

ANNEX 23

RESOLUTION MSC.231(82)

(adopted on 5 December 2006)

**ADOPTION OF AMENDMENTS TO THE EXISTING MANDATORY SHIP
REPORTING SYSTEM “IN THE GULF OF FINLAND”**

THE MARITIME SAFETY COMMITTEE,

RECALLING Article 28(b) of the Convention on the International Maritime Organization concerning the functions of the Committee,

RECALLING ALSO regulation V/11 of the International Convention for the Safety of Life at Sea (SOLAS), 1974, in relation to the adoption of mandatory ship reporting systems by the Organization,

RECALLING FURTHER resolution A.858(20) resolving that the function of adopting ship reporting systems shall be performed by the Committee on behalf of the Organization,

TAKING INTO ACCOUNT the Guidelines and criteria for ship reporting systems, adopted by resolution MSC.43(64), as amended by resolutions MSC.111(73) and MSC.189(79),

HAVING CONSIDERED the recommendations of the Sub-Committee on Safety on Navigation, at its fifty-second session,

1. ADOPTS, in accordance with SOLAS regulation V/11, the amendments to the existing mandatory ship reporting system “In the Gulf of Finland”, set out in the Annex to the present resolution;
2. DECIDES that the said amendments to the existing mandatory ship reporting system “In the Gulf of Finland Traffic Area ” will enter into force at 0000 hours UTC on 1 July 2007;
3. REQUESTS the Secretary-General to bring this resolution and its Annex to the attention of the Member Governments and SOLAS Contracting Governments to the 1974 SOLAS Convention.

ANNEX

**AMENDMENTS TO THE EXISTING MANDATORY SHIP REPORTING SYSTEM
“IN THE GULF OF FINLAND”**

Amend sub-section 1.1 to read as follows:

1.1 Ships of 300 gross tonnage and over are required to participate in the mandatory ship reporting system. Ships under 300 gross tonnage should make reports in circumstances where they:

- .1 are not under command or at anchor in the TSS;
- .2 are restricted in their ability to manoeuvre; and
- .3 have defective navigational aids.

Amend sub-section 2.1 to read as follows:

2.1 The mandatory ship reporting system in the Gulf of Finland covers the international waters in the Gulf of Finland. In addition, Estonia and Finland have implemented mandatory ship reporting systems to their national water areas outside VTS areas. These reporting systems provide same services and make same requirements to shipping as the system operating in the international waters. The mandatory ship reporting system and the Estonian and Finnish national mandatory ship reporting systems are together referred as the GOFREP and their area of coverage respectively as the GOFREP area.

Amend sub-section 2.2 to read as follows:

2.2 The reference charts are:

- .1 Finnish Maritime Administration chart 901 (2006 edition, scale 1:200 000), Geodetic datum is the national geodetic chart coordinate system (KKJ). WGS 84 latitude correction is -0'.01 and the longitude correction +0'.19. Finnish Maritime Administration charts 952 (2004 edition, scale 1:250 000) and 953 (2004 edition, scale 1:250 000). Geodetic datum for charts 952 and 953 is WGS 84.
- .2 Head Department of Navigation and Oceanography RF Ministry of Defence charts 22060-INT1213 (edition 2000, scale 1:250000). Geodetic datum of year 1942 (Pulkovo). For obtaining position in WGS 84 datum such positions should be moved 0,12' westward. 22061-INT1214 (edition 2002, scale 1:250000). For obtaining position in WGS 84 datum such positions should be moved 0,14' westward.
- .3 Estonian Maritime Administration updated charts 502, 504, 507, 509, 511 (all charts in scale 1:100 000, WGS 84 Datum).

Borderline point by point of the Gulf of Finland ship reporting area

(The co-ordinates below are in WGS 84 Datum)

1)	59° 33'.30 N	022° 30'.00 E	26)	60° 08'.50 N	026° 57'.50 E
2)	59° 36'.50 N	022° 38'.10 E	27)	60° 08'.20 N	026° 54'.50 E
3)	59° 38'.10 N	022° 51'.40 E	28)	60° 05'.00 N	026° 49'.00 E
4)	59° 39'.40 N	023° 21'.10 E	29)	60° 08'.90 N	026° 49'.00 E
5)	59° 47'.00 N	024° 12'.40 E	30)	60° 06'.50 N	026° 38'.00 E
6)	59° 47'.80 N	024° 19'.90 E	31)	60° 06'.10 N	026° 32'.20 E
7)	59° 49'.00 N	024° 29'.30 E	32)	60° 05'.00 N	026° 30'.00 E
8)	59° 53'.50 N	024° 47'.10 E	33)	59° 57'.00 N	026° 30'.00 E
9)	59° 55'.30 N	024° 55'.80 E	34)	59° 56'.30 N	026° 26'.10 E
10)	59° 56'.60 N	025° 10'.20 E	35)	59° 54'.00 N	026° 09'.10 E
11)	59° 55'.90 N	025° 28'.30 E	36)	59° 48'.90 N	026° 01'.20 E
12)	59° 55'.70 N	025° 35'.00 E	37)	59° 49'.60 N	025° 34'.60 E
13)	59° 55'.90 N	025° 37'.20 E	38)	59° 42'.20 N	024° 28'.80 E
14)	59° 58'.60 N	026° 01'.00 E	39)	59° 34'.60 N	023° 57'.10 E
15)	60° 00'.80 N	026° 04'.50 E	40)	59° 28'.90 N	023° 31'.20 E
16)	60° 02'.30 N	026° 11'.30 E	41)	59° 29'.00 N	023° 11'.40 E
17)	60° 02'.80 N	026° 17'.70 E	42)	59° 28'.20 N	023° 08'.50 E
18)	60° 09'.20 N	026° 29'.50 E	43)	59° 27'.40 N	023° 06'.40 E
19)	60° 09'.70 N	026° 36'.70 E	44)	59° 17'.50 N	022° 43'.90 E
20)	60° 11'.40 N	026° 44'.50 E	45)	59° 17'.70 N	022° 36'.10 E
21)	60° 12'.00 N	026° 45'.90 E	46)	59° 16'.20 N	022° 23'.80 E
22)	60° 12'.00 N	027° 13'.40 E	47)	59° 14'.70 N	022° 18'.40 E
23)	60° 12'.00 N	027° 17'.60 E	48)	59° 03'.40 N	021° 50'.90 E
24)	60° 10'.30 N	027° 10'.90 E	49)	59° 02'.10 N	021° 49'.00 E
25)	60° 08'.50 N	027° 04'.20 E	50)	59° 10'.0 N	021° 30'.00 E

Amend section 3 to read as follows:

Short report is always reported verbally on VHF. The short title for ship report is GOFREP. Vessels are urged to update their AIS information before entering the Gulf of Finland since they may fulfil the Full Report reporting requirements through the use of AIS. In cases where it is not possible to transmit the report fully with AIS additional information may be reported by other means.

Amend sub-section 3.2.1 to read as follows:

3.2.1 A short report by voice from a ship to the shore-based Authorities should contain the following information:

- A Vessel's name, call sign and IMO identification. MMSI may be reported.
- C Geographical position by two 6-digit groups; or
- D Bearing and distance in nautical miles from a clearly identified landmark and
- E True course in three (3) digit group.

Amend sub-section 3.2.2 to read as follows:

3.2.2 A full report from a ship to the shore-based Authorities by voice or by non-verbal means should contain the following information:

- A Vessel's name, call sign and IMO identification. MMSI may be reported.
- C Geographical position by two 6-digit groups; or
- D Bearing and distance in nautical miles from a clearly identified landmark and
- E True course in three (3) digit group.
- F Speed in knots with one decimal.
- H Time (UTC) and point of entry into the GOFREP area.
- I Destination and ETA.
- O Vessel's present draught in metres with one decimal.
- P Dangerous goods on board, main classes and total quantity in metric tons with up to two decimals. The amount of classes 1 and 7, if any, shall be reported separately.*)
- Q Brief details of defects or restrictions of manoeuvrability.
- R Description of pollution or dangerous goods lost overboard.
- T Address for the communication of cargo information.
- U Ship's type and length in meters.
- W Total number of persons onboard.
- X Characteristics and estimated quantity of bunker fuel for ships carrying more than 5,000 tons of bunker and navigational status.

*) In addition to designator P report, information on cargo other than dangerous goods is collected from all ships entering or leaving the ports of European Union countries in the Gulf of Finland. Ships are not required to report the information on cargo other than dangerous goods. Information is asked from ships only if it can not be obtained by other means.

All VHF, telephone, radar, AIS and other relevant information will be recorded and the records stored for 30 days.

Amend sub-section 3.3 to read as follows:

3.3.1 The Gulf of Finland mandatory Ship Reporting System area is divided into three areas of monitoring responsibility with a borderline. This borderline is referred as Central Reporting Line and it consists of two parts.

The western part is drawn through the midpoints of the separation zones of the traffic separation schemes off Kõpu, Hankoniemi, Porkkala and Kalbådagrund to 59° 59'.15 N 026°30'.00 E.

The eastern part of the Central Reporting Line is drawn from the point 59° 57'.0 N 026° 30'.00 E to 60° 05'.00 N 026° 30'.00 E and further through the borderline of the Russian territorial sea and the outer limit of the Finnish Exclusive Economic Zone eastwards until the point 60° 08'.90 N 026° 49'.00 E. From this point the Central Reporting Line continues through the limit of the Exclusive Economical Zone (EEZ) of Finland and the EEZ of Russia further to the point 60° 10'.30 N 026° 57'.50 E to 60° 10'.30 N 027° 10'.90 E and to 60° 12'.00 N 027°17'.60 E.

Monitoring of the GOFREP area north of the Central Reporting Line is the responsibility of the Helsinki Traffic and, south of the Central Reporting Line in the area west of longitude 26° 30'.00 E is the monitoring area of the Tallinn Traffic and east of the longitude 26° 30'.00 E south of the Central Reporting Line is the monitoring area of St. Petersburg Traffic. Thus,

- the vessels entering the mandatory ship reporting area north of the Central Reporting Line report to Helsinki Traffic,
- south of the Central Reporting Line east of longitude 26° 30'.00 E report to St. Petersburg Traffic, and
- south of the Central Reporting Line west of longitude 26° 30'.00 E or from Väinameri report to Tallinn Traffic.

3.3.2 Ships shall submit a Full Report:

1. when entering the GOFREP area from the west or from Väinameri,
2. on departure from a port or latest before entering the reporting area,
3. on departure from a port if it shall not enter the reporting area at all,
4. before departing from Russian Port areas.

A Full Report on departure from a port is given to the Traffic Centre of the country whose port the vessel is departing in the Gulf of Finland traffic area.

3.3.3 Ships that are registered in domestic traffic navigating exclusively inside the inner territorial waters are not required to make a Full Report when departing from a port in the Gulf of Finland.

3.3.4 Ships shall submit a Short Report:

1. on entering the GOFREP area from the Estonian or Finnish VTS areas in the Gulf of Finland,
2. on crossing the Western or Väinameri Reporting Line inward-bound to Gulf of Finland,
3. on crossing the Central Reporting Line,
4. whenever there is a change in the vessel's navigational status excluding the change of status when berthing or unberthing.

Short Report is given on VHF when crossing the Central Reporting Line to the Traffic Centre of the country to which monitoring area the vessel is proceeding.

Amend sub-section 4.1.1 to read as follows:

4.1.1 Each Authority provides information to shipping about specific and urgent situations which could cause conflicting traffic movements and other information concerning safety of navigation, for instance information about weather, ice, water level, navigational problems or other hazards. Information is broadcast on the following frequencies when necessary or on request.

Station	Frequency	Times	Additional broadcasts in wintertime
Tallinn	Main channel 61 Reserve channel 81	on request or when needed	on request or when needed
Helsinki	Main channel 60 Reserve channel 80	on request or when needed	on request or when needed
St. Petersburg	Main channel 74 Reserve channel 10	on request or when needed	on request or when needed

Amend sub-section 5.4 to read as follows:

5.4 The reports can be made verbally on VHF, by AIS or by facsimile as follows:

- Full Report in advance is to be sent by facsimile or e-mail.
- Short Report is to be made verbally on VHF.
- Full Report is made by non-verbal means (facsimile, AIS or e-mail) or verbally on VHF.

Delete sub-section 5.5.

Replace term “working channel” with term “reserve channel” in sub-sections 7.1.3.1 and 7.3.3.1.

Amend sub-section 7.2.1.1 to read as follows:

7.2.1.1 The system is managed from the Tallinn VTS Centre. There are two operator’s positions with expansion capabilities and equipment for technical supervision of the systems.

Amend sub-section 7.2.3.1 to read as follows:

7.2.3.1 VHF radio transceivers cover all the TALLINN TRAFFIC area of responsibility. The working channels are as follows:

- Channel 61 main channel
- Channel 81 reserve channel

Delete sub-section 7.2.3.2.

Amend sub-section 7.2.4 to read as follows:

7.2.4 AIS facilities

7.2.4.1 AIS system covers all the TALLINN TRAFFIC area of responsibility. The relevant information can be displayed at the operators working positions on the screens and database.

Add a new sub-section 7.2.5:

7.2.5 Personnel qualifications and training

7.2.5.1 TALLINN TRAFFIC is staffed with personnel trained according to national and international recommendations.

7.2.5.2 The training of the personnel comprises an overall study of the navigation safety measures, the relevant international (IMO) and national provisions with respect to safety of navigation. The training also includes thorough real-time simulations.

Delete sub-section Summary of Ship reporting System in the Gulf of Finland.

Amend Appendix 1 to read as follows:

Designators used in the Gulf of Finland mandatory ship reporting system and the format of the reports

Designator	Function	Information required
A	Ship	Vessel's name, call sign and IMO identification. MMSI may be reported.
C	Position	Geographical position by two 6 digit groups; or
D	Position	Bearing and distance in nautical miles from a clearly identified landmark
E	Course	True course in three (3) digit group
F	Speed	Speed in knots with one decimal
H	Entry	Time (UTC) and point of entry into the GOFREP area
I	Destination and ETA	Destination and expected time of arrival
O	Draught	Vessel's present draught in metres with one decimal
P	Cargo	Dangerous goods on board, main classes and total quantity in metric tons with up to two decimals. The amount of classes 1 and 7, if any, shall be reported separately. *)
Q	Deficiencies	Brief details of defects or restrictions of manoeuvrability
R	Pollution	Description of pollution or dangerous goods lost overboard
T	Owner or agent	Contact information of agent in the Gulf of Finland
U	Size and type	Ship's type and length in meters
W	Persons	Total number of persons onboard
X	Bunkers and navigational status	Characteristics and estimated quantity of bunker fuel for ships carrying more than 5,000 tons of bunker and navigational status

*) In addition to designator P report, information on cargo other than dangerous goods is collected from all ships entering or leaving the ports of European Union countries in the Gulf of Finland. Ships are not required to report the information on cargo other than dangerous goods. Information is asked from ships only if it can not be obtained by other means.

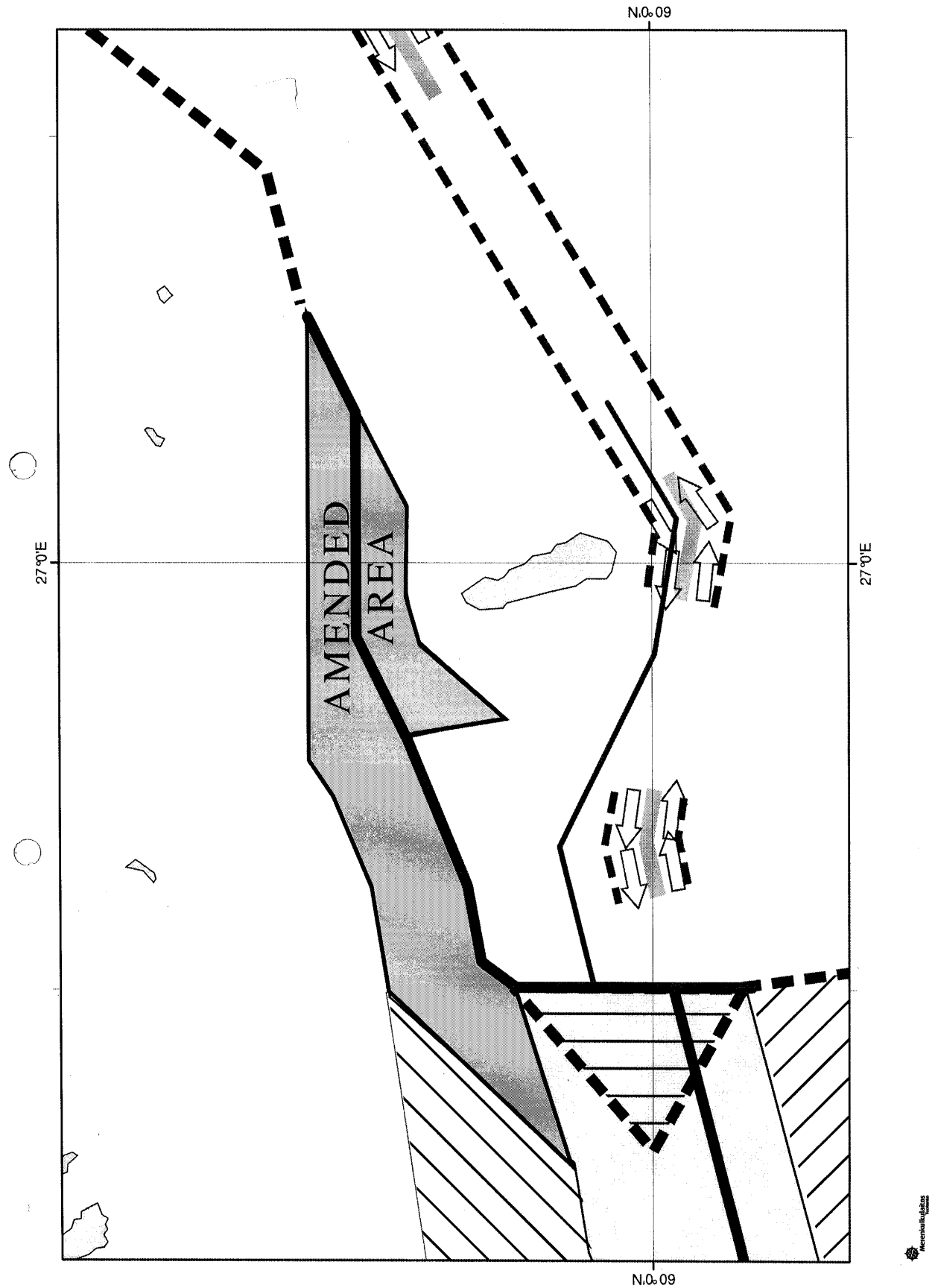
A Short Report consists of designators A, C or D and E. Vessels may additionally be requested to report designator F.

