritime Authority pertaining to such arrangements. Each fitting shall, together with its attachment, be capable of absorbing a horizontal pull in the fore and aft direction of at least $1.3 \times P$.

$$\text{Where } P = 50 \frac{\Delta}{L}$$

Where Δ is calculated as defined in Notice F, chapter III, regulation 4, and

L is the overall length.

2. Reference is made to Nordic Boat Standard for Materials and Components (NBS M and K).

Regulation 4 Stability and associated seaworthiness

Intact stability

- 4.1 Calculations shall be made demonstrating that the applicable criteria, with the following amendments and additions, are complied with. The stability shall be positive to 180°. Conditions of loading for light ship and for all operating conditions that occur in practice, including ice accretion, shall be drawn up. The stability information produced for use by the master shall, in addition to the information provided in the guidelines, also state the rolling period for each predicted condition. An inclining test shall be carried out for every vessel.
- 4.2 A supplementary examination of the stability conditions shall be carried out using recognised "weather criteria", for example the "Russian criteria".

Buoyancy

- 4.3 The buoyancy, which shall be calculated for the most unfavourable loading condition, shall be calculated on the basis of specific permeabilities and shall be ensured by using fixed, approved means of buoyancy. The buoyancy shall be sufficient to ensure that the vessel, with all spaces below deck open to the sea, floats in an upright position with a minimum freeboard of 76 mm and does not trim forward more than is required for the reserve buoyancy volume forward of the centre of buoyancy to be at least as large as the reserve buoyancy volume aft thereof. Asymmetrical flooding may, in general, be accepted and cross-flooding arrangements, where applicable, shall be automatic, and equalization shall occur within a period not exceeding 2 minutes. During equalization, the list may at no point in time exceed 7°.

Damage stability

- 4.4 Using a recognised method of calculation, an institution recognised by the Danish Maritime Authority shall make calculations verifying that the vessel in the final state of a damaged condition has a minimum metacentric height of 0.30 m. As a prerequisite for the calculations, the following cases of damage shall be anticipated:
- .1 The wheelhouse is open to the sea (other spaces are intact).
 - .2 The wheelhouse and remaining superstructure are open to the sea (spaces below deck are intact).
 - .3 All spaces below deck are flooded (the superstructures are intact).
 - .4 The calculations shall take into account conditions of ice accretion, but the volume of ice may be included as buoyancy.
- 4.5 The final condition shall be obtained within a period of 2 minutes calculated from the point when the wheelhouse is flooded.

Bulwarks

- 4.6 Bulwarks may not be fitted so as to allow water to collect on deck. However, a screen may be fitted for and aft as well as floor moulding. A guard rail 1 m in height shall be fitted all the way round the vessel.

Regulation 5 Provisions on "decked" vessels

Bulkheads

- 5.1 A double hull shall be fitted to the greatest extent possible as well as a forepeak bulkhead, machinery space bulkhead and a bulkhead between the steering gear space and machinery space. Bulkheads shall be watertight. If hatches or doors are arranged in the said bulkheads, they shall be designed with the same strength as the bulkhead, be watertight and be provided with the following text: "To be kept closed while at sea. To be opened only in case of passage."

Windows

- 5.2 The area of the windows shall be restricted to the minimum necessary, and apertures to spaces below deck shall not be permitted. Tempered glass or similar material with equivalent strength and properties shall be used. The thickness of the glass in mm may not be less than that specified in the following table:

Height/width	300	400	500
300	10	10	10
400	10	12	12
500	10	12	16
600	12	12	16

Windows, including sliding windows, shall be fit in fixed frames of a strength and with mounts equivalent to twice the normal standard which provides protection against deformation.

Ventilation openings

- 5.3 When placing ventilation openings and when using, where applicable, water traps and automatically operating means of closing, it shall be ensured that the penetration of water into the vessel is avoided.

Anchor equipment, etc.

