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**REPORT OF THE MARITIME SAFETY COMMITTEE ON ITS  
EIGHTY-FOURTH SESSION**

Attached are annexes 9 to 11 and 13 to 23 to the report of the Maritime Safety Committee on its eighty-fourth session (MSC 84/24).

For reasons of economy, this document is printed in a limited number. Delegates are kindly asked to bring their copies to meetings and not to request additional copies.

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**ANNEX 9****RESOLUTION MSC.263(84)  
(adopted on 16 May 2008)****REVISED PERFORMANCE STANDARDS AND FUNCTIONAL REQUIREMENTS  
FOR THE LONG-RANGE IDENTIFICATION AND TRACKING OF SHIPS**

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) on Procedure for the adoption of, and amendments to, performance standards and technical specifications, 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,

RECALLING FURTHER the provisions of the new regulation V/19-1 of the International Convention for the Safety of Life at Sea, 1974, as amended (the Convention), relating to the long-range identification and tracking of ships,

ALSO RECALLING the Performance standards and functional requirements for the long-range identification and tracking of ships (the Performance standards) adopted by resolution MSC.210(81) and amended by resolution MSC.254(83),

RECOGNIZING the need to adopt certain amendments to the Performance standards,

HAVING CONSIDERED the recommendation made, at its eighty-fourth session,

1. ADOPTS the Revised performance standards and functional requirements for the long-range identification and tracking of ships, set out in the Annex to the present resolution;
2. RECOMMENDS Contracting Governments to the Convention to ensure that:
  - .1 shipborne systems and equipment used to meet the requirements of regulation V/19-1 of the Convention conform to performance standards not inferior to those specified in the Annex to the present resolution;
  - .2 all Long-range identification and tracking (LRIT) Data Centres and the International LRIT Data Exchange conform to functional requirements not inferior to those specified in the Annex to the present resolution; and
  - .3 they promptly submit to the Organization and to the LRIT Data Centres the required information to enable the establishment and the continuous functioning of the LRIT system and that they update such information as and when changes occur;

3. AGREES to review and amend, in the light of experience gained as necessary, the Revised performance standards and functional requirements for the long-range identification and tracking of ships, set out in the Annex to the present resolution;
4. REVOKES resolutions MSC.210(81) and MSC.254(83).

ANNEX

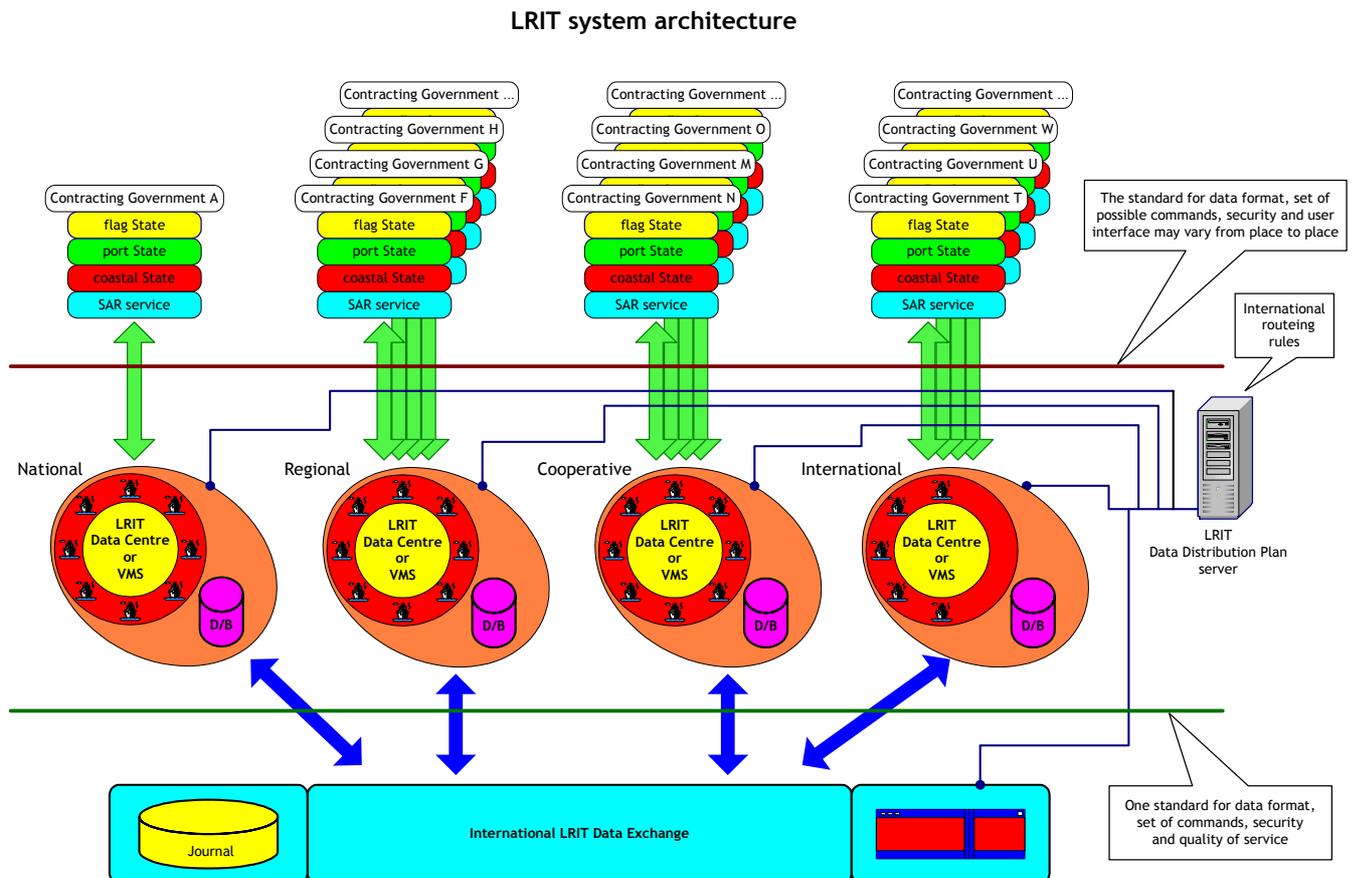
**REVISED PERFORMANCE STANDARDS AND FUNCTIONAL REQUIREMENTS  
FOR THE LONG-RANGE IDENTIFICATION AND TRACKING OF SHIPS**

**1 Overview**

1.1 The Long-Range Identification and Tracking (LRIT) system provides for the global identification and tracking of ships.

1.2 The LRIT system consists of the shipborne LRIT information transmitting equipment, the Communication Service Provider(s), the Application Service Provider(s), the LRIT Data Centre(s), including any related Vessel Monitoring System(s), the LRIT Data Distribution Plan and the International LRIT Data Exchange. Certain aspects of the performance of the LRIT system are reviewed or audited by an LRIT Coordinator acting on behalf of all Contracting Governments. Figure 1 provides an illustration of the LRIT system architecture.

**Figure 1**



1.3 LRIT information is provided to Contracting Governments and Search and rescue services<sup>1</sup> entitled to receive the information, upon request, through a system of National, Regional, Cooperative and International LRIT Data Centres, using where necessary, the International LRIT Data Exchange.

1.4 Each Administration should provide to the LRIT Data Centre it has selected, a list of the ships entitled to fly its flag, which are required to transmit LRIT information, together with other salient details and should update, without undue delay, such lists as and when changes occur. Ships should only transmit the LRIT information to the LRIT Data Centre selected by their Administration.

1.5 The obligations of ships to transmit LRIT information and the rights and obligations of Contracting Governments and of Search and rescue services to receive LRIT information are established in regulation V/19-1 of the 1974 SOLAS Convention.

## 2 Definitions

2.1 Unless expressly provided otherwise:

- .1 *Convention* means the International Convention for the Safety of Life at Sea, 1974, as amended.
- .2 *Regulation* means a regulation of the Convention.
- .3 *Chapter* means a chapter of the Convention.
- .4 *LRIT Data User* means a Contracting Government or a Search and rescue (SAR) service which opts to receive the LRIT information it is entitled to.
- .5 *Committee* means the Maritime Safety Committee.
- .6 *High-speed craft* means a craft as defined in regulation X/1.3.
- .7 *Mobile offshore drilling unit* means a mobile offshore drilling unit as defined in regulation XI-2/1.1.5.
- .8 *Organization* means the International Maritime Organization.
- .9 *Vessel Monitoring System* means a system established by a Contracting Government or a group of Contracting Governments to monitor the movements of the ships entitled to fly its or their flag. A Vessel Monitoring System may also collect from the ships information specified by the Contracting Government(s) which has established it.
- .10 *LRIT information* means the information specified in regulation V/19-1.5.

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<sup>1</sup> The term *search and rescue service* is defined in regulation V/2.5

2.2 The term “ship”, when used in the present performance standards, includes mobile offshore drilling units and high-speed craft as specified in regulation V/19-1.4.1 and means a ship which is required to transmit LRIT information.

2.3 Terms not otherwise defined should have the same meaning as the meaning attributed to them in the Convention.

### **3 General provisions**

3.1 It should be noted that regulation V/19-1.1 provides that:

*Nothing in this regulation or the provisions performance standards and functional requirements adopted by the Organization in relation to the long-range identification and tracking of ships shall prejudice the rights, jurisdiction or obligations of States under international law, in particular, the legal regimes of the high seas, the exclusive economic zone, the contiguous zone, the territorial seas or the straits used for international navigation and archipelagic sea lanes.*

3.2 In operating the LRIT system, recognition should be given to international conventions, agreements, rules or standards that provide for the protection of navigational information.

3.3 The present performance standards should always be read together with regulation V/19-1 and the technical specifications for the LRIT system<sup>2</sup>.

### **4 Shipborne equipment**

4.1 In addition to the general requirements contained in 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, the shipborne equipment should comply with the following minimum requirements:

- .1 be capable of automatically and without human intervention on board the ship transmitting the ship’s LRIT information at 6-hour intervals to an LRIT Data Centre;
- .2 be capable of being configured remotely to transmit LRIT information at variable intervals;
- .3 be capable of transmitting LRIT information following receipt of polling commands; and
- .4 interface directly to the shipborne global navigation satellite system equipment, or have internal positioning capability;

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<sup>2</sup> Refer to MSC.1/Circ.1259 on Interim revised technical specifications for the LRIT system.

- .5 be supplied with energy from the main and emergency source of electrical power<sup>3</sup>; and
- .6 be tested for electromagnetic compatibility taking into account the recommendations<sup>4</sup> developed by the Organization.

4.2 In addition to the provisions specified in paragraph 4.1 above, the shipborne equipment should provide the functionality specified in table 1.

**Table 1**

**DATA TO BE TRANSMITTED FROM THE SHIPBORNE EQUIPMENT**

Parameter	Comments
Shipborne equipment Identifier	The identifier used by the shipborne equipment.
Positional data	<p>The Global Navigation Satellite System (GNSS) position (latitude and longitude) of the ship (based on the WGS 84 datum).</p> <p><i>Position:</i> The equipment should be capable of transmitting the GNSS position (latitude and longitude) of the ship (based on WGS 84 datum) as prescribed by regulation V/19-1, without human interaction on board the ship.</p> <p><i>On-demand<sup>(1)</sup> position reports:</i> The equipment should be capable of responding to a request to transmit LRIT information on demand without human interaction on board the ship, irrespective of where the ship is located.</p> <p><i>Pre-scheduled<sup>(2)</sup> position reports:</i> The equipment should be capable of being remotely configured to transmit LRIT information at intervals ranging from a minimum of 15 min to periods of 6 h to the LRIT Data Centre, irrespective of where the ship is located and without human interaction on board the ship.</p>
Time Stamp 1	<p>The date and time<sup>(3)</sup> associated with the GNSS position.</p> <p>The equipment should be capable of transmitting the time<sup>(3)</sup> associated with the GNSS position with each transmission of LRIT information.</p>

Notes: <sup>(1)</sup> *On-demand position reports* means transmission of LRIT information as a result of either receipt of polling command or of remote configuration of the equipment so as to transmit at interval other than the preset ones.

<sup>(2)</sup> *Pre-scheduled position reports* means transmission of LRIT information at the preset transmit intervals.

<sup>(3)</sup> All times should be indicated as Universal Coordinated Time (UTC).

<sup>3</sup> This provision should not apply to ships using for the transmission of LRIT information any of the radio communication equipment provided for compliance with the provisions of chapter IV. In such cases, the shipborne equipment should be provided with sources of energy as specified in regulation IV/13.

<sup>4</sup> Refer to resolution A.813(19) on General requirements for electromagnetic compatibility of all electrical and electronic ship's equipment.

4.3 The shipborne equipment should transmit the LRIT information using a communication system which provides coverage in all areas where the ship operates.

4.4 The shipborne equipment should be set to automatically transmit the ship's LRIT information at 6-hour intervals to the LRIT Data Centre identified by the Administration, unless the LRIT Data User requesting the provision of LRIT information specifies a more frequent transmission interval.

4.4.1 When a ship is undergoing repairs, modifications or conversions in dry-dock or in port or is laid up for a long period, the master or the Administration may reduce the frequency of the transmission LRIT information to one transmission every 24-hour period, or may temporarily stop the transmission of such information.

## **5 Application Service Providers**

5.1 Application Services Provider(s) (ASPs) providing services to:

- .1 a National LRIT Data Centre, should be recognized by the Contracting Government establishing the centre;
- .2 a Regional or a Cooperative LRIT Data Centre, should be recognized by the Contracting Governments establishing the centre. In such a case, the arrangements for recognizing the ASPs should be agreed amongst the Contracting Governments establishing the centre; and
- .3 an International LRIT Data Centre, should be recognized by the Committee.

5.2 Contracting Governments should provide to the Organization a list with the names and contact details of the ASPs they recognize together with any associated conditions of recognition and thereafter should, without undue delay, update the Organization as changes occur.

5.2.1 The Organization should communicate information it receives pursuant to the provisions of paragraph 5.2 and information in relation to the ASP(s) recognized by the Committee for providing services to the International LRIT Data Centre and any changes thereto to all Contracting Governments, all LRIT Data Centres, the International LRIT Data Exchange and the LRIT Coordinator.

5.3 An ASP function should:

- .1 provide a communication protocol interface between the Communication Service Providers and the LRIT Data Centre to enable the following minimum functionality:
  - .1 remote integration of the shipborne equipment into an LRIT Data Centre;
  - .2 automatic configuration of transmission of LRIT information;
  - .3 automatic modification of the interval of transmission of LRIT information;

- .4 automatic suspension of transmission of LRIT information;
- .5 on demand transmission of LRIT information; and
- .6 automatic recovery and management of transmission of LRIT information;
- .2 provide an integrated transaction management system for the monitoring of LRIT information throughput and routing; and
- .3 ensure that LRIT information is collected, stored and routed in a reliable and secure manner.

5.4 The ASP where used should add the data identified in table 2 to each transmission of LRIT information:

**Table 2**  
**DATA TO BE ADDED BY AN APPLICATION SERVICE PROVIDER**  
**AND AT THE LRIT DATA CENTRE**

Parameters	Comments
Ship Identity <sup>(1)</sup>	The IMO ship identification number <sup>(1)</sup> and MMSI for the ship.
Name of ship	Name of the ship which has transmitted the LRIT information in the English language using latin-1 alphabet and UTF-8 encoding.
Time Stamp 2	The date and time <sup>(2)</sup> the transmission of LRIT information is received by the ASP (if used).
Time Stamp 3	The date and time <sup>(2)</sup> the received LRIT information is forwarded from the ASP (if used) to the appropriate LRIT Data Centre.
LRIT Data Centre Identifier	The identity of the LRIT Data Centre to be clearly indicated by a Unique Identifier.
Time Stamp 4	The date and time <sup>(2)</sup> the LRIT information is received by the LRIT Data Centre.
Time Stamp 5	The date and time <sup>(2)</sup> the transmission of LRIT information is forwarded from the LRIT Data Centre to an LRIT Data User.

Notes: <sup>(1)</sup> See regulation XI-1/3 and resolution A.600(15) on IMO ship identification number scheme.

<sup>(2)</sup> All times should be indicated as Universal Coordinated Time (UTC).

5.5 In addition to the provisions of paragraph 5.3, Administrations, Contracting Governments and the Committee may establish, in relation to the ASPs seeking their recognition, specific requirements as a condition of recognizing a particular ASP.

## **6 Communications Service Providers**

6.1 Communications Service Providers (CSPs) provide services which link the various parts of the LRIT system using communications protocols in order to ensure the end-to-end secure transfer of the LRIT information. This requirement precludes the use of non-secure broadcast systems.

6.2 A CSP may also provide services as an ASP.

## **7 LRIT Data Centre**

7.1 All LRIT Data Centres should:

- .1 establish and continuously maintain systems which ensure, at all times, that LRIT Data Users are only provided with the LRIT information they are entitled to receive as specified in regulation V/19-1;
- .2 collect LRIT information from ships instructed by their Administrations to transmit the LRIT information to the centre;
- .3 obtain, when requested to provide LRIT information transmitted by ships other than those which transmit the information to the centre, LRIT information from other LRIT Data Centres through the International LRIT Data Exchange;
- .4 make available, when requested to provide LRIT information transmitted by ships which transmit the information to the centre, LRIT information transmitted to the centre to other LRIT Data Centres through the International LRIT Data Exchange;
- .5 execute requests received from LRIT Data Users for polling of LRIT information or for change(s) in the interval(s) of transmission of LRIT information by a ship or a group of ships transmitting the information to the centre;
- .6 relay, when required, requests received from LRIT Data Users through the International LRIT Data Exchange to the other LRIT Data Centres for polling of LRIT information or for change(s) in the interval(s) of transmission of LRIT information by a ship or a group of ships not transmitting the information to the centre;
- .7 execute requests received through the International LRIT Data Exchange from other LRIT Data Centres for polling of LRIT information or for change(s) in the interval(s) of transmission of LRIT information by a ship or a group of ships transmitting the information to the centre;
- .8 upon request disseminate to LRIT Data Users the LRIT information they are entitled to receive in accordance with the agreed arrangements and notify the LRIT Data User and the Administration when a particular ship stops transmitting LRIT information;

- .9 archive LRIT information from ships which transmit the information to the centre, for at least one year and until such time as the Committee reviews and accepts the annual report of the audit of its performance by the LRIT Coordinator. However, the archived LRIT information should provide a complete record of the activities of the centre between two consecutive annual audits of its performance;
- .10 for LRIT information archived within the last 4 days, send the LRIT information within 30 min of receiving a request;
- .11 for LRIT information archived between 4 and 30 days previously, send the LRIT information within 1 h of receiving a request;
- .12 for LRIT information archived more than 30 days previously, send the LRIT information within 5 days of receiving a request;
- .13 ensure using appropriate hardware and software, that LRIT information is backed-up at regular intervals, stored at suitable off-site location(s) and available as soon as possible in the event of disruption to ensure continuity of service;
- .14 maintain a record of the ships which transmit LRIT information to the centre including name of ship, IMO Ship identification number, call sign and Maritime Mobile Service Identity (MMSI);
- .15 use a standard protocol for communications and agreed protocols to connect with the International LRIT Data Exchange and the LRIT Data Distribution Plan server;
- .16 use a standard secure transmission method with the International LRIT Data Exchange and the LRIT Data Distribution Plan server;
- .17 use a secure authentication method with LRIT Data Users;
- .18 use a standard and expandable message format for communicating with the International LRIT Data Exchange and the LRIT Data Distribution Plan server;
- .19 use reliable connections (e.g., TCP) to ensure that the LRIT information is successfully received by the LRIT Data Centres;
- .20 add the appropriate data identified in table 2 to each transmission of LRIT information collect by the centre; and
- .21 have access to the current LRIT Data Distribution Plan and to earlier versions of the plan.

7.2 All LRIT Data Centres should comply with the relevant provisions of the Technical specifications for communications within the LRIT system<sup>5</sup> and of the Technical specifications for the LRIT Data Distribution Plan and should take into account the relevant provisions of the Technical specifications for the International LRIT Data Exchange.

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<sup>5</sup> Refer to MSC.1/Circ.1259 on Interim revised technical specifications for the LRIT system.

7.3 All Regional or Cooperative LRIT Data Centres and the International LRIT Data Centre should only internally route LRIT information transmitted by ships entitled to fly the flag of the Contracting Governments establishing or participating such centres and should automatically maintain journal(s) for all of the internally routed LRIT information. The journal(s) should only contain message header information which should be used for audit and invoicing purposes. The journal(s) should be transmitted to the International LRIT Data Exchange at regular intervals in order to be combined with the journal(s) maintained by the International LRIT Data Exchange.

7.4 Each LRIT Data Centre should:

- .1 settle its financial obligations *vis-à-vis* the LRIT Data Centres which provide to it LRIT information and the International LRIT Data Exchange in a timely manner in accordance with the arrangements they have agreed;
- .2 publish its charges, in a currency to be decided by the Contracting Government(s) establishing the centre and in Special Drawing Rights (SDR) together with the date(s) as from which the charges are effective, for:
  - .1 providing LRIT information transmitted by the shipborne equipment at preset intervals<sup>6,7</sup>;
  - .2 providing LRIT information transmitted by the shipborne equipment on demand<sup>8</sup>;
  - .3 remotely configuring the shipborne equipment so as to transmit at interval other than the preset<sup>9</sup> ones and for resetting the shipborne equipment to transmit at preset interval; and
  - .4 providing archived LRIT information which is the LRIT information received from a ship other than the last one,and should update these as and when changes occur; and
- .3 transmit to the International LRIT Data Exchange information on its charges together with the currency they relate to and should update such information as and when changes occur.

7.5 The performance of all LRIT Data Centres should be audited by the LRIT Coordinator.

7.5.1 All LRIT Data Centres should cooperate and make available to the LRIT Coordinator the information required to enable the satisfactory completion of an audit of their performance.

7.5.2 All LRIT Data Centres should settle their financial obligations *vis-à-vis* the LRIT Coordinator in a timely manner in accordance with the arrangements they have agreed.

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<sup>6</sup> Refer to pre-scheduled position reports as defined in Note (2) in Table 1.

<sup>7</sup> Preset intervals are the intervals specified in paragraph 4.4.

<sup>8</sup> Refer to on demand reports as defined in Note (1) in Table 1.

<sup>9</sup> Preset intervals are the intervals specified in paragraph 4.4.

7.6 When providing LRIT information to LRIT Data Users, other than to a SAR service, LRIT Data Centres should:

- .1 in case such information are not archived, utilize the current version of the LRIT Data Distribution Plan;
- .2 in case such information are archived, utilize the version(s) of the LRIT Data Distribution Plan which were applicable at the time the archived LRIT information requested were originally received; and
- .3 apply the geographical areas specified by the Contracting Governments concerned in the LRIT Data Distribution Plan and should not endeavour to resolve any issues which may arise when such areas are either not specified or overlap geographical areas specified by other Contracting Governments.

7.7 Notwithstanding the provisions of paragraph 7.1 and subject to the provisions of paragraph 17.2, all LRIT Data Centres should provide to SAR services, LRIT information transmitted by all ships located within the geographical area specified by the SAR service requesting the information so as to permit the rapid identification of ships which may be called upon to provide assistance in relation to the search and rescue of persons in distress at sea. The LRIT information should be provided irrespective of the location of the geographical area and should be provided even if the geographical area is outside the search and rescue region associated with the SAR service requesting the information (regulation V/19-1.12 refers).

## **8 National, Regional and Cooperative LRIT Data Centres**

8.1 A Contracting Government may establish a National LRIT Data Centre. A Contracting Government establishing such a centre should provide relevant details to the Organization and thereafter should, without undue delay, update the information provided as and when changes occur.

8.2 A group of Contracting Governments may establish either a Regional or a Cooperative LRIT Data Centre. The arrangements for establishing such a centre should be agreed amongst the Contracting Governments concerned. One of the Contracting Governments establishing such a centre should provide relevant details to the Organization and thereafter should, without undue delay, update the information provided as and when changes occur.

8.3 Upon request, National, Regional and Cooperative LRIT Data Centres may provide services to Contracting Governments other than those establishing the centre.

8.3.1 The arrangements for providing services should be agreed between the LRIT Data Centre and the Contracting Government requesting the provision of the services.

8.3.2 The Contracting Government establishing the National LRIT Data Centre or one of the Contracting Governments establishing the Regional or Cooperative LRIT Data Centre should, if the centre provides services to Contracting Governments other than those which established the centre, provide relevant details to the Organization and thereafter should, without undue delay, update the information provided as and when changes occur.

8.4 National, Regional and Cooperative LRIT Data Centres may also serve as a National, Regional or Cooperative Vessel Monitoring System (VMS) and may require, as VMS, the transmission from ships of additional information, or of information at different intervals, or of information from ships which are not required to transmit LRIT information. VMSs may also perform other functions.

8.4.1 If a National, Regional or Cooperative LRIT Data Centre collects additional information from ships, it should transmit only the required LRIT information to the other LRIT Data Centres through the International LRIT Data Exchange.

## **9 International LRIT Data Centre**

9.1 An International LRIT Data Centre recognized by the Committee should be established.

9.2 Contracting Governments not participating in a National, Regional or Cooperative LRIT Data Centre, or Contracting Governments having an interest in the establishment of an International LRIT Data Centre should cooperate, under the coordination of the Committee, with a view to ensuring its establishment.

9.3 Ships, other than those which are required to transmit LRIT information to either a National, Regional or Cooperative LRIT Data Centre, should transmit the required LRIT information to the International LRIT Data Centre.

9.4 An International LRIT Data Centre may, upon request, collect additional information from ships entitled to fly the flag of an Administration on the basis of specific arrangements concluded with the Administration concerned.

9.5 In addition to the provisions of section 7, the International LRIT Data Centre should comply with the provisions of the Technical specifications for the International LRIT Data Centre<sup>10</sup>.

## **10 International LRIT Data Exchange**

10.1 An International LRIT Data Exchange recognized by the Committee should be established.

10.2 Contracting Governments should cooperate, under the coordination of the Committee, with a view to ensuring the establishment of the International LRIT Data Exchange.

10.3 The International LRIT Data Exchange should:

- .1 route LRIT information between LRIT Data Centres using the information provided in the LRIT Data Distribution Plan;
- .2 be connected to all LRIT Data Centres and the LRIT Data Distribution Plan server;
- .3 use a store and forward-buffer to ensure LRIT information is received;

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<sup>10</sup> Refer to MSC.1/Circ.1259 on Interim revised technical specifications for the LRIT system.

- .4 automatically maintain journal(s) containing message header information only which may be used for:
  - .1 invoicing functions and settlement of invoicing disputes; and
  - .2 audit purposes;
- .5 archive journal(s), for at least one year and until such time as the Committee reviews and accepts the LRIT Coordinator's annual report of the audit of its performance. However, the archived journal(s) should provide a complete record of the activities of the exchange between two consecutive annual audits of its performance;
- .6 receive journal(s) from Regional, Cooperative, and the International LRIT Data Centre and combine these journal(s) with its own journal(s);
- .7 prepare, as necessary, performance related statistical information based on the information contained in the journal(s);
- .8 use a standard protocol for communications agreed protocols to connect to with LRIT Data Centres and the LRIT Data Distribution Plan server;
- .9 use a standard secure access method with the LRIT Data Centres and the LRIT Data Distribution Plan server;
- .10 use a standard and expandable message format for communicating with the LRIT Data Centres and the LRIT Data Distribution Plan server;
- .11 use reliable connections (e.g., TCP) to ensure that the LRIT information is successfully received by the LRIT Data Centres;
- .12 not have the capability to archive LRIT information;
- .13 not have the capability to view or access the LRIT information;
- .14 have access to current LRIT Data Distribution Plan and to earlier versions of the plan; and
- .15 receive information from LRIT Data Centres in relation to the charges they levy when providing LRIT information, create a master list of charges for all LRIT Data Centres and transmit the master list of charges to an LRIT Data Centre on request.

10.4 The International LRIT Data Exchange should comply with the provisions of the Technical specifications for the International LRIT Data Exchange<sup>11</sup> and with the relevant provisions of the Technical specifications for communications within the LRIT system and of the Technical specifications for the LRIT Data Distribution Plan.