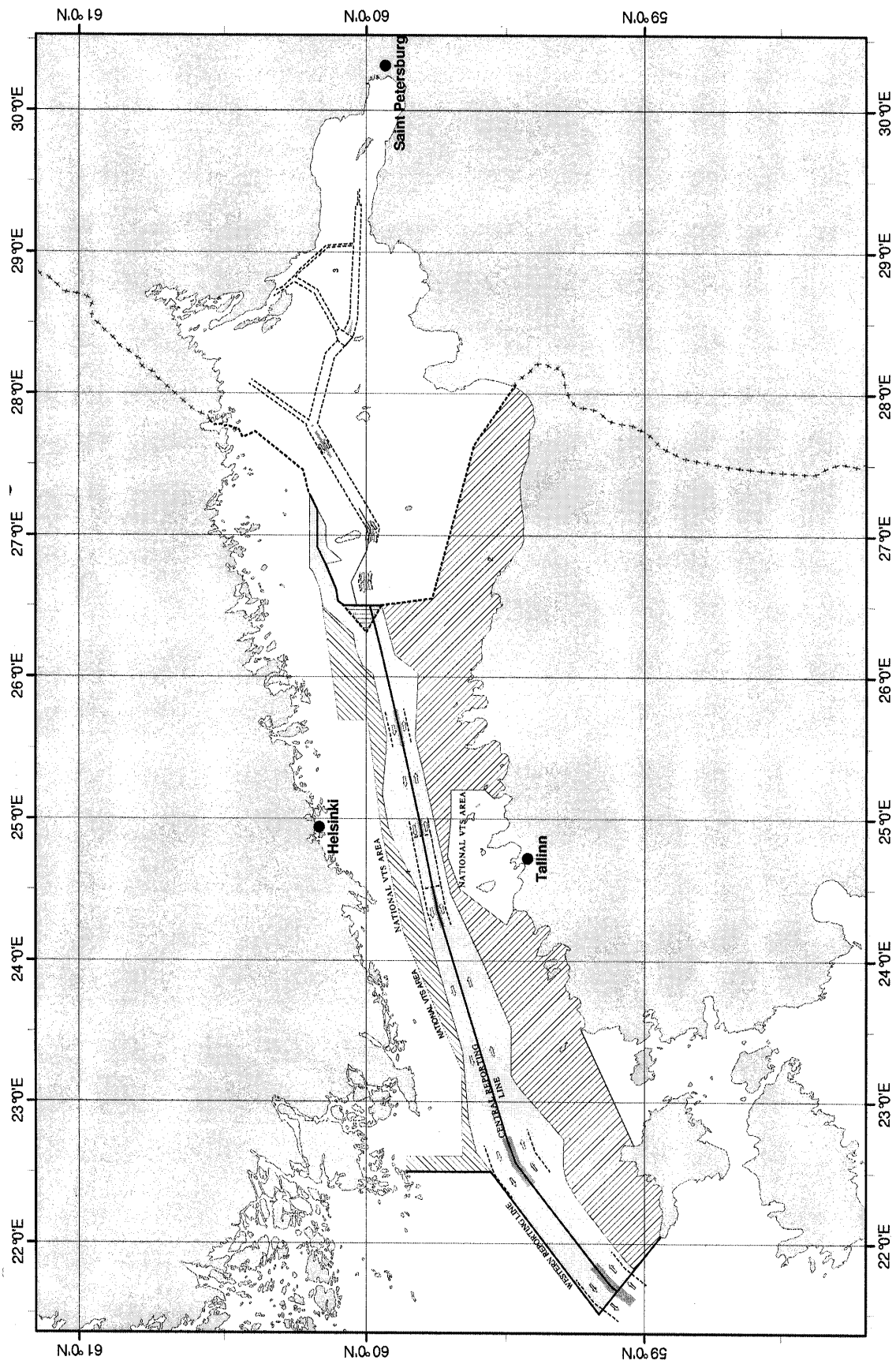
A Full Report consists of designators A, C or D, E, I, O, P, T, U, W and X. Vessels may additionally be requested to report designators F or H.

Vessels not equipped with AIS entering the GOFREP area from the Northern Baltic or Väinameri, are recommended to give a Full Report to the relevant Traffic Centre by fax or e-mail at least one hour before entering the area. In any case, a Full Report shall be given prior to entering the GOFREP area.

If there are any circumstances affecting normal navigation in accordance with the provisions of the SOLAS and MARPOL Conventions, the Master of the vessel in question is obliged to report designator Q or R, whichever is relevant under the prevailing circumstances. This report shall be made without delay.

Appendix 2





ANNEX 24**RESOLUTION MSC.232(82)****(adopted on 5 December 2006)****ADOPTION OF THE REVISED PERFORMANCE STANDARDS FOR
ELECTRONIC CHART DISPLAY AND INFORMATION SYSTEMS (ECDIS)**

THE MARITIME SAFETY COMMITTEE,

RECALLING Article 28(b) of the Convention on the International Maritime Organization concerning the functions of the Committee,

RECALLING ALSO resolution A.886(21), by which the Assembly resolved that the function of adopting performance standards and technical specifications, as well as amendments thereto shall be performed by the Maritime Safety Committee and/or the Marine Environment Protection Committee, as appropriate, on behalf of the Organization,

RECALLING ALSO regulations V/19 and V/27 of the International Convention for the Safety of Life at Sea (SOLAS), 1974, which requires all ships to carry adequate and up-to-date charts, sailing directions, lists of lights, notices to mariners, tide tables and all other nautical publications necessary for the intended voyage,

NOTING that the up-to-date charts required by SOLAS regulations V/19 and V/27 can be provided and displayed electronically on board ships by electronic chart display and information systems (ECDIS), and that the other nautical publications required by regulation V/27 may also be so provided and displayed,

RECOGNIZING the need to improve the previously adopted, by resolution A.817(19), as amended, performance standards for ECDIS in order to ensure the operational reliability of such equipment and taking into account the technological progress and experience gained,

HAVING CONSIDERED the recommendation made by the Sub-Committee on Safety of Navigation, at its fifty-second session,

1. ADOPTS the Revised performance standards for electronic chart display and information systems (ECDIS), set out in the Annex to the present resolution;
2. RECOMMENDS Governments ensure that ECDIS equipment:
 - (a) if installed on or after 1 January 2009, conform to performance standards not inferior to those specified in the Annex to the present resolution; and
 - (b) if installed on or after 1 January 1996 but before 1 January 2009, conform to performance standards not inferior to those specified in the Annex to resolution A.817(19), as amended by resolutions MSC.64(67) and MSC.86(70).

ANNEX

REVISED PERFORMANCE STANDARDS FOR ELECTRONIC CHART DISPLAY AND INFORMATION SYSTEMS (ECDIS)

1 SCOPE OF ECDIS

- 1.1 The primary function of the ECDIS is to contribute to safe navigation.
- 1.2 ECDIS with adequate back-up arrangements may be accepted as complying with the up-to-date charts required by regulations V/19 and V/27 of the 1974 SOLAS Convention, as amended.
- 1.3 ECDIS should be capable of displaying all chart information necessary for safe and efficient navigation originated by, and distributed on the authority of, government authorized hydrographic offices.
- 1.4 ECDIS should facilitate simple and reliable updating of the electronic navigational chart.
- 1.5 ECDIS should reduce the navigational workload compared to using the paper chart. It should enable the mariner to execute in a convenient and timely manner all route planning, route monitoring and positioning currently performed on paper charts. It should be capable of continuously plotting the ship's position.
- 1.6 The ECDIS display may also be used for the display of radar, radar tracked target information, AIS and other appropriate data layers to assist in route monitoring.
- 1.7 ECDIS should have at least the same reliability and availability of presentation as the paper chart published by government authorized hydrographic offices.
- 1.8 ECDIS should provide appropriate alarms or indications with respect to the information displayed or malfunction of the equipment (see appendix 5).
- 1.9 When the relevant chart information is not available in the appropriate form (see section 4), some ECDIS equipment may operate in the Raster Chart Display System (RCDS) mode as defined in appendix 7. RCDS mode of operation should conform to performance standards not inferior to those set out in appendix 7.

2 APPLICATION OF THESE STANDARDS

- 2.1 These performance standards should apply to all ECDIS equipment carried on all ships, as follows:
 - dedicated standalone workstation.
 - a multifunction workstation as part of an INS.
- 2.2 These performance standards apply to ECDIS mode of operation, ECDIS in RCDS mode of operation as specified in appendix 7 and ECDIS backup arrangements as specified in appendix 6.

- 2.3 Requirements for structure and format of the chart data, encryption of chart data as well as the presentation of chart data are within the scope of relevant IHO standards, including those listed in appendix 1.
- 2.4 In addition to the general requirements set out in resolution A.694(17)*, the presentation requirements set out in resolution MSC.191(79), ECDIS equipment should meet the requirements of these standards and follow the relevant guidelines on ergonomic principles adopted by the Organization¹.

3 DEFINITIONS

For the purpose of these performance standards:

- 3.1 *Electronic Chart Display and Information System (ECDIS)* means a navigation information system which with adequate back-up arrangements can be accepted as complying with the up-to-date chart required by regulations V/19 and V/27 of the 1974 SOLAS Convention, as amended, by displaying selected information from a system electronic navigational chart (SENC) with positional information from navigation sensors to assist the mariner in route planning and route monitoring, and if required display additional navigation-related information.
- 3.2 *Electronic Navigational Chart (ENC)* means the database, standardized as to content, structure and format, issued for use with ECDIS by or on the authority of a Government, authorized Hydrographic Office or other relevant government institution, and conform to IHO standards. The ENC contains all the chart information necessary for safe navigation and may contain supplementary information in addition to that contained in the paper chart (e.g. sailing directions) which may be considered necessary for safe navigation.
- 3.3 *System Electronic Navigational Chart (SENC)* means a database, in the manufacturer's internal ECDIS format, resulting from the lossless transformation of the entire ENC contents and its updates. It is this database that is accessed by ECDIS for the display generation and other navigational functions, and is equivalent to an up-to-date paper chart. The SENC may also contain information added by the mariner and information from other sources.
- 3.4 *Standard Display* is the display mode intended to be used as a minimum during route planning and route monitoring. The chart content is listed in appendix 2.
- 3.5 *Display Base* means the chart content as listed in appendix 2 and which cannot be removed from the display. It is not intended to be sufficient for safe navigation.
- 3.6 Further information on ECDIS definitions may be found in IHO Hydrographic Dictionary Special Publication S-32 (see appendix 1).

* Refer to Publication IEC 60945.

¹ MSC/Circ.982.

MODULE A - DATABASE

4 PROVISION AND UPDATING OF CHART INFORMATION

- 4.1** The chart information to be used in ECDIS should be the latest edition, as corrected by official updates, of that issued by or on the authority of a Government, government-authorized Hydrographic Office or other relevant government institution, and conform to IHO standards².
- 4.2** The contents of the SENC should be adequate and up-to-date for the intended voyage to comply with regulation V/27 of the 1974 SOLAS Convention as amended.
- 4.3** It should not be possible to alter the contents of the ENC or SENC information transformed from the ENC.
- 4.4** Updates should be stored separately from the ENC.
- 4.5** ECDIS should be capable of accepting official updates to the ENC data provided in conformity with IHO standards. These updates should be automatically applied to the SENC. By whatever means updates are received, the implementation procedure should not interfere with the display in use.
- 4.6** ECDIS should also be capable of accepting updates to the ENC data entered manually with simple means for verification prior to the final acceptance of the data. They should be distinguishable on the display from ENC information and its official updates and not affect display legibility.
- 4.7** ECDIS should keep and display on demand a record of updates including time of application to the SENC. This record should include updates for each ENC until it is superseded by a new edition.
- 4.8** ECDIS should allow the mariner to display updates in order to review their contents and to ascertain that they have been included in the SENC.
- 4.9** ECDIS should be capable of accepting both non-encrypted ENCs and ENCs encrypted in accordance with the IHO Data Protection Scheme³.

² IHO Special Publication S-52 and S-57 (see appendix 1).

³ IHO Special Publication S-63 (see appendix 1).

MODULE B – OPERATIONAL AND FUNCTIONAL REQUIREMENTS

5 DISPLAY OF SENC INFORMATION

- 5.1** ECDIS should be capable of displaying all SENC information. An ECDIS should be capable of accepting and converting an ENC and its updates into a SENC. The ECDIS may also be capable of accepting a SENC resulting from conversion of ENC to SENC ashore, in accordance with IHO TR 3.11⁴. This method of ENC supply is known as SENC delivery.
- 5.2** SENC information available for display during route planning and route monitoring should be subdivided into the following three categories, Display Base, Standard Display and All Other Information (see appendix 2).
- 5.3** ECDIS should present the Standard Display at any time by a single operator action.
- 5.4** When an ECDIS is switched on following a switch off or power failure, it should return to the most recent manually selected settings for display.
- 5.5** It should be easy to add or remove information from the ECDIS display. It should not be possible to remove information contained in the Display Base.
- 5.6** For any operator identified geographical position (e.g. by cursor picking) ECDIS should display on demand the information about the chart objects associated with such a position.
- 5.7** It should be possible to change the display scale by appropriate steps e.g. by means of either chart scale values or ranges in nautical miles.
- 5.8** It should be possible for the mariner to select a safety contour from the depth contours provided by the SENC. ECDIS should emphasize the safety contour over other contours on the display, however:
- .1 if the mariner does not specify a safety contour, this should default to 30m. If the safety contour specified by the mariner or the default 30 m contour is not in the displayed SENC, the safety contour shown should default to the next deeper contour;
 - .2 if the safety contour in use becomes unavailable due to a change in source data, the safety contour should default to the next deeper contour; and
 - .3 in each of the above cases, an indication should be provided.
- 5.9** It should be possible for the mariner to select a safety depth. ECDIS should emphasize soundings equal to or less than the safety depth whenever spot soundings are selected for display.
- 5.10** The ENC and all updates to it should be displayed without any degradation of their information content.

⁴ IHO Miscellaneous Publication M-3.
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5.11 ECDIS should provide a means to ensure that the ENC and all updates to it have been correctly loaded into the SENC.

5.12 The ENC data and updates to it should be clearly distinguishable from other displayed information, including those listed in appendix 3.

6 SCALE

6.1 ECDIS should provide an indication if:

- .1 the information is displayed at a larger scale than that contained in the ENC; or
- .2 own ship's position is covered by an ENC at a larger scale than that provided by the display.

7 DISPLAY OF OTHER NAVIGATIONAL INFORMATION

7.1 Radar information and/or AIS information may be transferred from systems compliant with the relevant standards of the Organization. Other navigational information may be added to the ECDIS display. However, it should not degrade the displayed SENC information and it should be clearly distinguishable from the SENC information.

7.2 It should be possible to remove the radar information, AIS information and other navigational information by single operator action.

7.3 ECDIS and added navigational information should use a common reference system. If this is not the case, an indication should be provided.

7.4 Radar

7.4.1 Transferred radar information may contain a radar image and/or tracked target information.

7.4.2 If the radar image is added to the ECDIS display, the chart and the radar image should match in scale, projection and in orientation.

7.4.3 The radar image and the position from the position sensor should both be adjusted automatically for antenna offset from the conning position.

8 DISPLAY MODE AND GENERATION OF THE NEIGHBOURING AREA

8.1 It should always be possible to display the SENC information in a "north-up" orientation. Other orientations are permitted. When such orientations are displayed, the orientation should be altered in steps large enough to avoid unstable display of the chart information.

8.2 ECDIS should provide for true motion mode. Other modes are permitted.

8.3 When true motion mode is in use, reset and generation of the chart display of the neighbouring area should take place automatically at own ship's distance from the edge of the display as determined by the mariner.

- 8.4** It should be possible to manually change the displayed chart area and the position of own ship relative to the edge of the display.
- 8.5** If the area covered by the ECDIS display includes waters for which no ENC at a scale appropriate for navigation is available, the areas representing those waters should carry an indication (see appendix 5) to the mariner to refer to the paper chart or to the RCDS mode of operation (see appendix 7).

9 COLOURS AND SYMBOLS

- 9.1** IHO recommended colours and symbols should be used to represent SENC information⁵.
- 9.2** The colours and symbols other than those mentioned in 9.1 should comply with the applicable requirements contained in the IMO standards for navigational symbols⁶.
- 9.3** SENC information displayed at the scale specified in the ENC should use the specified size of symbols, figures and letters⁵.
- 9.4** ECDIS should allow the mariner to select whether own ship is displayed in true scale or as a symbol.

10 DISPLAY REQUIREMENTS

- 10.1** ECDIS should be capable of displaying information for:
- .1 route planning and supplementary navigation tasks; and
 - .2 route monitoring.
- 10.2** The effective size of the chart presentation for route monitoring should be at least 270 mm x 270 mm.
- 10.3** The display should be capable of meeting colour and resolution recommendations of IHO⁵.
- 10.4** The method of presentation should ensure that the displayed information is clearly visible to more than one observer in the conditions of light normally experienced on the bridge of the ship by day and by night.
- 10.5** If information categories included in the Standard Display (See appendix 2) are removed to customize the display, this should be permanently indicated. Identification of categories which are removed from the Standard Display should be shown on demand.

⁵ Special Publication S-52, Appendix 2 (see appendix 1)
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11 ROUTE PLANNING, MONITORING AND VOYAGE RECORDING

- 11.1** It should be possible to carry out route planning and route monitoring in a simple and reliable manner.
- 11.2** The largest scale data available in the SENC for the area given should always be used by the ECDIS for all alarms or indications of crossing the ship's safety contour and of entering a prohibited area, and for alarms and indications according to appendix 5.

11.3 Route Planning

- 11.3.1** It should be possible to carry out route planning including both straight and curved segments.
- 11.3.2** It should be possible to adjust a planned route alphanumerically and graphically including:
- .1** adding waypoints to a route;
 - .2** deleting waypoints from a route; and
 - .3** changing the position of a waypoint.
- 11.3.3** It should be possible to plan one or more alternative routes in addition to the selected route. The selected route should be clearly distinguishable from the other routes.
- 11.3.4** An indication is required if the mariner plans a route across an own ship's safety contour.
- 11.3.5** An indication should be given if the mariner plans a route closer than a user-specified distance from the boundary of a prohibited area or a geographic area for which special conditions exist (see appendix 4). An indication should also be given if the mariner plans a route closer than a user-specified distance from a point object, such as a fixed or floating aid to navigation or isolated danger.
- 11.3.6** It should be possible for the mariner to specify a cross track limit of deviation from the planned route at which an automatic off-track alarm should be activated.

11.4 Route monitoring

- 11.4.1** For route monitoring the selected route and own ship's position should appear whenever the display covers that area.
- 11.4.2** It should be possible to display a sea area that does not have the ship on the display (e.g. for look ahead, route planning), while route monitoring. If this is done on the display used for route monitoring, the automatic route monitoring functions (e.g. updating ship's position, and providing alarms and indications) should be continuous. It should be possible to return to the route monitoring display covering own ship's position immediately by single operator action.
- 11.4.3** ECDIS should give an alarm if, within a specified time set by the mariner, own ship will cross the safety contour.

- 11.4.4** ECDIS should give an alarm or indication, as selected by the mariner, if, within a specified time set by the mariner, own ship will cross the boundary of a prohibited area or of a geographical area for which special conditions exist (see appendix 4).
- 11.4.5** An alarm should be given when the specified cross track limit for deviation from the planned route is exceeded.
- 11.4.6** An indication should be given to the mariner if, continuing on its present course and speed, over a specified time or distance set by the mariner, own ship will pass closer than a user-specified distance from a danger (e.g. obstruction, wreck, rock) that is shallower than the mariner's safety contour or an aid to navigation.
- 11.4.7** The ship's position should be derived from a continuous positioning system of an accuracy consistent with the requirements of safe navigation. Whenever possible, a second independent positioning source, preferably of a different type, should be provided. In such cases ECDIS should be capable of identifying discrepancies between the two sources.
- 11.4.8** ECDIS should provide an alarm when the input from position, heading or speed sources is lost. ECDIS should also repeat, but only as an indication, any alarm or indication passed to it from position, heading or speed sources.
- 11.4.9** An alarm should be given by ECDIS when the ship reaches a specified time or distance, set by the mariner, in advance of a critical point on the planned route.
- 11.4.10** The positioning system and the SENC should be on the same geodetic datum. ECDIS should give an alarm if this is not the case.
- 11.4.11** It should be possible to display alternative routes in addition to the selected route. The selected route should be clearly distinguishable from the other routes. During the voyage, it should be possible for the mariner to modify the selected sailing route or change to an alternative route.
- 11.4.12** It should be possible to display:
- .1 time-labels along a ship's track manually on demand and automatically at intervals selected between 1 and 120 minutes; and
 - .2 an adequate number of: points, free movable electronic bearing lines, variable and fixed range markers and other symbols required for navigation purposes and specified in appendix 3.
- 11.4.13** It should be possible to enter the geographical co-ordinates of any position and then display that position on demand. Also, it should be possible to select any point (features, symbol or position) on the display and read its geographical co-ordinates on demand.
- 11.4.14** It should be possible to adjust the displayed geographic position of the ship manually. This manual adjustment should be noted alpha-numerically on the screen, maintained until altered by the mariner and automatically recorded.

11.4.15.1 ECDIS should provide the capability to enter and plot manually obtained bearing and distance lines of position (LOP), and calculate the resulting position of own ship. It should be possible to use the resulting position as an origin for dead-reckoning.

11.4.15.2 ECDIS should indicate discrepancies between the positions obtained by continuous positioning systems and positions obtained by manual observations.

11.5 Voyage recording

11.5.1 ECDIS should store and be able to reproduce certain minimum elements required to reconstruct the navigation and verify the official database used during the previous 12 hours. The following data should be recorded at one minute intervals:

- .1 to ensure a record of own ship's past track: time, position, heading, and speed; and
- .2 to ensure a record of official data used: ENC source, edition, date, cell and update history.

11.5.2 In addition, ECDIS should record the complete track for the entire voyage, with time marks at intervals not exceeding 4 hours.

