FOREWORD

DET NORSKE VERITAS (DNV) is an autonomous and independent foundation with the objectives of safeguarding life, property and the environment, at sea and onshore. DNV undertakes classification, certification, and other verification and consultancy services relating to quality of ships, offshore units and installations, and onshore industries worldwide, and carries out research in relation to these functions.

The Rules lay down technical and procedural requirements related to obtaining and retaining a Class Certificate. It is used as a contractual document and includes both requirements and acceptance criteria.

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Any comments may be sent by e-mail to rules@dnv.com

If any person suffers loss or damage which is proved to have been caused by any negligent act or omission of Det Norske Veritas, then Det Norske Veritas shall pay compensation to such person for his proved direct loss or damage. However, the compensation shall not exceed an amount equal to ten times the fee charged for the service in question, provided that the maximum compensation shall never exceed USD 2 million.

In this provision "Det Norske Veritas" shall mean the Foundation Det Norske Veritas as well as all its subsidiaries, directors, officers, employees, agents and any other acting on behalf of Det Norske Veritas.
CHANGES

General
This document supersedes the January 2011 edition.

Text affected by the main changes in this edition is highlighted in red colour. However, if the changes involve a whole chapter, section or sub-section, normally only the title will be in red colour.

Main changes coming into force 1 January 2013
• Sec.1 General regulations
  — A401 to 404 in previous edition of document regarding required fuel capacity is deleted.
• Sec.2 Arrangement
  — B202 in previous edition of document about required means to measure the acceleration level on board is deleted.
  — D300 Windows has been changed to allow glued windows.
• Sec.3 Structures and Equipment
  — A303, definition of factor a for calculation of side and deck sea pressure has been modified.
• Sec.4 Machinery and Systems
  — A300 in previous edition of document preventing fuel tanks in double bottom has been deleted.

Corrections and Clarifications
In addition to above stated main changes, a number of corrections and clarifications may have been made to the existing text.
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SECTION 1
GENERAL REGULATIONS

A. Classification

A 100 Application

101 The main objective of the additional class notation for patrol boats is to provide safety for the crew and other persons onboard under operation in rough weather conditions. This includes the safety of the craft itself.

102 The additional class notation for patrol boats applies to craft which does not carry ordinary cargo, does not carry ordinary passengers nor make commercial trade.

103 No requirements from international codes or conventions are covered by this chapter.

104 The additional class notation for patrol boats may be applied to craft intended for a number of services i.e. pilot, police, custom, rescue, fire, ambulance, navy, coast-guard, pollution control and patrol services.

A 200 Class notation

201 High Speed and Light Craft built in compliance with this chapter and the rule requirements in Pt.1, Pt.2, Pt.3 except Ch.5 Sec.3, Pt.4 except Ch.11, may be given the additional classification notation Patrol.

202 A patrol boat will be assigned the class notation:

🌟 1A1 LC Patrol

when displacement fully loaded is not more than:

\[
\Delta \leq (0.16 L B)^{1.5}
\]

\(\Delta\) = maximum permissible displacement (tonnes).

The requirement in Pt.1 Ch.1 Sec.2 A103 is not applicable for patrol boats.

203 A patrol boat will be assigned the class:

🌟 1A1 HSLC Patrol

when the condition in 202 is complied with, and when the service speed is above 30 knots. The requirement in Pt.1 Ch.1 Sec.2 A105 is not applicable for patrol boats.

A 300 Service area restriction notation

301 Craft with the class notation Patrol will be assigned one of the service restrictions R0, R1, R2 or R3.

A 400 Operation limitation

401 The restriction of speed versus sea state based on the design acceleration, will be stated in the “Appendix to the class certificate”.

B. Documentation

B 100 General

101 Details related to the additional class notation Patrol are in general to be included in the plans for the main class, Pt.3 Ch.1.

102 Additional requirements to documentation not covered by the main class are specified in appropriate sections of this chapter.