- 5.4 There shall be two anchors of a type designed for shallow water and a sandy sea floor. The largest of the anchors shall be placed in a hawse or skids in order for it to be ready for lowering and raising. The main anchor shall be lowered and hauled in by means of a hydraulic winch that can be operated from the wheelhouse. It shall also be possible to operate the winch manually. The size of the anchors, chains, etc. shall be laid down in accordance with Notice F from the Danish Maritime Authority.

Regulation 6 Propulsion machinery

General provisions

- 6.1 Propulsion system means propulsion engine, gears, propeller shaft, propeller, starting equipment, manoeuvring equipment, fuel system, cooling system, lubricating system, monitoring equipment and other necessary equipment for safeguarding propulsion.
- 6.2 The propulsion system shall be capable of operating continually during repeated rolling up to 140 (70 on each side) and with a trim of 20 .

Engine rooms

- 6.3 Propulsion engines, gear, starting systems, fuel systems, cooling systems, lubricating systems and equipment necessary for safe propulsion shall be installed in a separate room.

Propulsion engine

- 6.4 The vessel shall be provided with at least two propulsion systems.
- 6.5 Failure of one propulsion system shall not be capable of preventing continued propulsion and ability to manoeuvre. On vessels of more than 15 metres, the propulsion systems shall be located in separate engine rooms. However, propulsion systems on vessels of less than 15 metres may be located in the same room, taking due account of the considerations this entails.
- 6.6 Port side and starboard propulsion systems shall, in principle, be identical.
- 6.7 If the propulsion engine is directly or indirectly cooled by saltwater (except for keel cooling), it shall be verified that the engine at normal output is capable of running for at least 5 minutes without cooling saltwater.

Propellers and propeller shafts

- 6.8 Propellers and shafts shall be dimensioned in accordance with the rules of a recognised classification society corresponding to Baltic Ice Class 1B in consideration of navigation through drifting objects. The propellers shall be fitted such that they are protected against grounding and damage as a result of the vessel pulling alongside a disabled vessel. The propellers shall be designed in such a way that persons in the water are not injured, e.g. by means of shaft brakes.

Insulation

- 6.9 All fuel oil high-pressure pipes on the engines shall be of the double pipe type. Other fuel oil pipes and hoses shall be screened off so that oil spray from bursts or leaks cannot come into contact with hot surfaces.

Ventilation of engine rooms

- 6.10 The ventilation system shall be designed with an effective arrangement which automatically closes off the ventilation emission during lists exceeding 70°.

Starting systems

- 6.11 It shall be possible to start, stop and regulate the machinery systems from the conning position.
- 6.12 All engines shall be designed in such a way that they can be started using electrical power.
- 6.13 For each propulsion system, there shall be at least two mutually independent accumulator batteries which easily and quickly by means of a fixed arrangement (interchangeable cables are not permitted) can be connected to both starting and charging arrangements, and which are separately capable of supplying power for six starts without the need for being charged again.
- 6.14 Each propulsion system shall be fitted with an automatic charging device. The starting batteries in a propulsion system shall, by means of a switch, be capable of being charged from another propulsion system.

Fuel tanks

- 6.15 The ventilation arrangement of fuel tanks shall be designed in such a way that fuel oil does not run out nor seawater run in if the vessel capsizes.

Fuel system

- 6.16 The fuel supply of each propulsion system shall be as large as possible, but not less than that required for 20 hours' operation at 100 per cent load.
Internal lines between fuel tanks belonging to the same propulsion system may be permitted.
Pumping of fuel oil from one propulsion system to another during operation may only be carried out using a hand pump.
The suction pipe in the tank shall be located such that the tank can only be emptied to 100 mm above the propulsion system's normal suction.
The fuel system may not have remote-controlled quick shut-off valves.
There shall be an arrangement for preventing the formation of air in the fuel system shall be provided.

Exhaust system

- 6.17 There shall be an arrangement for preventing water entering the exhaust pipe.

Cooling water systems and sea connections

- 6.18 Cooling water pumps shall have automatic suction.
6.19 Systems for indirect cooling shall be provided with suitable anti-freeze equipment.