11.5.3 It should not be possible to manipulate or change the recorded information.

11.5.4 ECDIS should have a capability to preserve the record of the previous 12 hours and of the voyage track.

12 CALCULATIONS AND ACCURACY

12.1 The accuracy of all calculations performed by ECDIS should be independent of the characteristics of the output device and should be consistent with the SENC accuracy.

12.2 Bearings and distances drawn on the display or those measured between features already drawn on the display should have accuracy no less than that afforded by the resolution of the display.

12.3 The system should be capable of performing and presenting the results of at least the following calculations:

- .1 true distance and azimuth between two geographical positions;
- .2 geographic position from known position and distance/azimuth; and
- .3 geodetic calculations such as spheroidal distance, rhumb line, and great circle.

13 PERFORMANCE TESTS, MALFUNCTIONS ALARMS AND INDICATIONS

- 13.1** ECDIS should be provided with means for either automatically or manually carrying out on-board tests of major functions. In case of a failure, the test should display information to indicate which module is at fault.
- 13.2** ECDIS should provide a suitable alarm or indication of system malfunction.

14 BACK-UP ARRANGEMENTS

Adequate back-up arrangements should be provided to ensure safe navigation in case of an ECDIS failure; see appendix 6.

- .1** Facilities enabling a safe take-over of the ECDIS functions should be provided in order to ensure that an ECDIS failure does not develop into a critical situation.
- .2** A back-up arrangement should provide means of safe navigation for the remaining part of a voyage in the case of an ECDIS failure.

MODULE C – INTERFACING AND INTEGRATION

15 CONNECTIONS WITH OTHER EQUIPMENT ⁷

- 15.1** ECDIS should not degrade the performance of any equipment providing sensor inputs. Nor should the connection of optional equipment degrade the performance of ECDIS below this standard.
- 15.2** ECDIS should be connected to the ship's position fixing system, to the gyro compass and to the speed and distance measuring device. For ships not fitted with a gyro compass, ECDIS should be connected to a marine transmitting heading device.
- 15.3** ECDIS may provide a means to supply SENC information to external equipment.

16 POWER SUPPLY

- 16.1** It should be possible to operate ECDIS and all equipment necessary for its normal functioning when supplied by an emergency source of electrical power in accordance with the appropriate requirements of chapter II-1 of the 1974 SOLAS Convention, as amended.
- 16.2** Changing from one source of power supply to another or any interruption of the supply for a period of up to 45 seconds should not require the equipment to be manually re-initialized.

⁷ Publication IEC 61162.

Appendix 1

REFERENCE DOCUMENTS

The following international organizations have developed technical standards and specifications, as listed below, for use in conjunction with this standard. The latest edition of these documents should be obtained from the organization concerned:

INTERNATIONAL MARITIME ORGANIZATION (IMO)

Address: International Maritime Organization	Phone: +44 207 735 76 11
4 Albert Embankment	Fax: +44 207 587 32 10
London SE1 7SR	E-mail: info@imo.org
United Kingdom	Web: http://www.imo.org

Publications

IMO resolution MSC.191(79) on Performance Standards for the presentation of navigation related information on shipborne navigational displays

IMO resolution A.694(17) on Recommendations on general requirements for shipborne radio equipment forming part of the Global Maritime Distress and Safety System (GMDSS) and for electronic navigational aids

SN.Circ/207 (1999) on Differences between RCDS and ECDIS

IMO SN/Circ.243 (2004) on Guidelines for the Presentation of Navigation-related Symbols, Terms and Abbreviations

IMO MSC/Circ.982 (2000) on Guidelines on ergonomic criteria for bridge equipment and layout

INTERNATIONAL HYDROGRAPHIC ORGANIZATION (IHO)

Address: Directing Committee	Phone: +377 93 10 81 00
International Hydrographic Bureau	Fax: +377 93 10 81 40
BP 445	E-mail: info@ihb.mc
MC 98011 Monaco Cedex	Web: http://www.iho.shom.fr
Principality of Monaco	

Publications

Special Publication No. S-52, Specifications for Chart Content and Display Aspects of ECDIS

Special Publication No. S-52 appendix 1, Guidance on Updating the Electronic Navigational Chart

Special Publication No. S-52 appendix 2, Colour and Symbol Specifications for ECDIS

Special Publication No. S-32, Hydrographic Dictionary

Special Publication No. S-57, IHO Transfer Standard for Digital Hydrographic Data

Special Publication No. S-61, IHO Product specification for Raster Navigational Charts (RNC)

Special Publication No. S-63, IHO Data Protection Scheme

Miscellaneous Publication No. M-3, *Resolutions of the IHO*

INTERNATIONAL ELECTROTECHNICAL COMMISSION (IEC)

Address: IEC Central Office
3 rue de Varembé
PO Box 131
CH-1211 Geneva 20
Switzerland

Phone: +41 22 734 01 50
Fax: +41 22 733 38 43

Publications

IEC Publication 61174, Electronic Chart Display and Information Systems (ECDIS) - Operational and Performance Requirements, Method of Testing and Required Test Results.

IEC Publication 60945, General Requirements for Shipborne Radio Equipment Forming Part of the Global Maritime Distress and Safety System and Marine Navigational Equipment.

IEC Publication 61162, *Digital Interfaces - Navigation and Radiocommunication Equipment On board Ship.*

[IEC Publication 62288, Maritime Navigation and Radiocommunication Equipment and Systems – Presentation of navigation related information – General requirements, methods of test and required test results.]

Appendix 2

SENC INFORMATION AVAILABLE FOR DISPLAY DURING ROUTE PLANNING AND ROUTE MONITORING

- 1 Display base to be permanently shown on the ECDIS display, consisting of:
 - .1 coastline (high water);
 - .2 own ship's safety contour;
 - .3 isolated underwater dangers of depths less than the safety contour which lie within the safe waters defined by the safety contour;
 - .4 isolated dangers which lie within the safe water defined by the safety contour, such as fixed structures, overhead wires, etc.;
 - .5 scale, range and north arrow;
 - .6 units of depth and height; and
 - .7 display mode.

- 2 Standard display consisting of:
 - .1 display base
 - .2 drying line
 - .3 buoys, beacons, other aids to navigation and fixed structures
 - .4 boundaries of fairways, channels, etc.
 - .5 visual and radar conspicuous features
 - .6 prohibited and restricted areas
 - .7 chart scale boundaries
 - .8 indication of cautionary notes
 - .9 ships' routing systems and ferry routes
 - .10 archipelagic sea lanes.

- 3 All other information, to be displayed individually on demand, for example:
 - .1 spot soundings
 - .2 submarine cables and pipelines
 - .3 details of all isolated dangers
 - .4 details of aids to navigation
 - .5 contents of cautionary notes
 - .6 ENC edition date
 - .7 most recent chart update number
 - .8 magnetic variation
 - .9 graticule
 - .10 place names.

Appendix 3

NAVIGATIONAL ELEMENTS AND PARAMETERS

- 1 Own ship.
 - .1 Past track with time marks for primary track.
 - .2 Past track with time marks for secondary track.
- 2 Vector for course and speed made good.
- 3 Variable range marker and/or electronic bearing line.
- 4 Cursor.
- 5 Event.
 - .1 Dead reckoning position and time (DR).
 - .2 Estimated position and time (EP).
- 6 Fix and time.
- 7 Position line and time.
- 8 Transferred position line and time.
 - .1 Predicted tidal stream or current vector with effective time and strength.
 - .2 Measured tidal stream or current vector with effective time and strength.
- 9 Danger highlight.
- 10 Clearing line.
- 11 Planned course and speed to make good.
- 12 Waypoint.
- 13 Distance to run.
- 14 Planned position with date and time.
- 15 Visual limits of lights arc to show rising/dipping range.
- 16 Position and time of “wheel over”.

Appendix 4

AREAS FOR WHICH SPECIAL CONDITIONS EXIST

The following are the areas which ECDIS should detect and provide an alarm or indication under sections 11.3.5 and 11.4.4:

- Traffic separation zone
- Inshore traffic zone
- Restricted area
- Caution area
- Offshore production area
- Areas to be avoided
- User defined areas to be avoided
- Military practise area
- Seaplane landing area
- Submarine transit lane
- Anchorage area
- Marine farm/aquaculture
- PSSA (Particularly Sensitive Sea Area)

Appendix 5

ALARMS AND INDICATORS

Section	Requirements	Information
11.4.3	Alarm	Crossing safety contour
11.4.4	Alarm or Indication	Area with special conditions
11.4.5	Alarm	Deviation from route
11.4.8	Alarm	Positioning system failure
11.4.9	Alarm	Approach to critical point
11.4.10	Alarm	Different geodetic datum
13.2	Alarm or Indication	Malfunction of ECDIS
5.8.3	Indication	Default safety contour
6.1.1	Indication	Information overscale
6.1.2	Indication	Larger scale ENC available
7.3	Indication	Different reference system
8.5	Indication	No ENC available
10.5	Indication	Customized display
11.3.4	Indication	Route planning across safety contour
11.3.5	Indication	Route planning across specified area
11.4.6	Indication	Crossing a danger in route monitoring mode
13.1	Indication	System test failure

In this Performance Standard the definitions of Indicators and Alarms provided in the IMO resolution A.830(19) "Code on Alarms and Indicators, 1995" apply.

Alarm: An alarm or alarm system which announces by audible means, or audible and visual means, a condition requiring attention.

Indicator: Visual indication giving information about the condition of a system or equipment.

Appendix 6

BACK-UP REQUIREMENTS

1 INTRODUCTION

As prescribed in section 14 of this performance standard, adequate independent back-up arrangements should be provided to ensure safe navigation in case of ECDIS failure. Such arrangements include:

- .1 facilities enabling a safe take-over of the ECDIS functions in order to ensure that an ECDIS failure does not result in a critical situation;
- .2 a means to provide for safe navigation for the remaining part of the voyage in case of ECDIS failure.

2 PURPOSE

The purpose of an ECDIS back-up system is to ensure that safe navigation is not compromised in the event of ECDIS failure. This should include a timely transfer to the back-up system during critical navigation situations. The back-up system shall allow the vessel to be navigated safely until the termination of the voyage.

3 FUNCTIONAL REQUIREMENTS

3.1 Required functions and their availability

3.1.1 Presentation of chart information

The back-up system should display in graphical (chart) form the relevant information of the hydrographic and geographic environment which are necessary for safe navigation.

3.1.2 Route planning

The back-up system should be capable of performing the route planning functions, including:

- .1 taking over of the route plan originally performed on the ECDIS;
- .2 adjusting a planned route manually or by transfer from a route planning device.

3.1.3 Route monitoring

The back-up system should enable a take-over of the route monitoring originally performed by the ECDIS, and provide at least the following functions:

- .1 plotting own ship's position automatically, or manually on a chart;
- .2 taking courses, distances and bearings from the chart;
- .3 displaying the planned route;

- .4 displaying time labels along ship's track;
- .5 plotting an adequate number of points, bearing lines, range markers, etc., on the chart.

3.1.4 Display information

If the back-up is an electronic device, it should be capable of displaying at least the information equivalent to the standard display as defined in this performance standard.

3.1.5 Provision of chart information

- .1 The chart information to be used in the backup arrangement should be the latest edition, as corrected by official updates, of that issued by or on the authority of a Government, authorized Hydrographic Office or other relevant government institution, and conform to IHO standards.
- .2 It should not be possible to alter the contents of the electronic chart information.
- .3 The chart or chart data edition and issuing date should be indicated.

3.1.6 Updating

The information displayed by the ECDIS back-up arrangements should be up-to-date for the entire voyage.

3.1.7 Scale

If an electronic device is used, it should provide an indication:

- .1 if the information is displayed at a larger scale than that contained in the database;
and
- .2 if own ship's position is covered by a chart at a larger scale than that provided by the system.

3.1.8 If radar and other navigational information are added to an electronic back-up display, all the corresponding requirements for radar information and other navigation information of this performance standard should be met.

3.1.9 If an electronic device is used, the display mode and generation of the neighbouring area should be in accordance with section 8 of this performance standard.

3.1.10 Voyage recording

The back-up arrangements should be able to keep a record of the ship's actual track, including positions and corresponding times.

3.2 Reliability and accuracy

3.2.1 Reliability

The back-up arrangements should provide reliable operation under prevailing environmental and normal operating conditions.

3.2.2 Accuracy

Accuracy should be in accordance with section 12 of this performance standard.

3.3 Malfunctions, warnings, alarms and indications

If an electronic device is used, it should provide a suitable alarm or indication of system malfunction.

4 OPERATIONAL REQUIREMENTS

4.1 Ergonomics

If an electronic device is used, it should be designed in accordance with the ergonomic principles of ECDIS.

4.2 Presentation of information

If an electronic device is used:

- .1 Colours and symbols should be in accordance with the colours and symbols requirements of ECDIS.
- .2 The effective size of the chart presentation should be not less than 250 mm x 250 mm or 250 mm diameter.

5 POWER SUPPLY

If an electronic device is used:

- .1 the back-up power supply should be separate from the ECDIS; and
- .2 conform to the requirements in this ECDIS performance standard.

6 CONNECTIONS WITH OTHER EQUIPMENT

6.1 If an electronic device is used, it should:

- .1 be connected to systems providing continuous position-fixing capability; and
- .2 not degrade the performance of any equipment providing sensor input.

6.2 If radar with selected parts of the ENC chart information overlay is used as an element of the back-up, the radar should comply with resolution MSC.192(79).

Appendix 7

RCDS MODE OF OPERATION

Whenever in this appendix reference is made to any provisions of the annex related to ECDIS, the term ECDIS should be substituted by the term RCDS, SENC by SRNC and ENC by RNC, as appropriate.

This appendix refers to each paragraph of the performance standards for ECDIS (i.e. the Annex to which this part is appendix 7) and specifies which paragraphs of the Annex either:

- .1 apply to RCDS; or
- .2 do not apply to RCDS; or
- .3 are modified or replaced as shown in order to apply to RCDS.

Any additional requirements applicable to RCDS are also described.

1 SCOPE

1.1 Paragraph applies to RCDS.

1.2 When operating in RCDS-mode, an appropriate portfolio of up-to-date paper charts (APC) should be carried on board and be readily available to the mariner.

1.3 - 1.7 Paragraphs apply to RCDS.

1.8 RCDS should provide appropriate alarms or indications with respect to the information displayed or malfunction of the equipment (see Table 1 of this appendix).

1.9 Refers to Appendix 7 and applies to RCDS.

2 APPLICATION OF THESE STANDARDS

2.1 – 2.4 Paragraphs apply to RCDS.

3 DEFINITIONS

3.1 *Raster Chart Display System (RCDS)* means a navigation information system displaying RNCs with positional information from navigation sensors to assist the mariner in route planning and route monitoring, and if required, display additional navigation-related information.

3.2 *Raster Navigational Chart (RNC)* means a facsimile of a paper chart originated by, or distributed on the authority of, a government-authorized hydrographic office. RNC is used in these standards to mean either a single chart or a collection of charts.

- 3.3** *System Raster Navigational Chart Database (SRNC)* means a database resulting from the transformation of the RNC by the RCDS to include updates to the RNC by appropriate means.
- 3.4-3.5** Paragraphs do not apply to RCDS.
- 3.6** Paragraph applies to RCDS.
- 3.7** Appropriate Portfolio of up to date paper Charts (APC) means a suite of paper charts of a scale to show sufficient detail of topography, depths, navigational hazards, aids to navigation, charted routes, and routing measures to provide the mariner with information on the overall navigational environment. The APC should provide adequate look-ahead capability. Coastal States will provide details of the charts which meet the requirement of this portfolio, and these details are included in a worldwide database maintained by the IHO. Consideration should be given to the details contained in this database when determining the content of the APC.

MODULE A - DATABASE

4 PROVISION AND UPDATING OF CHART INFORMATION

- 4.1** The RNC used in RCDS should be the latest edition of that originated by, or distributed on the authority of, a government authorized hydrographic office and conform to IHO standards. RNCs not on WGS 84 or PE-90 should carry meta-data (i.e., additional data) to allow geo-referenced positional data to be displayed in the correct relationship to SRNC data.
- 4.2** The contents of the SRNC should be adequate and up-to-date for that part of the intended voyage not covered by ENC.
- 4.3** It should not be possible to alter the contents of the RNC.
- 4.4 – 4.8** All paragraphs apply to RCDS.
- 4.9** Paragraph does not apply to RCDS

MODULE B – OPERATIONAL AND FUNCTIONAL REQUIREMENTS

5 DISPLAY OF SRNC INFORMATION

- 5.1** RCDS should be capable of displaying all SRNC information.
- 5.2** SRNC information available for display during route planning and route monitoring should be subdivided into two categories:
- .1 the RCDS standard display consisting of RNC and its updates, including its scale, the scale at which it is displayed, its horizontal datum, and its units of depths and heights; and
 - .2 any other information such as mariner's notes.

- 5.3- 5.4** Paragraphs apply to RCDS.
- 5.5** It should be easy to add to, or remove from; the RCDS display any information additional to the RNC data, such as mariner's notes. It should not be possible to remove any information from the RNC.
- 5.6 – 5.9** Paragraphs do not apply to RCDS.
- 5.10 – 5.12** Paragraphs apply to RCDS.
- 5.13** There should always be an indication if the ECDIS equipment is operating in RCDS mode.
- 6** **SCALE**
- This section applies to RCDS.
- 7** **DISPLAY OF OTHER NAVIGATIONAL INFORMATION**
- 7.1 - 7.4** All paragraphs apply to RCDS.
- 8** **DISPLAY MODE AND GENERATION OF THE NEIGHBOURING AREA**
- 8.1** It should always be possible to display the SRNC in “chart-up” orientation. Other orientations are permitted.
- 8.2 - 8.4** All paragraphs apply to RCDS.
- 8.5** Paragraph refers to RCDS mode of operation.
- 9** **COLOURS AND SYMBOLS**
- 9.1** IHO recommended colours and symbols should be used to represent SRNC information.
- 9.2** Paragraph applies to RCDS.
- 9.3** Paragraph does not apply to RCDS.
- 9.4** Paragraph applies to RCDS.
- 10** **DISPLAY REQUIREMENTS**
- 10.1-10.2** Paragraphs apply to RCDS.
- 10.3** Paragraph does not apply to RCDS.

- 10.4** Paragraph applies to RCDS.
- 10.5** Paragraph does not apply to RCDS.
- 10.6** RCDS should be capable of displaying, simply and quickly, chart notes which are not located on the portion of the chart currently being displayed.
- 11** **ROUTE PLANNING, MONITORING AND VOYAGE RECORDING**
- 11.1** Paragraphs apply to RCDS.
- 11.2** Paragraph does not apply to RCDS.
- 11.3** **Route Planning**
- 11.3.1-11.3.3** Paragraphs apply to RCDS.
- 11.3.4-11.3.5** Paragraphs do not apply to RCDS.
- 11.3.6** Paragraph applies to RCDS.
- 11.3.7** It should be possible for the mariner to enter points, lines and areas which activate an automatic alarm. The display of these features should not degrade the SRNC information and it should be clearly distinguishable from the SRNC information.
- 11.4** **Route monitoring**
- 11.4.1** Paragraph applies to RCDS.
- 11.4.2** It should be possible to display a sea area that does not have the ship on the display (e.g. for look ahead, route planning), while route monitoring. If this is done on the display used for route monitoring, the automatic route monitoring functions in 10.4.6 and 10.4.7 should be continuous. It should be possible to return to the route monitoring display covering own ship's position immediately by single operator action.
- 11.4.3-11.4.4** Paragraphs do not apply to RCDS.
- 11.4.5** Paragraph apply to RCDS.
- 11.4.6** Paragraphs do not apply to RCDS.
- 11.4.7-11.4.9** Paragraphs apply to RCDS.
- 11.4.10** The RCDS should only accept positional data referenced to the WGS 84 or PE-90 geodetic datum. RCDS should give an alarm if the positional data is not referenced to one of these datum. If the displayed RNC cannot be referenced to the WGS 84 or PE-90 datum then a continuous indication should be provided.

11.4.11-11.4.15 Paragraphs apply to RCDS.

11.4.16 RCDS should allow the user to manually align the SRNC with positional data. This can be necessary, for example, to compensate for local charting errors.

11.4.17 It should be possible to activate an automatic alarm when the ship crosses a point, line, or is within the boundary of a mariner entered feature within a specified time or distance.

11.5 Voyage recording

11.5.1-11.5.4 All paragraphs apply to RCDS.

12 CALCULATIONS AND ACCURACY

12.1-12.3 All paragraphs apply to RCDS.