103 For instrumentation and automation, including computer based control and monitoring, see Pt.4 Ch.9 Sec.1.

B 200 Technical manual

201 A technical manual is required. The technical manual is to contain at least the following information:

— main particulars for the craft
— description of the craft and its equipment
— maximum number of crew and passenger
— maximum loading capacity with distribution
— description and operation of systems (machinery, auxiliary, remote control and warning, electrical, fire protection, radio and navigational aids)
— operational speed versus wave height (sea state) and/or acceleration limits
— service and maximum speed versus load and rpm
— towing procedures including permissible towing speed and load
— operation procedures related to safety at high speed
— range of the craft at various rpm
— damage control procedures prior to departure
— procedures for checking the integrity of buoyancy compartments
— list of opening/doors to be kept closed at sea
— details of life saving appliances.

The contents may be modified in relation to the type of craft and the contents of other manuals for the craft.
SECTION 2
ARRANGEMENT

A. Watertight Integrity and Buoyancy

A 100 Reserve buoyancy

101 Patrol craft shall have a reserve buoyancy as defined in Pt.1 Ch.2 Sec.2 A300, as function of full load displacement in accordance with Table A1.

<table>
<thead>
<tr>
<th>Table A1 Reserve buoyancy</th>
</tr>
</thead>
<tbody>
<tr>
<td>R0</td>
</tr>
<tr>
<td>3.0 Δ</td>
</tr>
</tbody>
</table>

Δ = full load displacement

102 Internal foam buoyancy units or similar may be accepted when inspection of structure is possible. Parts of vital structures should be readily accessible via a hatch or equivalent.

103 Foam buoyancy in the hull below waterline and enclosed superstructure may be included in the reserve buoyancy.

A 200 Watertight bulkheads

201 Watertight bulkheads are at least to extend up to the bulkhead deck. For watertight bulkheads in a region with raised quarter deck, the bulkhead need not extend to the quarter deck.

202 At least 3 separate watertight compartments are to be arranged. The collision bulkhead and a bulkhead in front of engine room may be the only 2 bulkheads required as a minimum.

203 Openings in watertight bulkheads will be accepted when approved types of watertight closing appliances are used and alarm for open position is arranged in wheelhouse. Openings to be kept closed at sea.

A 300 Collision bulkhead

301 Below deepest waterline or double bottom, whichever is the upper level, the position of collision bulkhead is to comply with the requirement in Pt.3 Ch.1 Sec.1 B301.

302 Steps or recesses in the collision bulkhead above the level of the deepest waterline or double bottom will be accepted.

303 Openings in the collision bulkhead will be accepted when approved types of watertight closing appliances are used. Openings are to be kept closed at sea. Alarm as required in 203 is to be fitted.

A 400 Double bottom

401 For patrol boats with the class notation **1A1 HSLC**, a double bottom is to be arranged between the forward engine room bulkhead and the collision bulkhead. In addition local watertight sections are to be arranged to protect attachment of spade rudders, brackets, foils or other protrusions.

402 The double bottom is at least to extend in vertical direction to a level of 0.6 m above the moulded base line or to a level corresponding to the intersection with the hull shell at a distance of 0.2 B from the centreline, whichever is the greatest.

403 The double bottom may be omitted if a full length keel bar is arranged below the molded base line.

404 The double bottom may be omitted provided the craft will survive a bottom damage with transverse and vertical extension equal to the minimum dimensions required for the double bottom and with a longitudinal extension of 0.1 L, or 3 m + 0.03 L, or 11 m, whichever is less. No main transverse bulkhead is assumed to be damaged.

A 500 Intact stability

501 The stability requirements for assignment of main class are to be complied with.

**Guidance note:**

For information and guidance to the master, curves should be presented showing wind speeds, for which the IMO weather criterion is in compliance with, for the craft’s draught range.

---e-n-d---of---G-u-i-d-a-n-c-e---n-o-t-e---
B. Accommodation

B 100 Arrangement

101 Patrol boats may be arranged with sleeping cabins. Sleeping cabins may be arranged below the freeboard deck, but not forward of the collision bulkhead.

B 200 Seats

201 Seat accommodation is to be designed to withstand the design accelerations of the craft.

B 300 Stores

301 In compartments for stores, adequate means in accordance with the design accelerations of the craft are to be fitted to prevent shifting of the stored goods.

302 Loading limits are to be durably marked in those compartments.

C. Deck Arrangement

C 100 Rescue area

101 Patrol boats may be arranged with a permanent area applicable to rescue persons from the sea.

102 A rescue area is to be well protected from propeller, rudder or other protrusions from the hull, and visibility to the area from the wheelhouse is to be arranged.