Regulation 7 Fire extinction

- 7.1 There shall be at least two approved ABC fire-extinguishers, each of at least 6 kg, for each propulsion system.
7.2 The fire-extinguishers shall be mounted at the entrance descending to the engine rooms.
7.3 One approved ABC fire-extinguisher of at least 6 kg shall also be installed in rescue spaces, mounted immediately inside the entrance.
7.4 A fixed fire-extinguishing system with associated automatic fire-detection system shall be installed in every engine room.

Regulation 8 Navigation, etc.

- 8.1 In addition to the means for navigating, etc. prescribed for a cargo ship over 20 tonnes engaged on domestic voyages, a coastal rescue vessel shall be provided with the following:
- .1 A suitable radar.
 - .2 A suitable echo sounder.
 - .3 A receiver for a global satellite navigation system or a terrestrial radionavigation system or similar capable of automatically determining and updating the position of the vessel at all times during the entire planned voyage.
 - .4 At least two suitable searchlights for use in search and rescue operations during the night.
 - .5 A daylight signalling lamp.

- .6 “The International Code of Signals” and signal flags relevant to the coastal rescue service and “the International Aeronautical and Maritime Search and Rescue (IAMSAR) Manual”.
- .7 A suitable pair of binoculars.

Regulation 9 Life-saving appliances, etc.

- 9.1 In addition to the provisions contained in Notice F from the Danish Maritime Authority, the following shall apply:
- .1 Inflatable, rubber liferafts with sufficient capacity to accommodate the normal crew shall be carried on both sides. The total capacity of the liferafts shall be sufficient to accommodate both the crew and the number of rescued persons the vessel is designed to carry. The liferafts shall be appropriately positioned having regard to the lowering of the rafts and protection against the sea. The liferafts may not be fitted with hydrostatic release units.
 - .2 The vessel shall be equipped with a lifejacket with light for every rescuer on board and a lifejacket for each of the number of rescued persons the vessel is designed to carry.
 - .3 Each rescuer on board shall be provided with a suitable, approved immersion suit.
 - .4 A further 12 approved rocket parachute flares and 12 approved red hand flares shall be carried. The flares shall be replaced in accordance with the manufacturer's instructions, but not later than at the first opportunity at the end of 4 years from the date of manufacture.
 - .5 Life-saving appliances shall be SOLAS-approved (conformity marked) or especially approved for use in coastal rescue vessels.
 - .6 At least two orange smoke signals and six white star rockets for showing the life-saving signals stipulated in Notice B from the Danish Maritime Authority, chapter V, regulation 16.
 - .7 In addition to the lights prescribed in the International Regulations for Preventing Collisions at Sea, the coastal rescue vessel may, when in action during the night, also display a blue flashing light.

Regulation 10 Special equipment

- 10.1 The coastal rescue vessel shall be provided with a rescue zone on both sides in which the railing can be opened to facilitate the boarding of rescued persons.
- 10.2 It shall be possible to hang out a suitable boarding net in the rescue zone which, when hung out, extends from the deck to a least 1 m below the waterline. The lowest part of the boarding net shall be fitted with ballast to enable it to sink below the surface of the water.
- 10.3 It shall be possible to illuminate the rescue zone, the deck in the rescue zone and the water surrounding the rescue zone.
- 10.4 The coastal rescue vessel shall have efficient fenders. The fenders shall prevent the vessel from being damaged when it pulls alongside another vessel in rough weather in the open sea.
- 10.5 The coastal rescue vessel shall be provided with a towing arrangement. The towing arrangement and the fitting thereof shall comply with the relevant provisions of the Danish Maritime Authority. The towing arrangement shall be fitted as far forward of

- the stern as necessary to enable the rescue vessel to retain its steering capacity as much as possible while towing.
- 10.6 The vessel shall be provided with an effective megaphone.
- 10.7 The vessel shall be provided with a pair of night binoculars.
- 10.8 There shall be two approximately 4 metre long boathooks and one approximately 4 metre long pole fitted with a suitable ring approximately 50 cm in diameter.
- 10.9 The vessel shall be equipped with suitable hoisting for use when taking lifeless persons on board from the water.
- 10.10 An approved line-throwing appliance with four projectiles and four lines shall be carried on board.
- 10.11 The vessel shall carry hauling lines, mooring equipment and tow ropes as necessary.