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<sup>11</sup> Refer to MSC.1/Circ.1259 on Interim revised technical specifications for the LRIT system.

10.5 The International LRIT Data Exchange should provide to:

- .1 the LRIT Coordinator off-line access to all journals; and
- .2 Contracting Governments and LRIT Data Centres off-line access only to their share of the journals which relates to the LRIT information they have requested and were provided with.

10.6 The performance of the International LRIT Data Exchange should be audited by the LRIT Coordinator.

10.6.1 The International LRIT Data Exchange should cooperate and make available to the LRIT Coordinator the information required to enable the satisfactory completion of an audit of its performance.

10.6.2 The International LRIT Data Exchange should settle its financial obligations *vis-à-vis* the LRIT Coordinator in a timely manner in accordance with the arrangements they have agreed.

## **11 LRIT Data Distribution Plan**

11.1 The Organization should establish and maintain the LRIT Data Distribution Plan. The Organization should also host, build, operate and maintain the LRIT Data Distribution Plan server.

11.2 The LRIT Data Distribution Plan (the plan) should include:

- .1 a list indicating the unique LRIT identities of Contracting Governments, Search and rescue services entitled to receive LRIT information, LRIT Data Centres, the International LRIT Data Exchange, ASPs, the LRIT Data Distribution Plan server and the LRIT Coordinator;
- .2 for the purpose of the implementation of the provisions of regulation V/19-1.8.1, for each Contracting Government a list of geographical coordinates of points, taking into account the related provisions of the Technical specifications for the LRIT Data Distribution Plan<sup>12</sup>, based on the WGS 84 datum defining the geographical area:
  - .1 of the waters<sup>13</sup> landward of the baselines for measuring the breadth of the territorial sea of the Contracting Government concerned in accordance with international law;

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<sup>12</sup> Refer to MSC.1/Circ.1259 on Interim revised technical specifications for the LRIT system.

<sup>13</sup> The baselines for measuring the breadth of the territorial sea of the Contracting Government concerned in accordance with international law, the lines of delimitation between the Contracting Governments concerned and States with adjacent coasts and the coast of the Contracting Government concerned including any landward waters within which any ship which is required to comply with the provisions of regulation V/19-1 is able to navigate.

- .2 of the territorial sea<sup>14</sup> of the Contracting Government concerned in accordance with international law;
  - .3 between the coast of the Contracting Government concerned and a distance of 1,000 nautical miles from its coast. The Contracting Government concerned may, in lieu of defining the aforesaid area with reference to the geographical coordinate points defining its coast, define the area with reference to the geographical coordinate points of the baselines for measuring the breadth of the territorial sea of the Contracting Government concerned in accordance with international law; and
  - .4 within which the Contracting Government concerned is seeking the provision of LRIT information pursuant to the provisions of regulation V/19-1.8.1.3, if other than that defined under subparagraph .3 above;
- .3 for the purpose of the implementation of the provisions of regulation V/19-1.9.1 the following information:
- .1 the name of the Administration (together with its associated unique LRIT identity) which opts to exercise its right under the provisions of regulation V/19-1.9.1;
  - .2 the name(s) of the Contracting Government(s) (together with their associated unique LRIT identities) to which LRIT information about ships entitled to fly the flag of the aforesaid Administration shall not be provided pursuant to the provisions of paragraph V/19-1.8.1.3 together with the date and time as from which the decision of the Administration applies and any particulars thereof stated in the related communication to the Organization;
  - .3 in case of amendment, suspension or annulment such decisions of aforesaid Administration the salient details; and
  - .4 the date and time the Organization has received the related communication, including related amendment, suspension or annulment and the date and time the Organization has informed all Contracting Governments pursuant to the provisions of regulation V/19-1.9.2;
- .4 a list of ports and port facilities located within the territory and a list of places under jurisdiction of each Contracting Government together with the associated geographical coordinates of points (based on WGS 84 datum) in which ships that are required to comply with the provisions of regulation V/19-1 may enter or proceed to;

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<sup>14</sup> The baselines for measuring the breadth of the territorial sea and the outer limit of the territorial sea of the Contracting Government concerned in accordance with international law and the lines of delimitation of the territorial sea between the Contracting Governments concerned and States with opposite or adjacent coasts in accordance with international law.

- .5 a list indicating which LRIT Data Centre is collecting and archiving LRIT information for each of the Contracting Governments together with the related LRIT identifies;
- .6 a list indicating the Uniform Resource Locator/Uniform Resource Identifier (URL/URI) (Web Service Endpoint) of each LRIT Data Centre, the International LRIT Data Exchange and the LRIT Data Distribution Plan server;
- .7 a list indicating the ASPs providing services to each LRIT Data Centre together with the related LRIT identifies;
- .8 the contact details of Contracting Governments for LRIT-related matters;
- .9 the contact details of Search and rescue services entitled to receive LRIT information for LRIT-related matters;
- .10 information in relation to the ASPs recognized by each Contracting Governments together with any conditions attached to such recognitions, and their points of contact;
- .11 information in relation to each National, Regional and Cooperative LRIT Data Centre, the International LRIT Data Centre and the International LRIT Data Exchange, and their points of contact;
- .12 information in relation to the LRIT Coordinator, and its contact details;
- .13 information in relation to the LRIT Data Distribution Plan and its server and contact details of official(s) of the Organization who may be contacted for matters relating to the operation or maintenance of the plan or its server or for seeking help in relation to issues relating to or arising from the operation of the plan or its server; and
- .14 maintain a record of all previous versions of the plan together with the dates and times between which each version was in effect.

11.3 The LRIT Data Distribution Plan server should:

- .1 allow the International LRIT Data Exchange, the LRIT Data Centres and the LRIT Coordinator to have access to the current version of the plan;
- .2 provide earlier versions of the LRIT Data Distribution Plan to the International LRIT Data Exchange, the LRIT Data Centres and the LRIT Coordinator upon request;
- .3 use a standard protocol for communications and agreed protocols to connect with the International LRIT Data Exchange and the LRIT Data Centres;
- .4 use a standard secure transmission method with the International LRIT Data Exchange and the LRIT Data Centres;

- .5 use a standard and expandable message format for communicating with the International LRIT Data Exchange and the LRIT Data Centres;
- .6 use reliable connections (e.g., TCP) to ensure that the information in the plan is successfully received by the International LRIT Data Exchange and the LRIT Data Centres;
- .7 use industry standard file compression technology to reduce the size of the plan and its incremental updates when these are downloaded by the International LRIT Data Exchange and the LRIT Data Centres;
- .8 provide for the submission of the geographical areas in a standard industry format and use a consistent naming convention for the elements;
- .9 provide for uploading of the geographical areas in batch files in Geography Markup Language (GML) format;
- .10 maintain a unique number for each published version of the plan, incrementing each time a new version of the plan is published;
- .11 provide for the downloading of the plan and its incremental updates by the LRIT Data Centres and the International LRIT Data Exchange on the publishing of a new version of the plan;
- .12 archive all published versions of the plan and its incremental updates;
- .13 use a standard secure access methods with the Contracting Governments and the LRIT Coordinator; and
- .14 provide a web interface for the entry and amendment of information in the plan.

11.4 The LRIT Data Distribution Plan server should comply with the Technical specifications for LRIT Data Distribution Plan<sup>15</sup> and with the relevant provisions of the Technical specifications for communications within the LRIT system.

## **12 LRIT system security**

12.1 LRIT communications using land-line links should provide for data security using methods such as:

- .1 authorization: Access should only be granted to those who are authorized to see the specific LRIT information;
- .2 authentication: Any party exchanging information within the LRIT system should require authentication before exchanging information;

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<sup>15</sup> Refer to MSC.1/Circ.1259 on Interim revised technical specifications for the LRIT system.

- .3 confidentiality: Parties running an application server should protect the confidentiality of the LRIT information to ensure that it is not disclosed to unauthorized recipients when it travels across the LRIT system; and
- .4 integrity: Parties exchanging LRIT information should ensure that the integrity of the LRIT information is guaranteed and that no data has been altered.

### **13 LRIT system performance**

- 13.1 LRIT information should be available to an LRIT Data User within 15 min of the time it is transmitted by the ship.
- 13.2 On-demand LRIT information should be provided to an LRIT Data User within 30 min of the time the LRIT Data User requested the information.
- 13.3 The quality of service:

$$\frac{\text{Number of delivered LRIT information meeting latency requirements}}{\text{Total number of LRIT information requests}} \times 100\%$$

should be:

- .1 95% of the time over any 24-hour period; and
- .2 99% over any 1 month.

### **14 LRIT Coordinator**

- 14.1 The LRIT Coordinator should be appointed by the Committee.
- 14.2 The LRIT Coordinator should assist in the establishment of the International LRIT Data Centre and/or International LRIT Data Exchange by:
  - .1 participating in the development of any new technical specifications for the LRIT system or of any amendments to existing ones taking into account the provisions of regulation V/19-1, the present performance standards, the existing technical specifications and any related decisions of the Committee;
  - .2 issuing, when requested by the Committee, requests for the submission of proposals for the establishment and operation of the International LRIT Data Centre and/or the International LRIT Data Exchange;
  - .3 evaluating the management, operational, technical and financial aspects of the proposals received taking into account the provisions of regulation V/19-1, the present performance standards, the technical specifications for the LRIT system and any other related decisions of the Committee and submitting its recommendations in this respect for consideration by the Committee; and
  - .4 participating, as and when requested by the Committee, in their testing and integration into the LRIT system and reporting its findings in this respect for consideration by the Committee.

14.3 The LRIT Coordinator should, taking into account the provisions of regulation V/19-1, the present performance standards, the technical specification for the LRIT system and any related decisions of the Committee:

- .1 upon request, of any party concerned or the Committee, undertake the investigation of operational or technical disputes or invoicing difficulties and make recommendations for their settlement to the parties concerned and the Committee, as appropriate;
- .2 participate, as and when requested by the Committee, in the testing and integration of LRIT Data Centre(s) into the LRIT system and report its finding in this respect for consideration by the Committee; and
- .3 participate, as and when requested by the Committee, in the testing of new or modified procedures or arrangements for communications between the International LRIT Data Exchange, the LRIT Data Centres and the LRIT Data Distribution Plan server and report its finding in this respect for consideration by the Committee.

14.4 The LRIT Coordinator should undertake a review of the performance of the LRIT system taking into account the provisions of regulation V/19-1, the present performance standards, the technical specification for the LRIT system and any related decisions of the Committee and should report its findings to the Committee at least annually. In this respect, the LRIT Coordinator should on an annual basis:

- .1 review the performance of ASPs (or CSPs when they act as ASPs) providing services to the International LRIT Data Centre;
- .2 audit the performance of all LRIT Data Centres based on archived information and their fee structures;
- .3 audit the performance of the International LRIT Data Exchange and its fee structure, if any; and
- .4 verify that Contracting Governments and Search and rescue services receive only the LRIT information they have requested and are entitled to receive.

14.5 In addition to reporting to the Committee on the performance of the LRIT system including any identified non-conformities, the LRIT Coordinator may make recommendations to the Committee, based on an analysis of its findings, with a view to improving the efficiency, effectiveness and security of the LRIT system.

14.6 The LRIT Coordinator should, for the purpose of performing the functions specified in paragraphs 14.2.4 and 14.3 to 14.5:

- .1 be given the required level of access, by the LRIT Data Centres and the International LRIT Data Exchange, to management, and to charging, technical and operational data;
- .2 collect and analyse samples of LRIT information provided to LRIT Data Users;

- .3 collect and analyse statistics compiled by LRIT Data Centres and the International LRIT Data Exchange; and
- .4 be given access to the current LRIT Data Distribution Plan and to earlier versions of the plan.

14.7 The LRIT Coordinator should establish and communicate to the Committee the charges it would be levying in order to recover the expenditure it incurs for providing the services specified in paragraphs 14.2 to 14.5.

14.7.1 The related charges should be paid to the LRIT Coordinator in accordance with agreed arrangements – taking into account the laws of the Contracting Government(s) concerned – as follows:

- .1 in relation to the evaluation of proposals for the establishment of the International LRIT Data Centre and/or the International LRIT Data Exchange (paragraph 14.2.3), by those submitting the related proposals;
- .2 when participating in the testing and integration of the International LRIT Data Centre and/or the International LRIT Data Exchange into the LRIT system (paragraph 14.2.4), by the International LRIT Data Centre and/or the International LRIT Data Exchange as the case may be;
- .3 when undertaking the investigation of operational or technical disputes or invoicing difficulties (paragraph 14.3.1) by the party requesting the service;
- .4 when participating in the testing and integration of LRIT Data Centre(s) into the LRIT system (paragraph 14.3.2) by the LRIT Data Centre(s) being tested or integrated;
- .5 when participating in the testing of new or modified procedures or arrangements for communications between the International LRIT Data Exchange, the LRIT Data Centres and the LRIT Data Distribution Plan server (paragraph 14.3.3), by the International LRIT Data Exchange and/or the LRIT Data Centre(s);
- .6 when reviewing the performance of ASPs (or CSPs when they act as ASPs) providing services to the International LRIT Data Centre (paragraph 14.4.1), by the ASPs concerned;
- .7 when auditing the performance and fee structures of LRIT Data Centres (paragraph 14.4.2), by the LRIT Data Centre concerned; and
- .8 when auditing the performance and fee structure of the International LRIT Data Exchange (paragraph 14.4.3), by the International LRIT Data Exchange.

14.7.2 The Organization should not be required to make any payments to the LRIT Coordinator for any work the LRIT Coordinator may be required to carry out pursuant to any of the provisions of paragraphs 14.2 to 14.5; or for reporting or making recommendations to the Committee pursuant to any of the provisions of paragraphs 14.2 to 14.5.

14.7.3 Contracting Governments should not be responsible for making any direct payments to the LRIT Coordinator for the services it may be required to provide pursuant to any of the provisions of paragraphs 14.2 to 14.5. However, without prejudice as to the relations between Contracting Governments and the LRIT Data Centres the services of which may use, Contracting Governments may be required by LRIT Data Centres to pay fees for the LRIT information they request and receive which may contain elements to offset the charges paid by LRIT Data Centres to the LRIT Coordinator for the functions it performs. Notwithstanding the aforesaid, the Contracting Government which requests directly from the LRIT Coordinator the provision of a specific service should pay the LRIT Coordinator the relevant charges for the service it has requested.

## **15 Administrations**

15.1 Each Administration should decide to which LRIT Data Centre ships entitled to fly its flag are required to transmit LRIT information.

15.2 Each Administration should provide to the selected LRIT Data Centre the following information for each of the ships entitled to fly its flag which is required to transmit LRIT information:

- .1 name of ship;
- .2 IMO Ship identification number;
- .3 call sign; and
- .4 Maritime Mobile Service Identity.

15.3 Upon the transfer of the flag of a ship which is required to transmit LRIT information from another State, the Administration whose flag the ship is now entitled to fly should provide, without undue delay, to the selected LRIT Data Centre in addition to the information specified in paragraph 15.2 the following information:

- .1 the effective date and time (UTC) of transfer; and
- .2 the State whose flag the ship was formally entitled to fly, if known.

15.4 Administrations should, without undue delay, update the LRIT Data Centre as and when changes to the information they have provided under paragraphs 15.2 and 15.3 occur.

15.5 Upon the transfer of the flag of a ship which is required to transmit LRIT information to another State or when the ship is to be taken permanently out of service, the Contracting Government of the State whose flag the ship was entitled to fly hitherto should provide, without undue delay, to the LRIT Data Centre the following information:

- .1 name of ship;
- .2 IMO Ship identification number;

- .3 the effective date and time (UTC) of the transfer, or when the ship was, or will be, taken permanently out of service; and
- .4 the State to which the flag of the ship has been transferred, if known.

15.6 Administrations should either provide the ASP(s) they recognize with relevant information taking into account the provisions of 15.2 to 15.5 or should make the necessary arrangements for the aforesaid information to be provided to the ASP(s) concerned by the selected LRIT Data Centre.

## **16 Contracting Governments**

16.1 Each Contracting Government should:

- .1 obtain the LRIT information to which it is entitled to under the provisions of regulation V/19-1, and has requested, from the LRIT Data Centre designated under paragraph 15.1. Contracting Governments which have no ships entitled to fly their flag may receive the LRIT information they are entitled to under the provisions of regulation V/19-1 from any one of the LRIT Data Centres but should select one LRIT Data Centre from which they wish to receive the information. In such cases the Contracting Government concerned should, after reaching agreement with the LRIT Data Centre the services of which it would be using, inform accordingly the Organization and, without undue delay, update the information they have provided as and when changes;
- .2 if it wishes to receive LRIT information pursuant to the provisions of regulation V/19-1.8.1.1, indicate to the LRIT Data Centre the criteria for receiving such information. If so decided the Contracting Government may give the LRIT Data Centre a standing order regarding the criteria for receiving LRIT information;
- .3 if it wishes to receive LRIT information pursuant to the provisions of regulation V/19-1.8.1.2, indicate to the LRIT Data Centre the name and the IMO Ship identification number of the particular ship and either:
  - .1 the distance from a port; or
  - .2 a point in time,

from when it requires the provision of LRIT information transmitted by the ship. If so decided the Contracting Government may give the LRIT Data Centre a standing order regarding the criteria for receiving LRIT information. If the standing order is a distance from a port, the Contracting Government also has to inform the centre of the name of the port each ship is proceeding to;

- .4 if it wishes to receive LRIT information pursuant to the provisions of regulation V/19-1.8.1.3, indicate the distance from its coast within which it requires the provision of LRIT information transmitted by ships. If so decided, the Contracting Government may give the LRIT Data Centre a standing order regarding the criteria for receiving LRIT information;

- .5 cooperate with a view of resolving any issues in connection with which flag a particular ship is entitled to fly; and
- .6 ensure either the destruction of all received LRIT information which is no longer in use or their archiving in a secure and protected manner.

16.2 In accordance with regulation V/19-1.8.2, Contracting Governments are obliged to communicate to the Organization and enter into the LRIT Data Distribution Plan the information specified in paragraph 11.2 and thereafter update such information as and when changes occur before requesting the provision of LRIT information pursuant to the provisions of regulation V/19-1.8.1.

16.3 Contracting Governments are advised that the LRIT system would not apply any restrictions pursuant to the provisions of either regulations V/19-1.8.2 and V/19-8.1.3 in relation to ships located within the waters landward of baselines or regulation V/19-18.1.4 in relation to ships located within territorial seas until such time that they have communicated to the Organization and provided in the LRIT Data Distribution Plan the required information.

## **17 Search and rescue services**

17.1 Subject to the provisions of paragraph 7.7, search and rescue service when it wishes to receive LRIT information pursuant to the provisions of regulation V/19-1.12 should indicate to the LRIT Data Centre the criteria for receiving such information.

17.2 A Search and rescue service should request the provision of LRIT information only via the LRIT Data Centre serving the Contracting Government in whose territory the service is located.

17.3 Subject to the provisions of the national legislation of the Contracting Government concerned, search and rescue services should provide information when requested by the LRIT Coordinator to enable the holistic review of the performance of the LRIT system and for the investigation of any disputes.

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**ANNEX 10****RESOLUTION MSC.264(84)  
(adopted on 16 May 2008)****ESTABLISHMENT OF THE INTERNATIONAL LRIT DATA EXCHANGE  
ON AN INTERIM BASIS**

THE MARITIME SAFETY COMMITTEE,

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

RECALLING ALSO the provisions of regulation V/19-1 of the International Convention for the Safety of Life at Sea, 1974, as amended (the Convention) on the Long-range identification and tracking (LRIT) of ships and, in particular, that, as from 31 December 2008, ships shall transmit and Contracting Governments to the Convention (Contracting Governments) shall be able to receive, pursuant to the provisions of the regulation V/19-1, LRIT information transmitted by ships,

BEARING IN MIND that regulation V/19-1 entered into force on 1 January 2008,

RECALLING FURTHER the Revised performance standards and functional requirements on long-range identification and tracking of ships (the Revised performance standards) adopted by resolution MSC.263(84) provide in section 10.1 that an International LRIT Data Exchange recognized by the Committee should be established,

ALSO RECALLING the Arrangements for the timely establishment of the LRIT system adopted by resolution MSC.211(81) and, in particular, that the International LRIT Data Centre and the International LRIT Data Exchange should commence trials and testing of the LRIT system not later than 1 July 2008,

FURTHER RECALLING that, at its eighty-third session, it accepted the contingency offer from the United States in relation to the establishment and operation of the International LRIT Data Exchange on an interim basis and until such time the Committee would be able to make the necessary permanent arrangements and to this end adopted resolution MSC.243(83) on the Establishment of the International LRIT Data Exchange on an interim basis,

RECALLING ALSO that in operative paragraph 3 of resolution MSC.243(83) it requested the Secretariat to prepare, following any necessary consultations with the United States, a draft resolution on the establishment of an International LRIT Data Exchange on an interim basis, within the framework of regulation V/19-1.14, for consideration and adoption by the Committee at its eighty-fourth session,

MINDFUL of the key and pivotal role of the International LRIT Data Exchange in the LRIT system architecture,

DESIRING to put the necessary arrangements in place so as to ensure that the LRIT system becomes fully operational, as planned, on 31 December 2008,

HAVING CONSIDERED, at its eighty-fourth session, a report on the progress made by the United States in relation to the establishment and operation of the International LRIT Data Exchange on an interim basis,

1. RECOGNIZES, pursuant to the provisions of regulation V/19-1.14 and paragraph 10.1 of the Revised performance standards, the aforesaid exchange as the International LRIT Data Exchange referred to in the Revised performance standards subject to the terms and conditions set out in the Annex to the present resolution;
2. AGREES that, bearing in mind that the contingency offer from the United States is only an interim arrangement and a permanent solution should be found for the International LRIT Data Exchange as soon as possible (within two years as from 1 January 2008 subject to a further review by the Committee), at its eighty-fifth session, it would discuss with a view to finalizing the arrangements for the establishment and operation of the International LRIT Data Exchange on a permanent basis;
3. REVOKES resolution MSC.243(83).

ANNEX

**ESTABLISHMENT OF THE INTERNATIONAL LRIT DATA EXCHANGE  
ON AN INTERIM BASIS**

The International LRIT Data Exchange is established and operated by the United States under the following conditions:

- 1 The International LRIT Data Exchange should comply with the salient provisions of:
  - (1) regulation V/19-1;
  - (2) the Revised performance standards;
  - (3) the technical specifications for the LRIT system<sup>1</sup>, other than those relating to the capability to move to an off-site location;
  - (4) the criteria for the location of the International LRIT Data Centre and the International LRIT Data Exchange, other than those relating to backup servers; and
  - (5) any guidance in relation to financial and operational matters issued by the Committee.

2 The International LRIT Data Exchange would be provided by the United States at their own expense and, in this respect, the United States has clarified that its intention is that consistent with their domestic laws and procurement regulations, the capital, operating and maintenance costs for the establishment and operation of the International LRIT Data Exchange would be borne by the United States. The intention of the United States is that neither the Organization nor any of the LRIT Data Centres nor any of the other Contracting Governments would be required to make any payment to the United States for the services provided by the International LRIT Data Exchange.

3 The United States, while not withdrawing their reservation, during the eighty-second session of the Committee, with respect to the decision of Committee in relation to the appointment of the International Mobile Satellite Organization (IMSO) as the LRIT Coordinator, will cooperate fully and will meet all its obligations *vis-à-vis* IMSO as LRIT Coordinator in respect of participation of IMSO in the initial developmental and integration testing and in connection with the audit of the performance of the International LRIT Data Exchange within the framework established by regulation V/19-1 and sections 10 and 14 of the Revised performance standards.

4 The Contracting Governments, on the understanding that the LRIT information would be accessible in accordance with regulation V/19-1 and the Revised performance standards, agree that the United States does not assume any form of liability in case of any technical failure of the International LRIT Data Exchange.

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<sup>1</sup> Refer to MSC.1/Circ.1259 on Interim revised technical specifications for the LRIT system.

5 The Contracting Governments, on the understanding that the LRIT information would be accessible in accordance with regulation V/19-1 and the Revised performance standards, also agree that United States does not assume any form of liability in case the International LRIT Data Exchange needs to be temporarily shutting down for example due to denial of service or malicious attack.

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**ANNEX 11**

**DRAFT AMENDMENTS TO THE 1974 SOLAS CONVENTION**

**CHAPTER II-1  
CONSTRUCTION – STRUCTURE, SUBDIVISION AND STABILITY, MACHINERY  
AND ELECTRICAL INSTALLATIONS**

**Part A-1  
Structure of ships**

**Regulation 3-3 – Safe access to tanker bows**

1 In paragraph 1, the references “VII/8.2” and “VII/11.2” are replaced by the references “VII/13.2” and “VII/16.2”, respectively.

**CHAPTER II-2  
CONSTRUCTION – FIRE PROTECTION, FIRE DETECTION AND  
FIRE EXTINCTION**

**Part A  
General**

**Regulation 1 – Application**

2 In paragraph 6.2, the references “VII/8.1” and “VII/11.1” are replaced by the references “VII/13.1” and “VII/16.1”, respectively.

**Regulation 3 – Definitions**

3 In paragraph 11, the reference “VII/8.1” is replaced by the reference “VII/13.1”.

4 In paragraph 25, the reference “VII/11.1” is replaced by the reference “VII/16.1”.

**Part G  
Special requirements**

**Regulation 19 – Carriage of dangerous goods**

5 In note 10 to table 19.2, the words “the Code of Safe Practice for Solid Bulk Cargoes, adopted by resolution A.434(XI)” are replaced by the words “the International Maritime Solid Bulk Cargoes (IMSBC) Code, as adopted by resolution MSC....(..)”.

6 In paragraph 3.4, the existing title is replaced as follows:

“3.4 *Ventilation arrangement*”.

## **CHAPTER VI CARRIAGE OF CARGOES**

### **Part A General provisions**

7 The following new regulation 1 is added before the existing regulation 1 and the subsequent regulations are renumbered accordingly:

#### **“Regulation 1 Definitions**

For the purpose of this chapter, unless expressly provided otherwise:

1 *IMSBC Code* means the International Maritime Solid Bulk Cargoes Code adopted by the Maritime Safety Committee of the Organization by resolution MSC...(..), as may be amended by the Organization, provided that such amendments are adopted, brought into force and take effect in accordance with the provisions of article VIII of the present Convention concerning the amendment procedures applicable to the annex other than chapter I; and

2 *Solid bulk cargo* means any cargo, other than liquid or gas, consisting of a combination of particles, granules or any larger pieces of material generally uniform in composition, which is loaded directly into the cargo spaces of a ship without any intermediate form of containment.”

#### **Regulation 2 – Cargo information**

8 The existing paragraph 2.2 is replaced by the following:

“2 in the case of solid bulk cargo, information as required by section 4 of the IMSBC Code.”

9 The existing paragraph 2.3 is deleted.

10 The following new regulation 3 is added before the existing regulation 3 and the subsequent regulations are renumbered accordingly:

#### **“Regulation 3 Requirements for the carriage of solid bulk cargoes other than grain**

The carriage of solid bulk cargoes other than grain shall be in compliance with the relevant provisions of the IMSBC Code.”

### **Regulation 3 – Oxygen analysis and gas detection equipment**

11 In paragraph 1, the word “solid” is inserted in the first sentence, after the words “When transporting a”.

#### **Part B Special provisions for bulk cargoes other than grain**

12 The title of part B is replaced as follows:

#### **“Part B Special provisions for solid bulk cargoes”**

### **Regulation 6 – Acceptability for shipment**

13 In existing paragraph 1, the word “solid” is inserted in the first sentence after the words “Prior to loading a”.

14 The existing paragraphs 2 and 3 are deleted.

### **Regulation 7 – Loading, unloading and stowage of bulk cargoes**

15 In the heading of the regulation, the word “solid” is inserted after the words “stowage of”.

16 The existing paragraphs 4 and 5 are deleted and the subsequent paragraphs are renumbered accordingly.

## **CHAPTER VII CARRIAGE OF DANGEROUS GOODS**

17 Parts A-1 to D are re-lettered as Parts B to E.

18 Regulations 7-1, 7-2, 7-3 and 7-4 are renumbered as regulations 8, 10, 11 and 12, respectively, and the remaining regulations are renumbered accordingly.