12.4 RCDS should be capable of performing transformations between a local datum and WGS 84 Datum.

13 PERFORMANCE TESTS, MALFUNCTION ALARMS AND INDICATIONS

13.1-13.2 All paragraphs apply to RCDS.

14 BACK-UP ARRANGEMENTS

All paragraphs apply to RCDS.

MODULE C – INTERFACING AND INTEGRATION

15 CONNECTIONS WITH OTHER EQUIPMENT

15.1-15.3 All paragraphs apply to RCDS.

16 POWER SUPPLY

16.1-16.2 All paragraphs apply to RCDS.

Table 1

ALARMS AND INDICATORS IN THE RCDS MODE OF OPERATION

Paragraph	Requirement	Information
11.4.5	Alarm	Deviation from route
11.4.17	Alarm	Approach to mariner entered feature, e.g. area, line
11.4.8	Alarm	Position system failure
11.4.9	Alarm	Approach to critical point
11.4.10	Alarm or indication	Different geodetic datum
13.2	Alarm or indication	Malfunction of RCDS mode
5.13	Indication	ECDIS operating in the raster mode
6.1	Indication	Larger scale information available, or overscale
6.1.2	Indication	Larger scale RNC available for the area of the vessel

Note: The definitions of alarms and indicators are given in appendix 5.

ANNEX 25

RESOLUTION MSC.233(82)

(adopted on 5 December 2006)

**ADOPTION OF THE PERFORMANCE STANDARDS FOR SHIPBORNE
GALILEO RECEIVER EQUIPMENT**

THE MARITIME SAFETY COMMITTEE,

RECALLING Article 28(b) of the Convention on the International Maritime Organization concerning the functions of the Committee,

RECALLING ALSO resolution A.886(21), by which the Assembly resolved that the function of adopting performance standards and technical specifications, as well as amendments thereto shall be performed by the Maritime Safety Committee and/or the Marine Environment Protection Committee, as appropriate, on behalf of the Organization,

RECALLING FURTHER that, in accordance with resolution A.815(19) by which the Assembly adopted the IMO policy for the recognition and acceptance of suitable radionavigation systems intended for international use to provide ships with navigational position-fixing throughout their voyages, the GALILEO satellite system may be recognized as a possible component of the world-wide radionavigation system,

NOTING that shipborne receiving equipment for the world-wide radionavigation system should be designed to satisfy the detailed requirements of the particular system concerned,

RECOGNIZING the need to develop performance standards for shipborne GALILEO receiver equipment in order to ensure the operational reliability of such equipment and taking into account the technological progress and experience gained,

HAVING CONSIDERED the recommendation made by the Sub-Committee on Safety of Navigation, at its fifty-second session,

1. ADOPTS the Performance standards for Shipborne GALILEO receiver equipment, set out in the Annex to the present resolution;
2. RECOMMENDS Governments ensure that GALILEO receiver equipment installed on or after 1 January 2009 conform to performance standards not inferior to those specified in the Annex to the present resolution.

ANNEX

PERFORMANCE STANDARDS FOR SHIPBORNE GALILEO RECEIVER EQUIPMENT

1 INTRODUCTION

- 1.1 Galileo is the European satellite navigation system. Galileo is designed as a wholly civil system, operated under public control. Galileo comprises 30 medium earth orbit (MEO) satellites in 3 circular orbits. Each orbit has an inclination of 56° and contains 9 operational satellites plus one operational spare. This geometry ensures that a minimum of 6 satellites are in view to users world-wide with a position dilution of precision (PDOP) ≤ 3.5 .
- 1.2 Galileo transmits 10 navigation signals and 1 search and rescue (SAR) signal. The SAR signal is broadcast in one of the frequency bands reserved for the emergency services (1544-1545 MHz) whereas the 10 navigation signals are provided in the radio-navigation satellite service (RNSS) allocated bands:
- 4 signals occupy the frequency range 1164-1215 MHz (E5a-E5b).
 - 3 signals occupy the frequency range 1260-1300 MHz (E6).
 - 3 signals occupy the frequency range 1559-1591 MHz (E2, L1, E1).

Each frequency carries two signals; the first is a tracking signal – the so-called pilot signal – that contains no data but increases the tracking robustness at the receiver whereas the other carries a navigation data message.

Galileo provides two different services of use for the maritime community.

- 1.3 The Galileo Open Service provides positioning, navigation and timing services, free of direct user charges. The Open Service can be used on one (L1), two (L1 and E5a or L1 and E5b) or three (L1, E5a and E5b) frequencies.
- 1.4 The Galileo Safety of Life Service can be used on one (L1 **or** E5b) or two (L1 and E5b) frequencies¹. Each of the L1 and E5b frequencies carries a navigation data message that includes integrity information. The E5a frequency does not include integrity data.
- 1.5 Galileo receiver equipment intended for navigation purposes on ships of speeds not exceeding 70 knots, in addition to the general requirements specified in resolution A.694(17)², should comply with the following minimum performance requirements.

¹ The integrity parameters broadcast by the Galileo Safety of Life service will be unencrypted and therefore fully accessible. Service Guarantees and Authentication services can be made available, at a charge, through contractual means if desired.

² Refer to publication IEC 60945.

- 1.6 These standards cover the basic requirements of position fixing, determination of course over ground (COG), speed over ground (SOG) and timing, either for navigation purposes or as input to other functions. The standards do not cover the other computational facilities which may be in the equipment nor cover the requirements for any other systems that may take input from the Galileo receiver.

2 GALILEO RECEIVER EQUIPMENT

- 2.1 The words “*Galileo receiver equipment*” as used in these performance standards include all the components and units necessary for the system properly to perform its intended functions. The Galileo receiver equipment should include the following minimum facilities:

- .1 antenna capable of receiving Galileo signals;
- .2 Galileo receiver and processor;
- .3 means of accessing the computed latitude/longitude position;
- .4 data control and interface; and
- .5 position display and, if required, other forms of output.

Note: If Galileo forms part of an approved Integrated Navigation System, requirements of 2.1.3, 2.1.4, 2.1.5 may be provided within the INS.

- 2.2 The antenna design should be suitable for fitting at a position on the ship which ensures a clear view of the satellite constellation, taking into consideration any obstructions that might exist on the ship.

3 PERFORMANCE STANDARDS FOR GALILEO RECEIVER EQUIPMENT

The Galileo receiver equipment should:

- .1 be capable of receiving and processing the Galileo positioning and velocity, and timing signals on:
 - i) for a single frequency receiver, the L1 frequency alone. The receiver should use the ionospheric model broadcast to the receiver by the constellation to generate ionospheric corrections;
 - ii) for a dual frequency receiver, **either** the L1 and E5b frequencies **or** the L1 and E5a frequencies. The receiver should use dual frequency processing to generate ionospheric corrections;
- .2 provide position information in latitude and longitude in degrees, minutes and thousandths of minutes³;

³ Galileo uses Galileo Terrestrial Frame System (GTRF) datum which is a realization of the International Terrestrial Frame Reference (ITRF) system and differs from WGS 84 by less than 5 cm worldwide.

- .3 provide time referenced to universal time coordinated UTC (BIPM)*;
- .4 be provided with at least two outputs from which position information, UTC, course over ground (COG), speed over ground (SOG) and alarms can be supplied to other equipment. The output of position information should be based on the WGS84 datum and should be in accordance with international standards⁴. The output of UTC, course over ground (COG), speed over ground (SOG) and alarms should be consistent with the requirements of 3.16 and 3.18;
- .5 have static accuracy such that the position of the antenna is determined to within:
 - i) 15 m horizontal (95%) and 35 m vertical (95%) for single frequency operations on the L1 frequency;
 - ii) 10 m horizontal (95%) and 10 m vertical (95%) for dual frequency operations on L1 and E5a or L1 and E5b frequencies⁵;
- .6 have dynamic accuracy equivalent to the static accuracy specified in .5 above under the sea states and motion experienced in ships⁶;
- .7 have position resolution equal or better than 0.001 minutes of latitude and longitude;
- .8 have timing accuracy such that time is determined within 50ns of UTC;
- .9 be capable of selecting automatically the appropriate satellite-transmitted signals to determine the ship's position and velocity, and time with the required accuracy and update rate;
- .10 be capable of acquiring satellite signals with input signals having carrier levels in the range of -128dBm to -118dBm. Once the satellite signals have been acquired, the equipment should continue to operate satisfactorily with satellite signals having carrier levels down to -131dBm;
- .11 be capable of operating satisfactorily under normal interference conditions consistent with the requirements of resolution A.694(17);

* Bureau International des poids et mesures.

⁴ Publication IEC 61162.

⁵ The minimum accuracy requirements specified for dual frequency processing are based on the performance requirements established by the Organization in resolution A.915(22) and resolution A.953(23) for navigation in harbour entrances, harbour approaches and coastal waters.
The Galileo satellite navigation system will be able to provide better accuracy (4 m horizontal 95% and 8 m vertical 95%).

⁶ Refer to resolution A.694(17), publications IEC 6721-3-6 and IEC 60945.

- .12 be capable of acquiring position, velocity and time to the required accuracy within 5 min when there is no valid almanac data (cold start);
- .13 be capable of acquiring position, velocity and time to the required accuracy within 1 min when there is valid almanac data (warm start);
- .14 be capable of re-acquiring position, velocity and time to the required accuracy within 1 minute when there has been a service interruption of 60 s or less;
- .15 generate and output to a display and digital interface⁷ a new position solution at least once every 1 s for conventional craft and at least once every 0.5 s for high-speed craft;
- .16 provide the COG, SOG and UTC outputs, with a validity mark aligned with that on the position output. The accuracy requirements for COG and SOG should not be inferior to the relevant performance standards for heading⁸ and speed and distance measuring equipment (SDME)⁹ and the accuracy should be obtained under the various dynamic conditions that could be experienced onboard ships;
- .17 provide at least one normally closed contact, which should indicate failure of the Galileo receiver equipment;
- .18 have a bidirectional interface to facilitate communication so that alarms can be transferred to external systems and so that audible alarms from the Galileo receiver can be acknowledged from external systems; the interface should comply with the relevant international standards;¹⁰ and
- .19 have the facilities to process differential Galileo (dGalileo) data fed to it in accordance with the standards of ITU-R¹¹ and the appropriate RTCM¹² standard and provide indication of the reception of dGalileo signals and whether they are being applied to the ship's position.

4 INTEGRITY CHECKING, FAILURE WARNINGS AND STATUS INDICATIONS

- 4.1 The Galileo receiver equipment should also indicate whether the performance of Galileo is outside the bounds of requirements for general navigation in the ocean, coastal, port approach and restricted waters, and inland waterway phases of the voyage as specified in either resolution A.953(23) or Appendix 2 to resolution A.915(22) and any subsequent amendments as appropriate. The Galileo receiver equipment should as a minimum:

⁷ Conforming to the IEC 61162 series.

⁸ Resolution A.424 (XI) for conventional craft and resolution A.821(19) for high-speed craft.

⁹ Resolution A.824(19).

¹⁰ Publication IEC 61162.

¹¹ ITU-R Recommendation M.823.

¹² RTCM 10402 or 10403.

- .1 provide a warning within 5 s of loss of position or if a new position based on the information provided by the Galileo constellation has not been calculated for more than 1 s for conventional craft and 0.5 s for high-speed craft. Under such conditions the last known position and the time of last valid fix, with the explicit indication of the state so that no ambiguity can exist, should be output until normal operation is resumed;
 - .2 use receiver autonomous integrity monitoring (RAIM) to provide integrity performance appropriate to the operation being undertaken;
 - .3 provide a self-test function.
- 4.2 For receivers having the capability to process the Galileo Safety of Life Service, integrity monitoring and alerting algorithms should be based on a suitable combination of the Galileo integrity message and receiver autonomous integrity monitoring (RAIM). The receiver should provide an alarm within 10 s Time to Alarm (TTA) of the start of an event if an alert limit of 25 m Horizontal Alert Limit (HAL) is exceeded for a period of at least 3 s. The probability of detection of the event should be better than 99.999% over a 3-h period (integrity risk $\leq 10^{-5}/3$ h).

5 PROTECTION

Precautions should be taken to ensure that no permanent damage can result from an accidental short circuit or grounding of the antenna or any of its input or output connections or any of the Galileo receiver equipment inputs or outputs for a duration of 5 min or less.

ANNEX 26**DRAFT ASSEMBLY RESOLUTION
ADOPTION OF AMENDMENTS TO THE INTERNATIONAL REGULATIONS FOR
PREVENTING COLLISIONS AT SEA, 1972, AS AMENDED**

THE ASSEMBLY,

RECALLING article VI of the Convention on the International Regulations for Preventing Collisions at Sea, 1972, on amendments to the Regulations,

HAVING CONSIDERED the amendments to the International Regulations for Preventing Collisions at Sea, 1972, adopted by the Maritime Safety Committee at its eighty-second session and communicated to all Contracting Parties in accordance with paragraph 2 of article VI of that Convention and also the recommendations of the Maritime Safety Committee concerning entry into force of these amendments,

1. ADOPTS, in accordance with paragraph 3 of article VI of the Convention, the amendments set out in the Annex to the present resolution;
2. DECIDES, in accordance with paragraph 4 of article VI of the Convention, that the amendments shall enter into force on [... November 2009] unless by [... May 2008] more than one third of the Contracting Parties have notified their objection to the amendments;
3. REQUESTS the Secretary-General, in conformity with paragraph 3 of article VI, to communicate this resolution to all Contracting Parties to the Convention for acceptance;
4. INVITES Contracting Parties to notify any objections to the amendments not later than [... May 2008], whereafter the amendments will be deemed to have been accepted to enter into force as determined in the present resolution.

ANNEX

**AMENDMENTS TO THE INTERNATIONAL REGULATIONS FOR
PREVENTING COLLISIONS AT SEA, 1972, AS AMENDED**

Annex IV

Distress signals

1 The following signals, used or exhibited either together or separately, indicate distress and need of assistance:

- (a) a gun or other explosive signals fired at intervals of about a minute;
- (b) a continuous sounding with any fog-signalling apparatus;
- (c) rockets or shells, throwing red stars fired one at a time at short intervals;
- (d) a signal made by any signalling method consisting of the group . . . --- . . . (SOS) in the Morse Code;
- (e) a signal sent by radiotelephony consisting of the spoken word "MAYDAY";
- (f) the International Code Signal of distress indicated by N.C.;
- (g) a signal consisting of a square flag having above or below it a ball or anything resembling a ball;
- (h) flames on the vessel (as from a burning tar barrel, oil barrel, etc.);
- (i) a rocket parachute flare or a hand-flare showing a red light;
- (j) a smoke signal giving off orange-coloured smoke;
- (k) slowly and repeatedly raising and lowering arms outstretched to each side;
- (l) a distress alert by means of digital selective calling (DSC) transmitted on:
 - (a) VHF channel 70, or
 - (b) MF/HF on the frequencies 2187,5 kHz, 8414,5 kHz, 4207,5 kHz, 6312 kHz, 12577 kHz or 16804,5 kHz.
- (m) a ship-to-shore distress alert transmitted by the ship's Recognized Mobile Satellite Service Provider (RMSSP) ship earth station;
- (n) signals transmitted by emergency position-indicating radio beacons;
- (o) approved signals transmitted by radiocommunications systems, including survival craft radar transponders.

2 The use or exhibition of any of the foregoing signals except for the purpose of indicating distress and need of assistance and the use of other signals which may be confused with any of the above signals is prohibited.

3 Attention is drawn to the relevant sections of the International Code of Signals, the International Aeronautical and Maritime Search and Rescue Manual, Volume III and the following signals:

- (a) a piece of orange-coloured canvas with either a black square and circle or other appropriate symbol (for identification from the air);
- (b) a dye marker.

ANNEX 27

**DRAFT AMENDMENTS TO THE INTERNATIONAL CODE FOR THE SAFE
CARRIAGE OF PACKAGED IRRADIATED NUCLEAR FUEL, PLUTONIUM AND
HIGH-LEVEL RADIOACTIVE WASTES ON BOARD SHIPS**

**CHAPTER 2
DAMAGE STABILITY**

- 1 In paragraph 2.2.1, the words “Part B” are replaced by the words “Part B-1”.
- 2 In paragraphs 2.2.2 and 2.3.2, the following new sentence is added at the end of the paragraphs:

“For ships less than 80 m in length, the subdivision index R at 80 m shall be used.”

ANNEX 28**RESOLUTION MSC.234(82)****RECOMMENDATIONS CONCERNING TONNAGE MEASUREMENT OF
OPEN-TOP CONTAINERSHIPS**

THE MARITIME SAFETY COMMITTEE,

RECALLING Article 28(b) of the Convention on the International Maritime Organization concerning the functions of the Committee,

RECALLING FURTHER the relevant provisions of the International Convention on Tonnage Measurement of Ships, 1969,

RECALLING ALSO circular TM.5/Circ.4 on Provisional formula to calculate a reduced gross tonnage of open-top containerships, whereby the Committee, being concerned with the economic disadvantages caused by the use of greater gross tonnage in comparison with gross tonnage of conventional containerships for the assessment of fees, agreed to recommend a reduced gross tonnage for open-top containerships based on a provisional formula,

RECALLING ALSO circular TM.5/Circ.5 on Interpretations of the provisions of the International Convention on Tonnage Measurement of Ships, 1969, in particular section 3 entitled "Open-top containerships",

NOTING that, by the aforementioned circular TM.5/Circ.4, Governments were invited to submit to the Organization information on open-top containerships in operation and under consideration which would enable the assessment of the final coefficients in the formula, including principal dimensions, gross tonnage underdeck and ondeck carrying capacities of containers, deadweight etc.,

HAVING RECOGNIZED that based on the provisions included in circular MSC/Circ.608/Rev.1, open-top containerships are designed and constructed to a high safety level in particular. This applies to improved protection and securing of containers,

NOTING that, in view of the explicit amendment procedure of the 1969 Tonnage Measurement Convention, it may require a significant period of time for any amendment to become effective,

REALIZING the need for the establishment of the principles for the treatment and unified application of tonnage measurement of open-top containerships,

HAVING CONSIDERED, at its eighty-second session, the recommendation made by the Sub-Committee on Stability and Load Lines and on Fishing Vessels Safety, at its forty-ninth session,

1. ADOPTS the Recommendations concerning tonnage measurement of open-top containerships, the text of which is set out in the Annex to the present resolution;

2. AGREES that Governments which are Contracting Governments to the 1969 Tonnage Measurement Convention should use these Recommendations when applying the provisions of the Convention;
3. INVITES Governments to advise the ports and harbours authorities to apply the Recommendations when assessing fees based on reduced gross tonnage for open-top containerships;
4. REVOKES circular TM.5/Circ.4 and section 3 entitled “Open-top containerships” of circular TM.5/Circ.5.

ANNEX

**RECOMMENDATIONS CONCERNING TONNAGE MEASUREMENT OF
OPEN-TOP CONTAINERSHIPS**

1 In order to use a unified base for the application of tonnage measurement of open-top containerships, the Administrations are recommended to accept the following.

Definition of open-top containership

2 *An open-top containership*, for the purpose of application of the 1969 Tonnage Measurement Convention, means a ship which is designed for the carriage of containers and which is constructed like an open “U”, with not less than 66.7% of the total cargo hatchway clear opening area in an “open-top” configuration, with a double bottom and above this, high-sided erections without hatch covers on the upper deck and without a complete deck above the moulded draught (refer to the figure), and needs to be regarded as a ship of a novel type as referred to in regulation 1(3) of the Convention.

Interpretations of the provisions of the 1969 Tonnage Measurement Convention

3 The provisions of the 1969 Tonnage Measurement Convention for treatment of enclosed spaces should be applied to open-top containerships subject to the following unified interpretations:

.1 *Upper deck (regulation 2(1))*

In a ship which is exempted by the Administration from the requirements to fit weathertight hatch covers on the uppermost deck exposed to weather and sea, as in an open-top containership, the upper deck should be taken as that deck which would have been determined by regulation 2(1) as if such hatch covers had been fitted.

.2 *Enclosed spaces (regulation 2(4))*

In open-top containerships, an opening in a deck such as the absence of hatch covers should not preclude a space from being included in the enclosed space.

.3 *Shelter above container stacks*

In the case of open-top containerships having movable non-load-bearing covers (shelter) of light construction resting on the container-guides, the space above the hatch coamings up to the covers does not qualify as an excluded space according to regulation 2(5). For this particular design, however, an exception can be made in accordance with regulation 1(3). The space can be excluded provided that this type of ship meets the requirements of an open-top containership without such covers.