Regulation 11 Medicaments, etc.

- 11.1 The rescue vessel shall carry medicine and medicaments, etc. in accordance with the rules in force for cargo ships in the relevant service area. In addition, such medicine and medicaments, etc. may be carried as may be required in accordance with the function of the coastal rescue vessel.
- 11.2 A suitable hoistable stretcher shall be carried.
- 11.3 A suitable number of woollen blankets or similar shall be carried for use by rescued persons.
- 11.4 It shall be possible to prepare hot drinks or hot soup for rescued persons.

Regulation 12 Radio equipment

- 12.1 Coastal rescue vessels shall be fitted with radio equipment in accordance with the following table:

Sea area	VHF-DSC	MF-DSC	EPIRB manual	SART	Portable VHF	NAVTEX
A1	2 ³		1	1	1	1 ⁴
A2	2 ³	1	1	1	1	1 ⁴

- .1 As regards functional requirements for the individual types of radio equipment in the above table and the installation thereof, the provisions in the chapter on radio equipment contained in chapter IV of Notice B from the Danish Maritime Authority shall apply. Please see this set of regulations.
- .2 The radio installation shall be fitted with reliable, permanently installed electrical lighting providing adequate light for the operating facilities of the radio installation.
- .3 DSC and any Inmarsat equipment shall be continually and automatically supplied with information on the position of the vessel from the navigational equipment.
- .4 The radio installation shall be clearly marked with the vessel's name, call sign and MMSI number.
- .5 In addition to the aforementioned equipment, port-based coastal rescue vessels shall be fitted with
- mobile telephone (GSM) and

³ On existing coastal rescue vessels, only one of the VHF radio systems need be equipped with a DSC.

⁴ So far, vessels with a service area in sea areas A1 and A2 within the lines east of 6 eastern longitude in the North Sea and south of 58 northern latitude in the Baltic are not required to carry NAVTEX receivers. Acquisition is, however, recommended.

- maritime VHF direction finder which, in addition to the maritime VHF channels, shall be capable of locating on the aircraft frequency 121.5 MHz.

Accommodation spaces

Regulation 13 Wheelhouse, rescue spaces and storerooms

All rooms

- 13.1 Sharp corners and edges shall be avoided as far as possible in all spaces. Where this is not possible, padding shall be fitted.
- 13.2 Handgrips/handrails shall be fitted along all gangways and where there are no places to sit.
- 13.3 The vessel shall be heated either by electricity or by engine cooling water.
- 13.4 The noise level shall be kept as low as practicable and may not exceed 75 dB(A) in the wheelhouse.

Wheelhouse

- 13.5 At least two of the windows at the front of the wheelhouse shall be provided with windscreen washers. It shall be ensured by using hot wires or similar arrangement that the two specified panes and at least one pane on each side is free of frost and mist.
- 13.6 In view of the risk of water penetration, access to the wheelhouse from the outside shall as far as possible be from a protected position or through an airlock.
- 13.7 If a fixed lookout is arranged, a means of communication with the wheelhouse shall be established.
- 13.8 An appropriate chair shall be installed for the master.
- 13.9 The wheelhouse shall contain a ventilation system with a capacity for 15 air changes per hour. It shall be possible to control the system from the wheelhouse in an easy and convenient manner. It will be possible to approve other arrangements provided that they provide equivalent conditions for the crew.
- 13.10 The wheelhouse shall be self-draining.

Rescue spaces

- 13.11 It shall be possible to comfortably access the rescue space with a stretcher, and the space shall contain a suitably located and fastened stretcher.
- 13.12 Seats in rescue spaces shall be provided with safety belts.
- 13.13 Electric "night lighting" shall be provided.
- 13.14 There shall be a ventilation system with a capacity for a minimum of ten air changes per hour.