19 In the existing regulation 7-1.3, the words “detailed instructions on the safe carriage of dangerous goods in solid form in bulk which shall include” are deleted.

20 The following new regulation 9 is added after renumbered regulation 8:

#### **“Regulation 9 Requirements for the carriage of dangerous goods in solid form in bulk**

The carriage of dangerous goods in solid form in bulk shall be in compliance with the relevant provisions of the IMSBC Code, as defined in regulation VI/1.1.”

**CHAPTER IX  
MANAGEMENT FOR THE SAFE OPERATION OF SHIPS**

**Regulation 1 – Definitions**

- 21 In paragraph 4, the reference “VII/8.2” is replaced by the reference “VII/13.2”.
- 22 In paragraph 5, the reference “VII/11.2” is replaced by the reference “VII/16.2”.

**CHAPTER XI-2  
SPECIAL MEASURES TO ENHANCE MARITIME SECURITY**

**Regulation 1 – Definitions**

- 23 In paragraph 1.2, the reference “VII/8.2” is replaced by the reference “VII/13.2”.
- 24 In paragraph 1.3, the reference “VII/11.2” is replaced by the reference “VII/16.2”.

**CHAPTER XII  
ADDITIONAL SAFETY MEASURES FOR BULK CARRIERS**

**Regulation 8 – Information on compliance with requirements for bulk carriers**

- 25 In paragraph 1, the reference “VI/7.2” is replaced by the reference “VI/9.2”.

**Regulation 10 – Solid bulk cargo density declaration**

- 26 In paragraph 1, the reference “VI/2” is replaced by the reference “VI/4”.

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**ANNEX 13**

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

**Chapter 1 – General**

- 1 In regulation 1.1.1.8, the reference “VII/8.1” is replaced by the reference “VII/13.1”.
- 2 In regulation 1.2.1, the reference “VII/15” is replaced by the reference “VII/20”.

**Chapter 11 – Notification in the event of an incident involving INF cargo**

- 3 In regulation 11.1, the reference “VII/7-1” is replaced by the reference “VII/8”.

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**ANNEX 14**

**RESOLUTION MSC.265(84)  
(adopted on 9 May 2008)**

**AMENDMENTS TO THE REVISED GUIDELINES FOR APPROVAL OF  
SPRINKLER SYSTEMS EQUIVALENT TO THAT REFERRED TO  
IN SOLAS REGULATION II-2/12 (RESOLUTION A.800(19))**

THE MARITIME SAFETY COMMITTEE,

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

NOTING the significance of the performance and reliability of the sprinkler systems approved under provisions of regulation II-2/12 of the International Convention for the Safety of Life at Sea (SOLAS), 1974,

DESIROUS of keeping abreast of the advancement of sprinkler technology and further improving fire protection on board ships,

HAVING CONSIDERED, at its eighty-fourth session, the text of the proposed amendments to the Revised Guidelines for approval of sprinkler systems equivalent to that referred to in SOLAS regulation II-2/12 (resolution A.800(19)),

1. ADOPTS the amendments to the Revised Guidelines for approval of sprinkler systems equivalent to that referred to in SOLAS regulation II-2/12 (resolution A.800(19)), the text of which is set out in the annex to the present resolution;
2. INVITES Governments to apply the amendments when approving equivalent sprinkler systems on or after 9 May 2008.

## ANNEX

### **AMENDMENTS TO THE REVISED GUIDELINES FOR APPROVAL OF SPRINKLER SYSTEMS EQUIVALENT TO THAT REFERRED TO IN SOLAS REGULATION II-2/12 (RESOLUTION A.800(19))**

- 1 The following new section 1-1 is added after the existing section 1:

#### **“1-1 APPLICATION**

1-1.1 The present Guidelines apply to equivalent sprinkler systems installed on or after 9 May 2008.

1-1.2 Existing type approvals issued to confirm compliance of equivalent sprinkler systems with the Revised Guidelines, adopted by resolution A.800(19), should remain valid until 6 years after 9 May 2008.

1-1.3 Existing equivalent sprinkler systems installed before 9 May 2008, based on resolution A.800(19), should be permitted to remain in service as long as they are serviceable.”

### **3 PRINCIPAL REQUIREMENTS FOR THE SYSTEM**

- 2 The existing paragraph 3.3 is replaced by the following:

“3.3 The sprinkler system should be capable of continuously supplying the water-based extinguishing medium for a minimum of 30 min. A pressure tank or other means should be provided to meet the functional requirement stipulated in the FSS Code, chapter 8, paragraph 2.3.2.1. The design of the system should ensure that full system pressure is available at the most remote nozzle in each section within 60 s of system activation.”

- 3 The existing paragraphs 3.8 and 3.9 are replaced by the following:

“3.8 There should be not less than two sources of power for the system. Where the sources of power for the pump are electrical, these should be a main generator and an emergency source of power. One supply for the pump should be taken from the main switchboard, and one from the emergency switchboard by separate feeders reserved solely for that purpose. The feeders should be so arranged as to avoid galleys, machinery spaces and other enclosed spaces of high fire risk except in so far as it is necessary to reach the appropriate switchboards, and should be run to an automatic changeover switch situated near the sprinkler pump. This switch should permit the supply of power from the main switchboard so long as a supply is available there from, and be so designed that upon failure of that supply it will automatically change over to the supply from the emergency switchboard. The switches on the main switchboard and the emergency switchboard should be clearly labelled and normally kept closed. No other switch should be permitted in the feeders concerned. One of the sources of power supply for the system should be an emergency source. Where one of the sources of power for the pump is an internal combustion engine, it should, in addition to complying with the provisions of the FSS Code, chapter 8, paragraph 2.4.3, be so situated that a fire in any protected space

will not affect the air supply to the machinery. Pump sets consisting of two diesel engines each supplying at least 50% of the required water capacity are considered acceptable if the fuel supply is adequate to operate the pumps at full capacity for a period of 36 h on passenger ships and 18 h on cargo ships.

3.9 The system should be provided with a redundant means of pumping, including drivers, or otherwise supplying a water-based extinguishing medium to the sprinkler system. The capacity of the redundant means should be sufficient to compensate for the loss of any single supply pump or alternative source.

Failure of any one component in the power and control system should not result in a reduction of the automatic release capability or reduction of sprinkler pump capacity by more than 50%. Hydraulic calculations should be conducted to assure that sufficient flow and pressure are delivered to the hydraulically most remote 140 m<sup>2</sup> in the event of the failure of any one component.”

4 The existing paragraph 3.13 is replaced by the following:

“3.13 Each section of sprinklers should be capable of being isolated by one stop valve only. The stop-valve in each section should be readily accessible in a location outside of the associated section or in cabinets within stairway enclosures. The valve’s location should be clearly and permanently indicated. Means should be provided to prevent the operation of the stop-valves by an unauthorized person. Isolation valves used for service, maintenance or for refilling of antifreeze solutions may be installed in the sprinkler piping in addition to the section stop valves, if provided with a means for giving a visual and audible alarm as required by paragraph 3.17. Valves on the pump unit may be accepted without such alarms if they are locked in the correct position.”

5 The existing paragraph 3.15 is replaced by the following:

“3.15 The sprinkler system water supply components should be outside category A machinery spaces and should not be situated in any space required to be protected by the sprinkler system.”

6 The existing paragraph 3.19 is replaced by the following:

“3.19 Installation plans and operating manuals should be supplied to the ship and be readily available on board. A list or plan should be displayed showing the spaces covered and the location of the zone in respect of each section. Instructions for testing and maintenance should also be available on board. The maintenance instructions should include provisions for a flow test of each section at least annually to check for possible clogging or deterioration in the discharge piping.”

7 The existing paragraph 3.22 is replaced by the following:

“3.22 Pumps and alternative supply components should be capable of supplying the required flow rate and pressure for the space with the greatest hydraulic demand. For the purposes of this calculation, the design area used to calculate the required flow and pressure should be the deck area of the most hydraulically demanding space, separated from adjacent spaces by A-class divisions. The design area need not exceed 280 m<sup>2</sup>. For application to a small ship with a total protected area of less than 280 m<sup>2</sup>,

the Administration may specify the appropriate area for sizing of pumps and alternate supply components.”

3.23 The nozzle location, type of nozzle, and nozzle characteristics should be within the tested limits determined by the fire test procedures in appendix 2 to provide fire control or suppression as referred to in paragraph 3.2.

3.24 For atriums with intermediate level deck openings exceeding 100 m<sup>2</sup>, ceiling mounted sprinklers are not required.

3.25 The system should be designed in such a way that during a fire occurrence, the level of protection provided to those spaces unaffected by fire is not reduced.

3.26 A quantity of spare water mist nozzles should be carried for all types and ratings installed on the ship as follows:

<b>Total number of nozzles</b>	<b>Required number of spares</b>
< 300	6
300 to 1000	12
> 1000	24

The number of spare nozzles of any type need not exceed the total number of nozzles installed of that type.

3.27 Any parts of the system which may be subjected to freezing temperatures in service should be suitably protected against freezing.”

#### APPENDIX 1

### **COMPONENT MANUFACTURING STANDARDS FOR WATER MIST NOZZLES**

8 In appendix 1, a new paragraph 5.21.4 is added as follows:

“5.21.4 Alternative supply arrangements to the apparatus shown in figure 3 may be used where damage to the pump is possible. Restrictions to piping defined by note 2 of table 5 should apply to such systems.”

#### APPENDIX 2

### **FIRE TEST PROCEDURES FOR EQUIVALENT SPRINKLER SYSTEMS IN ACCOMMODATION, PUBLIC SPACE AND SERVICE AREAS ON PASSENGER SHIPS**

9 The existing title and the text of appendix 2 are replaced by the following:

“APPENDIX 2

**FIRE TEST PROCEDURES FOR WATER MIST SYSTEMS  
IN ACCOMMODATION, PUBLIC SPACES AND SERVICE AREAS  
ON PASSENGER SHIPS**

**1 SCOPE**

1.1 These test procedures describe a fire test method for evaluating the effectiveness of water mist systems equivalent to systems covered by chapter 8 of the FSS Code in accommodation and service areas on board ships. It should be noted that the test method is limited to the systems’ effectiveness against fire and is not intended for testing of the quality and design parameters of the individual components of the system.

1.2 In order to fulfil the requirements of paragraph 3.5 of the Guidelines, the system should be capable of fire control or suppression in a wide variety of fire loading, fuel arrangement, room geometry and ventilation conditions.

1.3 Products employing materials or having forms of construction differing from the requirements contained herein may be examined and tested in accordance with the intent of the requirements and, if found to be substantially equivalent, may be judged to comply with this document.

1.4 Products complying with the text of this document will not necessarily be judged to comply, if, when examined and tested, they are found to have other features which impair the level of safety contemplated by this document.

**2 HAZARD AND OCCUPANCY CLASSIFICATION**

For the purposes of identifying the different fire risk classifications, table 1 is given, which correlates the fire tests with the classification of occupancy defined in SOLAS regulations II-2/9.2.2.3 and II-2/9.2.2.4:

**Table 1 – Correlation between fire tests with the classification of occupancy defined in SOLAS regulations II-2/9.2.2.3 and 9.2.2.4**

Occupancy classification	Corresponding fire test			
	Section 5 cabin	Section 5 corridor	Section 6 public spaces	Section 8 storage
(1) Control stations			X	
(2) Stairways		X <sup>1</sup>		
(3) Corridors		X <sup>1</sup>		
(6) Accommodation spaces of minor fire risk	X <sup>2</sup>		X <sup>3</sup>	
(7) Accommodation spaces of moderate fire risk	X <sup>2</sup>		X <sup>3 4</sup>	
(8) Accommodation spaces of greater fire risk			X <sup>3 4</sup>	

Occupancy classification	Corresponding fire test			
	Section 5 cabin	Section 5 corridor	Section 6 public spaces	Section 8 storage
(9) Sanitary and similar spaces	X <sup>2</sup>		X <sup>3</sup>	
(11) Refrigerated chambers			X	
(12) Main galleys and annexes			X	
(13) Store rooms, workshops, pantries, etc.				X
(14) Other spaces in which flammable liquids are stowed				X

**Notes:**

- <sup>1</sup> For corridors and stairways wider than 1.5 m, use section 6 public space fire test instead of the corridor fire test.
- <sup>2</sup> For spaces up to the area of the cabin applied in tests of section 5.
- <sup>3</sup> For spaces over the area of the cabin applied in tests of section 5.
- <sup>4</sup> Refer to annex, item 3.24.

**3 DEFINITIONS**

3.1 Fire suppression: sharply reducing the heat release rate of a fire and preventing its re-growth by means of a direct and sufficient application of water through the fire plume to the burning fuel surface.

3.2 Fire control: limiting the size of a fire by distribution of water so as to decrease the heat release rate and pre-wet adjacent combustibles, while controlling ceiling gas temperatures to avoid structural damage.

3.3 Fire source: fire source is defined as the combustible material in which the fire is set and the combustible material covering walls and ceiling.

3.4 Igniter: the device used to ignite the fire source.

**4 GENERAL REQUIREMENTS**

**4.1 Nozzle positioning**

The fire test procedures are intended for pressurized wet-pipe systems with individually activated (automatic) nozzles.

Water without any fire-extinguishing additives should be used, unless the additives have been approved for fire protection service by an independent authority. The approval of the additives should consider possible adverse health effects to exposed personnel, including inhalation toxicity.

These test procedures are applicable to either overhead nozzles installed on the ceiling, or sidewall nozzles installed on bulkheads below the ceiling. Separate approval tests should be conducted for each nozzle type.

The testing organization should be responsible for assuring that the nozzles for each fire test are installed in accordance with the manufacturer's design and installation instructions. The tests should be performed at the maximum specified spacings, installation height and distances below the ceiling. In addition, if the testing organization finds it necessary, selected fire tests should also be conducted at minimum specified spacings, installation height and distances below the ceiling. Where two types of nozzles are installed in the same area, an overlap of the different nozzle spray patterns should be provided equal to at least one half of the maximum approved nozzle spacing.

#### **4.2 Water pressure and flow rates**

The testing organization should be responsible for assuring that all fire tests are conducted at the operating pressure and flow rates specified by the manufacturer.

For all tests, the system should either be:

- .1 pressurized to the minimum operating pressure specified by the manufacturer. Upon activation of the first nozzle, the flowing water pressure should be maintained at the minimum system operating pressure; or
- .2 pressurized to the minimum stand-by pressure specified by the manufacturer. Upon activation of the first nozzle, the flowing water pressure should be gradually increased to the minimum system operating pressure, specified by the manufacturer. The delay time until the minimum system operating pressure is reached should be at least 15 s. The delay time recorded during the tests should be documented and included in the approval of the system.

#### **4.3 Temperature measurements**

Temperatures should be measured as described in detail under each chapter. Chromelalumel thermocouple wires not exceeding 0.5 mm in diameter welded together should be used. The temperatures should be measured continuously, at least every 2 s, throughout the tests.

#### **4.4 Fire test hall and environmental conditions**

The fire tests are to be conducted inside a well-ventilated fire test hall, in order to minimize enclosure effects affecting the outcome of the testing. The enclosure effects include accumulation of heat, smoke and water droplets within the test area.

The fire test hall should have an ambient temperature of  $20 \pm 5^\circ\text{C}$  at the start of each test. Standing water should not be permitted on the floor of the test hall at the start of each test. The suspended ceiling should be dry at the start of each test.

Details of the fire test hall geometry, the ventilation conditions as well as of the environmental conditions with respect to the above should be given in the fire test report.

#### **4.5 Tolerances**

Unless otherwise stated, the following tolerances should apply:

- .1 length  $\pm 2\%$  of value;
- .2 volume  $\pm 5\%$  of value;
- .3 pressure  $\pm 3\%$  of value; and
- .4 temperature  $\pm 5\%$  of value.

These tolerances are in accordance with ISO Standard 6182-1:1994.

#### **4.6 Observations**

The following observations should be made during and after each test:

- .1 time of ignition;
- .2 activation time of each nozzle;
- .3 time when water flow is shut off;
- .4 damage to the fire source;
- .5 temperature recordings;
- .6 system flow rate and pressure; and
- .7 total number of operating nozzles.

#### **4.7 Fire sources**

If the requirements for fire sources specified in the following sections of this test method cannot be fulfilled, it is the responsibility of the test laboratory to show that alternative materials used have burning characteristics similar to those of specified materials.

#### **4.8 Product and documentation requirements**

The fire test report should identify the critical parameters to be incorporated into the design, installation and operating instruction manual. The instruction manual should reference the limitations of each device and should include at least the following items:

- .1 description and operating details of each device and all accessory equipment, including identification of extinguishing system components or accessory equipment by part or model number;
- .2 nozzle design recommendation and limitations for each fire type;

- .3 type and pressure rating of pipe, tubing and fittings to be used;
- .4 equivalent length values of all fittings and all system components through which water flows;
- .5 discharge nozzle limitations, including maximum dimensional and area coverage, minimum and maximum installation height limitations, and nozzle permitted location in the protected volume;
- .6 range of filling capacities for each size storage container;
- .7 details for the proper installation of each device, including all component equipment;
- .8 reference to the specific types of detection and control panels (if applicable) to be connected to the equipment;
- .9 operating pressure ranges of the system;
- .10 method of sizing pipe or tubing;
- .11 recommended orientation of tee fittings and the splitting of flows through tees; and
- .12 maximum difference in operating (flowing) pressure between the hydraulically closest and most remote nozzle.

## **5 CABIN AND CORRIDOR TESTS**

### **5.1 Test arrangement**

5.1.1 The fire tests should be conducted in a 3 m x 4 m, 2.5 m high cabin connected to the centre of a 1.5 m x 12 m long corridor, 2.5 m high with both ends open. The cabin area may be increased up to the maximum size to be protected with one nozzle. The disabled nozzle test should be conducted in a 3 m x 4 m cabin.

5.1.2 The cabin should be fitted with one doorway opening, 0.8 m wide and 2.2 m high, which provides for a 0.3 m lintel above the opening.

5.1.3 The walls of the cabin should be constructed from an inner layer of nominally 12 mm thick non-combustible wall board with a nominally 45 mm thick mineral wool liner. The walls and ceiling of the corridor and ceiling of the cabin should be constructed of nominally 12 mm thick non-combustible wall boards. The cabin may be provided with a window, having a maximum area of 1 m<sup>2</sup>, in the wall opposite the corridor for observation purposes during the fire tests.

5.1.4 The cabin and corridor ceiling should be covered with cellulosic acoustical panels. The acoustical panels should be nominally 12 mm to 15 mm thick and should not ignite when tested in accordance with part 3 of the FTP Code.

5.1.5 Plywood panels should be placed on the cabin and corridor walls. The panels should be 3 to 4 mm thick. The ignition time of the panel should be not more than 35 s and the flame spread time at 350 mm position should not be more than 100 s as measured in accordance with IMO resolution A.653(16).

## 5.2 Instrumentation

During each fire test, the following temperatures should be measured using thermocouples of diameter not exceeding 0.5 mm:

- .1 the ceiling surface temperature above the ignition source in the cabin should be measured with a thermocouple embedded in the ceiling material from above such that the thermocouple bead is flush with the ceiling;
- .2 the ceiling gas temperature should be measured with a thermocouple  $75 \pm 1$  mm below the ceiling in the centre of the cabin;
- .3 the ceiling surface temperature in the centre of the corridor, directly opposite the cabin doorway, should be measured with a thermocouple embedded in the ceiling material such that the thermocouple bead is flush with the ceiling (figure 1); and
- .4 the ceiling surface temperature directly above the corridor test fire source (if used) described in paragraph 5.4.2 should be measured with a thermocouple embedded in the ceiling material such that the thermocouple bead is flush with the ceiling surface.

Thermocouples intended for measuring ceiling surface temperatures should be imbedded in a shallow groove filled with thermally conductive cement such that the thermocouple bead is flush with the ceiling surface. The distance from the hole where the thermocouple wire penetrates the ceiling tile to the bead should be at least 25 mm.

## 5.3 Nozzle positioning

The nozzles should be installed to protect the cabin and corridor in accordance with the manufacturer's design and installation instructions subject to the following:

- .1 if only one ceiling nozzle is installed in the cabin, it may not be placed in the shaded area in figure 2;
- .2 if two or more ceiling nozzles are installed in the cabin the nominal water flux density should be homogeneously distributed throughout the cabin;
- .3 corridor nozzles should not be placed closer to the centreline of the cabin doorway than one half the maximum spacing recommended by the manufacturer. An exception is systems where nozzles are required to be placed outside each doorway; and
- .4 cabin mounted sidewall nozzles should be installed on the centreline of the front wall of the cabin adjacent to the doorway, aimed towards the rear of the cabin.

## 5.4 Fire sources

### 5.4.1 Cabin test fire source

Two pullman-type bunk beds having an upper and lower berth should be installed along the opposite side walls of the cabin (figure 1). The bunk beds should be made of nominally 1.5 mm thick steel and should have an outer dimension of approximately 2.0 m by 0.8 m. The bunk beds should have a 0.1 m high rim facing the long side wall of the cabin. No other rims are allowed in order to prevent accumulation of water onto the beds. Each bunk bed should be fitted with 2 m by 0.8 m by 0.1 m polyether mattresses having a cotton fabric cover. Pillows measuring 0.5 m by 0.8 m by 0.1 m should be cut from the mattresses. The cut edge should be positioned towards the doorway. A third mattress should form a backrest for the lower bunk bed. The backrest should be attached in an upright position in a way that prevents it from falling over (figure 3).

The mattresses should be made of non-fire retardant polyether and they should have a density of approximately 33 kg/m<sup>3</sup>. The cotton fabric should not be fire retardant treated and it should have an area weight of 140 g/m<sup>2</sup> to 180 g/m<sup>2</sup>. When tested according to ISO Standard 5660-1:2002 (ASTM E-1354), the polyether foam should give results as given in the table below. The frame of the bunk beds should be of steel nominally 2 mm thick.

#### ***ISO STANDARD 5660: Cone calorimeter test***

**Test conditions:** Irradiance 35 kW/m<sup>2</sup>. Horizontal position.

Sample thickness 50 mm. No frame retainer should be used.

<b>Test results</b>	<b>Foam</b>
Time to ignition (s)	2-6
3 min average HRR, q <sub>180</sub> (kW/m <sup>2</sup> )	270 ± 50
Minimum heat of combustion (MJ/kg)	25
Total heat release (MJ/m <sup>2</sup> )	50 ± 12

### 5.4.2 Corridor test fire source

The corridor fire tests should be conducted using eight piled polyether mattress pieces measuring 0.4 m x 0.4 m x 0.1 m, as specified in paragraph 5.4.1, without fabric covers. The pile should be placed on a stand, 0.25 m high, and in a steel test basket to prevent the pile from falling over (figure 4).

## 5.5 Test method

The following series of fire tests should be performed with automatic activation of the nozzle(s) installed in the cabin and/or corridor as indicated. Each fire should be ignited using an igniter made of some porous material, e.g., pieces of insulating fibreboard. The igniter may be either square or cylindrical, 60 mm square or 75 mm in diameter. The length should be 75 mm. Prior to the test the igniter should be soaked in 120 ml of heptane and positioned as indicated for each cabin fire test. For the corridor fire tests, the igniter should be located in the centre at the base of the pile of the mattress pieces, and on one side of the test stand at the base of the pile of mattress pieces:

- .1 lower bunk bed test. Fire arranged in one lower bunk bed and ignited with the igniter located at the front (towards door) centreline of the pillow;
- .2 upper bunk bed test. Fire arranged in one upper bunk bed with the igniter located at the front (towards door) centreline of the pillow;
- .3 arsonist test. Fire arranged by spreading 1 litre of white spirits evenly over one lower bunk bed and backrest 30 s prior to ignition. The igniter should be located in the lower bunk bed at the front (towards doorway opening) centreline of the pillow;
- .4 disabled nozzle test. The nozzle(s) in the cabin should be disabled. Fire arranged in one lower bunk bed and ignited with the igniter located at the front (towards door) centreline of the pillow. If nozzle(s) in the cabin are linked with nozzle(s) in the corridor such that a malfunction would affect them all, all cabin and corridor nozzles linked should be disabled;
- .5 corridor test. Fire source located against the wall of the corridor under one nozzle; and
- .6 corridor test. Fire source located against the wall of the corridor between two nozzles.

The fire tests should be conducted for 10 min after the activation of the first nozzle, and any remaining fire should be extinguished manually.

The door opening to the cabin is intended to be open during the tests according to paragraphs 5.5.1 through 5.5.4 and closed during the tests according to paragraphs 5.5.5 and 5.5.6.

## **5.6 Acceptance criteria**

Based on the measurements, a maximum 30 s average value should be calculated for each measuring point which forms the temperature acceptance criteria.

**Acceptance criteria for the cabin and corridor tests**

		Maximum 30 s average ceiling surface temperature in the cabin (°C)	Maximum 30 s average ceiling gas temperature in the cabin (°C)	Maximum 30 s average ceiling surface temperature in the corridor (°C)	Maximum acceptable damage on mattresses (%)		Other criteria
					Lower bunk	Upper bunk	
Cabin tests	Lower bunk bed	360	320	120	40	10	No nozzles in corridor allowed to operate <sup>3</sup>
	Upper bunk bed				N.A.	40	
	Arsonist	N.A.	N.A.	120	N.A.	N.A.	N.A.
Corridor tests		N.A.	N.A.	120 <sup>1</sup>	N.A.		Only two Independent and adjacent nozzles in corridor allowed to operate <sup>4</sup>
Disabled nozzle		N.A.	N.A.	400 <sup>2</sup>	N.A.		N.A.

**Notes:**

- <sup>1</sup> In each test, the temperature should be measured above the fire source.
  - <sup>2</sup> The fire is not allowed to propagate along the corridor beyond the nozzles closest to the door opening.
  - <sup>3</sup> Not applicable, if cabin nozzle(s) are linked to corridor nozzle(s).
  - <sup>4</sup> Not applicable, if corridor nozzle(s) are linked together.
- N.A. means not applicable.

**5.7 Damage calculations**

After the test, the fire sources should be examined visually to determine compliance with the required maximum damage. The damages should be estimated using the following formula:

- .1 damage to lower bunk bed = (damage to horizontal mattress (%) + 0.25 x damage to pillow (%) + damage to backrest (%))/2.25;
- .2 damage to upper bunk bed = (damage to horizontal mattress (%) + 0.25 x damage to pillow (%))/1.25; and
- .3 if it is not clearly obvious by visual examination whether the criteria are fulfilled or not, the test should be repeated.

## **6 PUBLIC SPACE FIRE TESTS**

### **6.1 Test arrangements**

The fire tests should be conducted inside a well-ventilated fire test hall as described in item 4.4 under a suspended rectangular ceiling of at least 80 m<sup>2</sup> in area with no dimensions less than 8 m. There should be at least 1 m space between the perimeters of the ceiling and any wall of the test hall. The ceiling height should be set at 2.5 m and 5 m, respectively.

The ceiling should be horizontal and smooth to allow an unobstructed horizontal flow of gases across the whole ceiling. No lintel is allowed around the perimeter of the ceiling and no opening is permitted in the ceiling. In order to be considered as smooth, the surface structure of the suspended ceiling should not have obstructions deeper than 15 mm.

The volume above the suspended ceiling, should be large enough, or be fitted with a natural or mechanical ventilation system, to vent the combustion gases away from the fire test area.

Details of the ceiling structure and its location in the fire test hall should be given in the fire test report.

Two different tests should be conducted as per paragraphs 6.1.1 and 6.1.2.

#### **6.1.1 *Open public space test***

The fire source should be positioned under the centre of the open ceiling so that there is an unobstructed flow of gases across the ceiling. The ceiling should be constructed from a non-combustible material. At least 1 m<sup>2</sup> of the ceiling just above ignition should be covered with acoustical panels. The acoustical panels should be nominally 12 mm to 15 mm thick, and should not ignite when tested in accordance with part 3 of the FTP Code.