103 A rescue area on deck and side of the craft is to be covered by separate rescue search lights.

C 200 Guard rails and bulwarks

201 For safe working on deck, adequate guard rails or bulwark and handholds are to be arranged where it is considered necessary for the operation of the craft. Guard rails around the anchoring position is not required.

202 Guard rails or bulwarks are in general to have a height of minimum 750 mm above deck.

203 If the craft is designed to operate at sea without crew on deck, it may be accepted to have an arrangement with portable railing intended for use in harbour.

C 300 Freeing ports and drainage

301 To provide rapid freeing of water from the weather deck of craft with service notation R0 and R1 at least half the deck length is to be fitted with open guard rail.

302 If bulwark is used instead of guard rails, scantlings are to be as for superstructures, and freeing ports are to be arranged with a minimum area of openings A according to:

\[ A = 0.7 + 0.035 \times l \]

\( l \) = length of bulwark in considered well.

303 All decks and spaces where wells are formed are to be arranged with drainage.

C 400 Bollard

401 A minimum of 6 mooring bollards according to Sec.3 are to be arranged.

C 500 Towing

501 For patrol boats arranged for towing, an unobstructed view to the towing hook or winch on the afterdeck from the steering position in the wheelhouse is to be arranged.

D. Openings and Closing Appliances

D 100 Doors and hatches

101 Doors and hatches for access openings are to have an equivalent strength as the surrounding structure.

102 On bulkhead deck and raised quarterdecks height of sills and coamings is to be minimum 600 mm for service restriction R0 and R1.

For service restrictions R2 or R3, this height may be reduced to 380 mm aft of midships.
**D 200  Ventilators and air intakes**

201 Ventilators, air intakes and air pipes are to have openings minimum 2400 mm above water line.
For service restriction R1 this height may be reduced to 1800 mm.
For service restriction R2 or R3 this may be reduced to 1200 mm.

202 Openings are to be fitted with arrangement to prevent ingress of sea spray. Openings are normally to be facing aft, but may be accepted facing forward if a protecting grate with drains is arranged.

**D 300  Windows**

301 Windows are generally to be of toughened safety glass. Except for front windows in the wheel house other materials may be found acceptable based on consideration of strength, impact resistance and ageing properties.

302 Thickness of the safety glass is to be calculated according to Pt.3 Ch.6 Sec.1 G200.

303 Window glasses are in general to be firmly mounted in stiff frames with due respect to impacts. In superstructures and deckhouses other types of mounting, gluing etc. shall be documented.

**D 400  Deadlights**

401 Documentation of the arrangement of deadlights is to be forwarded for approval.

402 Deadlights for windows are to be arranged in accordance with Table D1.

<table>
<thead>
<tr>
<th>Location</th>
<th>R0</th>
<th>R1</th>
<th>R2</th>
<th>R3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Below bulkhead deck</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>1 tier above bulkhead deck forward of midship</td>
<td>100%</td>
<td>1 of each type</td>
<td>1 of each type</td>
<td>0</td>
</tr>
</tbody>
</table>

403 Deadlights are to have the same strength as the surrounding panel structure.

404 Deadlights are to be clearly marked if they are not hinged to the window. The arrangement for stowage and mounting is to be such that quick and safe mounting is possible.
SECTION 3
STRUCTURES AND EQUIPMENT

A. Scantlings

A 100 General

101 Patrol boats are to comply with the design principles and design loads in Pt.3 with the modifications specified in this section.

A 200 Design acceleration

201 A patrol craft is at least to be designed for a minimum acceleration level corresponding to Pt.3 Ch.1 Sec.2 B200.

202 The design acceleration may be based on documentation of capability of the craft to maintain speed with maximum engine rating in various sea states.

203 The design acceleration will be stated in the “Appendix to the class certificate”.

A 300 Design pressure and forces

301 The design pressures and forces for patrol craft are in general to be according to Pt.3 Ch.1 Sec.2, with modifications specified in this section.

302 The wave coefficient according to Pt.3 Ch.1 Sec.2 A201 is to be taken as $C_w = 0.08$ L, and no reduction is to be given for service restrictions.