Storerooms

- 13.5 Rooms used for storing articles of any nature shall be fitted with shelves with fiddles and poundboards with hinged hatches which it shall be possible to secure in the closed position.

Chapter 3

Light coastal rescue vessels

Regulation 1 Approval

- 1.1 In the construction of a series of vessels, a prototype of the vessel may be built in accordance with the requirements of items 4-10. The prototype shall thereafter be subjected to a prototype test, cf. the Danish Maritime Authority's Guidance on prototype tests for open, light coastal rescue vessels.
- 1.2 When a vessel type has been type approved, subsequent vessels shall be identical to the prototype. For a series of uniform coastal rescue vessels, the manufacturer shall introduce a quality control procedure to ensure that the vessels are produced to the same standard as the prototype. All vessels produced shall be subjected to an initial main survey by the Danish Maritime Authority before being put into service.
- 1.3 For vessels produced as one-off manufactures, a type-approval shall not be issued. However, every individual vessel shall be subjected to inspection, survey and tests in accordance with these regulations.
- 1.4 Every vessel that has undergone significant repair, alteration or renewal shall be subjected to a survey as prescribed in chapter 1.

Functional requirements

- 2.1 The vessel shall be capable of accommodating at least nine persons, two of whom are crew members and one of whom is a person on a stretcher.
- 2.2 The vessel shall be capable, fully equipped and with three persons on board, of navigating at a minimum speed of 25 knots.
- 2.3 The vessel shall, in the condition specified in regulation 2.2, be capable of accelerating from 0 to a speed of 25 knots in not more than 15 seconds, and, with full engine capacity, have a minimum operating time of 4 hours.
- 2.4 The vessel shall be self-righting or be equipped with apparatus that, by manual operation, is able to right the vessel after capsizing.
- 2.5 The arrangement for self-draining while the vessel is moored shall be effective; this shall be demonstrated during practical sea tests.
- 2.6 The vessel shall have a capacity to manoeuvre for the intended purpose.

Regulation 3 Structure and arrangements

- 3.1 Vessels with an engine output providing a maximum speed of 30 knots or less under conditions specified in regulation 2.2 shall in principle be designed in accordance with the rules in force for rescue vessels contained in Notice B from the Danish Maritime Authority. However, drop and impact tests shall be carried out using loads corresponding to the requirements of regulation 2.2.
- 3.2 Where the structure is exposed to greater external stresses than normal for a rescue vessel due to the particular use of the vessel, the structural elements such as bases, supporting structures, stiffeners, etc., shall be designed to withstand such forces.
- 3.3 Vessels with an engine output providing a maximum speed of more than 30 knots shall be dimensioned in accordance with the rules pertaining to rescue vessels issued by a recognised classification society. However, coefficients for design loads given in the society's rules shall be doubled. If the requirements pertaining to the total strength of the hull are required to be reduced, this shall be documented when the

- necessary tests and specific model tests are carried out. However, the vessel shall as a minimum be dimensioned to withstand a force equivalent to ten times the acceleration due to gravity ($g = 9.8 \text{ m/s}^2$) measured vertically at the vessel's centre of gravity. The height for the drop test for such vessels shall be increased to 4 metres.
- 3.4 The vessel, fully equipped with a minimum of nine persons on board, shall have a satisfactory freeboard and satisfactory stability during operation.
 - 3.5 The vessel shall have sufficiently positive stability when it is loaded with its full complement of persons in accordance with the seating test and has leakages in any part of the hull and/or fender beam if this forms part of the buoyancy, but only to the extent that not more than two spaces become flooded.
 - 3.6 Unless the vessel has an adequate sheer, it shall be provided with a bow cover extending for not less than 10% and not more than 15% of the overall length of the vessel.
 - 3.7 There shall be seats for the crew (three persons) which shall be adequately secured. It shall be possible for the other persons the vessel is designed to carry to sit safely within the gunwale or fenders.
 - 3.8 There shall be an appropriate space for a stretcher (space requirement 2.0 x 0.6 metres).
 - 3.9 Except in the vicinity of the rudder and propeller, a buoyant lifeline shall be becketed around the outside of the vessel.
 - 3.10 An arrangement of gripping devices which provide corresponding means of gripping onto the vessel, irrespective of whether it is on an even keel or upside down, will be acceptable instead of the lifeline required in regulation 3.9.
 - 3.11 Suitable fittings shall be provided for securing the painters for and aft and the lifelines attached outside and inside the vessel.
 - 3.12 Depending on the design and freeboard of the vessel, a fixed ladder or a rescue net shall be provided.
 - 3.13 Depending on the design of the vessel, a bracket shall be fitted from the control panel to the stem.