#### **6.1.2 *Corner public space test***

The test should be conducted in a corner constructed by two at least 3.6 m wide, nominally 12 mm thick, non-combustible wall boards. Plywood panels should be placed on the walls. The panels should be 3 to 4 mm thick. The ignition time of the panel should not be more than 35 s and the flame spread time at 350 mm position should not be more than 100 s measured in accordance with part 3 of the FTP Code. The ceiling should be covered, 3.6 m out from the corner, with cellulosic acoustical panels. The acoustical panels should be nominally 12 mm to 15 mm thick, and should not ignite when tested in accordance with part 3 of the FTP Code.

### **6.1.3 Verification of ventilation conditions**

The ventilation rate of the test hall should be verified at the test hall configuration and ventilation conditions to be applied in the fire tests. The verification test should be conducted using a circular 2 m<sup>2</sup> tray filled with at least 50 mm of light diesel oil on a water-base. Freeboard is to be 150 ± 10 mm. The tray should be centrally located under the suspended open ceiling at the 2.5 m height. The ventilation rate should be high enough to prevent the oxygen concentration measured at radius of 3 m from the centre point of the fire source, 1.25 m (mid-height) above the floor, to decrease below 20% volume during a 10 min free burning test.

The fire test report should include details of the ventilation test, if conducted as a part of the test series, or alternatively, reference should be provided to a ventilation test that was performed at the same configuration and ventilation conditions.

## **6.2 Instrumentation**

During each fire test, the following temperatures should be measured using thermocouples with diameter not exceeding 0.5 mm.

### **6.2.1 Open public space test:**

- .1 the ceiling surface temperature above the ignition source should be measured using a thermocouple embedded in the ceiling material such that the thermocouple bead is flush with the ceiling surface; and
- .2 the ceiling gas temperature should be measured 75 ± 1 mm below the ceiling, at four different positions, at a horizontal radius of 1.8 m from the point of ignition. The thermocouples should be oriented 90° relative to each other and positioned such as to minimize the risk for direct wetting by the water sprays from the nozzles.

### **6.2.2 Corner public space test:**

- .1 the ceiling surface temperature above the ignition source should be measured using a thermocouple embedded in the ceiling material such that the thermocouple bead is flush with the ceiling surface; and
- .2 the ceiling gas temperature should be measured using a thermocouple located 75 ± 1 mm below the ceiling within 0.2 m horizontally from the closest nozzle to the corner.

Thermocouples intended for measuring ceiling surface temperatures should be imbedded in a shallow groove filled with thermally conductive cement such that the thermocouple bead is flush with the ceiling surface. The distance from the hole where the thermocouple wire penetrates the ceiling tile to the bead should be at least 25 mm.

## **6.3 Nozzle positioning**

### **6.3.1 *Open and corner public space tests***

For nozzles with frame arms, tests should be conducted with the frame arms positioned both perpendicular and parallel with the edges of the ceiling or corner walls. For nozzles without framed arms, the nozzles should be oriented so that the lightest discharge density will be directed towards the fire area.

### **6.3.2 *Open public space tests***

When sofas are positioned between two nozzles, the longitudinal centreline gap between sofas No.1 and No.2 should be oriented at a 90° angle to the line between the nozzles.

## **6.4 Fire sources**

### **6.4.1 *Open public space***

The fire source should consist of four sofas made of mattresses as specified in section 5.4.1 installed in steel frame sofas. The steel frames for the sofas should consist of rectangular bottom and backrest frames constructed of  $25 \pm 2$  mm square iron of normally 2 mm thickness. The dimensions of the bottom frame should be 2,000 mm x 700 mm and the dimensions of the backrest frame should be 2,000 mm x 725 mm. The seat and backrest mattresses should be supported on each frame by three vertical and one horizontal steel bars, constructed from similar steel stock. The vertical steel bars should be spaced every 500 mm and welded to the inner long sides of the frame. The horizontal steel bar should be welded to the inner short sides of the frame. Both steel frames should be fitted with a 150 mm by 150 mm steel plate, nominally 2 mm thick. The steel plate should be positioned directly under and behind the intended position of the igniter, in order to prevent it from falling to the floor under a test. Each sofa should have a rectangular armrest on each end. The armrest should be constructed of similar steel stock and should be 600 mm in length and 300 mm in height. The front section of the armrest should be attached to the bottom frame 70 mm from the backrest frame. The assembled frames should be supported by four legs constructed of similar steel stock. The two rear legs should be 205 mm in height and the front legs should be 270 mm in height. When installed, the mattress forming the seat should be installed first, with its long side edge close up against the backrest frame. The mattress forming the backrest should be installed thereafter. This mattress should be kept in upright position by four hooks, two on the short sides and two on the long sides of the backrest frame (see figure 5). The hooks should be constructed from nominally 50 mm flat iron bars, of nominally 2 mm thickness. The sofas should be positioned as shown in figure 6, with the top of the backrests spaced 25 mm apart.

One of the middle sofas should be ignited, centrally and at the bottom of the backrest, with an igniter as described in section 5.5.

### **6.4.2 *Corner public space test***

The fire source should consist of a sofa, as specified in 6.4.1, placed with the backrest 25 mm from the right-hand wall and close up to the left-hand wall. A target sofa should be placed along the right-hand wall with the seat cushion 0.1 m from the first sofa

and another target sofa should be placed 0.5 m from it on the left hand side. The sofa should be ignited using an igniter, as described in 5.5, that should be placed at the far left of the corner sofa, at the base of the backrest, near the left-hand wall (figure 7).

## 6.5 Test method

The fire tests should be conducted for 10 min after the activation of the first nozzle, and any remaining fire should be extinguished manually.

### 6.5.1 Open public space tests

Fire tests should be conducted with the ignition centred under one, between two and below four nozzles. An additional test should be conducted with the ignition centred under a disabled nozzle.

### 6.5.2 Corner public space test

The fire tests should be conducted with at least four nozzles arranged in a 2 x 2 matrix.

## 6.6 Acceptance criteria

Based on the measurements, a maximum 30 s average value should be calculated for each measuring point which forms the temperature acceptance criteria.

### 6.6.1 Acceptance criteria for the public space tests

		Maximum 30 s average ceiling surface temperature (°C)	Maximum 30 s average ceiling gas temperature (°C)	Maximum acceptable Damage on mattresses (%)
Open space	normal	360	220 <sup>2</sup>	50/35 <sup>1</sup>
	disabled nozzle	N.A.	N.A.	70
Corner		360	220	50/35 <sup>1</sup> (ignition sofa) No charring of target sofas

#### Notes:

- <sup>1</sup> 50% is the upper limit for any single test. 35% is the upper limit for the average of the public space tests required in 6 at each ceiling height (excluding the disabled sprinkler test).
  - <sup>2</sup> The gas temperature should be measured at four different positions and the evaluation of the results is based on the highest reading.
- N.A. means not applicable.

## 7 STORAGE AREA FIRE TESTS

### 7.1 Test arrangements

The fire tests should be conducted inside a well-ventilated fire test hall as described in paragraph 4.4 under a suspended ceiling as described in paragraph 6.1 installed at 2.5 m height.

## **7.2 Instrumentation**

No temperature measurements are required.

## **7.3 Nozzle positioning**

As per paragraph 6.3.

## **7.4 Fire source**

The fire source should consist of two central, 1.5 m high, solid piled stacks of cardboard boxes packed with polystyrene unexpanded plastic cups upside down with a 0.3 m flue space. Each stack should be approximately 1.6 m long and 1.1 m to 1.2 m wide.

A suitable plastic commodity is the FMRC standard plastic commodity. Similar commodities might be used if they are designed in a similar way and are proven to have the same burning characteristics and suppressability. In each test, new dry commodities should be used.

The fire source should be surrounded by six 1.5 m high solid piled stacks of empty cardboard boxes forming a target array to determine if the fire will jump the aisle. The boxes should be attached to each other, for example by staples, to prevent them from falling over (figure 8).

## **7.5 Test method**

Fire tests should be conducted with the ignition centred under one, between two and below four nozzles. Each fire should be ignited using two igniters as described in 5.5. The igniters should be placed on the floor, each against the base of one of the two central stacks and ignited simultaneously. The fire tests should be conducted for 10 min after the activation of the first nozzle, and any remaining fire should be extinguished manually.

When positioned between two nozzles, the gap between the two centric stacks of commodities should be positioned at 90° to the line between the nozzles.

## **7.6 Acceptance criteria**

- .1 no ignition or charring of the target cartons is allowed; and
- .2 no more than 50% of the cartons filled with plastic cups should be consumed.”

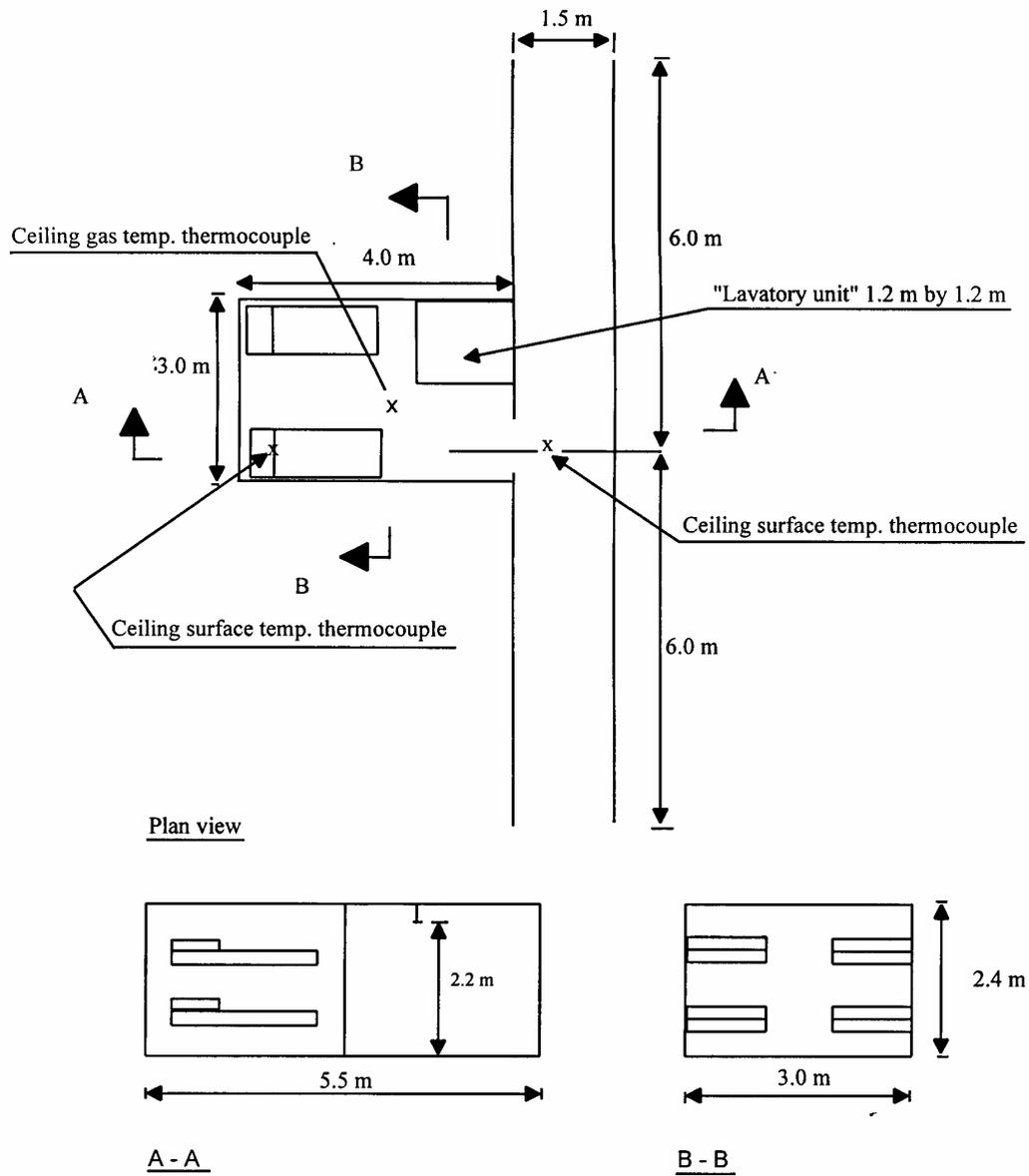
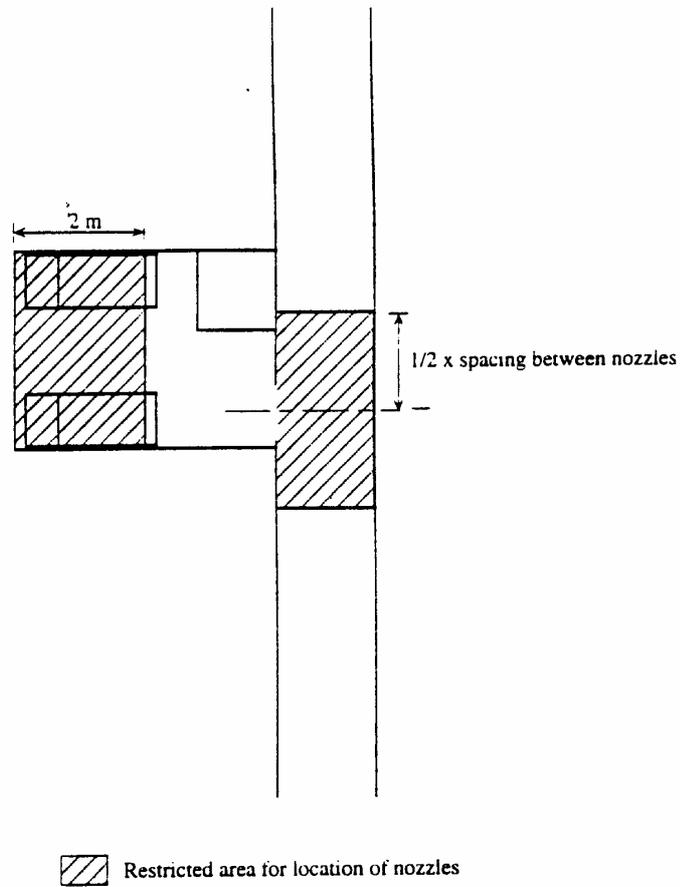


Figure 1



**Figure 2**

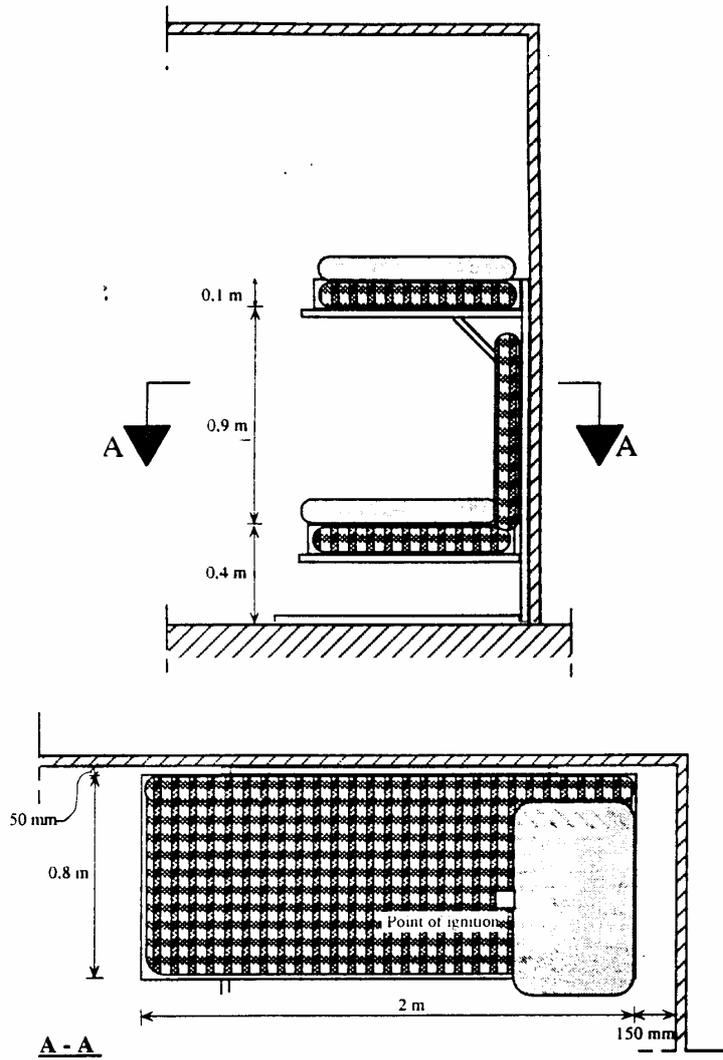
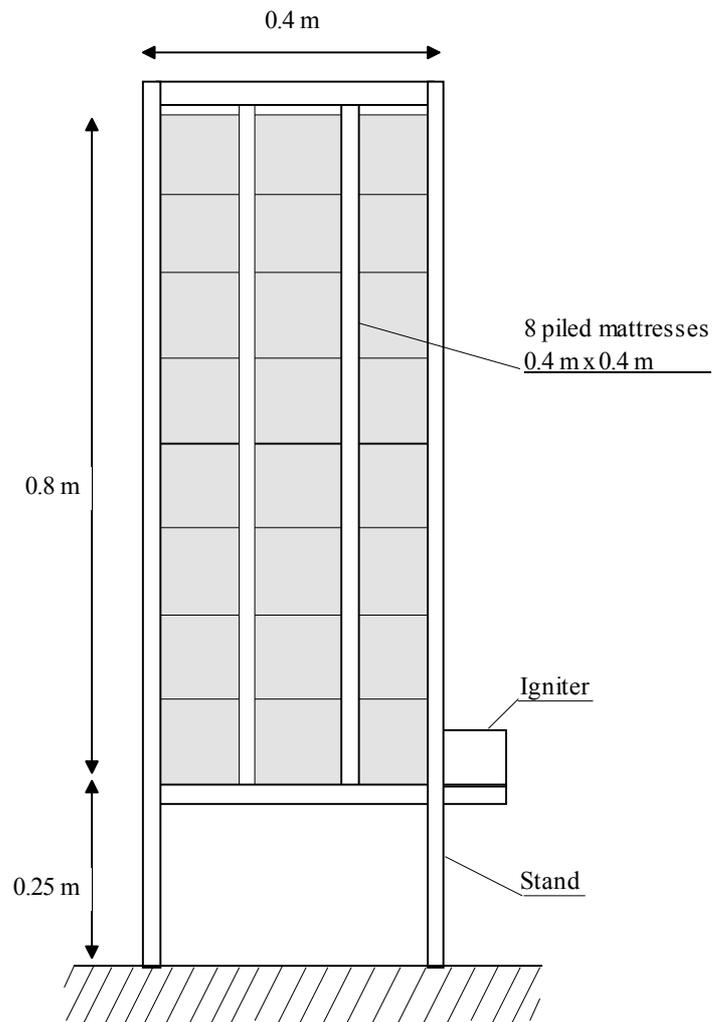
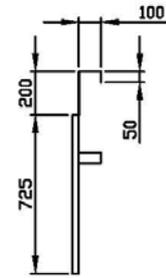
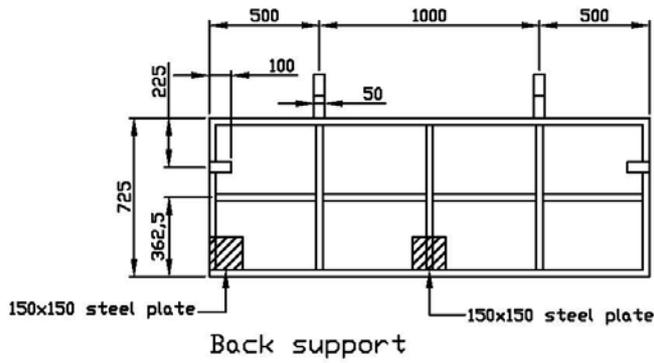


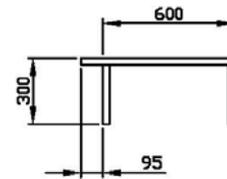
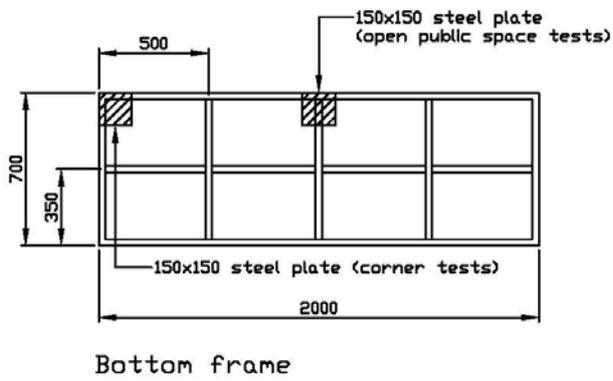
Figure 3



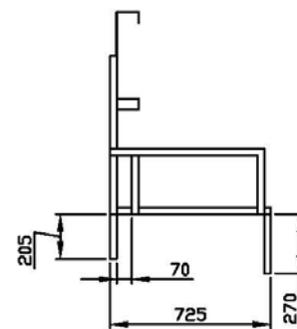
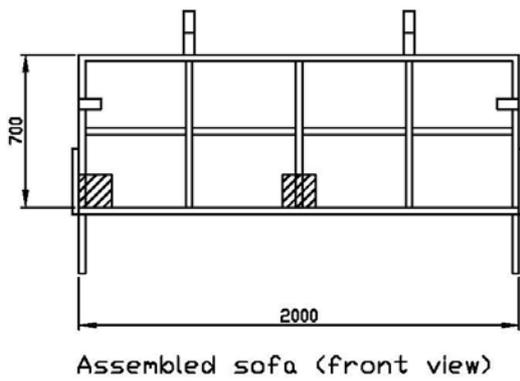
**Figure 4**



Back support (side view)



Armrest (2 pcs)



Assembled sofa (side view)

Figure 5

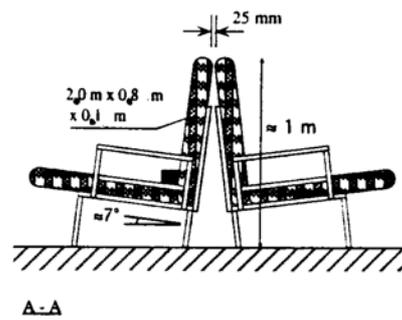
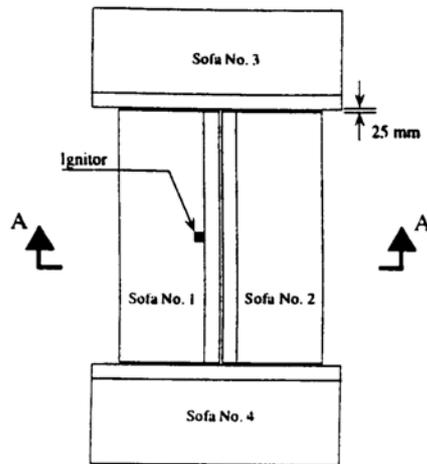
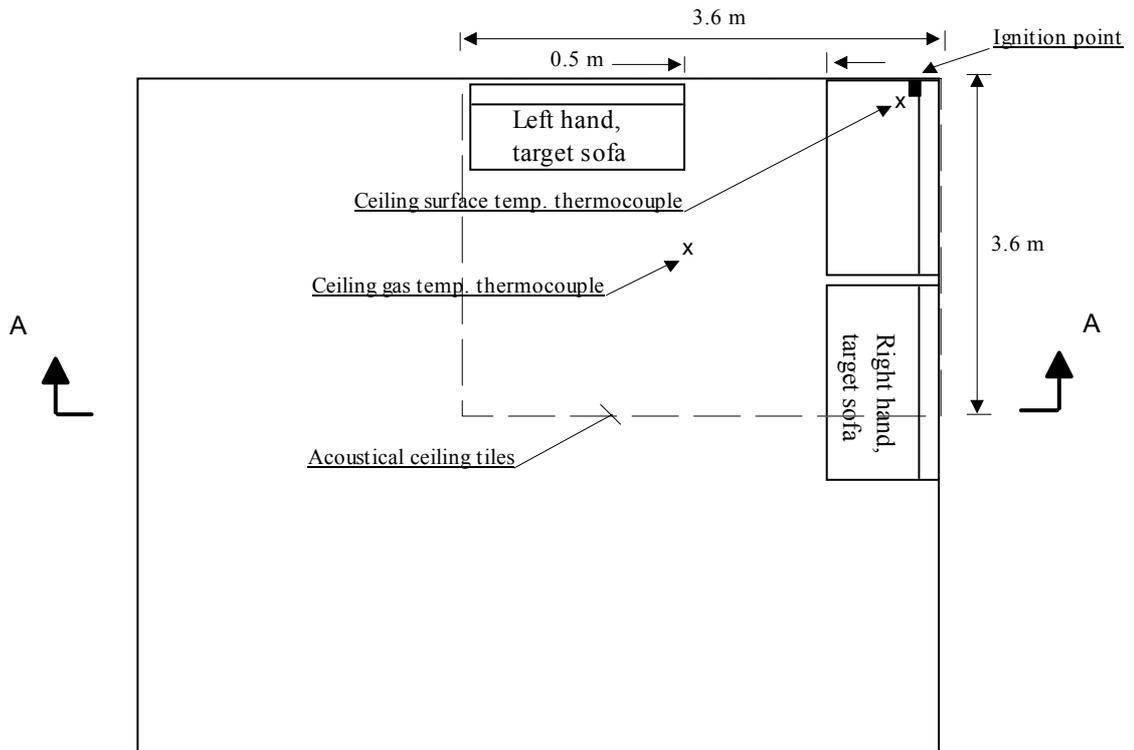
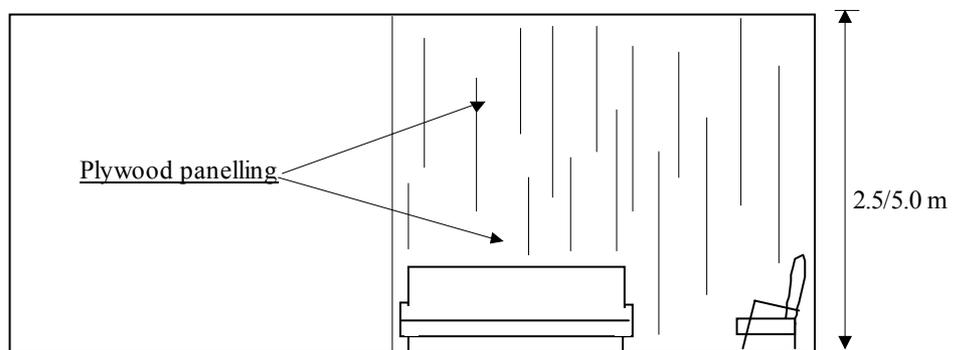


Figure 6

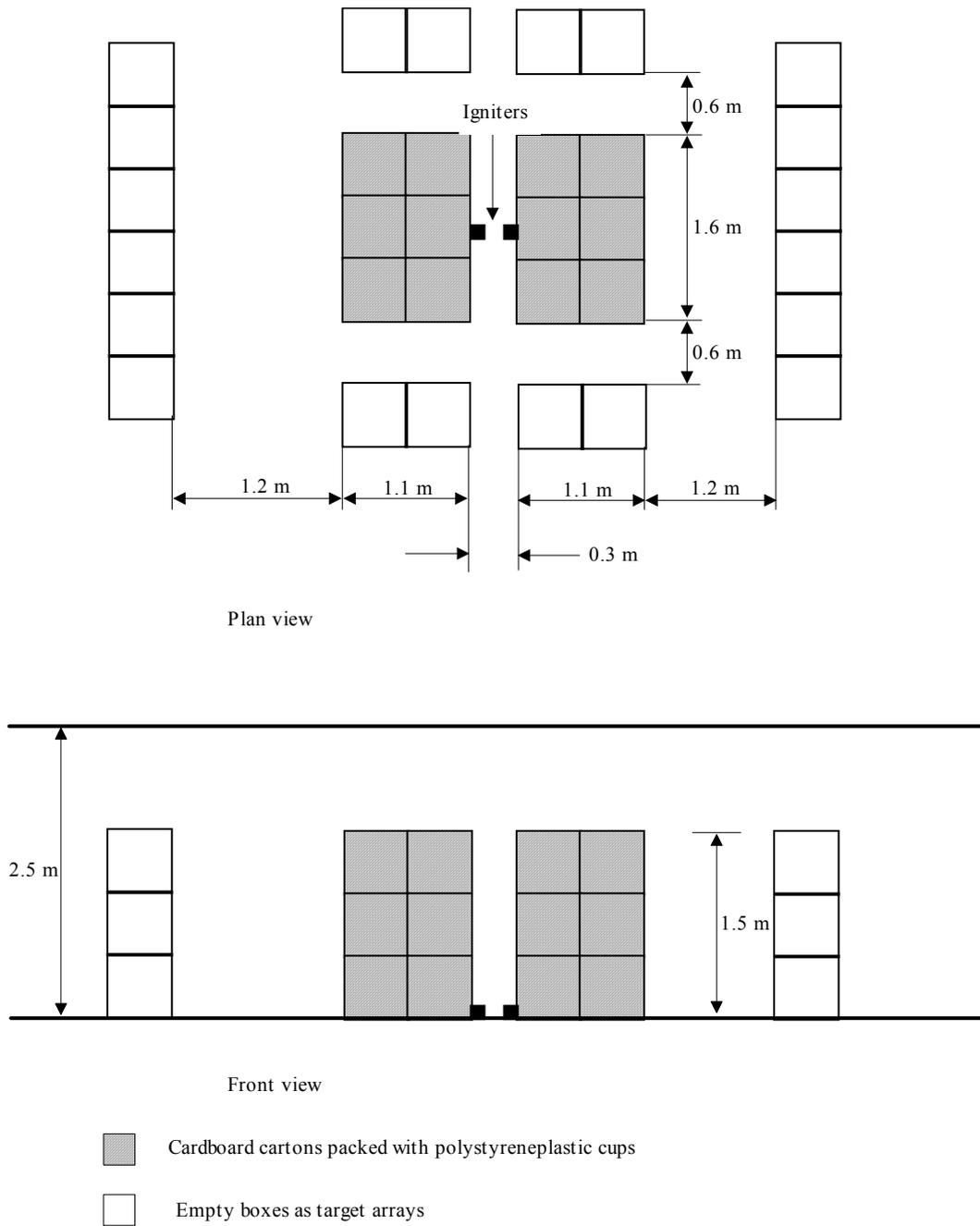


Plan view



A - A

**Figure 7**



**Figure 8**

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## ANNEX 15

## DRAFT AMENDMENTS TO SOLAS CHAPTER II-2

**CHAPTER II-2  
CONSTRUCTION – FIRE PROTECTION, FIRE DETECTION AND  
FIRE EXTINCTION**

**Part A  
General**

**Regulation 1 – Application**

1 The following new paragraph 2.3 is added:

“2.3 The following ships, with cargo spaces intended for the carriage of packaged dangerous goods, shall comply with regulation 19.3, except when carrying dangerous goods specified as classes 6.2 and 7 and dangerous goods in limited quantities\* and excepted quantities\*\* in accordance with tables 19.1 and 19.3 not later than the date of the first renewal survey on or after the [*date of entry into force*]:

- .1 passenger ships and cargo ships of 500 gross tonnage and upwards constructed on or after 1 September 1984 but before [*date of entry into force*]; and
- .2 cargo ships of less than 500 gross tonnage constructed on or after 1 February 1992 but before [*date of entry into*].