Reduced gross tonnage of open-top containerships

4 To reduce the disadvantages caused by the use of a greater gross tonnage in comparison with a gross tonnage of conventional containerships for assessing fees, a reduced gross tonnage for open-top containerships, without limitation in size, based on a simplified formula is recommended as follows:

$$GT_R = 0.9 \times GT$$

where:

GT_R = the reduced gross tonnage

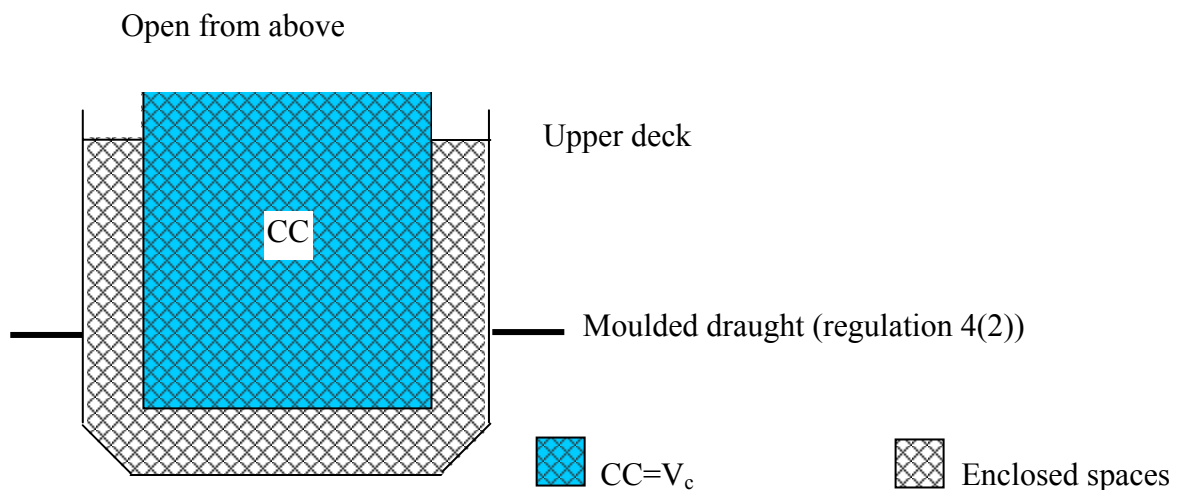
GT = the gross tonnage calculated in accordance with the 1969 Tonnage Measurement Convention

Entry into the International Tonnage Certificate (1969)

5 In the International Tonnage Certificate (1969), under "Remarks", an entry should be made for the tonnage of the open-top containership as follows:

"In accordance with resolution MSC.234(82), the reduced gross tonnage which should be used for the calculation of tonnage-based fees is....."

Figure referred to in paragraph 2



ANNEX 29

RESOLUTION MSC.235(82)

(adopted on 1 December 2006)

**ADOPTION OF THE GUIDELINES FOR THE DESIGN AND CONSTRUCTION OF
OFFSHORE SUPPLY VESSELS, 2006**

THE MARITIME SAFETY COMMITTEE,

RECALLING Article 28(b) of the Convention on the International Maritime Organization concerning the functions of the Committee,

RECALLING ALSO resolution A.469(XII) by which the Assembly adopted the Guidelines for the design and construction of offshore supply vessels (OSV Guidelines),

NOTING that the Assembly, by the aforementioned resolution, authorized the Committee to amend the Guidelines, as may be necessary, to incorporate new features of offshore supply vessels,

RECOGNIZING that the OSV Guidelines had been adopted in 1981 and were based on the requirements of the 1974 SOLAS Convention, as amended in that year, while a number of amendments to the Convention and other IMO instruments (such as the Intact Stability Code) have since been adopted which might affect the Guidelines,

BEING DESIROUS of keeping the OSV Guidelines up to date,

HAVING CONSIDERED, at its eighty-second session, the revised OSV Guidelines proposed by the Sub-Committee on Stability and Load Lines and on Fishing Vessels Safety, at its forty-eighth session, which was contributed by the Sub-Committee on Dangerous Goods, Solid Cargoes and Containers,

1. ADOPTS the Guidelines for the design and construction of offshore supply vessels, 2006, the text of which is set out in the Annex to the present resolution;
2. INVITES Governments to take appropriate steps to give effect to the annexed Guidelines for the design and construction of offshore supply vessels, 2006;
3. SUPERSEDES resolution A.469(XII).

ANNEX

**GUIDELINES FOR THE DESIGN AND CONSTRUCTION OF OFFSHORE SUPPLY
VESSELS, 2006**

CONTENTS

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PREAMBLE

- 1 These Guidelines have been developed for the design and construction of new offshore supply vessels with a view to promoting the safety of such vessels and their personnel, recognizing the unique design features and service characteristics of these vessels.
- 2 These Guidelines furthermore provide a standard of safety equivalent to the relevant requirements of the International Convention for the Safety of Life at Sea, 1974, as amended, and in particular to the stability criteria of the Code on Intact Stability for all Types of Ships Covered by IMO Instruments (IS Code), as amended.
- 3 Recognizing that for certain limited areas of operation and service characteristics it is unreasonable to apply these Guidelines in full, the possibility of relaxations has been introduced by the concept of “near-coastal voyage”.
- 4 Provisions for offshore supply vessels carrying more than 12 industrial personnel are not included in these Guidelines.
- 5 When an offshore supply vessel is used for special purposes, such as diving assistance or oceanographic surveys, the persons on board in connexion with these special purposes should be treated as special personnel.
- 6 The content of these Guidelines was reviewed in 2006 in order to update the references contained therein, to enhance subdivision and damage stability requirements, to remove duplication of the content between the Guidelines and the IS Code and to introduce an appropriate documentation of compliance with the Guidelines.

1 GENERAL

1.1 Application

- 1.1.1 Every new decked offshore supply vessel of 24 m and over but not more than 100 m in length should comply with the provisions of Parts 2 and 3 of these Guidelines. The intact and damage stability of a vessel of more than 100 m in length should be to the satisfaction of the Administration.
- 1.1.2 Parts 4, 5, 6 and 7 of these Guidelines apply to every new decked offshore supply vessel of 500 gross tonnage and above.
- 1.1.3 Where these Guidelines set forth alternative safety standards to those contained in the Convention and where the Convention is applicable, these Guidelines may be applied under the equivalency provisions of regulation 5 of chapter I of the Convention.
- 1.1.4 Vessels fitted with dynamic positioning equipment should comply with the guidelines developed by the Organization*.

* Refer to the Guidelines for vessels with dynamic positioning systems (MSC/Circ.645) and Guidelines for dynamic positioning system (DP) operator training (MSC/Circ.738).

1.1.5 For a vessel engaged in near-coastal voyages, the principles in 1.3 of these Guidelines should guide the Administration in the development of its national standards. Relaxations from the requirements of these Guidelines may be permitted by an Administration for vessels engaged in near-coastal voyages off its own coasts provided the operating conditions are, in the opinion of that Administration, such as to render compliance with the Guidelines unreasonable or unnecessary.

1.1.6 Unless expressly provided otherwise, an existing offshore supply vessel should be required to comply with these Guidelines as far as is practicable in the opinion of the Administration.

1.1.7 Where a vessel other than an offshore supply vessel, as defined in 1.2.1, is employed on a similar service, the Administration should determine the extent to which compliance with these Guidelines is required.

1.2 Definitions

For the purpose of these Guidelines, unless expressly provided otherwise:

1.2.1 *Offshore supply vessel* means a vessel:

- .1 which is primarily engaged in the transport of stores, materials and equipment to offshore installations; and
- .2 which is designed with accommodation and bridge erections in the forward part of the vessel and an exposed cargo deck in the after part for the handling of cargo at sea.

1.2.2 *New vessel* means a vessel the keel of which is laid or which is at a similar stage of construction six months after the date on which these Guidelines were adopted.

1.2.3 *Existing vessel* means a vessel which is not a new vessel.

1.2.4 The terms “length (L) of a vessel”, “perpendiculars”, “weathertight” and “summer load line” have the meanings as defined in the Protocol of 1988 relating to the International Convention on Load Lines, 1966, as amended.

1.2.5 *Administration* means the Government of the State whose flag the vessel is entitled to fly.

1.2.6 *Offshore installation* means a marine structure located at an offshore site.

1.2.7 *IS Code* means the Code on Intact Stability for all Types of Ships Covered by IMO Instruments, as amended.

1.2.8 *Near-coastal voyage* means a voyage in the vicinity of the coast of a State as defined by the Administration of that State.

1.2.9 *Convention* means the International Convention for the Safety of Life at Sea, 1974, as amended.

1.3 Principles governing near-coastal voyages

1.3.1 The Administration defining near-coastal voyages for the purpose of these Guidelines should not impose design and construction standards for a vessel entitled to fly the flag of another State and engaged in such voyages in a manner resulting in a more stringent standard for such a vessel than for a vessel entitled to fly its own flag. In no case should the Administration impose, in respect of a vessel entitled to fly the flag of another State, standards in excess of these Guidelines for a vessel not engaged in near-coastal voyages.

1.3.2 With respect to a vessel regularly engaged in near-coastal voyages off the coast of another State, the Administration should prescribe design and construction standards for such a vessel at least equal to those prescribed by the Government of the State off whose coast the vessel is engaged, provided such standards do not exceed these Guidelines in respect of a vessel not engaged in near-coastal voyages.

1.3.3 A vessel which extends its voyage beyond a near-coastal voyage should comply with these Guidelines.

2 INTACT STABILITY

The vessel should comply with the relevant provisions for offshore supply vessels contained in the IS Code. Reference should be made to appendix 1 for operational matters related to stability criteria.

SUBDIVISION AND DAMAGE STABILITY

3.1 General

Taking into account, as initial conditions before flooding, the standard loading conditions required by the relevant provisions of Part B of the IS Code and the damage assumptions in 3.2, the vessel should comply with the damage stability criteria as specified in 3.3.

3.2 Damage assumptions

3.2.1 Damage should be assumed to occur anywhere in the vessel's length between transverse watertight bulkheads.

3.2.2 The assumed extent of damage should be as follows:

- .1 longitudinal extent: vessels with the length (L) greater than 43 m, 3 m plus 3% of the vessel's length. For those with length (L) not greater than 43 m, 10% of the vessel's length,
- .2 transverse extent: transverse extent of damage should be assumed as 760 mm, measured inboard from the side of the vessel perpendicularly to the centreline at the level of the summer load waterline,
- .3 vertical extent: from the underside of the cargo deck, or the continuation thereof, for the full depth of the vessel.

3.2.3 A transverse watertight bulkhead extending from the vessel's side to a distance inboard of 760 mm or more at the level of the summer load line joining longitudinal watertight bulkheads may be considered as a transverse watertight bulkhead for the purpose of the damage calculations.

3.2.4 If pipes, ducts or tunnels are situated within the assumed extent of damage, arrangements should be made to ensure that progressive flooding cannot thereby extend to compartments other than those assumed to be floodable for each case of damage.

3.2.5 If damage of a lesser extent than that specified in 3.2.2 results in a more severe condition, such lesser extent should be assumed.

3.2.6 Where a transverse watertight bulkhead is located within the transverse extent of assumed damage and is stepped in way of a double bottom or side tank by more than 3.05 m, the double bottom or side tanks adjacent to the stepped portion of the transverse watertight bulkhead should be considered as flooded simultaneously.

3.2.7 If the distance between adjacent transverse watertight bulkheads or the distance between the transverse planes passing through the nearest stepped portions of the bulkheads is less than the longitudinal extent of damage given in 3.2.2.1, only one of these bulkheads should be regarded as effective for the purpose of 3.2.1.

3.3 Damage stability criteria

3.3.1 The final waterline, taking into account sinkage, heel and trim, should be below the lower edge of any opening through which progressive flooding may take place. Such openings should include air pipes and those which are capable of being closed by means of weathertight doors or hatch covers and may exclude those openings closed by means of watertight manhole covers and flush scuttles, small watertight cargo tank hatch covers which maintain the high integrity of the deck, remotely operated watertight sliding doors and sidescuttles of the non-opening type.

3.3.2 In the final stage of flooding, the angle of heel due to unsymmetrical flooding should not exceed 15°. This angle may be increased up to 17° if no deck immersion occurs.

3.3.3 The stability in the final stage of flooding should be investigated and may be regarded as sufficient if the righting lever curve has, at least, a range of 20° beyond the position of equilibrium in association with a maximum residual righting lever of at least 100 mm within this range. Unprotected openings should not become immersed at an angle of heel within the prescribed minimum range of residual stability unless the space in question has been included as a floodable space in calculations for damage stability. Within this range, immersion of any of the openings referred to in 3.3.1 and any other openings capable of being closed weathertight may be authorized.

3.3.4 The Administration should be satisfied that the stability is sufficient during intermediate stages of flooding.

3.4 Assumptions for calculating damage stability

3.4.1 Compliance with 3.3 should be confirmed by calculations which take into consideration the design characteristics of the vessel, the arrangements, configuration and permeability of the damaged compartments and the distribution, specific gravities and the free surface effect of liquids.

3.4.2 The permeability of compartments assumed to be damaged should be as follows:

<i>Spaces</i>	<i>Permeability</i>
Appropriated to stores	60
Occupied by accommodation	95
Occupied by machinery	85
Void spaces	95
Intended for dry cargo	95

The permeability of tanks should be consistent with the amount of liquid carried, as shown in the loading conditions specified in 3.1. The permeability of empty tanks should be assumed to be not less than 95.

3.4.3 The free surface effect should be calculated at an angle of heel of 5° for each individual compartment, or the effect of free liquid in a tank should be calculated over the range of positive residual righting arm, by assessing the shift of liquids by moment of transference calculations.

3.4.4 Free surface for each type of consumable liquid should be assumed for at least one transverse pair of tanks or a single centreline tank. The tank or tanks to be taken into account should be those where the effect of free surface is the greatest.

3.4.5 Alternatively, the actual free surface effect may be used provided the methods of calculation are acceptable to the Administration.

3.5 Subdivision

3.5.1 The machinery spaces and other working and living spaces in the hull should be separated by watertight bulkheads.

3.5.2 Arrangements made to maintain the watertight integrity of openings in watertight subdivisions should comply with the relevant provisions for cargo ships contained in chapter II-1 of the Convention.

3.5.3 A collision bulkhead should be fitted that complies with relevant provisions for cargo ships of chapter II-1 of the Convention.

3.5.4 An afterpeak bulkhead should be fitted and made watertight up to the freeboard deck. The afterpeak bulkhead may, however, be stepped below the freeboard deck, provided the degree of safety of the vessel as regards subdivision is not thereby diminished.

4 MACHINERY AND ELECTRICAL INSTALLATIONS

The vessel should comply with the relevant provisions for cargo ships contained in parts C, D and E of chapter II-1 of the Convention.

5 FIRE PROTECTION

The vessel should comply with the relevant provisions for cargo ships contained in chapter II-2 of the Convention.

6 LIFE-SAVING APPLIANCES

The vessel should comply with the relevant provisions for cargo ships contained in chapter III of the Convention.

7 RADIOCOMMUNICATIONS

The vessel should comply with the relevant provisions for cargo ships of chapter IV of the Convention.

8 DOCUMENTATION

The Administration, its nominated surveyor or duly authorized organization recognized by the Administration should issue a Document of Compliance, the model form of which is set out in appendix 2, after it is satisfied that the vessel complies with the provisions of these Guidelines.

9 TRANSPORT OF HAZARDOUS AND LIQUID NOXIOUS SUBSTANCES IN BULK

A vessel involved in the transport of limited quantities of hazardous and liquid noxious substances in bulk should comply with the Guidelines for the transport and handling of limited amounts of hazardous and noxious liquid substances in bulk on offshore support vessels, as amended*.

* Refer to the Guidelines for the transport and handling of limited amounts of hazardous and noxious liquid substances in bulk on offshore support vessels, as amended (resolution A.673(16), as amended).

APPENDIX 1

OPERATIONAL MATTERS PERTAINING TO STABILITY CRITERIA FOR OFFSHORE SUPPLY VESSELS

The following operational matters should be considered in relation to stability criteria under section 2 of the Guidelines.

- 1 The stability criteria mentioned in the IS Code are minimum values; no maximum values are recommended. It is advisable to avoid excessive values, since these might lead to acceleration forces which could be prejudicial to the vessel, its complement, its equipment and the safe carriage of the cargo.
- 2 Where anti-rolling devices are installed in a vessel, the Administration should be satisfied that the stability criteria in the IS Code can be maintained when the devices are in operation.
- 3 A number of factors such as beam wind on a vessel with large windage area, icing, rolling characteristics, following seas, etc., adversely affect stability and the Administration is advised to take these into account in so far as is deemed necessary.

APPENDIX 2

FORM OF THE OFFSHORE SUPPLY VESSEL DOCUMENT OF COMPLIANCE

DOCUMENT OF COMPLIANCE

(Official seal)

Issued under the provisions of the

GUIDELINES FOR THE DESIGN AND CONSTRUCTION OF OFFSHORE SUPPLY VESSELS, 2006
(resolution MSC.235(82))

under the authority of the Government of

.....
(full official designation of country)

by
(full official designation of the competent person or organization recognized by the Administration)

Particulars of the vessel*

Name of vessel
Distinctive number or letters
Port of registry
Gross tonnage
Deadweight
IMO Number**
Date on which keel was laid or
on which the vessel was at
a similar stage of construction

The vessel is exempted from compliance with the following provisions of the Guidelines:

.....

THIS IS TO CERTIFY that the design and construction of the vessel complies with relevant provisions of the Guidelines.

Issued at
(place of issue of Certificate)

.....
(Date of issue)

.....
*(signature of authorized official
issuing the certificate)*

(Seal or stamp of the authority, as appropriate)

* Alternatively, the particulars of the vessel may be placed horizontally in boxes.

** In accordance with the IMO ship identification number scheme, adopted by the Organization by resolution A.600(15).

ANNEX 30**RESOLUTION MSC.236(82)****(adopted on 1 December 2006)****ADOPTION OF AMENDMENTS TO THE GUIDELINES FOR THE TRANSPORT AND HANDLING OF LIMITED AMOUNTS OF HAZARDOUS AND NOXIOUS LIQUID SUBSTANCES IN BULK ON OFFSHORE SUPPORT VESSELS**

THE MARITIME SAFETY COMMITTEE,

RECALLING Article 28(b) of the Convention on the International Maritime Organization concerning the functions of the Committee,

RECALLING ALSO resolution A.673(16) by which the Assembly adopted the Guidelines for the transport and handling of limited amounts of hazardous and noxious liquid substances in bulk on offshore support vessels (LHNS Guidelines),

NOTING that the Assembly, by the aforementioned resolution, authorized the Maritime Safety Committee and the Marine Environment Protection Committee to amend the Guidelines as may be necessary,

NOTING ALSO that the Maritime Safety Committee, at its eighty-second session, adopted the Guidelines for the design and construction of offshore supply vessels, 2006 (OSV Guidelines),

NOTING FURTHER that the LHNS Guidelines were referred to in and applied in addition to the OSV Guidelines, stipulating that, where the Guidelines set forth alternative safety standards to those contained in the OSV Guidelines, the provisions of the LHNS Guidelines should be followed,

BEING DESIROUS of keeping the LHNS Guidelines up to date,

NOTING that the Marine Environment Protection Committee, at its fifty-fifth session, adopted by resolution MEPC.158(55) relevant amendments to the LHNS Guidelines,

CONSIDERING that it is highly desirable for the provisions of the LHNS Guidelines to remain identical when adopted by the Maritime Safety Committee and the Marine Environment Protection Committee,

HAVING CONSIDERED, at its eighty-second session, the amendments to the LHNS Guidelines proposed by the Sub-Committee on Stability and Load Lines and on Fishing Vessels Safety, at its forty-eighth session, which were contributed by the Sub-Committees on Bulk Liquids and Gases and on Dangerous Goods, Solid Cargoes and Containers,

1. ADOPTS the amendments to the Guidelines for the transport and handling of limited amounts of hazardous and noxious liquid substances in bulk on offshore support vessels (resolution A.673(16)), the text of which is set out in the Annex to the present resolution;
2. INVITES Governments to take appropriate steps to give effect to the annexed amendments to the LHNS Guidelines.