Regulation 4 Buoyancy

- 4.1 The vessel shall in itself have sufficient buoyancy or shall be provided with approved buoyancy material to keep the vessel and its equipment afloat when the spaces not filled with fixed buoyancy material are flooded and open to the sea.
- 4.2 In addition, approved means of buoyancy shall be provided which in itself has a buoyancy corresponding to 280 N per person for the maximum number of persons the vessel is designed to carry.
- 4.3 The buoyancy volume required by the vessel may be obtained from the following:
 - .1 Internal foam-filled tanks integrated into the hull construction.
 - .2 External, permanently attached foam fenders/tubes.
 - .3 A combination of the above.
- 4.4 Where buoyancy is wholly or partly provided by external fenders/tubes which do not form an integrated part of the hull, these shall be divided into sections, the length of each not exceeding 20% of the overall length of the vessel. However, this shall not apply to solid fenders.
- 4.5 The fender shall extend all the way round the vessel and protect the propulsion aggregate, unless another form of protection has been fitted.

Regulation 5 Freeboard and stability

- 5.1 When the vessel is loaded with 50% of the persons it is designed to carry seated in their normal positions to one side of the centreline, there shall be a distance measured from the waterline to the lowest point on the upper edge of the deck or the gunwale, fixed fenders or buoyancy tubes of at least 1.5% of the length of the vessel or 100 mm, whichever is greater.
- 5.2 Where the vessel is not designed to be self-righting, it shall be fitted with an apparatus that is capable of righting the vessel in not more than 5 minutes after capsizing which is manually operated from the sea.
- 5.3 Handrails shall be fitted on the bottom of the vessel or on the stern for the person controlling the release arrangement to hold on to.

Regulation 6 Marking

- 6.1 The vessel shall be marked with its signal letters and port of registry in legible, indelible letters and figures.
- 6.2 In addition, the vessel shall be marked with the manufacturer's name or trademark, construction number and date of manufacture.
- 6.3 The whole vessel shall be painted in a highly visible colour and provided with retro-reflective material as on rescue boats, cf. the Danish Maritime Authority's Technical Regulation on retro-reflective materials on life-saving appliances.

Regulation 7 Propulsion machinery

7.1 Propulsion systems

- .1 There shall be two mutually independent propulsion systems that are well-adapted to the conditions in which they are to function. The engines may be installed in the same space, cf. 7.2.1. A single propulsion system may be permitted in exceptional circumstances.
- .2 The engines shall be fitted with thermocontrolled engine heaters which, as a minimum, are able to maintain engines at 0 °C at an ambient temperature of minus 15 °C.
- .3 Petrol engines may only be used if they are situated outside the hull.
- .4 Engines, couplings and gears shall comply with the SOLAS provisions for rescue boat engines and shall be tested in accordance with the IMO Recommendation on testing of life-saving appliances.⁵
- .5 The engines shall stop if the master falls overboard, and provisions shall be made to enable the engines to be easily restarted.

7.2 Engine case

- .1 Engines and gears shall be installed in a closed, fire-retardant case which absorbs noise.
- .2 The engine case shall be designed in such a way that the engines and equipment are kept dry and in working order and are ensured of the necessary air supply during operation.
- .3 It shall be possible to close all openings of the engine case weathertight.
- .4 Under each engine, a wastewater sump shall be fitted together with means of preventing bilge water from spraying up onto the engine.