Notwithstanding these provisions:

- .3 passenger ships and cargo ships of 500 gross tonnage and upwards constructed on or after 1 September 1984 but before 1 July 1986 need not comply with regulation 19.3.3 provided that they comply with regulation 54.2.3 as adopted by resolution MSC.1(XLV);
- .4 passenger ships and cargo ships of 500 gross tonnage and upwards constructed on or after 1 July 1986 but before 1 February 1992 need not comply with regulation 19.3.3 provided that they comply with regulation 54.2.3 as adopted by resolution MSC.6(48);
- .5 passenger ships and cargo ships of 500 gross tonnage and upwards constructed on or after 1 September 1984 but before 1 July 1998 need not comply with regulations 19.3.10.1 and 19.3.10.2; and
- .6 cargo ships of less than 500 gross tonnage constructed on or after 1 February 1992 but before 1 July 1998 need not comply with regulations 19.3.10.1 and 19.3.10.2.

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\* Refer to chapter 3.4 of the IMDG Code.

\*\* Refer to chapter 3.5 of the IMDG Code.”

## **Part C** **Suppression of fire**

### **Regulation 9 – Containment of fire**

2 The last sentence of paragraph 4.1.1.2 is moved to a new separate paragraph 4.1.1.3 and the existing following paragraphs are renumbered accordingly.

3 The following text is added at the end of paragraph 4.1.1.2:

“Doors approved without the sill being part of the frame, which are installed on or after [*date of entry into force*], shall be installed such that the gap under the door does not exceed 12 mm. A non-combustible sill shall be installed under the door such that floor coverings do not extend beneath the closed door.”

4 The following text is added at the end of paragraph 4.1.2.1:

“Doors approved without the sill being part of the frame, which are installed on or after [*date of entry into force*], shall be installed such that the gap under the door does not exceed 25 mm.”

5 In paragraph 4.2.1, the following text is added after the first sentence:

“Doors approved as “A” class without the sill being part of the frame, which are installed on or after [*date of entry into force*], shall be installed such that the gap under the door does not exceed 12 mm and a non-combustible sill shall be installed under the door such that floor coverings do not extend beneath the closed door. Doors approved as “B” class without the sill being part of the frame shall be installed such that the gap under the door does not exceed 25 mm.”

6 In paragraph 7.1.1, in the first and second sentences, the words “non-combustible” are replaced by the words “steel or equivalent”.

7 At the beginning of paragraph 7.1.1.1, the words “subject to paragraph 7.1.1.2” are added and the word “a” before the word “material” is replaced by the word “any”.

8 The following new paragraph 7.1.1.2 is added after the existing paragraph 7.1.1.1 and the existing subsequent paragraphs are renumbered accordingly:

“2 on ships constructed on or after [*date of entry into force*], the ducts shall be made of heat resisting non-combustible material, which may be faced internally and externally with membranes having low flame-spread characteristics and, in each case, a calorific value\*\* not exceeding 45 MJ/m<sup>2</sup> of their surface area for the thickness used;

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\*\* Refer to the recommendations published by the International Organization for Standardization, in particular publication ISO 1716:2002, *Determination of calorific potential*.”

9 In paragraph 7.4.4.2, the words “non-combustible” are replaced by the words “steel or equivalent”.

10 In paragraph 7.4.4.3, the words “non-combustible” are replaced by the words “steel or equivalent”.

11 At the beginning of paragraph 7.4.4.3.1, the words “subject to paragraph 7.4.4.3.2” are added and the word “a” before the word “material” is replaced by the word “any”.

12 The following new paragraph 7.4.4.3.2 is added after the existing paragraph 7.4.4.3.1 and the existing subsequent paragraphs are renumbered accordingly:

“3.2 on ships constructed on or after [*date of entry into force*], the ducts shall be made of heat resisting non-combustible material, which may be faced internally and externally with membranes having low flame-spread characteristics and, in each case, a calorific value\* not exceeding 45 MJ/m<sup>2</sup> of their surface area for the thickness used;”

---

\* Refer to the recommendations published by the International Organization for Standardization, in particular publication ISO 1716:2002, *Determination of calorific potential.*”

13 At the end of paragraph 7.5.2.1.2, the words “and, in addition, a fire damper in the upper end of the duct” are added.

### **Regulation 10 – Fire fighting**

14 The following new paragraph 10.2.6 is inserted after the existing paragraph 10.2.5:

“10.2.6 Passenger ships carrying more than 36 passengers constructed on or after [*date of entry into force*] shall be fitted with a suitably located means for fully recharging breathing air cylinders, free from contamination. The means for recharging shall be either:

- .1 breathing air compressors supplied from the main and emergency switchboard, or independently driven, with a minimum capacity of 60 l/min per required breathing apparatus, not to exceed 420 l/min; or
- .2 self-contained high-pressure storage systems of suitable pressure to recharge the breathing apparatus used on board, with a capacity of at least 1,200 l per required breathing apparatus, not to exceed 50,000 l of free air.”

**Part G**  
**Special requirements**

**Regulation 19 – Carriage of dangerous goods**

15 The existing note 1 to table 19.1 is replaced by the following:

“<sup>1</sup> For classes 4 and 5.1 solids not applicable to closed freight containers. For classes 2, 3, 6.1 and 8 when carried in closed freight containers the ventilation rate may be reduced to not less than two air changes per hour. For classes 4 and 5.1 liquids when carried in closed freight containers, the ventilation rate may be reduced to not less than two air changes per hour. For the purpose of this requirement a portable tank is a closed freight container.”

16 In note 10 to table 19.2, the words “the Code of Safe Practice for Solid Bulk Cargoes, adopted by resolution A.434(XI)” are replaced by the words “the International Maritime Solid Bulk Cargoes (IMSBC) Code, as adopted by resolution MSC....(...)”.

17 The existing table 19.3 is replaced by the following table:

**“Table 19.3 – Application of the requirements to different classes of dangerous goods except solid dangerous goods in bulk**

Class	Regulation 19																							
	1.1 to 1.6	1.4S	2.1	2.2	2.3 flammable	2.3 non-flammable	3 FP <sup>15</sup> < 23°C	3 FP <sup>15</sup> ≥ 23°C to ≤ 60°C	4.1	4.2	4.3 liquids	4.3 solids	5.1	5.2 <sup>16</sup>	6.1 liquids FP <sup>15</sup> < 23°C	6.1 liquids FP <sup>15</sup> ≥ 23°C to ≤ 60°C	6.1 liquids	6.1 solids	8 liquids FP <sup>15</sup> < 23°C	8 liquids FP <sup>15</sup> ≥ 23°C to ≤ 60°C	8 liquids	8 solids	9	
3.1.1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
3.1.2	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-
3.1.3	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3.1.4	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3.2	X	-	X	-	X	-	X	-	-	-	X <sup>18</sup>	-	-	-	X	-	-	-	X	-	-	-	X <sup>17</sup>	
3.3	X	X	X	X	-	X	X	X	X	X	X	X	X	-	X	X	X	X	X	X	X	X	X	-
3.4.1	-	-	X	-	-	X	X	-	X <sup>11</sup>	X <sup>11</sup>	X	X	X <sup>11</sup>	-	X	X	-	X <sup>11</sup>	X	X	-	-	X <sup>11</sup>	
3.4.2	-	-	X	-	-	-	X	-	-	-	-	-	-	-	X	-	-	-	X	-	-	-	X <sup>17</sup>	
3.5	-	-	-	-	-	-	X	-	-	-	-	-	-	-	X	X	X	-	X	X <sup>19</sup>	X <sup>19</sup>	-	-	
3.6	-	-	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X <sup>14</sup>
3.7	-	-	-	-	-	-	X	X	X	X	X	X	X	-	X	X	-	-	X	X	-	-	-	
3.8	X <sup>12</sup>	-	X	X	X	X	X	X	X	X	X	X	X <sup>13</sup>	X	X	X	-	-	X	X	-	-	-	
3.9	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
3.10.1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
3.10.2	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

- <sup>11</sup> When “mechanically-ventilated spaces” are required by the IMDG Code, as amended.
- <sup>12</sup> Stow 3 m horizontally away from the machinery space boundaries in all cases.
- <sup>13</sup> Refer to the IMDG Code, as amended.
- <sup>14</sup> As appropriate for the goods to be carried.
- <sup>15</sup> FP means flashpoint.
- <sup>16</sup> Under the provisions of the IMDG Code, as amended, stowage of class 5.2 dangerous goods under deck or in enclosed ro-ro spaces is prohibited.
- <sup>17</sup> Only applicable to dangerous goods evolving flammable vapour listed in the IMDG Code.

<sup>18</sup> Only applicable to dangerous goods having a flashpoint less than 23°C listed in the IMDG Code.

<sup>19</sup> Only applicable to dangerous goods having a subsidiary risk class 6.1.”

18 In paragraph 2.1, the words “and excepted quantities” with the following footnote are added after the text “except when carrying dangerous goods in limited quantities”:

“Refer to chapter 3.5 of the IMDG Code.”

19 In paragraph 3.4, the existing title is replaced as follows:

“3.4 *Ventilation arrangement*”.

20 The following text is added at the end of the first sentence of paragraph 3.6.1:

“and shall be selected taking into account the hazards associated with the chemicals being transported and the standards developed by the Organization according to the class and physical state\* .

---

\* For solid bulk cargoes, the protective clothing should satisfy the equipment provisions specified in the respective schedules of the IMSBC Code for the individual substances. For packaged goods, the protective clothing should satisfy the equipment provisions specified in emergency procedures (EmS) of the Supplement to the IMDG Code for the individual substances.”

21 At the end of paragraph 4, the words “and excepted quantities” are added.

\*\*\*

**ANNEX 16**

**DRAFT AMENDMENTS TO THE 2000 HSC CODE**

**CHAPTER 7  
FIRE SAFETY**

- 1 The existing note 1 to table 7.17-1 is replaced by the following:
  - “<sup>1</sup> For classes 4 and 5.1 solids not applicable to closed freight containers. For classes 2, 3, 6.1 and 8 when carried in closed freight containers the ventilation rate may be reduced to not less than two air changes per hour. For classes 4 and 5.1 liquids when carried in closed freight containers, the ventilation rate may be reduced to not less than two air changes per hour. For the purpose of this requirement a portable tank is a closed freight container.”
- 2 The existing table 7.17-3 is replaced by the following:

“Table 7.17-3

**Application of the requirements of section 7.17.3 to different classes of dangerous goods except solid dangerous goods in bulk**

Section	Class																							
	1.1 to 1.6	1.4S	2.1	2.2	2.3 flammable	2.3 non-flammable	3 FP <sup>12</sup> < 23°C	3 FP <sup>12</sup> ≥ 23°C to ≤ 60°C	4.1	4.2	4.3 liquids	4.3 solids	5.1	5.2 <sup>13</sup>	6.1 liquids FP <sup>12</sup> < 23°C	6.1 liquids FP <sup>12</sup> ≥ 23°C to ≤ 60°C	6.1 liquids	6.1 solids	8 liquids FP <sup>12</sup> < 23°C	8 liquids FP <sup>12</sup> ≥ 23°C to ≤ 60°C	8 liquids	8 solids	9	
7.17.3.1.1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
7.17.3.1.2	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-
7.17.3.1.3	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
7.17.3.1.4	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
7.17.3.2	X	-	X	-	X	-	X	-	-	-	X <sup>15</sup>	-	-	-	X	-	-	-	X	-	-	-	X <sup>14</sup>	
7.17.3.3	X	X	X	X	-	X	X	X	X	X	X	X	X	-	X	X	X	X	X	X	X	X	-	
7.17.3.4.1	-	-	X	-	-	X	X	-	X <sup>8</sup>	X <sup>8</sup>	X	X	X <sup>8</sup>	-	X	X	-	X <sup>8</sup>	X	X	-	-	X <sup>8</sup>	
7.17.3.4.2	-	-	X	-	-	-	X	-	-	-	-	-	-	-	X	-	-	-	X	-	-	-	X <sup>14</sup>	
7.17.3.5	-	-	-	-	-	-	X	-	-	-	-	-	-	-	X	X	X	-	X	X <sup>16</sup>	X <sup>16</sup>	-	-	
7.17.3.6	-	-	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X <sup>11</sup>	
7.17.3.7	-	-	-	-	-	-	X	X	X	X	X	X	X	-	X	X	-	-	X	X	-	-	-	
7.17.3.8	X <sup>9</sup>	X	X	X	X	X	X	X	X	X	X	X	X <sup>10</sup>	X	X	X	X	X	X	X	X	X	X	
7.17.3.9	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
7.17.3.10	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	

<sup>8</sup> When “mechanically-ventilated spaces” are required by the IMDG Code, as amended.

<sup>9</sup> Stow 3 m horizontally away from the machinery space boundaries in all cases.

<sup>10</sup> Refer to the IMDG Code, as amended.

<sup>11</sup> As appropriate for the goods to be carried.

<sup>12</sup> FP means flashpoint.

<sup>13</sup> Under the provisions of the IMDG Code, stowage of class 5.2 dangerous goods under deck or in enclosed ro-ro spaces is prohibited.

- <sup>14</sup> Only applicable to dangerous goods evolving flammable vapour listed in the IMDG Code.
- <sup>15</sup> Only applicable to dangerous goods having a flashpoint less than 23°C listed in the IMDG Code.
- <sup>16</sup> Only applicable to dangerous goods having a subsidiary risk class 6.1.”
- 3 In paragraph 7.17.1, the words “and excepted quantities” with the following footnote are added after the text “except when carrying dangerous goods in limited quantities”:  
“Refer to chapter 3.5 of the IMDG Code.”
- 4 The following text is added at the end of the first sentence of paragraph 7.17.3.6.1:  
“and shall be selected taking into account the hazards associated with the chemicals being transported and the standards developed by the Organization according to the class and physical state\* .

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\* For solid bulk cargoes, the protective clothing should satisfy the equipment provisions specified in the respective schedules of the IMSBC Code for the individual substances. For packaged goods, the protective clothing should satisfy the equipment provisions specified in emergency procedures (EmS) of the Supplement to the IMDG Code for the individual substances.”

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**ANNEX 17****RESOLUTION MSC.266(84)  
(adopted on 13 May 2008)****CODE OF SAFETY FOR SPECIAL PURPOSE SHIPS, 2008**

THE MARITIME SAFETY COMMITTEE,

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

NOTING that specialized types of ships with unusual design and operational characteristics may differ from those of conventional merchant ships subject to the International Convention for the Safety of Life at Sea, 1974 (hereafter referred to as the “1974 SOLAS Convention”),

ALSO NOTING that, by virtue of the specialized nature of the work undertaken by these ships, special personnel are carried, who are neither crew members nor passengers as defined in the 1974 SOLAS Convention,

RECOGNIZING that certain safety standards supplementing those of the 1974 SOLAS Convention may be required for special purpose ships,

NOTING FURTHER that the Assembly, at its thirteenth session, adopted, by resolution A.534(13), the Code of Safety for Special Purpose Ships and authorized the Committee to amend the Code as necessary,

1. ADOPTS the Code of Safety for Special Purpose Ships, 2008 (2008 SPS Code), the text of which is set out in the Annex to the present resolution, as an amendment to the Code adopted by the Assembly by resolution A.534(13);
2. DETERMINES that the 2008 SPS Code supersedes the SPS Code adopted by resolution A.534(13) for special purpose ships certified on or after 13 May 2008;
3. INVITES all Contracting Governments to the 1974 SOLAS Convention to take appropriate steps to give effect to the present Code as soon as possible;
4. REQUESTS the Assembly to endorse the action taken by the Maritime Safety Committee.

## ANNEX

### CODE OF SAFETY FOR SPECIAL PURPOSE SHIPS, 2008

#### CONTENTS

Chapter	1	General
Chapter	2	Stability and subdivision
Chapter	3	Machinery installations
Chapter	4	Electrical installations
Chapter	5	Periodically unattended machinery spaces
Chapter	6	Fire protection
Chapter	7	Dangerous goods
Chapter	8	Life-saving appliances
Chapter	9	Radiocommunications
Chapter	10	Safety of navigation
Chapter	11	Security
Annex		Form of Safety Certificate for Special Purpose Ships

#### PREAMBLE

1 The Maritime Safety Committee, at its eighty-fourth session, revised the Code of Safety for Special Purpose Ships (SPS Code) adopted by resolution A.534(13) to bring it up to date with amendments to SOLAS and to extend the voluntary application of the revised Code to include training ships, whether or not covered by the application requirements of SOLAS.

2 The Code has been developed to provide an international standard of safety for special purpose ships of new construction, the application of which will facilitate operation of such ships and result in a level of safety for the ships and their personnel equivalent to that required by the International Convention for the Safety at Life of Sea, 1974.

3 For the purposes of this Code, a special purpose ship is a ship of not less than 500 gross tonnage which carries more than 12 special personnel, i.e. persons who are specially needed for the particular operational duties of the ship and are carried in addition to those persons required for the normal navigation, engineering and maintenance of the ship or engaged to provide services for the persons carried on board.

4 Because special personnel are expected to be able bodied with a fair knowledge of the layout of the ship and have received some training in safety procedures and the handling of the ship's safety equipment, the special purpose ships on which they are carried need not be considered or treated as passenger ships.

5 In developing the safety standards for this Code it has been necessary to consider:

- .1 the number of special personnel being carried; and
- .2 the design and size of the ship in question.

6 While the Code has been developed for new ships of 500 gross tonnage and above, Administrations may also consider the application of the provisions of the Code to ships of lesser tonnage. The term "new ship" has not been defined in order to give any Administration discretion to decide the effective date of entry into force.

7 For facilitating the operation of special purpose ships, this Code provides for a certificate, called a Special Purpose Ship Safety Certificate, which should be issued to every special purpose ship. Where a special purpose ship is normally engaged on international voyages as defined in SOLAS it should, in addition, also carry SOLAS safety certificates, either:

- .1 for a passenger ship with a SOLAS Exemption Certificate; or
- .2 for a cargo ship with a SOLAS Exemption Certificate, where necessary,

as the Administration deems appropriate.

8 Noting that the Code may be readily applied to some ships that carry special personnel on board to which SOLAS does not apply, the Maritime Safety Committee invites Administrations to apply the standards of the Code to such ships to the extent deemed reasonable and practicable.

## **CHAPTER 1**

### **GENERAL**

1.1 The purpose of the Code is to recommend design criteria, construction standards and other safety measures for special purpose ships.

#### **1.2 Application**

1.2.1 Except as provided in 8.3, the Code applies to every special purpose ship of not less than 500 gross tonnage certified on or after 13 May 2008. The Administration may also apply these provisions as far as reasonable and practicable to special purpose ships of less than 500 gross tonnage and to special purpose ships constructed before 13 May 2008.

1.2.2 This Code does not apply to ships meeting the Code for the Construction and Equipment of Mobile Offshore Drilling Units (MODU Code).

1.2.3 The Code is not intended for ships used to transport and accommodate industrial personnel that are not working on board.

#### **1.3 Definitions**

1.3.1 For the purpose of this Code, the definitions given hereunder apply. For terms used, but not defined in this Code, the definitions as given in SOLAS apply.

1.3.2 "Breadth (B)" means the maximum breadth of the ship, measured amidships to the moulded line of the frame in a ship with a metal shell and to the outer surface of the hull in a ship with a shell of any other material. The breadth (B) should be measured in metres.

1.3.3 "Crew" means all persons carried on board the ship to provide navigation and maintenance of the ship, its machinery, systems and arrangements essential for propulsion and safe navigation or to provide services for other persons on board.

1.3.4 "IMDG Code" means the International Maritime Dangerous Goods Code, adopted by the Maritime Safety Committee by resolution MSC.122(75), as amended.

1.3.5 “Length (L)” means 96% of the total length on a waterline of 85% at the least moulded depth measured from the top of the keel, or the length from the foreside of the stem to the axis of the rudder stock on that waterline, if that be greater. In ships designed with a rake of keel, the waterline on which this length is measured should be parallel to the designed waterline. The length (L) should be measured in metres.

1.3.6 “LSA Code” means the International Life-Saving Appliance Code, adopted by the Maritime Safety Committee by resolution MSC.48(66), as amended.

1.3.7 “Organization” means the International Maritime Organization.

1.3.8 “Passenger” means every person other than:

- .1 the master and the members of the crew or other persons employed or engaged in any capacity on board a ship on the business of that ship; and
- .2 a child under one year of age.

1.3.9 “Permeability” in relation to a space is the ratio of the volume within that space which is assumed to be occupied by water to the total volume of that space.

1.3.10 “SOLAS” means the International Convention for the Safety of Life at Sea, 1974, as amended.

1.3.11 “Special personnel” means all persons who are not passengers or members of the crew or children of under one year of age and who are carried on board in connection with the special purpose of that ship or because of special work being carried out aboard that ship. Wherever in this Code the number of special personnel appears as a parameter, it should include the number of passengers carried on board which may not exceed 12.

Special personnel are expected to be able bodied with a fair knowledge of the layout of the ship and to have received some training in safety procedures and the handling of the ship’s safety equipment before leaving port and include the following:

- .1 scientists, technicians and expeditionaries on ships engaged in research, non-commercial expeditions and survey;
- .2 personnel engaging in training and practical marine experience to develop seafaring skills suitable for a professional career at sea. Such training should be in accordance with a training programme approved by the Administration;
- .3 personnel who process the catch of fish, whales or other living resources of the sea on factory ships not engaged in catching;
- .4 salvage personnel on salvage ships, cable-laying personnel on cable-laying ships, seismic personnel on seismic survey ships, diving personnel on diving support ships, pipe-laying personnel on pipe layers and crane operating personnel on floating cranes; and
- .5 other personnel similar to those referred to in .1 to .4 who, in the opinion of the Administration, may be referred to this group.

1.3.12 “Special purpose ship”<sup>1</sup> means a mechanically self-propelled ship which by reason of its function carries on board more than 12 special personnel<sup>2</sup>.

1.3.13 “Training programme” means a defined course of instruction and practical experience in all aspects of ship operations, similar to the basic safety training as offered by the maritime institutions in the country of the Administration.

#### 1.4 Exemptions

A ship which is not normally engaged as a special purpose ship and which undertakes an exceptional single voyage as a special purpose ship may be exempted by the Administration from the provisions of this Code, provided that it complies with safety requirements which in the opinion of the Administration are adequate for the voyage which is to be undertaken by the ship.

#### 1.5 Equivalentents

1.5.1 Where the Code requires that a particular fitting, material, appliance, apparatus, item of equipment or type thereof should be fitted or carried in a unit, or that any particular provision should be made, or any procedure or arrangement should be complied with, the Administration may allow any other fitting, material, appliance, apparatus, item of equipment or type thereof to be fitted or carried, or any other provision, procedure or arrangement to be made in that unit, if it is satisfied by trial thereof or otherwise that such fitting, material, appliance, apparatus, item of equipment or type thereof or that any particular provision, procedure or arrangement is at least as effective as that required by the Code.

1.5.2 When an Administration so allows any fitting, material, appliance, apparatus, item of equipment or type thereof, or provision, procedure, arrangement, novel design or application to be substituted hereafter, it should communicate to the Organization the particulars thereof, together with a report on the evidence submitted, so that the Organization may circulate the same to other Governments for the information of their officers.

#### 1.6 Surveys

Every special purpose ship should be subject to the surveys specified for cargo ships, other than tankers, in SOLAS, which should cover the provisions of this Code.

#### 1.7 Certification

1.7.1 A certificate may be issued after survey in accordance with 1.6 either by the Administration or by any person or organization duly authorized by it. In every case the Administration assumes full responsibility for the certificate.

1.7.2 The certificate should be drawn up in the official language of the issuing country in a form corresponding to the model given in the annex to the Code. If the language used is neither English nor French, the text should include a translation into one of these languages.

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<sup>1</sup> Some sail training ships may be classified by the Administration as “not propelled by mechanical means” if fitted with mechanical propulsion for auxiliary and emergency purposes.

<sup>2</sup> Where a ship carries more than 12 passengers, as defined in SOLAS, the ship should not be considered a special purpose ship as it is a passenger ship as defined by SOLAS.

1.7.3 The duration and validity of the certificate should be governed by the respective provisions for cargo ships in SOLAS.

1.7.4 If a certificate is issued for a special purpose ship of less than 500 gross tonnage, this certificate should indicate to what extent relaxations in accordance with 1.2 were accepted.

## CHAPTER 2

### STABILITY AND SUBDIVISION

2.1 The intact stability of special purpose ships should comply with the provisions of section 2.5 of Part B of the 2007 Intact Stability Code.