ANNEX

**AMENDMENTS TO THE GUIDELINES FOR THE TRANSPORT AND HANDLING OF
LIMITED AMOUNTS OF HAZARDOUS AND NOXIOUS LIQUID SUBSTANCES
IN BULK ON OFFSHORE SUPPORT VESSELS
(RESOLUTION A.673(16))**

PREAMBLE

1 In paragraph 2, the words “regulation 13(4) of Annex II” are replaced by the words “regulation 11(2) of Annex II”.

2 In paragraph 5, the year “2006” is inserted after “Guidelines for the Design and Construction of Offshore Supply Vessels” and the words “(resolution A.469(XII))” are replaced by “resolution MSC.235(82)”.

CHAPTER 1 – GENERAL

1.1 Application

3 Paragraph 1.1.7 is deleted.

4 The following new paragraph 1.1.7 is inserted:

“1.1.7 For provisions regulating the transport of dangerous goods and marine pollutants in packaged form, including transport of dangerous goods in portable tanks, refer to the International Maritime Dangerous Goods (IMDG) Code.”

5 In paragraph 1.1.8, the reference to “(resolution A.469(XII))” is deleted in the first sentence and the words “to those contained in resolution A.469(XII)” are deleted in the second sentence.

1.2 Scope

6 In paragraph 1.2.2.1.2, the words “category A, B and C” are deleted.

1.3 Definitions

7 Paragraph 1.3.6 is deleted.

8 Paragraphs 1.3.7, 1.3.8 and 1.3.9 are renumbered as paragraphs 1.3.6, 1.3.7 and 1.3.8, respectively.

9 Paragraph 1.3.10 is renumbered as paragraph 1.3.9 and the words “, as amended” are added after “MEPC.19(22)”.

10 Paragraph 1.3.11 is renumbered as paragraph 1.3.10 and the words “, as amended” are added after “MSC.5(48)”.

11 Paragraphs 1.3.12 and 1.3.13 are deleted.

1.5 Survey and certification

- 12 In paragraph 1.5.1, the following new sentence is added after the existing first sentence:
- “If the language used is not English, French or Spanish, the text should include the translation into one of these languages.”
- 13 In paragraph 1.5.2, the words “regulation 11 of Annex II” are replaced by the words “regulations 7 and 9 of Annex II”.

CHAPTER 2 – STABILITY AND CARGO TANK LOCATION

- 14 In paragraph 2.1.1, the year “2006” is inserted after the words “Guidelines for the design and construction of offshore supply vessels” and the words “(resolution A.469(XII))” are replaced by “resolution MSC.235(82)”.

CHAPTER 3 – SHIP DESIGN

3.4 Cargo tank construction

- 15 Paragraph 3.4.2 is deleted.
- 16 The following new paragraph 3.4.2 is inserted:
- “3.4.2 Instead of the use of permanently attached deck-tanks, portable tanks meeting the requirements of the International Maritime Dangerous Goods (IMDG) Code or other portable tanks specifically approved by the Administration may be used for cargoes indicated in paragraph 1.2.2, provided that the tanks are properly located and secured to the vessel.”
- 17 In paragraph 3.4.4.1, the reference to “0.7 bar” is replaced by the reference to “0.07 MPa”.

3.6 Cargo tank vent systems

- 18 In paragraph 3.6.2, the reference to “8.2.2” is replaced by the reference to “8.3.4”.

3.9 Fire-fighting requirements

- 19 In paragraph 3.9.1.1, the references to “60, 61, 62 and 63” are replaced by the references to “4.5.5, 10.8 and 10.9”.
- 20 In paragraph 3.9.1.2, the references to “56.1, 56.2, 56.4, 56.8 and 56.7” are replaced by the references to “4.5.1.1, 4.5.1.2, 4.5.1.4, 4.5.2.1 to 4.5.2.3 and 9.2.4.2.5”, respectively and the word “metres” is replaced by the symbol “m”.
- 21 In paragraph 3.9.1.3, the reference to “57.1” is replaced by the reference to “9.2.4.1” and the reference to “42.5.1” is replaced by the reference to “9.2.3.1.1.1”.

22 In paragraph 3.9.1.4, the reference to “44” is replaced by the reference to “9.2.3” and the reference to “58” is replaced by the reference to “9.2.4.2”.

23 In paragraph 3.9.1.5, the word “regulation” is replaced by the word “regulations” and the reference to “59” is replaced by the reference to “4.5.3, 4.5.4 and 4.5.6 to 4.5.8”.

24 The existing text of paragraph 3.9.1.6 is replaced by the following:

“regulations 10.2, 10.4 and 10.5, except regulation 10.5.6, should apply as they would apply to tankers of 2,000 gross tonnage and over;”.

25 In paragraph 3.9.1.7, the reference to “61” is replaced by the reference to “10.8”.

26 In paragraph 3.9.1.8, the reference to “63” is replaced by the reference to “10.9”.

27 In paragraph 3.9.2.3, the words “should be provided” are deleted.

28 In paragraph 3.9.2.3.4.3, the words “per square metre” are deleted.

29 The existing text of paragraph 3.9.2.4 is replaced by the following:

“An alternative to the systems required in 3.9.2.3 above may be approved in accordance with the procedures contained in SOLAS regulation II-2/17.”

3.16 Emergency remote shutdown

30 In paragraph 3.16, the reference to “50 bar gauge” is replaced by the reference to “5 MPa”.

CHAPTER 4 – POLLUTION REQUIREMENTS

31 The existing text of paragraph 4.1 is replaced by the following:

“4.1 Each ship certified to carry noxious liquid substances should be provided with a Cargo Record Book, a Procedure and Arrangements Manual and a Shipboard Marine Emergency Plan developed for the ship in accordance with Annex II to MARPOL 73/78 and approved by the Administration.”

32 The existing text of paragraph 4.2 is replaced by the following:

“4.2 Discharge into the sea of residues of noxious liquid substances permitted for the carriage in Ship Type 3, or products listed in appendix 1 or ballast water, tank washings, or other residues or mixtures containing such substances, is prohibited. Any discharges of residues and mixtures containing noxious liquid substances should be to reception facilities in port. As a consequence of this prohibition, the Administration may waive the requirements for efficient stripping and underwater discharge arrangements in MARPOL 73/78, Annex II.”

33 Paragraph 4.3 is deleted and paragraph 4.4 is renumbered as paragraph 4.3.

34 The existing text of appendix 1 is replaced by the following:

APPENDIX 1

TABLE OF PERMITTED PRODUCTS

	Flammability
Oil-based mud containing mixtures of products listed in chapters 17 and 18 of the IBC Code and the MEPC.2/Circular and permitted to be carried under paragraph 1.2 of these Guidelines	No
Water-based mud containing mixtures of products listed in chapters 17 and 18 of the IBC Code and the MEPC.2/Circular and permitted to be carried under paragraph 1.2 of these Guidelines	No
Drilling Brines, including:	No
Sodium Chloride Solution	No
Calcium Bromide Solution	No
Calcium Chloride Solution	No
Calcium nitrate/Magnesium nitrate/Potassium chloride solution	No
Calcium Nitrate Solution (50% or less)	No
Drilling brines (containing zinc salts)	No
Potassium Formate Solution	No
Potassium Chloride Solution	No
Ethyl Alcohol	Yes
Ethylene Glycol	No
Ethylene Glycol monoalkyl ether	Yes
Methyl Alcohol	Yes
Acetic acid	Yes
Formic acid	Yes
Hydrochloric Acid	No
Hydrochloric-hydrofluoric mixtures containing 3% or less Hydrofluoric acid	No
Sodium Silicate Solution	No
Sulphuric Acid	No
Triethylene Glycol	Yes
Toluene	Yes
Xylene	Yes
Liquid carbon dioxide	No
Liquid nitrogen	No
Noxious liquid, NF, (7) n.o.s. (trade name ..., contains ...) ST3, Cat. Y	No
Noxious liquid, F, (8) n.o.s. (trade name, contains ...) ST3, Cat. Y	Yes
Noxious liquid, NF, (9) n.o.s. (trade name ..., contains ...) ST3, Cat. Z	No
Noxious liquid, F, (10) n.o.s. (trade name ..., contains ...) ST3, Cat. Z	Yes
Noxious liquid, (11) n.o.s. (trade name ..., contains ...) Cat. Z	No
Non-noxious liquid, (12) n.o.s. (trade name ..., contains ...) Cat. OS	No

APPENDIX 2

MODEL FORM OF CERTIFICATE OF FITNESS

35 The existing text of appendix 2 is replaced by the following:

“CERTIFICATE OF FITNESS

(Official seal)

Issued under the provisions of the

**GUIDELINES FOR THE TRANSPORT AND HANDLING OF LIMITED AMOUNTS OF
HAZARDOUS AND NOXIOUS LIQUID SUBSTANCES IN BULK ON OFFSHORE
SUPPORT VESSELS**

(resolution A.673(16), as amended by resolutions MSC.236(82) and MEPC.158(55))

under the authority of the Government of

.....
(full official designation of country)

by
*(full official designation of the competent person
or organization recognized by the Administration)*

Particulars of ship¹

Name of ship
Distinctive number or letters
IMO Number²
Port of registry
Gross tonnage
Date on which keel was laid or on
which the vessel was at a similar
stage of construction or (in the case of a converted vessel) date
on which conversion for the carriage
of bulk liquids subject to these
Guidelines was commenced:

The ship also complies fully with the following amendments to the Guidelines:

.....
.....

The ship is exempted from compliance with the following provisions of the Guidelines:

.....
.....

¹ Alternatively, the particulars of the ship may be placed horizontally in boxes.
² In accordance with the IMO ship identification number scheme, adopted by the Organization by resolution A.600(15).

THIS IS TO CERTIFY:

- 1 That the ship has been surveyed in accordance with the provisions of 1.5 of the Guidelines.
- 2 That the survey showed that the construction and equipment of the ship:
 - .1 complied with the relevant provisions of the Guidelines applicable to “new” ships³;
 - .2 complied with the provisions of the Guidelines in respect of “existing” ships³.
- 3 That the ship has been provided with a Manual in accordance with Appendix 4 of Annex II of MARPOL 73/78 as called for by regulation 14 of Annex II and that the arrangements and equipment of the vessel prescribed in the manual are in all respects satisfactory.
- 4 That the ship complies with the requirements of the Guidelines and Annex II to MARPOL 73/78 for carriage in bulk of the following products provided that all relevant operational provisions of the Guidelines and Annex II are observed:

Products (refer to Notes 1, 2 on completion of Certificate)	Conditions of carriage (tank numbers, etc.)	Pollution Category
Continued on attachment 1, additional signed and dated sheets ³ . Tank numbers referred to in this list are identified on attachment 2, showing a signed and dated simplified tank plan.		

³ Delete as appropriate.

5 That, in accordance with 1.4³ of the Guidelines and 2.8.2³ of the IBC Code, the provisions of the Guidelines and the Code are modified in respect of the vessel in the following manner:
.....

6 That the ship must be loaded:

.1 in accordance with the loading conditions provided in the approved loading manual, stamped and dated and signed by a responsible officer of the Administration, or of an organization recognized by the Administration³;

.2 in accordance with the loading limitations appended to this Certificate³.

Where it is required to load the ship other than in accordance with the above instructions, then the necessary calculations to justify the proposed loading conditions should be communicated to the certifying Administration who may authorize in writing the adoption of the proposed loading condition.⁴

This Certificate is valid until:⁵
(dd/mm/yyyy)

subject to surveys in accordance with 1.5 of the Guidelines.

Completion date of the survey on which this certificate is based:
(dd/mm/yyyy)

Issued at
(Place of issue of Certificate)

.....
(Date of issue)

.....
(Signature of authorized official issuing the certificate)

(Seal or stamp of the authority, as appropriate)

³ Delete as appropriate.

⁴ Instead of being incorporated in the Certificate, this text may be appended to the Certificate if duly signed and stamped.

⁵ Insert the day of expiry, as specified by the Administration, which should not exceed 5 years from the date of initial survey or the periodical survey.

Notes on completion of Certificate:

- 1 Products: products listed in appendix 1 to the Guidelines or which have been evaluated by the Administration in accordance with 1.2.4 of the Guidelines should be listed. In respect of the latter “new” products, any special requirements provisionally prescribed should be noted.
- 2 Products: the list of products the vessel is suitable to carry should include the Noxious Liquid Substances of category Z which are not covered by the Guidelines and should be identified as “IBC Code chapter 18 category Z”.

ENDORSEMENT FOR ANNUAL AND INTERMEDIATE SURVEYS

THIS IS TO CERTIFY that at a survey required by 1.5.2 of the Code the ship was found to comply with the relevant provisions of the Guidelines.

Annual survey: Signed:
(Signature of duly authorized official)
Place:
Date:
(dd/mm/yyyy)

(Seal or stamp of the Authority, as appropriate)

Annual/Intermediate³ survey: Signed:
(Signature of duly authorized official)
Place:
Date:
(dd/mm/yyyy)

(Seal or stamp of the Authority, as appropriate)

Annual/Intermediate³ survey: Signed:
(Signature of duly authorized official)
Place:
Date:
(dd/mm/yyyy)

(Seal or stamp of the Authority, as appropriate)

³ Delete as appropriate.

Annual survey:

Signed:
(Signature of duly authorized official)

Place:

Date:
(dd/mm/yyyy)

(Seal or stamp of the Authority, as appropriate)

ANNUAL/INTERMEDIATE SURVEY IN ACCORDANCE WITH PARAGRAPH 1.5.6.8.3

THIS IS TO CERTIFY that, at an annual/intermediate³ survey in accordance with paragraph 1.5.8.6.3 of the Code, the ship was found to comply with the relevant provisions of the Guidelines:

Signed:
(Signature of duly authorized official)

Place:

Date:
(dd/mm/yyyy)

(Seal or stamp of the Authority, as appropriate)

**ENDORSEMENT TO EXTEND THE CERTIFICATE IF VALID
FOR LESS THAN 5 YEARS WHERE PARAGRAPH 1.5.6.3 APPLIES**

The ship complies with the relevant provisions of the Guidelines, and this Certificate shall, in accordance with paragraph 1.5.6.3 of the Code, be accepted as valid until:

.....
(dd/mm/yyyy)

Signed:
(Signature of duly authorized official)

Place:

Date:
(dd/mm/yyyy)

(Seal or stamp of the Authority, as appropriate)

³ Delete as appropriate.

**ENDORSEMENT WHERE THE RENEWAL SURVEY HAS BEEN
COMPLETED AND PARAGRAPH 1.5.6.4 APPLIES**

The ship complies with the relevant provisions of the Guidelines, and this Certificate shall, in accordance with paragraph 1.5.6.4 of the Code, be accepted as valid until:

.....
(dd/mm/yyyy)

Annual survey:

Signed:
(Signature of duly authorized official)

Place:

Date:
(dd/mm/yyyy)

(Seal or stamp of the Authority, as appropriate)

**ENDORSEMENT TO EXTEND THE VALIDITY OF THE CERTIFICATE
UNTIL REACHING THE PORT OF SURVEY OR FOR A PERIOD
OF GRACE WHERE PARAGRAPH 1.5.6.5 OR 1.5.66 APPLIES**

This Certificate shall, in accordance with paragraph 1.5.6.5/1.5.6.6³ of the Code, be accepted as valid until

Signed:
(Signature of duly authorized official)

Place:

Date:
(dd/mm/yyyy)

(Seal or stamp of the Authority, as appropriate)

**ENDORSEMENT FOR ADVANCEMENT OF ANNIVERSARY DATE WHERE
PARAGRAPH 1.5.6.8 APPLIES**

In accordance with paragraph 1.5.6.8 of the Code, the new anniversary date is

Signed:
(Signature of duly authorized official)

Place:

Date:
(dd/mm/yyyy)

(Seal or stamp of the Authority, as appropriate)

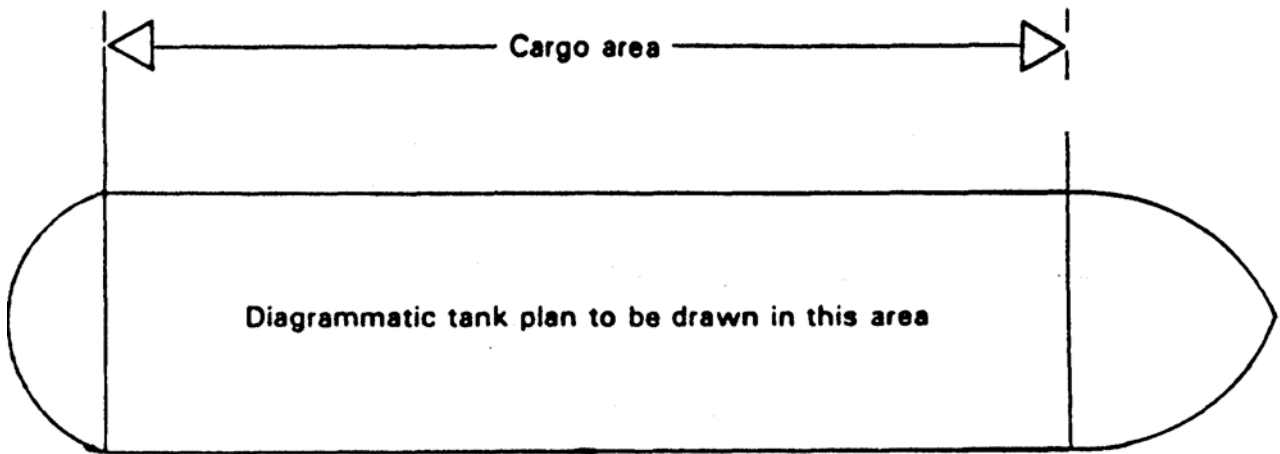
³ Delete as appropriate.

ATTACHMENT 2 TO THE CERTIFICATE OF FITNESS

TANK PLAN (specimen)

Name of ship:

Distinctive number or letters:



Date

(dd/mm/yyyy)
(as for certificate)

.....

*(Signature of official issuing the Certificate
and/or seal of issuing authority)*

ANNEX 31

RESOLUTION MSC.237(82)

(adopted on 1 December 2006)

**ADOPTION OF AMENDMENTS TO THE CODE OF SAFE PRACTICE FOR
THE CARRIAGE OF CARGOES AND PERSONS BY OFFSHORE SUPPLY VESSELS
(OSV CODE)**

THE MARITIME SAFETY COMMITTEE,

RECALLING Article 28(6) of the Convention on the International Maritime Organization concerning the function of the Committee,

RECALLING FURTHER resolution A.863(20) on Code of Safe Practice for the Carriage of Cargoes and Persons by Offshore Supply Vessels (OSV Code), adopted by the Assembly at its twentieth session,

NOTING that the Assembly requested the Maritime Safety Committee to keep OSV Code under review and to amend it as necessary,

HAVING CONSIDERED the recommendation made by the Sub-Committee on Dangerous Goods, Solid Cargoes and Containers, at its eleventh session,

1. ADOPTS the amendments to the Code of Safe Practice for the Carriage of Cargoes and Persons by Offshore Supply Vessels (OSV Code), the text of which is set out in the Annex to the present resolution;
2. INVITES Governments to bring the annexed amendments to the attention of all parties concerned.

ANNEX

**AMENDMENTS TO THE CODE OF SAFE PRACTICE FOR THE
CARRIAGE OF CARGOES AND PERSONS BY OFFSHORE SUPPLY VESSELS
(OSV CODE)**

**CHAPTER 1
GENERAL**

1.1 Definitions

- 1 At the end of paragraph 1.1.3, the following new sentence is added:

“Vessels fitted with dynamic positioning equipment should comply with the guidelines developed by the Organization*.”

* Refer to the Guidelines for vessels with dynamic positioning systems (MSC/Circ.645) and the Guidelines for dynamic positioning systems (DP) operating training (MSC/Circ.738).

1.4 Cargo handling and stability

- 2 In paragraph 1.4.6, the words “Guidelines for the design and construction of offshore supply vessels (resolution A.469(XII))” are replaced by the words “Guidelines for the design and construction of offshore supply vessels, 2006 (resolution MSC.235(82))”.