303 When calculating sea pressure on side, superstructure's side and decks according to Pt.3 Ch.1 Sec.2 C501, the factor $a$ is to be taken as:

\[
\begin{align*}
    a &= 1.25 \text{ aft of } L/2 \\
    &= 2.0 \text{ forward of FP} \\
    &= \text{Linear interpolation in between}
\end{align*}
\]

$\text{a} = 1.0$ for weather deck above bulkhead deck

Minimum sea pressure in kN/m² is not to be taken less than as given in Table A1.

<table>
<thead>
<tr>
<th>Table A1 Minimum sea pressure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Side</td>
</tr>
<tr>
<td>Bulkhead deck</td>
</tr>
<tr>
<td>Weather deck</td>
</tr>
</tbody>
</table>

304 When calculating sea pressure on superstructure end bulkheads and deckhouse according to Pt.3 Ch.1 Sec.2 C502, the factor $a$ is to be taken as:

$a = 3.0$ for lowest tier of unprotected front

$a = 2.3$ for deckhouse front

$a = 1.5$ elsewhere.

A 400 Allowable stresses

401 For patrol boats the maximum allowable stresses as specified for the different materials in Pt.3 may be increased with 10%.

A 500 Foundations

501 Weapon system with foundation is not within the scope of classification, and it will be stated in the “Appendix to the class certificate” if the craft is prepared for weapons.

502 For all foundations of heavy equipment weight and moments on the supporting structure is to be specified in the documentation for the foundation.

For cranes, a working diagram for moments is also to be included.

503 All foundations are to be designed with smooth transitions and proper alignment with the hull structure elements.
B. Equipment

B 100 Anchoring

101 Minimum requirements for anchoring are to be as for the additional class notation Yacht according to Ch.5.

B 200 Mooring

201 Minimum requirements for mooring lines are to be according to Ch.5 Sec.3 Table F1.

202 For equipment number exceeding 110 a mooring winch complying with Pt.3 Ch.5 Sec.3 G500 is to be arranged.

B 300 Bollards

301 Bollards for towing are to be designed according to Pt.3 Ch.5 Sec.3 A304, A305 and A306.
SECTION 4
MACHINERY AND SYSTEMS

A. Machinery and Hull Piping

A 100 General

101 Patrol craft is in general to comply with the requirements in Pt.4, with the modifications specified in this section.

A 200 Bilge pumping

201 The considerations for side and bottom damages according to Pt.4 Ch.6 Sec.4 is not applicable.

202 Leakage detection shall be provided in all main compartments below the waterline i.e. forepeak, accommodation, double bottom, engine compartment etc.

A 300 Pumps

301 The requirements for certificates for pumps will be specially considered.

B. Propulsion and Auxiliary Machinery

B 100 Certification

101 Main and auxiliary machinery are in general to comply with the main class requirements.

102 For diesel engines, reduction gears, flexible couplings, waterjets and propellers which are type approved for a maximum power rating of 2 500 kW, product certification is not required and such units may be delivered with maker’s test report only.

B 200 Engine rating

201 Engine ratings are to be according to group 2 or 3 in Pt.4 Ch.3 Sec.1 A200.

202 Documentation shall be provided on requirements for ventilation of the engines related to rating and air temperature.

C. Electrical systems

C 100 Emergency source of electrical power

101 Vessels with service area restriction notation R0 shall have an emergency source of electrical power located above the uppermost continuous deck and readily accessible from open deck.

The services given in Pt.4 Ch.8 Sec.2 Table C1 shall be supplied by the emergency source of power for the period specified in the table.

102 Vessels with service area restriction notation R1 - R3:

— shall be provided with an emergency source of electrical power situated above the uppermost continuous deck and outside the machinery casings, capable of, for minimum 3 hours, supplying the following consumers:

1) Emergency lighting at stowage positions of life-saving appliances, at all escape routes, in machinery spaces and the main and emergency generating spaces including their control positions, at control stations, at steering gears.

2) Main navigation lights and “not under command” lights.

3) Daylight signalling lamp (intermittent operation).

4) Electrical internal communication equipment.

5) Craft radio facilities (GMDSS).

6) Craft's whistle (intermittent operation).

7) Fire detection system. Fire alarm to have capacity for 0.5 hour.

8) General alarm system (0.5 hour capacity for alarm).

9) Remote control devices of fire-extinguishing systems (if fitted)
10) Emergency fire pump when electrically driven (if fitted).