2.2 The subdivision and damage stability of special purpose ships should in general be in accordance with SOLAS chapter II-1 where the ship is considered a passenger ship, and special personnel are considered passengers, with an R-value calculated in accordance with SOLAS regulation II-1/6.2.3 as follows:

- .1 where the ship is certified to carry 240 persons or more, the R-value is assigned as R;
- .2 where the ship is certified to carry not more than 60 persons, the R-value is assigned as 0.8R; and
- .3 for more than 60 (but not more than 240) persons, the R-value should be determined by linear interpolation between the R-values given in .1 and .2 above.

2.3 For special purpose ships to which 2.2.1 applies, the requirements of SOLAS regulations II-1/8 and II-1/8-1 and of SOLAS chapter II-1, parts B-2, B-3 and B-4 should be applied as though the ship is a passenger ship and the special personnel are passengers. However, SOLAS regulations II-1/14 and II-1/18 are not applicable.

2.4 For special purpose ships to which 2.2.2 or 2.2.3 applies, except as provided in 2.5, the provisions of SOLAS chapter II-1, parts B-2, B-3 and B-4 should be applied as though the ship is a cargo ship and the special personnel are crew. However, SOLAS regulations II-1/8 and II-1/8-1 need not be applied and SOLAS regulations II-1/14 and II-1/18 are not applicable.

2.5 All special purpose ships should comply with SOLAS regulations II-1/9, II-1/13, II-1/19, II-1/20, II-1/21 and II-1/35-1, as though the ship is a passenger ship.

## CHAPTER 3

### MACHINERY INSTALLATIONS

3.1 Subject to 3.2, the requirements of part C of chapter II-1 of SOLAS should be met.

#### 3.2 **Steering gear**

All installations should be in accordance with regulation 29 of part C of chapter II-1 of SOLAS, except that installations in special purpose ships carrying not more than 240 persons on board should, when applicable, be in accordance with regulation 29.6.1.2 and installations in special

purpose ships carrying more than 240 persons on board should, when applicable, be in accordance with regulation 29.6.1.1.

## CHAPTER 4

### ELECTRICAL INSTALLATIONS

4.1 Subject to 4.2 and 4.3, the requirements of part D of chapter II-1 of SOLAS should be met.

#### 4.2 **Emergency source of power**

4.2.1 Installations in special purpose ships carrying not more than 60 persons on board should be in accordance with regulation 43 of part D of chapter II-1 of SOLAS and in addition special purpose ships of more than 50 m in length should meet the requirements of regulation 42.2.6.1 of that part.

4.2.2 Installations in special purpose ships carrying more than 60 persons on board should be in accordance with regulation 42 of part D of chapter II-1 of SOLAS.

#### 4.3 **Precautions against shock, fire and other hazards of electrical origin**

4.3.1 All installations should be in accordance with regulation 45.1 to 45.10 inclusive of part D of chapter II-1 of SOLAS.

4.3.2 Installations on special purpose ships carrying more than 60 persons on board should also be in accordance with regulation 45.11 of part D of chapter II-1 of SOLAS.

## CHAPTER 5

### PERIODICALLY UNATTENDED MACHINERY SPACES

5.1 Subject to 5.2, the requirements of part E of chapter II-1 of SOLAS other than regulation 46, should be met.

#### 5.2 **Special purpose ships carrying more than 240 persons on board**

Special purpose ships carrying more than 240 persons on board should be specially considered by the Administration as to whether or not their machinery spaces may be periodically unattended, and, if so, whether additional requirements to those stipulated in this chapter are necessary to achieve equivalent safety to that of normally attended machinery spaces.

## CHAPTER 6

### FIRE PROTECTION

6.1 For ships carrying more than 240 persons on board, the requirements of chapter II-2 of SOLAS for passenger ships carrying more than 36 passengers should be applied.

6.2 For ships carrying more than 60 (but not more than 240) persons on board, the requirements of chapter II-2 of SOLAS for passenger ships carrying not more than 36 passengers should be applied.

6.3 For ships carrying not more than 60 persons on board, the requirements of chapter II-2 of SOLAS for cargo ships should be applied.

## **CHAPTER 7**

### **DANGEROUS GOODS**

7.1 Special purpose ships sometimes carry a wide range of dangerous goods classified in accordance with the IMDG Code for use in scientific or survey work or a variety of other applications. These dangerous goods are often carried as ships' stores and are used on board and, therefore, they are not subject to the provisions of the IMDG Code. However, dangerous goods that are carried on board for shipment as cargo and are not used on board, are clearly subject to the provisions of the IMDG Code.

7.2 Notwithstanding the fact that the IMDG Code does not apply to dangerous goods carried as ships' stores and used on board, it contains provisions that are relevant to their safe stowage, handling and carriage on special purpose ships. The IMDG Code also contains requirements for electrical equipment, wiring, fire-fighting equipment, ventilation, smoking provisions and requirements for any special equipment. Some of the provisions are general and apply to all classes of dangerous goods, whilst others are specific, e.g., Class 1 Explosives.

7.3 Therefore, it is important to take into account the appropriate provisions of the IMDG Code when planning to carry dangerous goods, so that the relevant provisions can be taken into account to ensure appropriate construction, loading, stowage, segregation and carriage provisions are put into place.

7.4 Although the IMDG Code does not apply to ships' stores, the master and persons on board the ship responsible for the use of ships' stores should be aware of the provisions of the IMDG Code and should apply them as best practice whenever possible.

7.5 The issues of stowage, personal protection and emergency procedures when dangerous goods are in use, and the subsequent stowage of opened dangerous goods, should be addressed through a formal safety assessment. In addition to the IMDG Code, to carry out such a formal safety assessment, suppliers and safety data sheets for the dangerous goods should also be consulted.

7.6 The provisions of the IMDG Code are based on intact and unopened packaging and the removal of explosive articles or substances from a complete pack may invalidate its IMDG Code classification. This aspect should be taken into account when carrying out the formal safety assessment to ensure an equivalent level of safety is maintained when dangerous goods remain after use.

## **CHAPTER 8**

### **LIFE-SAVING APPLIANCES**

8.1 The requirements of chapter III of SOLAS should be applied with the specifications given hereunder.

8.2 A special purpose ship carrying more than 60 persons on board should comply with the requirements contained in chapter III of SOLAS for passenger ships engaged in international voyages which are not short international voyages.

8.3 Notwithstanding the provisions of 8.2, a ship carrying more than 60 persons on board may in lieu of meeting the requirements of regulations 21.1.1 of chapter III of SOLAS comply with the requirements of regulation 21.1.5 of chapter III of SOLAS, including the provision of at least two rescue boat(s) in accordance with regulation 21.2.1 of chapter III.

8.4 A special purpose ship carrying not more than 60 persons on board should comply with the requirements contained in chapter III of SOLAS for cargo ships other than tankers. Such ships may, however, carry life-saving appliances in accordance with 8.2, if they comply with the subdivision requirements for ships carrying more than 60 persons.

8.5 Regulations 2, 19.2.3, 21.1.2, 21.1.3, 31.1.6 and 31.1.7 of chapter III of SOLAS and the requirements of paragraphs 4.8 and 4.9 of the LSA Code are not applicable to special purpose ships.

8.6 Where in chapter III of SOLAS the term “passenger” is used, it should be read to mean “special personnel” for the purpose of this Code.

## **CHAPTER 9**

### **RADIOCOMMUNICATIONS**

Notwithstanding the right of the Administration to impose requirements higher than those specified herein, special purpose ships should comply with the requirements for cargo ships of chapter IV of SOLAS.

## **CHAPTER 10**

### **SAFETY OF NAVIGATION**

All special purpose ships should comply with the requirements of chapter V of SOLAS.

## **CHAPTER 11**

### **SECURITY**

All special purpose ships should comply with the requirements of chapter XI-2 of SOLAS.

**ANNEX**

**FORM OF SAFETY CERTIFICATE FOR SPECIAL PURPOSE SHIPS**

**SPECIAL PURPOSE SHIP SAFETY CERTIFICATE**

This Certificate should be supplemented by a Record of Equipment (Form SPS)

(Official seal)

(State)

Issued in compliance with the provisions of the

**CODE OF SAFETY FOR SPECIAL PURPOSE SHIPS, 2008**  
as adopted by resolution MSC.266(84)

under the authority of the Government of

(name of the State)

by

(person or organization authorized)

Particulars of ship\*

Name of ship .....

Distinctive number or letters .....

Port of registry .....

Gross tonnage .....

Sea areas in which ship is certificated  
to operate (SOLAS regulation IV/2) .....

IMO number .....

Ship's special purpose .....

Date on which keel was laid or ship was of a similar  
stage of construction or, where applicable, date on  
which work for a conversion or an alteration or  
modification of a major character was commenced .....

---

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

THIS IS TO CERTIFY:

- 1 That the ship has been surveyed in accordance with the provisions of 1.6 of the Code.
- 2 That the survey showed that:
  - 2.1 the ship complied with the provisions of the Code as regards:
    - .1 the structure, main and auxiliary machinery, boilers and other pressure vessels; and
    - .2 the watertight subdivision arrangements and details;
  - 2.2 the ship complied with the provisions of the Code as regards structural fire protection, fire safety systems and appliances and fire control plans;
  - 2.3 the life-saving appliances and the equipment of the lifeboats, liferafts and rescue boats were provided in accordance with the provisions of the Code;
  - 2.4 the ship was provided with a line-throwing appliance and radio installations used in life-saving appliances in accordance with the provisions of the Code;
  - 2.5 the ship complied with the provisions of the Code as regards radio installations;
  - 2.6 the functioning of the radio installations used in life-saving appliances complied with the provisions of the Code;
  - 2.7 the ship complied with the provisions of the Code as regards shipborne navigational equipment, means of embarkation for pilots and nautical publications;
  - 2.8 the ship was provided with lights, shapes, means of making sound signals and distress signals in accordance with the provisions of the Code and the International Regulations for Preventing Collisions of Sea in force;
  - 2.9 in all other respects the ship complied with the relevant provisions of the Code.
- 3 That an Exemption Certificate has/has not\* been issued.

---

\* *Delete as appropriate.*

- 4 That the ship has/has not\* been provided with certificates issued under SOLAS, as amended.

This certificate is valid until .....

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 issuing authority, as appropriate)

---

\* *Delete as appropriate.*

**ENDORSEMENT FOR ANNUAL SURVEYS RELATING TO HULL, MACHINERY  
AND EQUIPMENT REFERRED TO IN SECTION 2.1 OF THIS CERTIFICATE**

THIS IS TO CERTIFY that, at a survey required by 1.6 of the Code, the ship was found to comply with the relevant provisions of the Code.

Annual survey: Signed .....  
(Signature of authorized official)  
Place .....  
Date .....  
(Seal or stamp of the Authority, as appropriate)

Annual survey: Signed .....  
(Signature of authorized official)  
Place .....  
Date .....  
(Seal or stamp of the Authority, as appropriate)

Annual survey: Signed .....  
(Signature of authorized official)  
Place .....  
Date .....  
(Seal or stamp of the Authority, as appropriate)

Annual survey: Signed .....  
(Signature of authorized official)  
Place .....  
Date .....  
(Seal or stamp of the Authority, as appropriate)

**ENDORSEMENT FOR ANNUAL AND PERIODICAL SURVEYS RELATING TO  
LIFE-SAVING APPLIANCES AND OTHER EQUIPMENT REFERRED TO  
IN SECTIONS 2.2, 2.3, 2.4, 2.6, 2.7, 2.8 AND 2.9  
OF THIS CERTIFICATE**

THIS IS TO CERTIFY that, at a survey required by 1.6 of the Code, the ship was found to comply with the relevant provisions of the Code.

Annual survey: Signed .....  
(Signature of authorized official)

Place .....

Date .....

(Seal or stamp of the Authority, as appropriate)

Annual/periodical\* survey: Signed .....  
(Signature of authorized official)

Place .....

Date .....

(Seal or stamp of the Authority, as appropriate)

Annual/periodical\* survey: Signed .....  
(Signature of authorized official)

Place .....

Date .....

(Seal or stamp of the Authority, as appropriate)

Annual survey: Signed .....  
(Signature of authorized official)

Place .....

Date .....

(Seal or stamp of the Authority, as appropriate)

---

\* *Delete as appropriate.*

**ENDORSEMENT FOR PERIODICAL SURVEYS RELATING TO RADIO  
INSTALLATIONS REFERRED TO IN SECTION 2.5 OF THIS CERTIFICATE**

THIS IS TO CERTIFY that, at a survey required by 1.6 of the Code, the ship was found to comply with the relevant provisions of the Code:

Periodical survey: Signed .....  
(Signature of authorized official)

Place .....

Date .....

(Seal or stamp of the Authority, as appropriate)

Periodical survey: Signed .....  
(Signature of authorized official)

Place .....

Date .....

(Seal or stamp of the Authority, as appropriate)

Periodical survey: Signed .....  
(Signature of authorized official)

Place .....

Date .....

(Seal or stamp of the Authority, as appropriate)

Annual survey: Signed .....  
(Signature of authorized official)

Place .....

Date .....

(Seal or stamp of the Authority, as appropriate)

**ENDORSEMENT FOR THE EXTENSION OF THE CERTIFICATE**

The ship complies with the relevant provisions of the Code and this Certificate should, in accordance with 1.7.3, be accepted as valid until .....

Signed .....  
(Signature of authorized official)

Place .....

Date .....

(Seal or stamp of the Authority, as appropriate)

APPENDIX

**Record of Equipment for the Special Purpose Ship Safety Certificate  
(Form SPS)**

This Record should be permanently attached to the  
Special Purpose Ship Safety Certificate.

**RECORD OF EQUIPMENT FOR COMPLIANCE WITH THE  
CODE OF SAFETY FOR SPECIAL PURPOSE SHIPS**

**1 Particulars of ship**

Name of ship .....

Distinctive number or letters .....

Number of persons on board (including passengers)  
for which certified .....

Minimum number of persons on board with required qualifications to operate  
the radio installations .....

**2 Details of life-saving appliances**

1	Total number of persons for which life-saving appliances are provided	.....	
		Port side	Starboard side
2	Total number of lifeboats	.....	.....
2.1	Total number of persons accommodated by them	.....	.....
2.2	Number of partially enclosed lifeboats (regulation III/31 and LSA Code, section 4.6)	.....	.....
2.3	Number of self-righting partially enclosed lifeboats (regulation III/31 and LSA Code, section 4.8)	.....	.....
2.4	Number of totally enclosed lifeboats (regulation III/31 and LSA Code, section 4.9)	.....	.....
2.5	Other lifeboats	.....	.....
2.5.1	Number	.....	.....
2.5.2	Type	.....	.....

3	Number of motor lifeboats (included in the total lifeboats shown above)	.....
3.1	Number of lifeboats fitted with searchlights	.....
4	Number of rescue boats	.....
4.1	Number of boats which are included in the total lifeboats shown above	.....
5	Liferafts	.....
5.1	Those for which approved launching appliances are required	.....
5.1.1	Number of liferafts	.....
5.1.2	Number of persons accommodated by them	.....
5.2	Those for which approved launching appliances are not required	.....
5.2.1	Number of liferafts	.....
5.2.2	Number of persons accommodated by them	.....
6	Buoyant apparatus	.....
6.1	Number of apparatus	.....
6.2	Number of persons capable of being supported	.....
7	Number of lifebuoys	.....
8	Number of lifejackets	.....
9	Immersion suits	.....
9.1	Total number	.....
9.2	Number of suits complying with the requirements for lifejackets	.....
10	Number of thermal protective aids*	.....
11	Radio installations used in life-saving appliances	.....
11.1	Number of radar transponders	.....
11.2	Number of two-way VHF radiotelephone apparatus	.....

---

\* Excluding those required by the LSA Code, paragraphs 4.1.5.1.24, 4.4.8.31 and 5.1.2.2.13.

**3 Details of radio facilities**

Item	Actual provision
1 Primary systems	.....
1.1 VHF radio installation	.....
1.1.1 DSC encoder	.....
1.1.2 DSC watch receiver	.....
1.1.3 Radiotelephony	.....
1.2 MF radio installation	.....
1.2.1 DSC encoder	.....
1.2.2 DSC watch receiver	.....
1.2.3 Radiotelephony	.....
1.3 MF/HF radio installation	.....
1.3.1 DSC encoder	.....
1.3.2 DSC watch receiver	.....
1.3.3 Radiotelephony	.....
1.3.4 Direct-printing radiotelegraphy	.....
1.4 Inmarsat ship earth station	.....
2 Secondary means of alerting	.....
3 Facilities for reception of maritime safety information	.....
3.1 NAVTEX receiver	.....
3.2 EGC receiver	.....
3.3 HF direct-printing radiotelegraph receiver	.....
4 Satellite EPIRB	.....
4.1 COSPAS-SARSAT	.....
4.2 Inmarsat	.....
5 VHF EPIRB	.....
6 Ship's radar transponder	.....

**4 Methods used to ensure availability of radio facilities (SOLAS regulations IV/15.6 and 15.7)**

- 4.1 Duplication of equipment .....
- 4.2 Shore-based maintenance .....
- 4.3 Of-sea maintenance capability .....

## 5 Details of navigational systems and equipment

### Item

1.1	Standard magnetic compass*	.....
1.2	Spare magnetic compass*	.....
1.3	Gyro compass*	.....
1.4	Gyro compass heading repeater*	.....
1.5	Gyro compass bearing repeater*	.....
1.6	Heading or track control system*	.....
1.7	Pelorus or compass bearing device*	.....
1.8	Means of correcting heading and bearings	.....
1.9	Transmitting heading device (THD)*	.....
2.1	Nautical charts/Electronic chart display and information system (ECDIS)**	.....
2.2	Back up arrangements for ECDIS	.....
2.3	Nautical publications	.....
2.4	Back up arrangements for electronic nautical publications	.....
3.1	Receiver for a global navigation satellite system/terrestrial radionavigation system*,**	.....
3.2	9 GHz radar*	.....
3.3	Second radar (3 GHz/ 9 GHz)**)*	.....
3.4	Automatic radar plotting aid (ARPA)*	.....
3.5	Automatic tracking aid*	.....
3.6	Second automatic tracking aid*	.....
3.7	Electronic plotting aid*	.....
4	Automatic identification system (AIS)	.....
5.1	Voyage data recorder (VDR)**	.....
5.2	Simplified voyage data recorder (S-VDR)**	.....
6.1	Speed and distance measuring device (through the water)*	.....
6.2	Speed and distance measuring device (over the ground in the forward and athwartship direction)*	.....
6.3	Echo sounding device*	.....
7.1	Rudder, propeller, thrust, pitch and operational mode indicator*	.....
7.2	Rate of turn indicator*	.....
8	Sound reception system*	.....
9	Telephone to emergency steering position*	.....
10	Daylight signalling lamp*	.....
11	Radar reflector*	.....
12	International Code of Signals	.....
13	IAMSAR Manual, Volume III	.....

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\* Alternative means of meeting this requirement are permitted under regulation V/19. In case of other means, they should be specified.

\*\* Delete as appropriate.

THIS IS TO CERTIFY that this Record is correct in all respects.

Issued at .....  
(Place of issue of the Record)

.....  
(Date of issue)

.....  
(Signature of duly authorized official  
issuing the Record)

(Seal or stamp of the issuing authority, as appropriate)

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**ANNEX 18****DRAFT AMENDMENTS TO THE LSA CODE****CHAPTER IV  
SURVIVAL CRAFT****4.4 General requirements for lifeboats**

1 In subparagraph .1 of paragraph 4.4.2.2, the words “(for a lifeboat intended for a passenger ship) or 82.5 kg (for a lifeboat intended for a cargo ship)” are inserted after the words “75 kg”.

2 The existing paragraph 4.4.9.1 is replaced by the following:

“4.4.9.1 The number(s) of persons for which the lifeboat is approved, for passenger ships and/or cargo ships, as applicable, shall be clearly marked on it in clear permanent characters.”

**4.7 Free-fall lifeboats**

3 The existing paragraph 4.7.2 is replaced by the following:

**“4.7.2 Carrying capacity of a free-fall lifeboat**

4.7.2.1 The carrying capacity of a free-fall lifeboat is the number of persons having an average mass of 82.5 kg that can be provided with a seat without interfering with the means of propulsion or the operation of any of the lifeboat’s equipment. The seating surface shall be smooth and shaped and provided with cushioning of at least 10 mm over all contact areas to provide support for the back and pelvis and flexible lateral side support for the head. The seats shall be of the non-folding type, permanently secured to the lifeboat and arranged so that any deflection of the hull or canopy during launching will not cause injury to the occupants. The location and structure of the seat shall be arranged to preclude the potential for injury during launch if the seat is narrower than the occupant’s shoulders. The passage between the seats shall have a clear width of at least 480 mm from the deck to the top of the seats, be free of any obstruction and provided with an anti-slip surface with suitable foot holds to allow safe embarkation in the ready-to-launch position. Each seat shall be provided with a suitable locking harness capable of quick release under tension to restrain the body of the occupant during launching.

4.7.2.2 The angle between the seat pan and the seat back shall be at least 90°. The width of the seat pan shall be at least 480 mm. Free clearance in front of the backrest (buttock to knee length) shall be at least 650 mm measured at an angle of 90° to the backrest. The backrest shall extend at least 1,075 mm above the seat pan. The seat shall provide for shoulder height, measured along the seat back, of at least 760 mm. The foot rest shall be oriented at not less than half of the angle of the seat pan and shall have a foot length of at least 330 mm. Figure 2 refers.

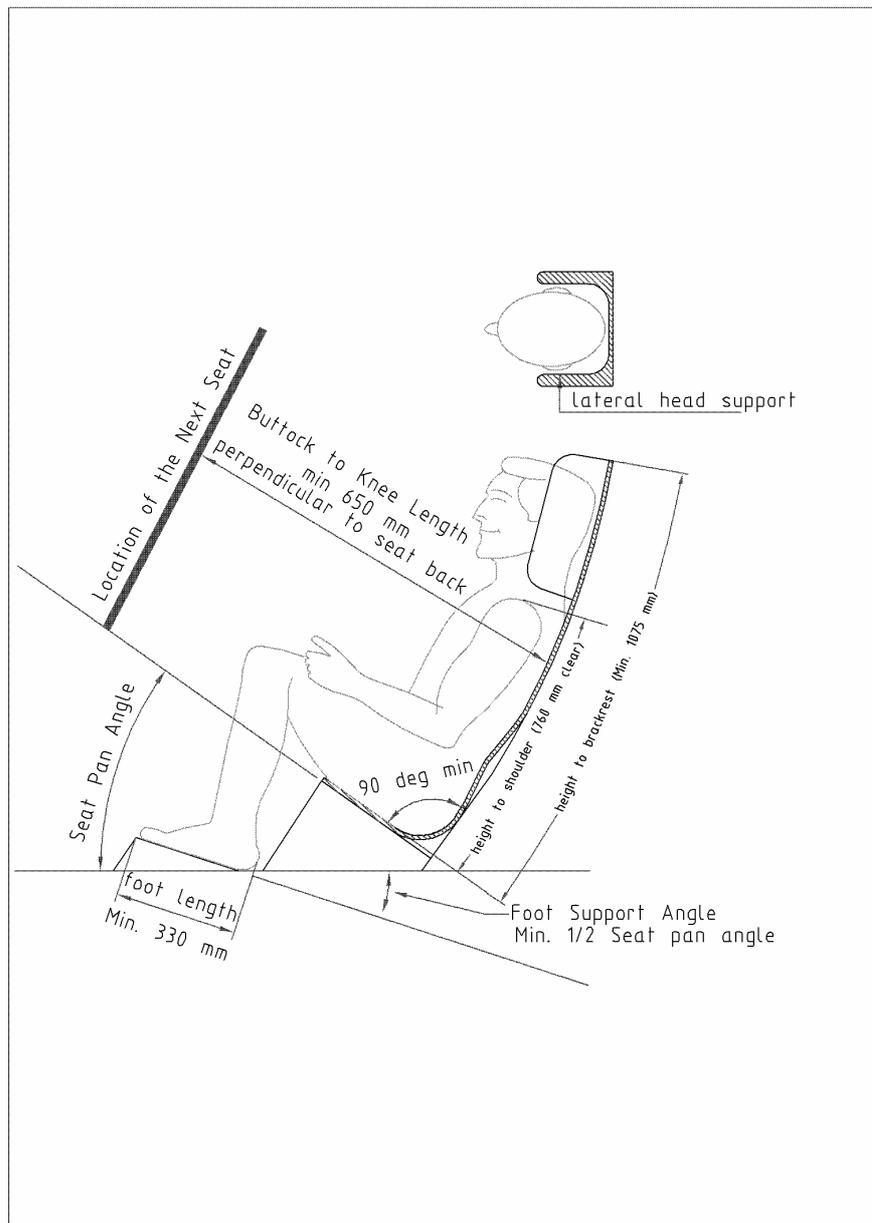


Figure 2”

## CHAPTER V RESCUE BOATS

### 5.1 Rescue boats

4 In the first sentence of paragraph 5.1.1.1, the words “, except that, for all rescue boats, an average mass of 82.5 kg shall apply to paragraph 4.4.2.2.1” are added after the reference to “4.4.9”.

5 In the second sentence of paragraph 5.1.3.5, the words “75 kg” are replaced by the words “82.5 kg”.

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**ANNEX 19**

**DRAFT MSC RESOLUTION**

**ADOPTION OF AMENDMENTS TO THE REVISED RECOMMENDATION ON TESTING OF LIFE-SAVING APPLIANCES (RESOLUTION MSC.81(70))**

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.689(17) on Testing of life-saving appliances, by which the Assembly, at its seventeenth session, adopted recommendations for test requirements for life-saving appliances,

RECALLING FURTHER that the Assembly, when adopting resolution A.689(17), authorized the Committee to keep the Recommendation on testing of life-saving appliances under review and to adopt, when appropriate, amendments thereto,

NOTING resolution MSC.81(70), by which, at its seventieth session, it adopted the Revised recommendation on testing of life-saving appliances, recognizing the need to introduce more precise provisions for the testing of life-saving appliances based on the requirements of the International Life-Saving Appliances (LSA) Code,

BEING DESIROUS to address increases in the size of mariners by increasing the assumed weight of persons in lifeboats and rescue boats, and to address potential injury by flexing of hulls and canopies of free-fall lifeboats during launch,

HAVING CONSIDERED, at its [.....] session, amendments to the Revised recommendation on testing of life-saving appliances, proposed by the Sub-Committee on Ship Design and Equipment at its fifty-first session,

1. ADOPTS amendments to the Revised recommendation on testing of life-saving appliances (resolution MSC.81(70)), the text of which is set out in the Annex to the present resolution;
2. RECOMMENDS Governments to apply the annexed amendments when testing life-saving appliances.

ANNEX

**AMENDMENTS TO  
THE REVISED RECOMMENDATION ON TESTING OF LIFE-SAVING APPLIANCES  
(RESOLUTION MSC.81(70))**

**PART 1**

**PROTOTYPE TESTS FOR LIFE-SAVING APPLIANCES**

**6.1 Definitions and general conditions**

1 The existing paragraph 6.1.1 is replaced by the following:

“6.1.1 Except as specified otherwise, the mass of an average person as used herein should be taken to be 75 kg for a lifeboat intended for a passenger ship, or 82.5 kg for a lifeboat intended for a cargo ship.”

**6.3 Lifeboat overload test**

2 In the first sentence of paragraph 6.3.2, after the word “persons”, the words “for the type of ship” are inserted.

3 The existing paragraph 6.3.9 is replaced by the following:

“6.3.9 This test should be considered successful if the lifeboat passes the operational test to the satisfaction of the Administration; no damage has been sustained that would affect the lifeboat’s efficient functioning; and any deflections of the hull or canopy as measured during the test would not cause injury to lifeboat occupants.”

**6.7 Lifeboat seating space test**

4 In the second sentence of paragraph 6.7.1, after the words “75 kg”, the words “for a lifeboat intended for a passenger ship or 82.5 kg for a lifeboat intended for a cargo ship,” are inserted.