5. IMO Resolution MSC.81(70), "Revised recommendation on testing of life-saving appliances".

7.3 Protection of the propeller

Where a screw propeller is used, it shall be surrounded by a nozzle, grille or similar structure to protect persons in the water. A grille that can be lowered, which is used when retrieving persons, may be approved.

7.4 Instrumentation

At the conning position, there shall be indicating instruments or similar for the propulsion machinery's fuel supply, lubricating oil pressure, revolutions, cooling water temperature and ammeter for the battery charge. It shall be possible to read these instruments during the night. In addition, there shall be acoustic and visual alarms for low lubricating oil pressure, high cooling water temperature, failure of the battery charger and high level of bilge water in the machinery space.

7.5 Screening

All hot and rotating parts within the vessel, including the propeller shafts, shall be protected against inadvertent contact.

7.6 Starting system

- .1 Manoeuvring as well as starting and stopping of the engines shall be possible from the conning position.
- .2 Screw propellers, water jets and similar propulsion components shall be capable of being switched on and off from the conning position.
- .3 It shall be possible to start each engine electrically, and there shall be at least two mutually independent accumulator batteries connected by means of a fixed arrangement to both the starting and charging arrangements and which are separately capable of supplying power for six starts without the need for charging. Interchangeable couplings may not be used.

7.7 Fuel system

- .1 The fuel system shall be arranged in such a way that there is no penetration of seawater, even in the event of capsizing.
- .2 Fuel tanks of approved material shall be securely fixed to the structure of the vessel.
- .3 Fuel filters shall be doubled and placed parallel to switches that are easily accessible.
- .4 The only closing devices permitted in the fuel system are valves.
- .5 Fuel pipes shall be made of steel piping.
 - .1 In fuel pipes used for a fuel other than petrol, short approved hoses with screw joints may be used.
 - .2 For outboard engines, approved hoses with screw joints may be used between the engine and engine well or stern.

7.8 Exhaust system

The exhaust system shall be so arranged as to prevent water entering the engines during operation or on capsizing.

7.9 Cooling water system and sea connections

- .1 If seawater is used for direct cooling of the engine or exhaust system, there shall be either an external grille fitted in connection with the seawater intake or a readily accessible filter capable of being cleaned without the use of tools fitted on the inlet side of the cooling water line.
- .2 The cooling water intakes may not be common to two engines, but shall be placed as far from each other as practicable.

7.10 Lubricating oil system

The lubricating oil system shall be designed in such a way that the engines do not lose lubricating oil on capsizing, and the engines shall be capable of being restarted without the risk of loss of the vessel.

7.11 Bilge pumping

A manual bilge pump with suction from the wastewater sump shall be fitted. The hydrant shall be fitted with a hose. The capacity of the pump per stroke shall not be less than 0.7 l.

7.12 Electrical installations

- .1 Electrical installations shall be twin wire and insulated.
- .2 The main electrical system shall be capable of functioning in all conditions, even after capsizing.
- .3 Accumulator batteries shall be capable of being turned through 360° on a horizontal axis without loss of liquid and be maintained for 8 minutes in the most unfavourable position as regards loss of liquid.
- .4 During operation, it shall not be possible for seawater to penetrate accumulator spaces or cases.
- .5 Means shall be provided for recharging all accumulators.
- .6 Centre and tube fuses as well as fuses with automatic connection may not be used.
- .7 Electrical instruments, lights, starters, generators, cables, etc. shall be adequately secured.

7.13 Shore connection

- .1 On connection from land to the vessel's electrical system with voltages greater than 50 volt, the connection shall be electrically isolated from the vessel's electrical system.
- .2 A suitable, strong rubber cable shall be used for the shore connection cable. The connection shall be fitted in an appropriate position and be protected against splashes and weather. Connection to the vessel shall not be effected by means of a plug connector on the connection cable (male plug).
- .3 Apparatus for connecting to land shall include connection to the shore installation's protective earthing.
- .4 At the shore-connection apparatus the type of current and voltage that may be supplied to the installation shall be indicated.

7.14 Fire extinction

For the extinction of fire, a manually operated fire-fighting system shall be installed in each engine case.