**Guidance note:**
For vessels where location of the emergency source of power above the uppermost continuous deck is impractical alternative locations may be accepted provided that the arrangement gives an equivalent level of safety from fire and flooding.

---e-n-d---of---G-u-i-d-a-n-c-e---n-o-t-e---
SECTION 5
FIRE SAFETY

A. General

100 Rule references and documentation

101 The requirements for fire safety in this section are intended to apply to patrol boats with an overall length of maximum 50 meters. This figure shall be regarded as a guidance and not a rule restriction.

102 Patrol boats shall comply with the fire safety requirements for cargo boats in 2000 HSC Code, with the modifications specified in this section and the applicable interpretations as specified in Pt.4 Ch.10 App.A and B.

103 Documentation shall be submitted as required by Table A1.

104 For a full definition of the document types, see Pt.0 Ch.3.

<table>
<thead>
<tr>
<th>Object</th>
<th>Document type</th>
<th>Additional description</th>
<th>For approval (AP) or For information (FI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fire Safety General</td>
<td>G040 - Fire control plan</td>
<td>Equipment as described in 2000 HSC Code Ch. 7.9.1</td>
<td>AP</td>
</tr>
<tr>
<td>Structural Fire Protection</td>
<td>G060 - Structural fire protection drawing</td>
<td>Including specification of insulation material and fastening of insulation, hatches and doors</td>
<td>AP</td>
</tr>
<tr>
<td>Fire main drawing</td>
<td>G200 - Fixed fire extinguishing system documentation</td>
<td>— Specification and location of pumps, hydrants hoses and isolation valves — Specification and routing of piping</td>
<td>AP</td>
</tr>
<tr>
<td>Fixed fire-extinguishing in machinery spaces</td>
<td>G200 - Fixed fire extinguishing system documentation</td>
<td>Including equipment certificates</td>
<td>AP</td>
</tr>
<tr>
<td>Escape</td>
<td>G120 - Escape route drawing</td>
<td></td>
<td>AP</td>
</tr>
<tr>
<td>Fire detection and alarm</td>
<td>I200 - Documentation for control and monitoring systems. Z030 - System arrangement plan</td>
<td>Including specification/certificates of central unit, detectors, manual call points and alarms</td>
<td>AP</td>
</tr>
<tr>
<td>Ventilation</td>
<td>S012 - Ducting diagram</td>
<td>Including position, details and fastening arrangement of fire dampers</td>
<td>AP</td>
</tr>
</tbody>
</table>

B. Structural fire protection and arrangements

100 Structural fire protection

101 Machinery spaces of major fire hazard, galleys above 10 m² and storage spaces for ammunition shall be enclosed by fire resisting divisions. For ammunition stores, the insulation shall be provided on the external boundaries of the space, except where bounding tanks, voids and open spaces.

102 The structural fire protection time for fire resisting divisions is 30 minutes. For steel structures, A-0 towards void and open spaces is considered sufficient.

103 No structural fire protection requirements are applicable to areas other than specified in 101.

104 No requirements related to restricted use of combustible materials and smoke-tight division will apply

200 Escape ways and arrangement

201 All spaces shall be provided with satisfactory means of escape through corridors, stairways or other spaces independent of the space considered, all with a minimum free opening of 700 mm in all directions. Where a secondary means of escape is required, this can be provided by a permanent ladder and hatch arrangement with a free opening of minimum 500 mm in all directions. Doors and hatches not capable of being unlocked from both sides shall not be regarded as an escape way.
202 For accommodation spaces, two means of escape from every restricted space or group of spaces shall be provided.

203 For machinery spaces of major fire hazard, two means of escape shall be provided, except where the space has a length of less than 5 m and direct access to open deck is provided.

204 Fire doors need not be remotely operated or self closing. However, where fire doors bounding areas of major fire hazard are not self closing, they shall be normally shut and fitted with indicators to provide warning in the control station when the doors are not completely closed.

205 Fuel oil tanks may be located contiguous to machinery spaces of major fire hazard provided the boundary between such spaces and fuel oil tanks are protected with 60 minutes fire-resisting divisions.

206 Petrol for auxiliary purposes may be stored in limited volume. Petrol shall only be stored on open deck or in compartments effectively ventilated to open deck. The storage position shall be so arranged that under no circumstances can inflammable or explosive fluids or gases accumulate, for example, in lower parts of the hull.