**7.1 Rigid rescue boats**

5 In the second sentence of paragraph 7.1.3, the words “75 kg” are replaced by the words “82.5 kg”.

6 In the first sentence of paragraph 7.1.4, after the word “persons”, the words “, each weighing 82.5 kg,” are inserted.

**7.2 Inflated rescue boats**

7 In subparagraph .3 of paragraph 7.2.4, the words “75 kg” are replaced by the words “82.5 kg”.

8 In the first sentence of paragraph 7.2.11, after the word “persons”, the words “, each weighing 82.5 kg,” are inserted.

## **PART 2**

### **PRODUCTION AND INSTALLATION TESTS**

#### **5.2 Davit-launched liferaft and inflated rescue boat test**

9 In subparagraph .4 of paragraph 5.2, after the words “75 kg per person”, the words “for the liferaft and 82.5 kg per person for the rescue boat” are inserted.

#### **6.1 Launching appliances using falls and winches**

10 In the first sentence of paragraph 6.1.2, after the words “75 kg”, the words “or 82.5 kg, as applicable” are inserted.

11 In the first sentence of paragraph 6.1.5, after the words “75 kg”, the words “or 82.5 kg, as applicable” are inserted.

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**ANNEX 20****DRAFT AMENDMENTS TO THE  
INTERNATIONAL SAFETY MANAGEMENT (ISM) CODE****1 GENERAL****1.1 Definitions**

- 1 In paragraph 1.1.10 the words “and includes” are replaced by the word “or”.

**1.2 Objectives**

- 2 The existing paragraph 1.2.2.2 is replaced by the following:

“2 assess all identified risks to its ships, personnel and the environment and establish appropriate safeguards; and”

**5 MASTER’S RESPONSIBILITY AND AUTHORITY**

- 3 The word “periodically” is added at the beginning of paragraph 5.1.5.

**7 DEVELOPMENT OF PLANS FOR SHIPBOARD OPERATIONS**

- 4 The existing section 7 is replaced by the following:

**“7 SHIPBOARD OPERATIONS**

The Company should establish procedures, plans and instructions, including checklists as appropriate, for key shipboard operations concerning the safety of the personnel, ship and protection of the environment. The various tasks should be defined and assigned to qualified personnel.”

**8 EMERGENCY PREPAREDNESS**

- 5 The existing paragraph 8.1 is replaced by the following:

“8.1 The Company should identify potential emergency shipboard situations, and establish procedures to respond to them.”

## **9 REPORTS AND ANALYSIS OF NON-CONFORMITIES, ACCIDENTS AND HAZARDOUS OCCURRENCES**

6 The existing paragraph 9.2 is replaced by the following:

“9.2 The Company should establish procedures for the implementation of corrective action, including measures intended to prevent recurrence.”

## **10 MAINTENANCE OF THE SHIP AND EQUIPMENT**

7 In paragraph 10.3, the words “establish procedures in its safety management system to” are deleted.

## **12 COMPANY VERIFICATION, REVIEW AND EVALUATION**

8 In paragraph 12.1 the words “[on board and ashore at least annually]” are inserted after the words “internal audits”.

9 In paragraph 12.2 the words “efficiency of and, when needed, review” are replaced by the words “effectiveness of”.

## **13 CERTIFICATION AND PERIODICALLY VERIFICATION**

10 The following new paragraphs 13.12, 13.13 and 13.14 are added after the existing paragraph 13.11:

“13.12 When the renewal verification is completed after the expiry date of the existing Safety Management Certificate, the new Safety Management Certificate shall be valid from the date of completion of the renewal verification to a date not exceeding five years from the date of expiry of the existing Safety Management Certificate.

13.13 If a renewal verification has been completed and a new Safety Management Certificate cannot be issued or placed on board the ship before the expiry date of the existing certificate, the Administration or organization recognized by the Administration may endorse the existing certificate and such a certificate shall be accepted as valid for a further period which shall not exceed five months from the expiry date.

13.14 If a ship at the time when a Safety Management Certificate expires is not in a port in which it is to be verified, the Administration may extend the period of validity of the Safety Management Certificate but this extension shall be granted only for the purpose of allowing the ship to complete its voyage to the port in which it is to be verified, and then only in cases where it appears proper and reasonable to do so. No Safety Management Certificate shall be extended for a period of longer than three months, and the ship to which an extension is granted shall not, on its arrival in the port in which it is to be verified, be entitled by virtue of such extension to leave that port without having a new Safety Management Certificate. When the renewal verification is completed, the new Safety Management Certificate shall be valid to a date not exceeding five years from the expiry date of the existing Safety Management Certificate before the extension was granted.”

#### **14 INTERIM CERTIFICATION**

- 11 In paragraph 14.4.3 the word “internal” is inserted after the words “planned the”.

APPENDIX

**Forms of the Document of Compliance, the Safety Management Certificate,  
the Interim Document of Compliance and the Interim Safety Management Certificate**

**SAFETY MANAGEMENT CERTIFICATE**

12 The following new form is added after existing form of “ENDORSEMENT FOR INTERMEDIATE VERIFICATION AND ADDITIONAL VERIFICATION (IF REQUIRED)”:

“Certificate No.

**ENDORSEMENT WHERE THE RENEWAL VERIFICATION  
HAS BEEN COMPLETED AND PART B 13.13 OF  
THE ISM CODE APPLIES**

The ship complies with the relevant provisions of part B of the ISM Code, and the Certificate shall, in accordance with part B 13.13 of the ISM Code, be accepted as valid until.....

Signed .....  
(Signature of authorized official)  
Place .....  
Date .....

*(Seal or stamp of the authority, as appropriate)*

**ENDORSEMENT TO EXTEND THE VALIDITY OF THE  
CERTIFICATE UNTIL REACHING THE PORT OF  
VERIFICATION WHERE PART B 13.12 OF THE ISM CODE APPLIES  
OR FOR A PERIOD OF GRACE WHERE PART B 13.14 OF  
THE ISM CODE APPLIES**

This Certificate shall, in accordance with part B 13.12 or part B 13.14 of the ISM Code, be accepted as valid until .....

Signed .....  
(Signature of authorized official)  
Place .....  
Date .....

*(Seal or stamp of the authority, as appropriate)”*

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## ANNEX 21

## WORK PROGRAMMES OF THE SUB-COMMITTEES

## SUB-COMMITTEE ON BULK LIQUIDS AND GASES (BLG)

		<b>Target completion date/number of sessions needed for completion</b>	<b>Reference</b>
1	<b>Evaluation of safety and pollution hazards of chemicals and preparation of consequential amendments</b> <i>Strategic direction: 7.2 and 1.3</i> <i>High-level action: 7.2.2 and 1.3.3</i> <i>Planned output: 7.2.2.1 and 1.3.3.1</i>	Continuous	BLG 10/19, section 3; BLG 11/16, section 3
2	<b>Casualty analysis</b> (coordinated by FSI) <i>Strategic direction: 12.1</i> <i>High-level action: 12.1.2</i> <i>Planned output: 12.1.2.1 to .2</i>	Continuous	MSC 70/23, paragraphs 9.17 and 20.4; MSC 80/24, paragraph 21.6; BLG 12/17, section 9
3	<b>Consideration of IACS unified interpretations</b> <i>Strategic direction: 1.1</i> <i>High-level action: 1.1.2</i> <i>Planned output: 1.1.2.1</i>	Continuous	MSC 78/26, paragraph 22.12; BLG 12/17, section 10
H.1	Environmental and safety aspects of alternative tanker designs under MARPOL, Annex I, regulation 19 <i>Strategic direction: 7.2</i> <i>High-level action: 7.2.2</i> <i>Planned output: 7.2.2.1</i>		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

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- 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 13.

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

		<b>Target completion date/number of sessions needed for completion</b>	<b>Reference</b>
H.2	<b>Development of provisions for gas-fuelled ships</b> (in cooperation with FP and DE) <i>Strategic direction: 5.2</i> <i>High-level action: 5.2.1</i> <i>Planned output: 5.2.1.1</i>	2009	MSC 78/26, paragraph 24.11; BLG 12/17, section 7
H.3	<b>Development of guidelines and other documents for uniform implementation of the 2004 BWM Convention</b> <i>Strategic direction: 7.1</i> <i>High-level action: 7.1.2</i> <i>Planned output: 7.1.2.2 to .5</i>	2010	MEPC 52/24, paragraph 2.21.6; BLG 12/17, section 5
H.4	<b>Application of the requirements for the carriage of bio-fuels and bio-fuel blends</b> <i>Strategic direction: 7.2</i> <i>High-level action: 7.2.2</i> <i>Planned output: 7.2.2.1</i>	2009	MEPC 55/23, paragraphs 19.4 and 19.5; BLG 12/17, section 4
H.5	<b>Development of international measures for minimizing the transfer of invasive aquatic species through bio-fouling of ships</b> <i>Strategic direction: 7.1</i> <i>High-level action: 7.1.1</i> <i>Planned output: -</i>	2010	MEPC 56/23, paragraph 19.12; BLG 12/17, section 11
H.6	<b>Review of the Recommendation for material safety data sheets for MARPOL Annex I cargoes and marine fuel oils</b> <i>Strategic direction: 5.2</i> <i>High-level action: 5.2.3</i> <i>Planned output: 5.2.3.1</i>	2009	BLG 11/16, paragraph 14.14; MSC 83/28, paragraph 25.8; BLG 12/17, section 12

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

		<b>Target completion date/number of sessions needed for completion</b>	<b>Reference</b>
H.7	<p><b>Revision of the IGC Code</b> (in cooperation with FP, DE, SLF and STW as necessary) <i>Strategic direction:</i> 5.2 <i>High-level action:</i> 5.2.1 <i>Planned output:</i> -</p>	2010	MSC 83/28, paragraph 25.7; BLG 12/17, section 13
H.8	<p><b>Safety requirements for natural gas hydrate pellet carriers</b> <i>Strategic direction:</i> 5.2 <i>High-level action:</i> 5.2.1 <i>Planned output:</i> -</p>	2011	MSC 83/28, paragraph 25.6
H.9	<p><b>Review of relevant non-mandatory instruments as a consequence of the amended MARPOL Annex VI and the NOx Technical Code</b> <i>Strategic direction:</i> 7.3 <i>High-level action:</i> 7.3.1 <i>Planned output:</i> 7.3.1.1</p>	2010	BLG 12/17, paragraph 6.88.9
H.10	<p><b>Amendments to MARPOL Annex I on the use and carriage of heavy grade oil on ships in the Antarctic area</b> <i>Strategic direction:</i> 7.2 <i>High-level action:</i> 7.2.2 <i>Planned output:</i> -</p>	2010	BLG 12/17, paragraph 16.12

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

		<b>Target completion date/number of sessions needed for completion</b>	<b>Reference</b>
1	<b>Harmonization of the IMDG Code with the UN Recommendations on the Transport of Dangerous Goods</b> <i>Strategic direction: 1.3</i> <i>High-level action: 1.3.5</i> <i>Planned output: 1.3.5.1</i>	Continuous	MSC 63/23, paragraph 10.6
2	<b>Reports on incidents involving dangerous goods or marine pollutants in packaged form on board ships or in port areas</b> <i>Strategic direction: 12.3</i> <i>High-level action: 12.3.1</i> <i>Planned output: -</i>	Continuous	CDG 45/22, section 11 and paragraph 20.2; DSC 11/19, section 6
3	<b>Amendments to the BC Code, including evaluation of properties of solid bulk cargoes</b> <i>Strategic direction: 5.2</i> <i>High-level action: 5.2.3</i> <i>Planned output: 5.2.3.1</i>	Continuous	BC 34/17, section 3; DSC 11/19, section 4
4	<b>Casualty analysis</b> (coordinated by FSI) <i>Strategic direction: 12.1</i> <i>High-level action: 12.1.2</i> <i>Planned output: 12.1.2.1 to .2</i>	Continuous	MSC 70/23, paragraphs 9.17 and 20.4; DSC 11/19, section 6
H.1	<b>Amendment (35-10) to the IMDG Code and supplements</b> <i>Strategic direction: 5.2</i> <i>High-level action: 5.2.3</i> <i>Planned output: 5.2.3.1</i>	2009	DSC 3/15, paragraph 12.6; DSC 12/19, section 3
H.2	<b>Amendments to the CSS Code</b> <i>Strategic direction: 5.2</i> <i>High-level action: 5.2.3</i> <i>Planned output: 5.2.3.1</i>	2008	MSC 78/26, paragraph 24.15.3; DSC 12/19, section 8

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2 Items printed in bold letters have been selected for the provisional agenda for DSC 13.

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

		<b>Target completion date/number of sessions needed for completion</b>	<b>Reference</b>
H.3	<b>Extension of the BLU Code to include grain</b> <i>Strategic direction: 5.2</i> <i>High-level action: 5.2.3</i> <i>Planned output: -</i>	2008	MSC 79/23, paragraph 20.7; DSC 11/19, section 12
H.4	<b>Guidance on providing safe working conditions for securing of containers</b> <i>Strategic direction: 5.2</i> <i>High-level action: 5.2.3</i> <i>Planned output: 5.2.3.2</i>	2008	MSC 80/24, paragraph 21.8; DSC 12/19, section 10
H.5	<b>Review of the Recommendations on the safe use of pesticides in ships</b> <i>Strategic direction: 5.2</i> <i>High-level action: 5.2.3</i> <i>Planned output: 5.2.3.2</i>	2008	DSC 10/17, paragraph 4.23; DSC 12/19, section 11
H.6	<b>Guidance on protective clothing</b> <i>Strategic direction: 5.2</i> <i>High-level action: 5.2.3</i> <i>Planned output: 5.2.3.2</i>	2008	MSC 81/25, paragraph 23.8; DSC 11/19, paragraph 16.1.3.1
H.7	<b>Revision of the Code of Safe Practice for Ships Carrying Timber Deck Cargoes</b> <i>Strategic direction: 5.2</i> <i>High-level action: -</i> <i>Planned output: -</i>	2010	MSC 82/24, paragraph 21.11
H.8	<b>Form and procedure for approval of the Cargo Securing Manual</b> <i>Strategic direction: 5.2</i> <i>High-level action: 5.2.3</i> <i>Planned output: 5.2.3.2</i>	2008	MSC 82/24, paragraph 21.12
H.9	<b>Stowage of water-reactive materials</b> (in cooperation with FP as necessary) <i>Strategic direction: 5.2</i> <i>High-level action: 5.2.3</i> <i>Planned output: -</i>	2009	MSC 83/28, paragraph 25.12

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

		<b>Target completion date/number of sessions needed for completion</b>	<b>Reference</b>
H.10	<b>Amendments to the International Convention for Safe Containers, 1972</b> <i>Strategic direction:</i> 5.2 <i>High-level action:</i> 5.2.3 <i>Planned output:</i> 5.2.3.1	2009	DSC 12/19, section 16; MSC 83/28, paragraph 25.13.1
H.11	<b>Review of the Guidelines for packing of cargo transport units</b> <i>Strategic direction:</i> 5.2 <i>High-level action:</i> 5.2.3 <i>Planned output:</i> 5.2.3.2	2009	DSC 12/19, section 16; MSC 83/28, paragraph 25.13.2
L.1	<b>Review of documentation requirements for dangerous goods in packaged form</b> <i>Strategic direction:</i> 5.2 <i>High-level action:</i> 5.2.3 <i>Planned output:</i> -	2009	MSC 84/24, paragraph 22.9
L.2	Consideration for the efficacy of Container Inspection Programme <i>Strategic direction:</i> 5.2 <i>High-level action:</i> 5.2.3 <i>Planned output:</i> -	2 sessions	MSC 84/24, paragraph 22.10

**SUB-COMMITTEE ON FIRE PROTECTION (FP)**

		<b>Target completion date/number of sessions needed for completion</b>	<b>Reference</b>
1	<b>Analysis of fire casualty records</b> <i>Strategic direction:</i> 12.1 <i>High-level action:</i> 12.1.2 <i>Planned output:</i> 12.1.2.1 to .2	Continuous	MSC 75/24, paragraph 22.18; FP 52/21, section 15
2	<b>Consideration of IACS unified interpretations</b> <i>Strategic direction:</i> 1.1 <i>High-level action:</i> 1.1.2 <i>Planned output:</i> 1.1.2.1	Continuous	MSC 78/26, paragraph 22.12; FP 52/21, section 12
H.1	<b>Performance testing and approval standards for fire safety systems</b> <i>Strategic direction:</i> 2 <i>High-level action:</i> 2.1.1 <i>Planned output:</i> 2.1.1.2	2009	MSC 74/24, paragraph 21.12; FP 52/21, section 3
H.2	<b>Comprehensive review on the Fire Test Procedures Code</b> <i>Strategic direction:</i> 2 <i>High-level action:</i> 2.1.1 <i>Planned output:</i> 2.1.1.1	2009	MSC 80/24, paragraph 21.11; FP 52/21, section 4
H.3	<b>Development of provisions for gas-fuelled ships (coordinated by BLG)</b> <i>Strategic direction:</i> 5.2 <i>High-level action:</i> 5.2.1 <i>Planned output:</i> 5.2.1.1	2009	MSC 78/26, paragraph 24.19; FP 52/21, section 11
H.4	<b>Measures to prevent fires in engine-rooms and cargo pump-rooms</b> <i>Strategic direction:</i> 2 <i>High-level action:</i> 2.1.1 <i>Planned output:</i> 2.1.1.2	2009	MSC 79/23, paragraph 20.11; FP 52/21, section 6

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- 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 FP 53.

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

		<b>Target completion date/number of sessions needed for completion</b>	<b>Reference</b>
H.5	<b>Fire resistance of ventilation ducts</b> <i>Strategic direction:</i> 5.2 <i>High-level action:</i> 5.2.1 <i>Planned output:</i> 5.2.1.1	2009	MSC 81/25, paragraph 23.13; MSC 83/28, paragraph 25.22
H.6	<b>Fixed hydrocarbon gas detection systems on double-hull oil tankers</b> (in cooperation with BLG as necessary) <i>Strategic direction:</i> 2 <i>High-level action:</i> 2.1.1 <i>Planned output:</i> 2.1.1.1	2010	MSC 82/24, paragraph 21.18; FP 52/21, section 13; MSC 84/24, paragraph 22.16
H.7	<b>Clarification of SOLAS chapter II-2 requirements regarding interrelation between central control station and safety centre</b> <i>Strategic direction:</i> 2 <i>High-level action:</i> 2.1.1 <i>Planned output:</i> 2.1.1.2	2009	MSC 82/24, paragraph 21.20; FP 52/21, section 14
H.8	<b>Harmonization of the requirements for the location of entrances, air inlets and openings in the superstructures of tankers</b> (in cooperation with BLG as necessary) <i>Strategic direction:</i> 5.2 <i>High-level action:</i> 5.2.1 <i>Planned output:</i> -	2010	MSC 83/28, paragraph 25.24.2; FP 52/21, paragraph 16.1
H.9	<b>Amendments to SOLAS chapter II-2 related to the releasing controls and means of escape for spaces protected by fixed carbon dioxide systems</b> <i>Strategic direction:</i> 5.2 <i>High-level action:</i> 5.2.1 <i>Planned output:</i> -	2010	MSC 83/28, paragraph 25.24.1; FP 52/21, paragraph 16.1

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

		<b>Target completion date/number of sessions needed for completion</b>	<b>Reference</b>
H.10	<b>Guidelines for drainage systems in closed vehicle and ro-ro spaces and special category spaces</b> (in cooperation with SLF) <i>Strategic direction:</i> 5.1 <i>High-level action:</i> 5.1.1 <i>Planned output:</i> 5.1.1.2	2009	MSC 83/28, paragraph 25.20; FP 52/21, paragraph 18.5
H.11	<b>Review of fire protection requirements for on-deck cargo areas</b> (in cooperation of DSC as necessary) <i>Strategic direction:</i> 5.1 <i>High-level action:</i> 5.1.1 <i>Planned output:</i> -	2011	MSC 83/28, paragraph 25.21; FP 52/21, paragraph 16.1
H.12	<b>Means of escape from machinery spaces</b> <i>Strategic direction:</i> 5.2 <i>High-level action:</i> 5.2.1 <i>Planned output:</i> -	2010	MSC 83/28, paragraph 25.23; FP 52/21, paragraph 16.1
H.13	<b>Measures to prevent explosions on oil and chemical tankers transporting low-flash point cargoes</b> (in cooperation with BLG and DE as necessary) <i>Strategic direction:</i> 5.2 <i>High-level action:</i> 5.2.3 <i>Planned output:</i> 5.2.3.4	2009	FP 51/19, paragraph 10.8; MSC 83/28, paragraph 9.26; FP 52/21, section 20
H.14	<b>Recommendation on evacuation analysis for new and existing passenger ships</b> <i>Strategic direction:</i> 5.1 <i>High-level action:</i> 5.1.1 <i>Planned output:</i> 5.1.1.1	2010	MSC 73/21, paragraph 4.16; MSC 83/28, paragraph 8.7 ; FP 52/21, section 19

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

		<b>Target completion date/number of sessions needed for completion</b>	<b>Reference</b>
H.15	<b>Explanatory notes for the application of the safe return to port requirements (in cooperation with DE and SLF as necessary)</b> <i>Strategic direction:</i> 5.1 <i>High-level action:</i> 5.1.1 <i>Planned output:</i> -	2010	MSC 84/24, paragraph 22.15
H.16	Safety provisions applicable to tenders operating from passenger ships (coordinated by DE) <i>Strategic direction:</i> 5.2 <i>High-level action:</i> 5.2.1 <i>Planned output:</i> -	3 sessions	MSC 84/24, paragraph 22.14
L.1	Smoke control and ventilation <i>Strategic direction:</i> 5.2 <i>High-level action:</i> 5.2.1 <i>Planned output:</i> -	2 sessions	FP 39/19, section 9; FP 46/16, section 4

**SUB-COMMITTEE ON FLAG STATE IMPLEMENTATION (FSI)**

		<b>Target completion date/number of sessions needed for completion</b>	<b>Reference</b>
1	<b>Mandatory reports under MARPOL 73/78</b> <i>Strategic direction:</i> 2.1 <i>High-level action:</i> 2.1.1 <i>Planned output:</i> 2.1.1.6	Continuous	MSC 70/23, paragraph 20.12.1; FSI 15/18, section 4
2	<b>Casualty statistics and investigations</b> <i>Strategic direction:</i> 12.1 <i>High-level action:</i> 12.1.2 <i>Planned output:</i> 12.1.2.1 to .2	Continuous	MSC 68/23, paragraphs 7.16 to 7.24; FSI 15/18, section 6
3	<b>Harmonization of port State control activities</b> <i>Strategic direction:</i> 5.3 <i>High-level action:</i> 5.3.1 <i>Planned output:</i> -	Continuous	MSC 71/23, paragraph 20.16; MSC 80/24, paragraph 21.16; FSI 15/18, section 7
4	<b>Responsibilities of Governments and measures to encourage flag State compliance</b> <i>Strategic direction:</i> 5.3 <i>High-level action:</i> 5.3.1 <i>Planned output:</i> -	Continuous	MSC 68/23, paragraphs 7.2 to 7.8; FSI 15/18, section 3
5	<b>Comprehensive analysis of difficulties encountered in the implementation of IMO instruments</b> <b>Strategic direction:</b> 2.1 <b>High-level action:</b> 2.1.1 <b>Planned output:</b> -	Continuous	MSC 69/22, paragraph 20.28; FSI 8/19, paragraph 4.3; FSI 15/18, section 11

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- 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 FSI 16.

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

		<b>Target completion date/number of sessions needed for completion</b>	<b>Reference</b>
6	<b>Review of the Survey Guidelines under the HSSC (resolution A.948(23))</b> <i>Strategic direction:</i> 5.2 <i>High-level action:</i> 5.2.1 <i>Planned output:</i> 5.2.1.2	Continuous	MSC 72/23, paragraph 21.27; FSI 15/18, section 12
7	<b>Consideration of IACS unified interpretations</b> <i>Strategic direction:</i> 1.1 <i>High-level action:</i> 1.1.2 <i>Planned output:</i> 1.1.2.1	Continuous	MSC 78/26, paragraph 22.12; FSI 15/18, section 13
8	<b>Review of the Code for the Implementation of Mandatory IMO Instruments</b> <i>Strategic direction:</i> 2.2 <i>High-level action:</i> 2.2.1 <i>Planned output:</i> 2.2.1.2	Continuous	MSC 83/28, paragraph 15.3
H.1	<b>PSC guidelines on seafarers' working hours</b> <i>Strategic direction:</i> 1.1 <i>High-level action:</i> 1.1.2 <i>Planned output:</i> 1.1.2.1	2009	MSC 70/23, paragraph 20.12.3; FSI 15/18, paragraph 10.5
H.2	<b>Illegal, unregulated and unreported (IUU) fishing and implementation of resolution A.925(22)</b> <i>Strategic direction:</i> 1.1 <i>High-level action:</i> 1.1.2 <i>Planned output:</i> -	2008	MSC 72/23, paragraph 21.28; FSI 10/17, section 11; MSC 75/24, paragraphs 13.11 and 22.25.3; FSI 15/18, section 14
H.3	<b>Development of guidelines on port State control under the 2004 BWM Convention</b> <i>Strategic direction:</i> 5.3 <i>High-level action:</i> 5.3.1 <i>Planned output:</i> -	2008	MEPC 52/24, paragraph 2.21.2; FSI 15/18, section 9

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

		<b>Target completion date/number of sessions needed for completion</b>	<b>Reference</b>
H.4	<b>Port reception facilities-related issues</b> <i>Strategic direction:</i> 1.1 <i>High-level action:</i> 1.1.2 <i>Planned output:</i> -	2010	MEPC 53/24, paragraph 9.7; FSI 15/18, section 5
H.5	Code of conduct during demonstrations/campaigns against ships on high seas (coordinated by NAV) <i>Strategic direction:</i> 5.2 <i>High-level action:</i> 5.2.4 <i>Planned output:</i> 5.2.4.2	2 sessions	MSC 82/24, paragraph 21.26
H.6	Measures to protect the safety of persons rescued at sea <i>Strategic direction:</i> 5.1 <i>High-level action:</i> 5.1.2 <i>Planned output:</i> -	2 sessions*	MSC 84/24, paragraph 22.19
H.7	Development of a Code for Recognized Organizations <i>Strategic direction:</i> 1.1 <i>High-level action:</i> 1.1.2 <i>Planned output:</i> -	2 sessions*	MSC 84/24, paragraphs 22.25 and 22.36

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\* The Sub-Committee has been instructed to include the item in the provisional agenda for FSI 17.