Regulation 8 Equipment

- 8.1 All items of the vessel's equipment shall be secured within the vessel by means of lashings or stored in suitable lockers or compartments. Items of equipment may not be stored in compartments which, with a view to the safe operation of the vessel, shall be kept closed watertight while at sea.
- 8.2 The vessel shall be provided with sufficient lights and sound signalling devices to enable it to comply with the provisions of the International Regulations for Preventing Collisions at Sea. In addition, a blue flashing light may be displayed.
- 8.3 The crew shall be dressed in either immersion suits and lifejackets or rescue suits and lifejackets.
- 8.4 The vessel's normal equipment shall consist of:
- .1 Two paddles to make headway in calm seas. The paddles shall be capable of floating on water.
 - .2 A compass which is luminous or provided with suitable means of illumination.
 - .3 A sea-anchor and tripping line with a cable of adequate strength and not less than 10 metres in length.
 - .4 Anchor equipment.
 - .5 A painter of sufficient length and strength, attached at the forward end of the vessel.
 - .6 A buoyant line, not less than 50 metres in length and of sufficient strength to tow a liferaft.
 - .7 Two waterproof electric torches suitable for Morse signalling together with one spare set of batteries and one spare bulb in a waterproof container.
 - .8 One whistle or equivalent sound signal.
 - .9 Approved first-aid kit in a waterproof case containing the following:
A dressing case containing:
4 approved thermal protective aids,
1 set of pressure dressings (arms and legs),
4 head dressings,
4 slings and
6 gauze dressings.
1 supplementary case to medicine chest 4.
1 gas first-aid appliance for vessels operating in areas with the risk of fishing up war gas.
1 item of resuscitation equipment.
 - .10 Two buoyant rescue quoits, attached to not less than 30 metres of buoyant line.
 - .11 An efficient, waterproof searchlight.
 - .12 An efficient radar reflector.
 - .13 Light coastal rescue vessels shall only be equipped with one permanently installed VHF-DSC radio installation and one portable VHF radio installation. Radio installations in open vessels shall be of a waterproof type (at least IP 67).
 - .14 Means for watertight storage of small items of equipment.
 - .15 A set of signalling devices (pyrotechnical) consisting of:
6 approved hand flares.

- 4 approved parachute flares and
6 white flares.
 - .16 A boathook.
 - .17 A bucket.
 - .18 A knife or hatchet.
 - .19 A 6 kg fire-extinguisher of a type suitable for use in the vessel.
- 8.5 The righting system shall be inspected and tested annually at an authorised workshop.

Chapter 4

Coastal rescue vessels of the "fast rescue boat" type

Regulation 1

Rescue vessels of the "fast rescue boat" type shall be designed in accordance with and satisfy the provisions for fast rescue boats (FRB) in ro-ro passenger ships, cf. Notice B from the Danish Maritime Authority, regulation III/26.3.1 and the Danish Maritime Authority's Technical Regulation on marine equipment. However, as the vessels will not be lowered from a ship at sea, the maximum length may be up to 15 metres. In addition, they shall comply with the following regulations:

- .1 The vessels shall be approved for launching from the beach or in port by means of a crane or over skids.
- .2 The vessels shall be designed in accordance with the rules for conformity marking ("wheel mark"), cf. the Technical Regulation on marine equipment.
- .3 Depending on the type and launching method, the rescuers' organisation and the Royal Danish Administration of Navigation and Hydrography shall jointly draw up a list of equipment and special measures, where applicable, for individual vessels.
- .4 The vessels shall only be fitted with one permanently installed VHF-DSC radio installation and one portable VHF radio installation. Radio installations in open vessels shall be of a waterproof type (at least IP 67).
- .5 Every vessel shall be surveyed and approved by the Danish Maritime Authority and be issued with a trading permit and survey book before it is put into service as new. The trading permit and survey book may be kept at the vessel's shore-based station. The vessel shall thereafter be subjected to periodical surveys carried out by the Danish Maritime Authority every 4 years.