C. Ventilation

C 100 Operation of fans, dampers and closing appliances

101 The requirements of 2000 HSC Code Ch.7.6 apply as amended and modified below.

102 Controls for closure of ventilation and operation of fans may be located outside the control station if located in a safe and readily available position.

103 Fire Dampers need only be operable from outside the engine room. Arrangement for remote and automatic closing of fire dampers is not required.

104 Steel dampers of robust design will be accepted for ventilation outlets from areas of major fire hazard to open decks in lieu of fire dampers.

D. Fire detection

D 100 Fire detection systems

101 The requirements of 2000 HSC Code Ch.7.7 apply as amended and modified below.

102 An approved automatic fire detection and alarm system shall be installed, to indicate, at the craft's control station, the location of an outbreak of fire. In the event that the control station is unmanned, an audible alarm shall be automatically sounded throughout the crew compartments.

103 All enclosed spaces, except areas of no fire risk and limited areas of minor fire risk such as void spaces and bathrooms of limited area within cabins, shall be provided with fire detectors. Spaces with floor area below 4 m² and ceiling area below 6 m² shall in this context be considered spaces of limited area.

104 Patrol boats need not be fitted with TV cameras in main propulsion machinery room.

E. Extinguishing systems

E 100 Extinguishing in machinery spaces

101 Spaces of major fire hazard, except for galleys below 10 m², shall be fitted with a fixed fire extinguishing system according to 2000 HSC Code Ch. 7.7.3.

102 For areas of major fire hazard, remote control of the fixed extinguishing system from the control station is not required provided local manual control is in a safe and readily available position.

103 The quantity of gas required for one discharge is accepted as being sufficient where gas is used as the extinguishing medium. A minimum capacity of 40% of the gross volume of the complete machinery space shall be provided for when using CO₂ systems.

E 200 Other extinguishing systems

201 Fixed extinguishing systems for deep fat cooking equipment and galley ducts are not required.

202 Sprinkler system in accommodation is not required, irrespective of size.
F. Fire pumps and fire main

F 100 Fire pumps

101 All craft shall be provided with minimum one main fire pump
   The capacity shall be at least 25 m³/h
   The pressure at hydrants shall be minimum 2.7 bars with any two hydrants in simultaneous operation

102 Craft with an overall length of more than 40 m, or where the main fire pump is installed in a space not
   protected by a fixed fire extinguishing system, shall be fitted with an emergency fire pump with minimum
   capacity of 15 m³/h.

103 With regard to hoses, hydrants and nozzles, 2000 HSC Code Ch.7.7.5 applies.

G. Portable extinguishers

G 100 Number, type and capacity

101 The number and type of extinguishers shall be according to MSC/Circ 1275, but in no case less than 1
   for each deck in addition to 1 in main engine room.

102 The capacity shall be according to Fire Safety Systems Code (FSS Code) Chapter 4.3.1.1.

H. Miscellaneous

H 100 Miscellaneous

101 A duplicate set of fire control plans is not required to be stored outside the deckhouse.

102 Patrol boats need not carry fireman's outfits.
SECTION 6
SPECIAL REQUIREMENTS

A. Lifesaving Appliances

A 100 General

101 Unless the lifesaving equipment is accepted by the National Authority or the Naval Authority, in the case of naval vessels, the items specified in this section apply as class requirements.

102 Except for the rescue boat, the required equipment according to this section is to be approved by a National Authority in accordance with SOLAS Ch. III and IMO Resolution A.689(17) as amended.

103 Life rafts are to be provided for all persons the craft is to carry.

104 A rescue boat may be included in the life raft capacity.

105 A lifejacket with light and whistle is to be provided for all persons onboard.

106 One lifebuoy with smoke and light and one lifebuoy with line are to be provided.

107 Twelve parachute signals are to be provided.

108 One line-throwing apparatus with 4 rockets and lines is to be provided.

109 One day-light signalling light with independent source of power is to be provided.

110 One radar transponder is to be provided.

111 Two two-way VHF radio telephone apparatus are to be provided.

112 Immersion suits are to be provided for all personnel onboard unless the craft operates in warm waters.

B. Radiocommunication

B 100 General

101 The craft is to comply with GMDSS for areas A1 and A2 as far as practicable.