ANNEX 32

RESOLUTION MSC.238(82)
(adopted on 1 December 2006)

**ADOPTION OF AMENDMENTS TO THE CODE OF PRACTICE FOR THE SAFE
LOADING AND UNLOADING OF BULK CARRIERS**

THE MARITIME SAFETY COMMITTEE,

RECALLING Article 28(b) of the Convention on the International Maritime Organization concerning functions of the Committee,

RECALLING ALSO resolution A.862(20), by which the Assembly, at its twentieth session, adopted the Code of Practice for the Safe Loading and Unloading of Bulk Carriers (BLU Code),

NOTING that the Assembly authorized the Committee to keep this Code under review and amend it as may be necessary,

CONSIDERING that the application of the BLU Code should be extended to ships carrying grain,

HAVING CONSIDERED, at its eighty-second session, amendments to the BLU Code prepared by the Sub-Committee on Dangerous Goods, Solid Cargoes and Containers, at its eleventh session,

1. ADOPTS the amendments to the Code of Practice for the Safe Loading and Unloading of Bulk Carriers, the text of which is set out in the Annex to the present resolution;
2. DETERMINES that the above-said amendments should become effective on 1 January 2007.

ANNEX

AMENDMENTS TO THE CODE OF PRACTICE FOR THE SAFE LOADING AND UNLOADING OF BULK CARRIERS

INTRODUCTION

- 1 In paragraph 3, the words “, excluding grain,” are deleted.
- 2 The following new paragraph 8 is added after the existing paragraph 7:

“8 In the event of a conflict between this Code and the International Code for the Safe Carriage of Grain in Bulk (International Grain Code), the provisions of the International Grain Code should prevail.”

SECTION 5

CARGO LOADING AND HANDLING OF BALLAST

- 3 At the end of paragraph 5.1.4, the words “, or the International Grain Code, as appropriate” are added.

APPENDIX 4

GUIDELINES FOR COMPLETING THE SHIP/SHORE SAFETY CHECKLIST

- 4 At the end of paragraph 17, the words “, or the International Grain Code, as appropriate” are added.

ANNEX 33

WORK PROGRAMMES OF THE SUB-COMMITTEES

SUB-COMMITTEE ON BULK LIQUIDS AND GASES (BLG)

		Target completion date/number of sessions needed for completion	Reference
1	Evaluation of safety and pollution hazards of chemicals and preparation of consequential amendments	Continuous	BLG 10/19, section 3
2	Casualty analysis (co-ordinated by FSI)	Continuous	MSC 70/23, paragraphs 9.17 and 20.4; MSC 80/24, paragraph 21.6; BLG 10/19, section 10
3	Consideration of IACS unified interpretations	Continuous	MSC 78/26, paragraph 22.12; BLG 10/19, section 9
H.1	Environmental and safety aspects of alternative tanker designs under MARPOL 73/78, regulation I/13F		BLG 3/18, paragraph 15.7
	.1 assessment of alternative tanker designs, if any (as necessary)	Continuous	BLG 1/20, section 16; BLG 4/18, paragraph 15.3
H.2	Oil tagging systems	2008	MEPC 45/20, paragraph 17.4; BLG 8/18, section 10 and paragraph 15.4.3
H.3	Development of provisions for gas-fuelled ships (in co-operation with FP and DE)	2007	MSC 78/26, paragraph 24.11; BLG 10/19, section 6

Notes: 1 “H” means a high priority item and “L” means a low priority item. However, within the high and low priority groups, items have not been listed in any order of priority.

2 Items printed in bold letters have been selected for the provisional agenda for BLG 11.

Sub-Committee on Bulk Liquids and Gases (BLG) (continued)

		Target completion date/number of sessions needed for completion	Reference
H.4	Development of guidelines for uniform implementation of the 2004 BWM Convention	2007	MEPC 52/24, paragraph 2.21.6; BLG 10/19, section 4
H.5	Guidelines on other technological methods verifiable or enforceable to limit SO_x emissions	2007	MEPC 53/24, paragraph 4.40
H.6	Amendments to MARPOL Annex I for the prevention of marine pollution during oil transfer operations between ships at sea	2007	MEPC 53/24, paragraph 20.6; BLG 10/19, section 15
H.7	Review of MARPOL Annex VI and the NO_x Technical Code	2007	MEPC 53/24, paragraph 4.50; BLG 10/19, section 14
H.8	Application of the requirements for the carriage of bio-fuels and bio-fuel blends	2008	MEPC 55/23, paragraphs 19.4 and 19.5

SUB-COMMITTEE ON DANGEROUS GOODS, SOLID CARGOES AND CONTAINERS (DSC)

		Target completion date/number of sessions needed for completion	Reference
1	Harmonization of the IMDG Code with the UN Recommendations on the Transport of Dangerous Goods	Continuous	MSC 63/23, Paragraph 10.6 ; DSC 11/19, section 3
2	Reports on incidents involving dangerous goods or marine pollutants in packaged form on board ships or in port areas	Continuous	CDG 45/22, section 11 and paragraph 20.2; DSC 11/19, section 6
3	Amendments to the BC Code, including evaluation of properties of solid bulk cargoes	Continuous	BC 34/17, section 3; DSC 11/19, section 4
4	Casualty analysis (co-ordinated by FSI)	Continuous	MSC 70/23, paragraphs 9.17 and 20.4; DSC 11/19, section 6
H.1	Amendment (34-08) to the IMDG Code and supplements	2007	DSC 3/15, paragraph 12.6; DSC 11/19, section 14
H.2	Mandatory application of the BC Code	2007	DSC 3/15, paragraph 12.7; MSC 78/25, paragraph 13.7; DSC 11/19, section 5
H.3	Review of the SPS Code (co-ordinated by DE)	2007	MSC 78/26, paragraph 24.9; DSC 11/19, section 9
	Amendments to the CSS Code	2007	MSC 78/26, paragraph 24.15.3; DSC 11/19, section 10

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2 Items printed in bold letters have been selected for the provisional agenda for DSC 12.

Sub-Committee on Dangerous Goods, Solid Cargoes and Containers (DSC) (continued)

		Target completion date/number of sessions needed for completion	Reference
H.5	Extension of the BLU Code to include grain	2008	MSC 79/23, paragraph 20.7; DSC 11/19, section 12
H.6	Guidance on providing safe working conditions for securing of containers	2007	MSC 80/24, paragraph 21.8; DSC 11/19, section 13
H.7	Review of the Recommendations on the safe use of pesticides in ships	2007	DSC 10/17, paragraph 4.23; DSC 11/19, section 14
H.8	Application of requirements for dangerous goods in packaged form in SOLAS and the 2000 HSC Code (co-ordinated by FP)	2007	MSC 81/25, paragraphs 23.9 and 23.14; DSC 11/19, section 15
H.9	Guidance on protective clothing	2008	MSC 81/25, paragraph 23.8; DSC 11/19, paragraph 16.1.3.1
H.10	Revision of the Code of Safe Practice for Ships Carrying Timber Deck Cargoes	2010	MSC 82/24, paragraph 21.11
H.11	Form and procedure for approval of the Cargo Securing Manual	2008	MSC 82/24, paragraph 21.12

SUB-COMMITTEE ON FIRE PROTECTION (FP)

		Target completion date/number of sessions needed for completion	Reference
1	Analysis of fire casualty records	Continuous	MSC 75/24, paragraph 22.18; FP 50/21, section 12
2	Consideration of IACS unified interpretations	Continuous	MSC 78/26, paragraph 22.12; FP 50/21, section 11
H.1	Performance testing and approval standards for fire safety systems	2009	MSC 74/24, paragraph 21.12; FP 50/21, section 4
H.2	Comprehensive review on the Fire Test Procedures Code	2008	MSC 80/24, paragraph 21.11; FP 50/21, section 10
H.3	Recommendation on evacuation analysis for new and existing passenger ships	2008	MSC 73/21, paragraph 4.16; FP 50/21, section 5
H.4	Review of the SPS Code (co-ordinated by DE)	2007	MSC 78/26, paragraph 24.9; FP 50/21, section 8
H.5	Development of provisions for gas-fuelled ships (co-ordinated by BLG)	2007	MSC 78/26, paragraph 24.19; FP 50/21, section 6
H.6	Measures to prevent fires in engine-rooms and cargo pump-rooms	2009	MSC 79/23, paragraph 20.11; FP 50/21, section 7

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 - 2 Items printed in bold letters have been selected for the provisional agenda for FP 51.

Sub-Committee on Fire Protection (FP) (continued)

		Target completion date/number of sessions needed for completion	Reference
H.7	Fire resistance of ventilation ducts	2007	MSC 81/25, paragraph 23.13
H.8	Application of requirements for dangerous goods in package form in SOLAS and the 2000 HSC Code (in co-operation with DSC)	2007	MSC 81/25, paragraph 23.14
H.9	Unified interpretation on the number and arrangement of portable extinguishers in accommodation spaces, service spaces, control stations, etc.	2008	MSC 81/25, paragraphs 23.15 and 23.16
H.10	Review of fire safety of external areas on passenger ships	2007	MSC 81/25, paragraph 23.17.1
H.11	Performance standards for fixed water-spraying, fire detection and fire alarm systems for cabin balconies	2008	MSC 81/25, paragraph 23.17.2
H.12	Fixed hydrocarbon gas detection systems on double-hull oil tankers (in co-operation with BLG, as necessary and when requested by FP)	2 sessions	MSC 82/24, paragraph 21.18
H.13	Clarification of SOLAS chapter II-2 requirements regarding interrelation between central control station and safety centre	2 sessions	MSC 82/24, paragraph 21.20
L.1	Smoke control and ventilation	2 sessions	FP 39/19, section 9; FP 46/16, section 4

SUB-COMMITTEE ON FLAG STATE IMPLEMENTATION (FSI)

		Target completion date/number of sessions needed for completion	Reference
1	Mandatory reports under MARPOL 73/78	Continuous	MSC 70/23, paragraph 20.12.1; FSI 14/19, section 4
2	Casualty statistics and investigations	Continuous	MSC 68/23, paragraphs 7.16 to 7.24; FSI 14/19, section 5
3	Harmonization of port State control activities	Continuous	MSC 71/23, paragraph 20.16; MSC 80/24, paragraph 21.16; FSI 14/19, section 7
4	Responsibilities of Governments and measures to encourage flag State compliance	Continuous	MSC 68/23, paragraphs 7.2 to 7.8; FSI 14/19, section 3
5	Comprehensive analysis of difficulties encountered in the implementation of IMO instruments	Continuous	MSC 69/22, paragraph 20.28; FSI 8/19, paragraph 4.3; FSI 14/19, section 10
6	Review of the Survey Guidelines under the HSSC (resolution A.948(23))	Continuous	MSC 72/23, paragraph 21.27; FSI 14/19, section 11

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2 Items printed in bold letters have been selected for the provisional agenda for FSI 15.

Sub-Committee on Flag State Implementation (FSI) (continued)

		Target completion date/number of sessions needed for completion	Reference
7	Consideration of IACS unified interpretations	Continuous	MSC 78/26, paragraph 22.12; FSI 14/19, section 14
H.1	PSC guidelines on seafarers' working hours	2007	MSC 70/23, paragraph 20.12.3; FSI 14/19, section 8
H.2	Illegal, unregulated and unreported (IUU) fishing and implementation of resolution A.925(22)	2008	MSC 72/23, paragraph 21.28; FSI 10/17, section 11; MSC 75/24, paragraphs 13.11 and 22.25.3; FSI 14/19, section 15
H.3	Development of guidelines on port State control under the 2004 BWM Convention	2008	MEPC 52/24, paragraph 2.21.2; FSI 14/19, section 9
H.4	Review of the Code for the Investigation of Marine Casualties and Incidents	2007	MSC 79/23, paragraphs 20.15 to 20.18; FSI 14/19, section 6
H.5	Port reception facilities-related issues	2007	MEPC 53/24, paragraph 9.7; FSI 14/19, section 3
H.6	Amendments to the ISM Code relating to requirements for seafarer safety representation	2 sessions	MSC 82/24, paragraph 21.24.1
H.7	Code of conduct during demonstrations/campaigns against ships on high seas (co-ordinated by NAV)	2 sessions	MSC 82/24, paragraph 21.26

SUB-COMMITTEE ON RADIOCOMMUNICATIONS AND SEARCH AND RESCUE (COMSAR)

		Target completion date/number of sessions needed for completion	Reference
1	Global Maritime Distress and Safety System (GMDSS)		COMSAR 10/16, section 3
	.1 matters relating to the GMDSS Master Plan	Continuous	COMSAR 10/16, paragraphs 3.1 to 3.4
	.2 exemptions from radio requirements	Continuous	COMSAR 4/14, paragraphs 3.38 to 3.41
2	Promulgation of maritime safety information (MSI) (in co-operation with ITU, IHO, WMO and IMSO)		
	.1 operational and technical co-ordination provisions of maritime safety information (MSI) services, including review of the related documents	Continuous	COMSAR 10/16, paragraphs 3.5 to 3.29
3	ITU World Radiocommunication Conference matters	Continuous	COMSAR 10/16, paragraphs 4.3 to 4.6, and 4.13 to 4.20
4	Radiocommunication ITU-R Study Group 8 matters	Continuous	COMSAR 10/16, paragraphs 4.1, 4.2, and 4.9 to 4.12
5	Satellite services (Inmarsat and COSPAS-SARSAT)	Continuous	COMSAR 10/16, section 5

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2 Items printed in bold letters have been selected for the provisional agenda for COMSAR 11.

Sub-Committee on Radiocommunications and Search and Rescue (COMSAR) (continued)

		Target completion date/number of sessions needed for completion	Reference
6	Matters concerning search and rescue, including those related to the 1979 SAR Conference and the implementation of the GMDSS		
.1	harmonization of aeronautical and maritime search and rescue procedures, including SAR training matters	2007	COMSAR 10/16, paragraphs 6.1 to 6.16
.2	plan for the provision of maritime SAR services, including procedures for routing distress information in the GMDSS	Continuous	COMSAR 10/16, paragraphs 6.27 to 6.41
.3	revision of the IAMSAR Manual	Continuous	MSC 71/23, paragraph 20.2; COMSAR 10/16, section 8
.4	medical assistance in SAR services	2007	MSC 75/24, paragraph 22.29; COMSAR 10/16, paragraphs 6.42 to 6.49
7	Casualty analysis (co-ordinated by FSI)	Continuous	MSC 70/23, paragraphs 9.17 and 20.4; MSC 78/26, paragraph 24.8
H.1	Amendments to SOLAS chapter IV pursuant to the criteria set out in resolution A.888(21)	3 sessions	MSC 72/23, paragraph 21.33.1.2
H.2	Developments in maritime radiocommunication systems and technology	2007	MSC 74/24, paragraph 21.25.1; COMSAR 10/16, section 7

Sub-Committee on Radiocommunications and Search and Rescue (COMSAR) (continued)

		Target completion date/number of sessions needed for completion	Reference
H.3	Revision of the performance standards for SART	2007	MSC 78/26, paragraph 24.26; COMSAR 10/16, section 12
H.4	Amendments to COLREGs Annex IV relating to distress signals (co-ordinated by NAV)	2007	MSC 81/25, paragraphs 23.24 and 23.38
H.5	Guidelines on the control of ships in an emergency (co-ordinated by NAV)	2007	MSC 81/25, paragraphs 23.22, and 23.28 to 23.32
H.6	Guidelines for uniform operating limitations of high-speed craft (co-ordinated by DE)	2008	MSC 81/25, paragraph 23.45
H.7	Development of an e-navigation strategy (co-ordinated by NAV)	2008	MSC 81/25, paragraphs 23.34 to 23.37
L.1	Replacements for use of NBDP (radio telex) for maritime distress and safety communications in maritime MF/HF bands	2008	MSC 81/25, paragraph 23.23

SUB-COMMITTEE ON SAFETY OF NAVIGATION (NAV)

		Target completion date/number of sessions needed for completion	Reference
1	Routeing of ships, ship reporting and related matters	Continuous	MSC 72/23, paragraphs 10.69 to 10.71, 20.41 and 20.42; NAV 52/18, section 3
2	Casualty analysis (co-ordinated by FSI)	Continuous	MSC 70/23, paragraphs 9.17 and 20.4; NAV 52/18, section 13
3	Consideration of IACS unified interpretations	Continuous	MSC 78/26, paragraph 22.12; NAV 52/18, section 14
H.1	Worldwide radionavigation system (WWRNS)	2008	MSC 75/24, paragraph 22.37
	.1 new developments in the field of GNSS, especially Galileo	2008	NAV 52/18, section 12
	.2 review and amendment of IMO policy for GNSS (resolution A.915(22))	2008	NAV 52/18, section 12
	.3 recognition of radionavigation systems as components of the WWRNS (resolution A.953(23))	2008	NAV 52/18, section 12
H.2	ITU matters, including Radiocommunication ITU-R Study Group 8 matters	2009	MSC 69/22, paragraphs 5.69 and 5.70; NAV 52/18, section 9

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Sub-Committee on Safety of Navigation (NAV) (continued)

		Target completion date/number of sessions needed for completion	Reference
H.3	Revision of the performance standards for INS and IBS	2007	MSC 78/26, paragraph 24.30; NAV 52/18, section 4
H.4	Evaluation of the use of ECDIS and ENC development	2007	MSC 78/26, paragraph 24.33; NAV 52/18, section 6
H.5	Development of guidelines for the installation of shipborne radar equipment	2008	MSC 80/24, paragraph 21.23; NAV 52/18, section 7
H.6	Amendments to COLREGs Annex I related to colour specification of lights	2007	MSC 80/24, paragraph 21.24.1; NAV 52/18, section 8
H.7	Development of performance standards for navigation lights, navigation light controllers and associated equipment	2007	MSC 80/24, paragraph 21.24.2; NAV 52/18, section 11
H.8	Carriage requirements for a bridge navigational watch alarm system	2008	MSC 81/25, paragraph 23.27; NAV 52/18, paragraphs 17.44 and 17.45
H.9	Guidelines on the control of ships in an emergency (in co-operation with COMSAR)	2007	MSC 81/25, paragraphs 23.28 to 23.32 NAV 52/18, paragraphs 17.31 to 17.37
H.10	Development of an e-navigation strategy (in co-operation with COMSAR)	2008	MSC 81/25, paragraphs 23.34 to 23.37; NAV 52/18, paragraphs 17.18 to 17.30

Sub-Committee on Safety of Navigation (NAV) (continued)

		Target completion date/number of sessions needed for completion	Reference
H.11	Development of carriage requirements for ECDIS	2008	MSC 81/25, paragraphs 23.39 and 23.40; NAV 52/18, paragraphs 17.50 to 17.57
H.12	Guidelines for uniform operating limitations of high-speed craft (co-ordinated by DE)	2008	MSC 81/25, paragraph 23.45
H.13	Guidelines on the layout and ergonomic design of safety centres on passenger ships	2008	MSC 81/25, paragraph 23.42
H.14	Amendments to the General Provisions on Ships' Routing	1 session	MSC 82/24, paragraph 21.34
H.15	Review of COLREGs regarding the right of way of vessels over pleasure craft	1 session	MSC 82/24, paragraph 21.35
H.16	Code of conduct during demonstrations/campaigns against ships on high seas (in co-operation with FSI)	2 sessions	MSC 82/24, paragraph 21.36
H.17	Measures to minimize incorrect data transmissions by AIS equipment (in co-operation with FSI and COMSAR, as necessary)	2 sessions	MSC 82/24, paragraph 21.38
H.18	Review of vague expressions in SOLAS regulation V/22	2 sessions	MSC 82/24, paragraph 21.39
H.20	Revision of the Guidance on the application of AIS binary messages	2 sessions	MSC 82/24, paragraph 21.41
H.21	Improved safety of pilot transfer arrangements (in co-operation with DE)	2 sessions	MSC 82/24, paragraph 21.42

SUB-COMMITTEE ON SHIP DESIGN AND EQUIPMENT (DE)

		Target completion date/number of sessions needed for completion	Reference
1	Casualty analysis (co-ordinated by FSI)	Continuous	MSC 70/23, paragraphs 9.17 and 20.4
2	Consideration of IACS unified interpretations	Continuous	MSC 78/26, paragraph 22.12
H.1	Amendments to resolution A.744(18)	2007	DE 45/27, paragraphs 7.18 and 7.19; DE 49/20, paragraphs 3.4 to 3.8
H.2	Measures to prevent accidents with lifeboats (in co-operation with FSI, NAV and STW)	2008	MSC 74/24, paragraph 21.34; DE 48/25, section 5; FP 50/21, section 13
H.3	Performance standards for protective coatings	2007	MSC 76/23, paragraphs 20.41.2 and 20.48; DE 49/20, section 6
H.4	Inspection and survey requirements for accommodation ladders	2007	MSC 77/26, paragraph 23.32; DE 49/20, section 8
H.5	Mandatory emergency towing systems in ships other than tankers of not less than 20,000 dwt	2007	MSC 77/26, paragraph 23.33; DE 49/20, section 7
H.6	Compatibility of life-saving appliances	2008	DE 47/15, paragraph 5.3; MSC 78/26, paragraph 24.37.1; DE 48/25, section 8; FP 50/21, section 14

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Sub-Committee on Ship Design and Equipment (DE) (continued)

		Target completion date/number of sessions needed for completion	Reference
H.7	Review of the SPS Code (in co-operation with DSC, FP, NAV, COMSAR and SLF)	2007	MSC 78/26, paragraph 24.9; DE 49/20, section 12
H.8	Development of provisions for gas-fuelled ships (co-ordinated by BLG)	2007	MSC 78/26, paragraph 24.39; DE 49/20, section 10
H.9	Test standards for extended service intervals of inflatable liferafts	2007	MSC 78/26, paragraph 24.41; DE 48/25, section 20; FP 50/20, section 16
H.10	Amendments to the Guidelines for ships operating in Arctic ice-covered waters (in co-operation with SLF, as necessary)	2008	MSC 79/23, paragraph 8.25
H.11	Revision of the Code on Alarms and Indicators (in co-operation with appropriate sub-committees, as necessary)	2007	MSC 79/23, paragraph 20.28; DE 49/20, section 13
H.12	Amendments to the MODU Code	2007	MSC 79/23, paragraph 22.51; DE 49/20, section 14
H.13	Guidelines for uniform operating limitations of high-speed craft (in co-operation with COMSAR, NAV and SLF)	2009	DE 49/20, section 5; MSC 81/25, paragraph 23.45
H.14	Guidelines for maintenance and repair of protective coatings	2008	MSC 81/25, paragraph 23.48.1
H.15	Requirements and standard for corrosion protection of permanent means of access arrangements	2008	MSC 81/25, paragraph 23.48.2

Sub-Committee on Ship Design and Equipment (DE) (continued)

		Target completion date/number of sessions needed for completion	Reference
H.16	Performance standards for recovery systems	2008	MSC 81/25, paragraph 23.49.1
H.17	Guidelines for the approval of novel life-saving appliances	2008	MSC 81/25, paragraph 23.49.2
H.18	Review of MEPC/Circ.511 and relevant MARPOL Annex I and Annex VI requirements	2008	MEPC 55/23, paragraph 6.16
H.19	Guidance to ensure consistent policy for determining the need for watertight doors to remain open during navigation	2 sessions	SLF 49/17, paragraph 3.11; MSC 82/24, paragraph 21.47
H.20	Review of the SOLAS requirements on new installation of materials containing asbestos	2 sessions	MSC 82/24, paragraph 21.48
H.21	Development of a new framework of requirements for life-saving appliances (in co-operation with FP and COMSAR, as necessary and when requested by DE)	4 sessions	MSC 82/24, paragraph 21.49
H.22	Improved safety of pilot transfer arrangements (co-ordinated by NAV)	2 sessions	MSC 82/24, paragraph 21.50
H.23	Cargo oil tank coating and corrosion protection	2009*	MSC 82/24, paragraphs 21.51 and 23.12
H.24	Development of safety objectives and functional requirements of the Guidelines on alternative design and arrangements for SOLAS chapters II-1 and III	3 sessions	MSC 82/24, paragraphs 3.92 and 21.52

* To be included in the provisional agenda for DE 51.

Sub-Committee on Ship Design and Equipment (DE) (continued)

		Target completion date/number of sessions needed for completion	Reference
H.25	Interpretation of SOLAS regulations II-1/1.3 and II-1/3-6	2008*	MSC 82/24, paragraph 21.53
L.1	Revision of resolution A.760(18)	2008	DE 46/32, paragraph 31.23; DE 47/25, paragraph 22.6
L.2	Free-fall lifeboats with float-free capabilities	1 session	MSC 76/23, paragraphs 20.41.3 and 20.48; DE 47/25, paragraph 22.6
L.3	Guidelines on equivalent methods to reduce on-board NO _x emission	2 sessions	MEPC 41/20, paragraph 8.22.1; BLG 10/19, Paragraph 12.3; MEPC 55/23, paragraph 19.9

* To be included in the provisional agenda for DE 51.

SUB-COMMITTEE ON STABILITY AND LOAD LINES AND ON FISHING VESSELS SAFETY (SLF)

		Target completion date/number of sessions needed for completion	Reference
1	Analysis of intact stability casualty records	Continuous	MSC 70/23, paragraph 20.4; SLF 30/18, paragraphs 4.16 and 4.17
2	Analysis of damage cards	Continuous	MSC 70/23, paragraph 20.4
3	Consideration of IACS unified interpretations	Continuous	MSC 78/26, paragraph 22.12
H.1	Development of explanatory notes for harmonized SOLAS chapter II-1	2008	MSC 69/22, paragraph 20.60.1; SLF 49/17, section 3
H.2	Safety of small fishing vessels (in co-operation with DE, COMSAR, FP, NAV and STW, as necessary)	2009	MSC 79/23, paragraphs 11.15 and 20.32; SLF 49/17, section 6
H.3	Revision of the Intact Stability Code	2007	SLF 41/18, paragraph 3.14; SLF 49/17, section 5
H.4	Review of the SPS Code (co-ordinated by DE)	2007	MSC 78/26, paragraph 24.9; SLF 49/17, section 11
H.5	Development of options to improve effect on ship design and safety of the 1969 TM Convention	2008	MSC 81/25, paragraph 23.53

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2 Items printed in bold letters have been selected for inclusion in the provisional agenda for SLF 50.

Sub-Committee on Stability and Load Lines and on Fishing Vessels Safety (SLF)
(continued)

		Target completion date/number of sessions needed for completion	Reference
H.6	Guidelines for uniform operating limitations on high-speed craft (co-ordinated by DE)	2008	MSC 81/25, paragraph 23.45
H.7	Time-dependant survivability of passenger ships in damaged condition	2009	MSC 81/25, paragraph 23.54; SLF 49/17, section 14
H.8	Interpretation of alterations and modifications of a major character under the revised SOLAS chapter II-1	2007	SLF 49/17, section 13; MSC 82/24, paragraph 21.56.1
H.9	Guidance on the impact of open watertight doors on existing and new ship survivability	2008	SLF 49/17, section 3; MSC 82/24, paragraph 21.56.2
H.10	Stability and sea-keeping characteristics of damaged passenger ships in a seaway when returning to port by own power or under tow	2008*	MSC 82/24, paragraphs 3.16 and 21.57
L.1	Revision of resolution A.266(VIII)	2007	SLF 45/14, paragraphs 3.19 and 11.1.4.1; MSC 76/23, paragraph 20.50; SLF 49/17, section 9
L.2	Revision of MSC/Circ.650	2007	SLF 47/17, paragraph 3.8; SLF 49/17, section 13

* To be included in the provisional agenda for SLF 51.

SUB-COMMITTEE ON STANDARDS OF TRAINING AND WATCHKEEPING (STW)

		Target completion date/number of sessions needed for completion	Reference
1	Validation of model training courses	Continuous	STW 31/17, Paragraph 14.4; STW 37/18, section 3
2	Casualty analysis (co-ordinated by FSI)	Continuous	MSC 70/23, paragraphs 9.17 and 20.4; MSC 77/26, paragraphs 18.10 and 23.40.2; STW 37/18, section 11
H.1	Unlawful practices associated with certificates of competency	Continuous	MSC 71/23, paragraph 20.55.2; STW 37/18, section 4
H.2	Passenger ship safety	2007	MSC 74/24, paragraph 21.4; STW 37/18, section 5
H.3	Measures to enhance maritime security	2007	MSC 75/24, paragraph 22.9 and 22.45; STW 37/18, section 7
H.4	Education and training requirements for fatigue prevention, mitigation and management	2007	MSC 75/24, paragraph 22.48; STW 37/18, section 8
H.5	Development of training requirements for the control and management of ship's ballast water and sediments	2007	MSC 71/23, paragraph 20.55.3; STW 37/18, section 9

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2 Items printed in bold letters have been selected for the provisional agenda for STW 38.

Sub-Committee on Standards of Training and Watchkeeping (STW) (continued)

		Target completion date/number of sessions needed for completion	Reference
H.6	Development of competences for Ratings	2007	MSC 77/26, paragraph 23.40.1; STW 37/18, section 10
H.7	Identification of areas in chapter VI of the STCW Code where training cannot be conducted on board	2008	STW 37/18, section 17; MSC 81/25, paragraph 23.57.1
H.8	Comprehensive review of the STCW Convention and the STCW Code	2008	STW 37/18, section 15; MSC 82/25, paragraphs 23.57.2, 23.40.2, 23.62 and 23.63
H.9	Review of the principles for establishing the safe manning levels of ships	2008	MSC 81/25, paragraphs 23.58 to 23.60
H.10	Development of training standards for recovery systems	2 sessions	MSC 81/25, paragraph 23.64
H.11	Training for seafarer safety representatives	2 sessions	MSC 82/24, paragraph 21.60
L.1	Review of the implementation of STCW chapter VII	2 sessions	MSC 72/23, paragraph 21.56; STW 35/19, section 14
L.2	Clarification of the STCW-F Convention provisions and follow-up Action to the associated Conference resolution	2 sessions	STW 34/14, paragraph 11.8

ANNEX 34**PROVISIONAL AGENDAS FOR THE FORTHCOMING SESSIONS
OF THE SUB-COMMITTEES****SUB-COMMITTEE ON BULK LIQUIDS AND GASES (BLG) – 11TH SESSION ***

- Opening of the session
- 1 Adoption of the agenda
 - 2 Decisions of other IMO bodies
 - 3 Evaluation of safety and pollution hazards of chemicals and preparation of consequential amendments
 - 4 Application of the requirements for the carriage of bio-fuels and bio-fuel blends
 - 5 Development of guidelines for uniform implementation of the 2004 BWM Convention
 - 6 Review of MARPOL Annex VI and the NO_x Technical Code
 - 7 Development of provisions for gas-fuelled ships
 - 8 Amendments to MARPOL Annex I for the prevention of marine pollution during oil transfer operations between ships at sea
 - 9 Oil tagging systems
 - 10 Guidelines on other technological methods verifiable or enforceable to limit SO_x emissions
 - 11 Casualty analysis
 - 12 Consideration of IACS unified interpretations
 - 13 Work programme and agenda for BLG 12
 - 14 Election of Chairman and Vice-Chairman for 2008
 - 15 Any other business
 - 16 Report to the Committees

* Agenda item numbers do not necessarily indicate priority.

**SUB-COMMITTEE ON DANGEROUS GOODS, SOLID CARGOES AND CONTAINERS (DSC) –
12TH SESSION ***

- Opening of the session
- 1 Adoption of the agenda
 - 2 Decisions of other IMO bodies
 - 3 Amendments to the IMDG Code and supplements, including harmonization of the IMDG Code with the UN Recommendations on the Transport of Dangerous Goods
 - .1 harmonization of the IMDG Code with the UN Recommendations on the Transport of Dangerous Goods
 - .2 amendment (34-08) to the IMDG Code and supplements
 - 4 Amendments to the BC Code, including evaluation of properties of solid bulk cargoes
 - 5 Mandatory application of the BC Code
 - .1 identification of mandatory and recommendatory parts of the BC Code, including consequential amendments
 - .2 amendments to SOLAS chapters VI and VII on making the BC Code mandatory
 - 6 Casualty and incident reports and analysis
 - 7 Review of the SPS Code
 - 8 Amendments to the CSS Code
 - 9 Extension of the BLU Code to include grain
 - 10 Guidance on providing safe working conditions for securing of containers
 - 11 Review of the Recommendations on the safe use of pesticides in ships
 - 12 Application of requirements for dangerous goods in packaged form in SOLAS and the 2000 HSC Code
 - 13 Guidance on protective clothing
 - 14 Revision of the Code of Safe Practice for Ships Carrying Timber Deck Cargoes
 - 15 Form and procedure for approval of the Cargo Securing Manual
 - 16 Work programme and agenda for DSC 13
 - 17 Election of Chairman and Vice-Chairman for 2008
 - 18 Any other business
 - 19 Report to the Maritime Safety Committee

* Agenda item numbers do not necessarily indicate priority.

SUB-COMMITTEE ON FIRE PROTECTION (FP) – 51ST SESSION *

- Opening of the session
- 1 Adoption of the agenda
 - 2 Decisions of other IMO bodies
 - 3 Performance testing and approval standards for fire safety systems
 - 4 Comprehensive review of the Fire Test Procedures Code
 - 5 Recommendation on evacuation analysis for new and existing passenger ships
 - 6 Review of the SPS Code
 - 7 Development of provisions for gas-fuelled ships
 - 8 Measures to prevent fires in engine-rooms and cargo pump-rooms
 - 9 Consideration of IACS unified interpretations
 - 10 Analysis of fire casualty records
 - 11 Fire resistance of ventilation ducts
 - 12 Application of requirements for dangerous goods in package form in SOLAS and the 2000 HSC Code
 - 13 Unified interpretation on the number and arrangement of portable extinguishers in accommodation spaces, service spaces, control stations, etc.
 - 14 Review of fire safety of external areas on passenger ships
 - 15 Performance standards for fixed water-spraying, fire detection and fire alarm systems for cabin balconies
 - 16 Work programme and agenda for FP 52
 - 17 Election of Chairman and Vice-Chairman for 2008
 - 18 Any other business
 - 19 Report to the Maritime Safety Committee

* Agenda item numbers do not necessarily indicate priority.

SUB-COMMITTEE ON FLAG STATE IMPLEMENTATION (FSI) – 15th SESSION *

- Opening of the session
- 1 Adoption of the agenda
 - 2 Decisions of other IMO bodies
 - 3 Responsibilities of Governments and measures to encourage flag State compliance
 - 4 Mandatory reports under MARPOL 73/78
 - 5 Port reception facilities-related issues
 - 6 Casualty statistics and investigations
 - 7 Review of the Code for the Investigation of Marine Casualties and Incidents
 - 8 Harmonization of port State control activities
 - 9 Development of guidelines on port State control under the 2004 BWM Convention
 - 10 PSC guidelines on seafarers' working hours
 - 11 Comprehensive analysis of difficulties encountered in the implementation of IMO instruments
 - 12 Review of the Survey Guidelines under the HSSC (resolution A.948(23))
 - 13 Consideration of IACS unified interpretations
 - 14 Illegal, unregulated and unreported (IUU) fishing and implementation of resolution A.925(22)
 - 15 Work programme and agenda for FSI 16
 - 16 Election of Chairman and Vice-Chairman for 2008
 - 17 Any other business
 - 18 Report to the Committees

* Agenda item numbers do not necessarily indicate priority.

**SUB-COMMITTEE ON RADIOCOMMUNICATIONS AND SEARCH AND RESCUE (COMSAR) –
11th SESSION***

- Opening of the session
- 1 Adoption of the agenda
- 2 Decisions of other IMO bodies
- 3 Global Maritime Distress and Safety System (GMDSS)
 - .1 matters relating to the GMDSS Master Plan
 - .2 operational and technical co-ordination provisions of maritime safety information (MSI) services, including review of the related documents
- 4 ITU maritime radiocommunication matters
 - .1 Radiocommunication ITU-R Study Group 8 matters
 - .2 ITU World Radiocommunication Conference matters
- 5 Satellite services (Inmarsat and COSPAS-SARSAT)
- 6 Matters concerning search and rescue, including those related to the 1979 SAR Conference and the implementation of the GMDSS
 - .1 harmonization of aeronautical and maritime search and rescue procedures, including SAR training matters
 - .2 plan for the provision of maritime SAR services, including procedures for routeing distress information in the GMDSS
 - .3 medical assistance in SAR services
- 7 Developments in maritime radiocommunication systems and technology
- 8 Revision of the IAMSAR Manual
- 9 Revision of the performance standards for SART
- 10 Amendments to COLREGs Annex IV relating to distress signals
- 11 Guidelines on the control of ships in an emergency
- 12 Replacements for use of NBDP (radio telex) for maritime distress and safety communications in maritime MF/HF bands
- 13 Guidelines for uniform operating limitations of high-speed craft
- 14 Development of an e-navigation strategy

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- 15 Work programme and agenda for COMSAR 12
- 16 Election of Chairman and Vice-Chairman for 2008
- 17 Any other business
- 18 Report to the Maritime Safety Committee

SUB-COMMITTEE ON SAFETY OF NAVIGATION (NAV) – 53rd SESSION *

- Opening of the session
- 1 Adoption of the agenda
 - 2 Decisions of other IMO bodies
 - 3 Routing of ships, ship reporting and related matters
 - 4 Revision of the performance standards for INS and IBS
 - 5 Evaluation of the use of ECDIS and ENC development
 - 6 Carriage requirements for a bridge navigational watch alarm system
 - 7 Development of guidelines for the installation of shipborne radar equipment
 - 8 Amendments to COLREGs Annex I related to colour specification of lights
 - 9 ITU matters, including Radiocommunication ITU-R Study Group 8 matters
 - 10 Guidelines on the control of ships in an emergency
 - 11 Development of performance standards for navigation lights, navigation light controllers and associated equipment
 - 12 Worldwide radionavigation system (WWRNS)
 - 13 Development of an e-navigation strategy
 - 14 Development of carriage requirements for ECDIS
 - 15 Guidelines for uniform operating limitations of high-speed craft
 - 16 Guidelines on the layout and ergonomic design of safety centres on passenger ships
 - 17 Casualty analysis
 - 18 Consideration of IACS unified interpretations
 - 19 Work programme and agenda for NAV 54
 - 20 Election of Chairman and Vice-Chairman for 2008
 - 21 Any other business
 - 22 Report to the Maritime Safety Committee

* Agenda item numbers do not necessarily indicate priority.

SUB-COMMITTEE ON SHIP DESIGN AND EQUIPMENT (DE) – 50th SESSION *

- Opening of the session
- 1 Adoption of the agenda
 - 2 Decisions of other IMO bodies
 - 3 Amendments to resolution A.744(18)
 - 4 Performance standards for protective coatings
 - 5 Inspection and survey requirements for accommodation ladders
 - 6 Mandatory emergency towing systems in ships other than tankers of not less than 20,000 dwt
 - 7 Development of provisions for gas-fuelled ships
 - 8 Consideration of IACS unified interpretations
 - 9 Review of the SPS Code
 - 10 Revision of the Code on Alarms and Indicators
 - 11 Amendments to the MODU Code
 - 12 Measures to prevent accidents with lifeboats
 - 13 Compatibility of life-saving appliances
 - 14 Test standards for extended service intervals of inflatable liferafts
 - 15 Amendments to the Guidelines for ships operating in Arctic ice-covered waters
 - 16 Revision of resolution A.760(18)
 - 17 Casualty analysis
 - 18 Guidelines for uniform operating limitations of high-speed craft
 - 19 Guidelines for maintenance and repair of protective coatings

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- 20 Requirements and standard for corrosion protection of permanent means of access arrangements
- 21 Performance standards for recovery systems
- 22 Guidelines for the approval of novel life-saving appliances
- 23 Review of MEPC.1/Circ.511 and relevant MARPOL Annex I and Annex VI requirements
- 24 Work programme and agenda for DE 51
- 25 Any other business
- 26 Election of Chairman and Vice-Chairman for 2008
- 27 Report to the Maritime Safety Committee

**SUB-COMMITTEE ON STABILITY AND LOAD LINES AND ON FISHING VESSELS SAFETY (SLF) –
50th SESSION ***

- Opening of the session
- 1 Adoption of the agenda
 - 2 Decisions of other IMO bodies
 - 3 Development of explanatory notes for harmonized SOLAS chapter II-1
 - 4 Revision of the Intact Stability Code
 - 5 Safety of small fishing vessels
 - 6 Development of options to improve effect on ship design and safety of the 1969 TM Convention
 - 7 Guidelines for uniform operating limitations on high-speed craft
 - 8 Time-dependant survivability of passenger ships in damaged condition
 - 9 Consideration of IACS unified interpretations
 - 10 Revision of resolution A.266(VIII)
 - 11 Review of the SPS Code
 - 12 Analysis of damage cards
 - 13 Revision of MSC/Circ.650
 - 14 Interpretation of alterations and modifications of a major character under the revised SOLAS chapter II-1
 - 15 Guidance on the impact of open watertight doors on existing and new ship survivability
 - 16 Work programme and agenda for SLF 51
 - 17 Election of Chairman and Vice-Chairman for 2008
 - 18 Any other business
 - 19 Report to the Maritime Safety Committee

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