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

		<b>Target completion date/number of sessions needed for completion</b>	<b>Reference</b>
<b>1</b>	<b>Global Maritime Distress and Safety System (GMDSS)</b>		
	<b>.1 matters relating to the GMDSS Master Plan</b>	Continuous	COMSAR 12/15, paragraphs 3.1 to 3.7 and 3.23 to 3.30
	<i>Strategic direction:</i> 5.2		
	<i>High-level action:</i> 5.2.5		
	<i>Planned output:</i> 5.2.5.2		
<b>2</b>	<b>Promulgation of maritime safety information (MSI) (in cooperation with ITU, IHO, WMO and IMSO)</b>		
	<b>.1 operational and technical coordination provisions of maritime safety information (MSI) services, including review of the related documents</b>	Continuous	COMSAR 12/15, paragraphs 3.1 to 3.7 and 3.23 to 3.30
	<i>Strategic direction:</i> 5.2		
	<i>High-level action:</i> 5.2.5		
	<i>Planned output:</i> 5.2.5.1		
<b>3</b>	<b>ITU World Radiocommunication Conference matters</b>	Continuous	COMSAR 12/15, paragraphs 4.11 to 4.19 and 4.28 to 4.35
	<i>Strategic direction:</i> 1.1		
	<i>High-level action:</i> 1.1.2		
	<i>Planned output:</i> 1.1.2.2		
<b>4</b>	<b>Radiocommunication ITU-R Study Group matters</b>	Continuous	COMSAR 12/15, paragraphs 4.1 to 4.10 and 4.22 to 4.27
	<i>Strategic direction:</i> 1.1		
	<i>High-level action:</i> 1.1.2		
	<i>Planned output:</i> 1.1.2.2		

**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 COMSAR 13.

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

		<b>Target completion date/number of sessions needed for completion</b>	<b>Reference</b>
5	<b>Satellite services (Inmarsat and COSPAS-SARSAT)</b> <i>Strategic direction:</i> 5.2 <i>High-level action:</i> 5.2.5 <i>Planned output:</i> 5.2.5.4	Continuous	COMSAR 12/15, section 5
6	<b>Matters concerning search and rescue, including those related to the 1979 SAR Conference and the implementation of the GMDSS</b>		
.1	<b>harmonization of aeronautical and maritime search and rescue procedures, including SAR training matters</b> <i>Strategic direction:</i> 2 <i>High-level action:</i> 2.3.1 <i>Planned output:</i> 2.3.1.5	2009	COMSAR 12/15, paragraphs 6.1 to 6.15, 6.65 to 6.75 and 6.91 to 6.92
.2	<b>plan for the provision of maritime SAR services, including procedures for routing distress information in the GMDSS</b> <i>Strategic direction:</i> 2 <i>High-level action:</i> 2.3.1 <i>Planned output:</i> 2.3.1.1/2.3.1.2	Continuous	COMSAR 12/15, paragraphs 6.16 to 6.59 and 6.76 to 6.90
.3	<b>revision of the IAMSAR Manual</b> <i>Strategic direction:</i> 1.3 <i>High-level action:</i> 1.3.5 <i>Planned output:</i> 1.3.5.2	Continuous	MSC 71/23, paragraph 20.2; COMSAR 12/15, section 8
7	<b>Casualty analysis (coordinated by FSI)</b> <i>Strategic direction:</i> 12.1 <i>High-level action:</i> 12.1.2 <i>Planned output:</i> 12.1.2.1 to .2	Continuous	MSC 70/23, paragraphs 9.17 and 20.4; MSC 78/26, paragraph 24.8

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

		<b>Target completion date/number of sessions needed for completion</b>	<b>Reference</b>
H.1	<b>Developments in maritime radiocommunication systems and technology</b> <i>Strategic direction:</i> 5.2 <i>High-level action:</i> - <i>Planned output:</i> -	2009	MSC 74/24, paragraph 21.25.1; COMSAR 12/15, section 7
H.2	<b>Development of procedures for updating shipborne navigation and communication equipment</b> (coordinated by NAV) <i>Strategic direction:</i> 5.2 <i>High-level action:</i> - <i>Planned output:</i> -	2010	MSC 83/28, paragraph 25.30
H.3	<b>Measures to protect the safety of persons rescued at sea</b> <i>Strategic direction:</i> 5.1 <i>High-level action:</i> 5.1.2 <i>Planned output:</i> -	2010	MSC 84/24, paragraphs 22.25 and 22.36
H.4	Safety provisions applicable to tenders operating from passenger ships (coordinated by DE) <i>Strategic direction:</i> 5.2 <i>High-level action:</i> 5.2.1 <i>Planned output:</i> -	3 sessions	MSC 84/24, paragraph 22.35

**SUB-COMMITTEE ON SAFETY OF NAVIGATION (NAV)**

		<b>Target completion date/number of sessions needed for completion</b>	<b>Reference</b>
1	<b>Routeing of ships, ship reporting and related matters</b> <i>Strategic direction:</i> 5.2 <i>High-level action:</i> 5.2.4 <i>Planned output:</i> 5.2.4.1	Continuous	MSC 72/23, paragraphs 10.69 to 10.71, 20.41 and 20.42; NAV 53/22, section 3
2	<b>Casualty analysis</b> (coordinated by FSI) <i>Strategic direction:</i> 12.1 <i>High-level action:</i> 12.1.2 <i>Planned output:</i> 12.1.2.1 to .2	Continuous	MSC 70/23, paragraphs 9.17 and 20.4; NAV 53/22, section 17
3	<b>Consideration of IACS unified interpretations</b> <i>Strategic direction:</i> 1.1 <i>High-level action:</i> 1.1.2 <i>Planned output:</i> 1.1.2.1	Continuous	MSC 78/26, paragraph 22.12; NAV 53/22, section 18
H.1	<b>Worldwide radionavigation system (WWRNS)</b> <i>Strategic direction:</i> 5.2 <i>High-level action:</i> 5.2.4 <i>Planned output:</i> -	2008	MSC 75/24, paragraph 22.37; NAV 53/22, section 12
.1	new developments in the field of GNSS, especially Galileo	2008	
.2	review and amendment of IMO policy for GNSS (resolution A.915(22))	2008	
.3	recognition of radionavigation systems as components of the WWRNS (resolution A.953(23))	2008	

**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 NAV 54.

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

		<b>Target completion date/number of sessions needed for completion</b>	<b>Reference</b>
H.2	ITU matters <i>Strategic direction:</i> 5.2 <i>High-level action:</i> 5.2.4 <i>Planned output:</i> -	2009	MSC 69/22, paragraphs 5.69 and 5.70; NAV 53/22, section 9
	<b>.1 Radiocommunication ITU-R Study Group 8 matters</b>	2008	
H.3	<b>Development of guidelines for IBS, including performance standards for bridge alert management</b> <i>Strategic direction:</i> 5.2 <i>High-level action:</i> 5.2.4 <i>Planned output:</i> -	2009	MSC 78/26, paragraph 24.30; NAV 53/22, section 4
H.4	<b>Amendments to COLREG Annex I related to colour specification of lights</b> <i>Strategic direction:</i> 5.2 <i>High-level action:</i> 5.2.4 <i>Planned output:</i> 5.2.4.1	2008	MSC 80/24, paragraph 21.24.1; NAV 53/22, section 8
H.5	<b>Carriage requirements for a bridge navigational watch alarm system</b> <i>Strategic direction:</i> 5.2 <i>High-level action:</i> 5.2.4 <i>Planned output:</i> -	2008	MSC 81/25, paragraph 23.27; NAV 53/22, section 6
H.6	<b>Development of an e-navigation strategy (in cooperation with COMSAR)</b> <i>Strategic direction:</i> 5.2 <i>High-level action:</i> 5.2.4 <i>Planned output:</i> -	2008	MSC 81/25, paragraphs 23.34 to 23.37; NAV 53/22, section 13
H.7	<b>Development of carriage requirements for ECDIS</b> <i>Strategic direction:</i> 5.2 <i>High-level action:</i> 5.2.4 <i>Planned output:</i> 5.2.4.1	2008	MSC 81/25, paragraphs 23.39 and 23.40; NAV 53/22, section 14

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

		<b>Target completion date/number of sessions needed for completion</b>	<b>Reference</b>
H.8	<b>Guidelines for uniform operating limitations of high-speed craft</b> (coordinated by DE) <i>Strategic direction:</i> 5.2 <i>High-level action:</i> 5.2.4 <i>Planned output:</i> 5.2.4.2	2008	MSC 81/25, paragraph 23.45; NAV 53/22, section 15
H.9	<b>Guidelines on the layout and ergonomic design of safety centres on passenger ships</b> <i>Strategic direction:</i> 5.2 <i>High-level action:</i> 5.2.4 <i>Planned output:</i> 5.2.4.2	2008	MSC 81/25, paragraph 23.42; NAV 53/22, section 16
H.10	<b>Amendments to the General Provisions on Ships' Routing</b> <i>Strategic direction:</i> 5.2 <i>High-level action:</i> 5.2.4 <i>Planned output:</i> 5.2.4.2	2008	MSC 82/24, paragraph 21.34
H.11	<b>Review of COLREGs regarding the right of way of vessels over pleasure craft</b> <i>Strategic direction:</i> 5.2 <i>High-level action:</i> 5.2.4 <i>Planned output:</i> 5.2.4.1	2008	MSC 82/24, paragraph 21.35
H.12	<b>Code of conduct during demonstrations/campaigns against ships on high seas</b> (in cooperation with FSI) <i>Strategic direction:</i> 5.2 <i>High-level action:</i> 5.2.4 <i>Planned output:</i> 5.2.4.2	2009	MSC 82/24, paragraph 21.36
H.13	<b>Measures to minimize incorrect data transmissions by AIS equipment</b> (in cooperation with FSI and COMSAR, as necessary) <i>Strategic direction:</i> 5.2 <i>High-level action:</i> 5.2.4 <i>Planned output:</i> 5.2.4.2	2009	MSC 82/24, paragraph 21.38

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

		<b>Target completion date/number of sessions needed for completion</b>	<b>Reference</b>
H.14	<b>Review of vague expressions in SOLAS regulation V/22</b> <i>Strategic direction:</i> 5.2 <i>High-level action:</i> 5.2.4 <i>Planned output:</i> 5.2.4.2	2009	MSC 82/24, paragraphs 21.39 to 21.40
H.15	<b>Revision of the Guidance on the application of AIS binary messages</b> <i>Strategic direction:</i> 5.2 <i>High-level action:</i> 5.2.4 <i>Planned output:</i> 5.2.4.2	2009	MSC 82/24, paragraph 21.41
H.16	<b>Improved safety of pilot transfer arrangements (in cooperation with DE)</b> <i>Strategic direction:</i> 5.2 <i>High-level action:</i> 5.2.4 <i>Planned output:</i> 5.2.4.2	2009	MSC 82/24, paragraph 21.42
H.17	Amendments to the Performance standards for VDR and S-VDR <i>Strategic direction:</i> 5.2 <i>High-level action:</i> 5.2.4 <i>Planned output:</i> -	3 sessions	MSC 83/28, paragraph 25.34; MSC 84/24, paragraph 22.44
H.18	Development of procedures for updating shipborne navigation and communication equipment (in cooperation with COMSAR) <i>Strategic direction:</i> 5.2 <i>High-level action:</i> 5.2.4 <i>Planned output:</i> -	2 sessions	MSC 83/28, paragraph 25.33
H.19	Safety provisions applicable to tenders operating from passenger ships (coordinated by DE) <i>Strategic direction:</i> 5.2 <i>High-level action:</i> 5.2.4 <i>Planned output:</i> -	3 sessions	MSC 84/24, paragraph 22.40

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

		<b>Target completion date/number of sessions needed for completion</b>	<b>Reference</b>
H.20	Guidelines for consideration of requests for safety zones larger than 500 metres around artificial islands, installations and structures in the EEZ <i>Strategic direction:</i> 5.2 <i>High-level action:</i> 5.2.4 <i>Planned output:</i> -	2 sessions	MSC 84/24, paragraph 22.41

**SUB-COMMITTEE ON SHIP DESIGN AND EQUIPMENT (DE)**

		<b>Target completion date/number of sessions needed for completion</b>	<b>Reference</b>
1	Casualty analysis (coordinated by FSI) <i>Strategic direction:</i> 12.1 <i>High-level action:</i> 12.1.2 <i>Planned output:</i> 12.1.2.1 to .2	Continuous	MSC 70/23, paragraphs 9.17 and 20.4; DE 50/27, section 17
2	<b>Consideration of IACS unified interpretations</b> <i>Strategic direction:</i> 1.1 <i>High-level action:</i> 1.1.2 <i>Planned output:</i> 1.1.2.1	Continuous	MSC 78/26, paragraph 22.12; DE 51/28, section 22
H.1	<b>Amendments to resolution A.744(18)</b> <i>Strategic direction:</i> 5.2 <i>High-level action:</i> 5.2.1 <i>Planned output:</i> 5.2.1.1	2009	DE 45/27, paragraphs 7.18 and 7.19; DE 51/28, section 3
H.2	<b>Measures to prevent accidents with lifeboats</b> (in cooperation with FSI, NAV and STW) <i>Strategic direction:</i> 5.1 <i>High-level action:</i> 5.1.2 <i>Planned output:</i> 5.1.2.1	2010	MSC 74/24, paragraph 21.34; DE 51/28, section 8
H.3	<b>Compatibility of life-saving appliances</b> <i>Strategic direction:</i> 5.1 <i>High-level action:</i> 5.1.2 <i>Planned output:</i> 5.1.2.2	2009	DE 47/15, paragraph 5.3; MSC 78/26, paragraph 24.37.1; DE 51/28, section 9
H.4	Development of provisions for gas-fuelled ships (coordinated by BLG) <i>Strategic direction:</i> 5.2 <i>High-level action:</i> 5.2.1 <i>Planned output:</i> 5.2.1.1	2 sessions	MSC 78/26, paragraph 24.39; DE 51/28, section 4

**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 DE 52.

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

		<b>Target completion date/number of sessions needed for completion</b>	<b>Reference</b>
H.5	<b>Test standards for extended service intervals of inflatable liferafts</b> <i>Strategic direction:</i> 5.1 <i>High-level action:</i> 5.1.2 <i>Planned output:</i> 5.1.2.3	2009	MSC 78/26, paragraph 24.41; DE 51/28, section 10
H.6	<b>Amendments to the Guidelines for ships operating in Arctic ice-covered waters</b> (in cooperation with SLF, as necessary) <i>Strategic direction:</i> 5.2 <i>High-level action:</i> 5.2.1 <i>Planned output:</i> 5.2.1.2	2010	MSC 79/23, paragraph 8.25; DE 51/28, section 11
H.7	<b>Revision of the Code on Alarms and Indicators</b> (in cooperation with appropriate sub-committees, as necessary) <i>Strategic direction:</i> 2 <i>High-level action:</i> 2.1.1 <i>Planned output:</i> 2.1.1.2	2009	MSC 79/23, paragraph 20.28; DE 51/28, section 6
H.8	<b>Amendments to the MODU Code</b> <i>Strategic direction:</i> 2 <i>High-level action:</i> 2.1.1 <i>Planned output:</i> 2.1.1.2	2009	MSC 79/23, paragraph 22.51; DE 51/28, section 7
H.9	<b>Guidelines for uniform operating limitations of high-speed craft</b> (in cooperation with COMSAR, NAV and SLF) <i>Strategic direction:</i> 5.2 <i>High-level action:</i> 5.2.1 <i>Planned output:</i> 5.2.1.2	2009	MSC 81/25, paragraph 23.45; DE 51/28, section 13
H.10	<b>Guidelines for maintenance and repair of protective coatings</b> <i>Strategic direction:</i> 2 <i>High-level action:</i> 2.1.1 <i>Planned output:</i> 2.1.1.2	2009	MSC 81/25, paragraph 23.48.1; DE 51/28, section 14

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

		<b>Target completion date/number of sessions needed for completion</b>	<b>Reference</b>
H.11	<b>Performance standards for recovery systems</b> <i>Strategic direction:</i> 5.1 <i>High-level action:</i> 5.1.1 <i>Planned output:</i> 5.1.1.1	2010	MSC 81/25, paragraph 23.49.1; DE 51/28, section 16
H.12	<b>Guidance to ensure consistent policy for determining the need for watertight doors to remain open during navigation</b> <i>Strategic direction:</i> 2 <i>High-level action:</i> 2.1.1 <i>Planned output:</i> 2.1.1.2	2009	SLF 49/17, paragraph 3.11; MSC 82/24, paragraph 21.47; DE 51/28, section 26
H.13	<b>Development of a new framework of requirements for life-saving appliances</b> (in cooperation with FP and COMSAR, as necessary)	2012	MSC 82/24, paragraph 21.49
H.14	Improved safety of pilot transfer arrangements (coordinated by NAV) <i>Strategic direction:</i> 5.2 <i>High-level action:</i> 5.2.4 <i>Planned output:</i> 5.2.4.2	2 sessions	MSC 82/24, paragraph 21.50
H.15	<b>Cargo oil tank coating and corrosion protection</b> <i>Strategic direction:</i> 5.2 <i>High-level action:</i> - <i>Planned output:</i> -	2009	MSC 82/24, paragraphs 21.51 and 23.12; DE 51/28, section 19
H.16	Development of safety objectives and functional requirements of the Guidelines on alternative design and arrangements for SOLAS chapters II-1 and III <i>Strategic direction:</i> 5.2 <i>High-level action:</i> - <i>Planned output:</i> -	3 sessions	MSC 82/24, paragraphs 3.92 and 21.52

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

		<b>Target completion date/number of sessions needed for completion</b>	<b>Reference</b>
H.17	Protection against noise on board ships <i>Strategic direction:</i> 5.2 <i>High-level action:</i> - <i>Planned output:</i> -	2 sessions	MSC 83/28, paragraph 25.41
H.18	Thermal performance of immersion suits <i>Strategic direction:</i> 5.1 <i>High-level action:</i> 5.1.2 <i>Planned output:</i> -	2 sessions	MSC 84/24, paragraph 22.48
H.19	Amendments to the Revised recommendation on testing of life-saving appliances <i>Strategic direction:</i> 5.1 <i>High-level action:</i> 5.1.2 <i>Planned output:</i> -	2 sessions	MSC 84/24, paragraph 22.49
H.20	Safety provisions applicable to tenders operating from passenger ships (in cooperation with FP, COMSAR, NAV, SLF and STW) <i>Strategic direction:</i> 5.2 <i>High-level action:</i> 5.2.1 <i>Planned output:</i> -	3 sessions	MSC 84/24, paragraph 22.50
H.21	Alternative arrangements for the bottom inspection requirements for passenger ships other than ro-ro passenger ships <i>Strategic direction:</i> 5.2 <i>High-level action:</i> 5.2.1 <i>Planned output:</i> -	1 session	MSC 84/24, paragraph 22.52

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

		<b>Target completion date/number of sessions needed for completion</b>	<b>Reference</b>
L.1	<b>Revision of resolution A.760(18)</b> <i>Strategic direction:</i> 5.2 <i>High-level action:</i> 5.2.1 <i>Planned output:</i> 5.2.1.2	2010	DE 46/32, paragraph 31.23; DE 51/28, section 12
L.2	Free-fall lifeboats with float-free capabilities <i>Strategic direction:</i> 5.1 <i>High-level action:</i> 5.1.2 <i>Planned output:</i> -	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 onboard NO <sub>x</sub> emissions <i>Strategic direction:</i> 2 <i>High-level action:</i> - <i>Planned output:</i> -	2 sessions	MEPC 41/20, paragraph 8.22.1; BLG 10/19, paragraph 12.3; MEPC 55/23, paragraph 19.9
L.4	Performance standards for protective coatings <i>Strategic direction:</i> 2 <i>High-level action:</i> 2.1.1 <i>Planned output:</i> 2.1.1.2	2 sessions	MSC 76/23, paragraphs 20.41.2 and 20.48; DE 50/27, section 4
.1	mandatory application of the Performance standard for protective coatings for void spaces on bulk carriers and oil tankers	2 sessions	
.2	performance standard for protective coatings for void spaces on all types of ships	2 sessions	

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

		<b>Target completion date/number of sessions needed for completion</b>	<b>Reference</b>
1	Analysis of intact stability casualty records <i>Strategic direction:</i> 12.1 <i>High-level action:</i> 12.1.2 <i>Planned output:</i> 12.1.2.1 to .2	Continuous	MSC 70/23, paragraph 20.4; SLF 30/18, paragraphs 4.16 and 4.17
2	Analysis of damage cards <i>Strategic direction:</i> 12.1 <i>High-level action:</i> 12.1.2 <i>Planned output:</i> 12.1.2.1	Continuous	MSC 70/23, paragraph 20.4; SLF 50/19, section 12
3	<b>Consideration of IACS unified interpretations</b> <i>Strategic direction:</i> 1.1 <i>High-level action:</i> 1.1.2 <i>Planned output:</i> 1.1.2.1	Continuous	MSC 78/26, paragraph 22.12
H.1	<b>Development of explanatory notes for harmonized SOLAS chapter II-1</b> <i>Strategic direction:</i> 2.1 <i>High-level action:</i> 2.1.1 <i>Planned output:</i> 2.1.1.2	2008	MSC 69/22, paragraph 20.60.1; SLF 50/19, section 3
H.2	<b>Safety of small fishing vessels</b> (in cooperation with DE, COMSAR, FP, NAV and STW, as necessary) <i>Strategic direction:</i> 5.2 <i>High-level action:</i> 5.2.1 <i>Planned output:</i> 5.2.1.2	2010	MSC 79/23, paragraphs 11.15 and 20.32; SLF 50/19, section 5 MSC 83/28, paragraph 25.53
H.3	<b>Revision of the Intact Stability Code</b> <i>Strategic direction:</i> 5.2 <i>High-level action:</i> 5.2.1 <i>Planned output:</i> 5.2.1.2	2010	SLF 41/18, paragraph 3.14; SLF 50/19, section 4

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- 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 inclusion in the provisional agenda for SLF 51.

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

		<b>Target completion date/number of sessions needed for completion</b>	<b>Reference</b>
H.4	<b>Development of options to improve effect on ship design and safety of the 1969 TM Convention</b> <i>Strategic direction:</i> 2.1 <i>High-level action:</i> 2.1.1 <i>Planned output:</i> 2.1.1.2	2008	MSC 81/25, paragraph 23.53; SLF 50/19, section 6
H.5	<b>Guidelines for uniform operating limitations on high-speed craft</b> (coordinated by DE) <i>Strategic direction:</i> 5.2 <i>High-level action:</i> 5.2.1 <i>Planned output:</i> 5.2.1.2	2008	MSC 81/25, paragraph 23.45; SLF 50/19, section 7
H.6	<b>Time-dependent survivability of passenger ships in damaged condition</b> <i>Strategic direction:</i> 5.1 <i>High-level action:</i> 5.1.2 <i>Planned output:</i> -	2009	MSC 81/25, paragraph 23.54; SLF 50/19, section 8
H.7	<b>Guidance on the impact of open watertight doors on existing and new ship survivability</b> <i>Strategic direction:</i> 2.1 <i>High-level action:</i> 2.1.1 <i>Planned output:</i> 2.1.1.2	2008	SLF 49/17, section 3; MSC 82/24, paragraph 21.56; SLF 50/19, section 15
H.8	<b>Stability and sea-keeping characteristics of damaged passenger ships in a seaway when returning to port by own power or under tow</b> <i>Strategic direction:</i> 5.1 <i>High-level action:</i> 5.1.2 <i>Planned output:</i> -	2008	MSC 82/24, paragraph 21.57; SLF 50/19, section 8
H.9	<b>Guidelines for drainage systems in closed vehicle and ro-ro spaces and special category spaces</b> (in cooperation with FP) <i>Strategic direction:</i> 5.1 <i>High-level action:</i> 5.1.1 <i>Planned output:</i> 5.1.1.2	2009	MSC 83/28, paragraph 25.49

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

		<b>Target completion date/number of sessions needed for completion</b>	<b>Reference</b>
H.10	<b>Guidelines for verification of damage stability requirements for tankers and bulk carriers</b> (in cooperation with DE and STW as necessary and when requested by SLF) <i>Strategic direction:</i> 2.1 <i>High-level action:</i> 2.1.1 <i>Planned output:</i> 2.1.1.2	2009	MSC 83/28, paragraphs 25.50 to 25.52
H.11	Safety provisions applicable to tenders operating from passenger ships (coordinated by DE) <i>Strategic direction:</i> 5.2 <i>High-level action:</i> 5.2.1 <i>Planned output:</i> -	3 sessions	MSC 84/24, paragraph 22.57
H.12	Damage stability regulations for ro-ro passenger ships <i>Strategic direction:</i> 5.1 <i>High-level action:</i> 5.1.1 <i>Planned output:</i> -	2 sessions*	MSC 84/24, paragraph 22.59
H.13	Development of an agreement on the implementation of the 1993 Torremolinos Protocol (in cooperation with appropriate sub-committees, as necessary) <i>Strategic direction:</i> 5.2 <i>High-level action:</i> 5.2.1 <i>Planned output:</i> -	2 sessions*	MSC 84/24, paragraph 22.62

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\* The Sub-Committee has been instructed to include the item in the provisional agenda for SLF 52.

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

		<b>Target completion date/number of sessions needed for completion</b>	<b>Reference</b>
1	<b>Validation of model training courses</b> <i>Strategic direction:</i> 5.2 <i>High-level action:</i> 5.2.2 <i>Planned output:</i> –	Continuous	STW 31/17, paragraph 14.4; STW 39/12, section 3
2	<b>Casualty analysis</b> (coordinated by FSI) <i>Strategic direction:</i> 12.1 <i>High-level action:</i> 12.1.2 <i>Planned output:</i> 12.1.2.1 to.2	Continuous	MSC 77/26, paragraphs 18.10 and 23.40.2; STW 39/12, section 10
H.1	<b>Unlawful practices associated with certificates of competency</b> <i>Strategic direction:</i> 5.2 <i>High-level action:</i> 5.2.1 <i>Planned output:</i> –	Continuous	MSC 71/23, paragraph 20.55.2; STW 39/12, section 4
H.2	<b>Measures to enhance maritime security</b> <i>Strategic direction:</i> 6 <i>High-level action:</i> 6.3.2 <i>Planned output:</i> 6.3.2.1	2010	MSC 75/24, paragraphs 22.9 and 22.45; STW 38/17, section 6
H.3	<b>Comprehensive review of the STCW Convention and Code</b> <i>Strategic direction:</i> 5 <i>High-level action:</i> 5.2.2 <i>Planned output:</i> 5.2.2.1	2010	STW 37/18, section 15; MSC 81/25, paragraphs 23.57.2, 23.40.2, 23.62 and 23.63; STW 39/12, section 7
	.1 <b>chapter I of the STCW Convention and Code</b>		
	.2 <b>chapter II of the STCW Convention and Code</b>		

**Notes:**

- 1 “H” means 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 STW 40.

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

		<b>Target completion date/number of sessions needed for completion</b>	<b>Reference</b>
	<b>.3 chapter III of the STCW Convention and Code</b>		
	<b>.4 chapter IV of the STCW Convention and Code</b>		
	<b>.5 chapter V of the STCW Convention and Code</b>		
	<b>.6 chapter VI of the STCW Convention and Code</b>		
	<b>.7 chapter VII of the STCW Convention and Code</b>		
	<b>.8 chapter VIII of the STCW Convention and Code</b>		
H.4	<b>Review of the principles for establishing the safe manning level of ships</b> (in cooperation with NAV) <i>Strategic direction:</i> 5 <i>High-level action:</i> 5.2.2 <i>Planned output:</i> 5.2.2.2	2010	MSC 81/25, paragraphs 23.58 to 23.60; STW 39/12, section 8
H.5	Development of training standards for recovery systems <i>Strategic direction:</i> 5.1 <i>High-level action:</i> 5.1.2 <i>Planned output:</i> -	2 sessions	MSC 81/25, paragraph 23.64
H.6	<b>Training for seafarer safety representatives</b> <i>Strategic direction:</i> 5.2 <i>High-level action:</i> 5.2.2 <i>Planned output:</i> -	2009	MSC 82/24, paragraph 21.23; STW 39/12, section 5

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

		<b>Target completion date/number of sessions needed for completion</b>	<b>Reference</b>
H.7	Safety provisions applicable to tenders operating from passenger ships (coordinated by DE) <i>Strategic direction:</i> 12 <i>High-level action:</i> 12.1.2 <i>Planned output:</i> 12.1.2.1	3 sessions	MSC 84/24, paragraph 22.66
H.8	<b>Mandatory requirements for determining safe manning</b> (in cooperation with NAV as necessary) <i>Strategic direction:</i> 12 <i>High-level action:</i> 12.1.2 <i>Planned output:</i> 12.1.2.1	2010	MSC 84/24, paragraph 22.68
L.1	Review of the implementation of STCW chapter VII <i>Strategic direction:</i> 5 <i>High-level action:</i> 5.2.2 <i>Planned output:</i> -	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 resolutions <i>Strategic direction:</i> 5 <i>High-level action:</i> 5.2.1 <i>Planned output:</i> -	2 sessions	STW 34/14, paragraph 11.8
L.3	Development of model procedures for executing shipboard emergency measures <i>Strategic direction:</i> 5 <i>High-level action:</i> 5.2.2 <i>Planned output:</i> 5.2.2.2	2 sessions	MSC 84/24, paragraph 22.67

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**ANNEX 22****PROVISIONAL AGENDAS FOR THE SUB-COMMITTEES****SUB-COMMITTEE ON BULK LIQUIDS AND GASES (BLG) – 13<sup>TH</sup> 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 and other documents for uniform implementation of the 2004 BWM Convention
  - 6 Development of provisions for gas-fuelled ships
  - 7 Casualty analysis
  - 8 Consideration of IACS unified interpretations
  - 9 Development of international measures for minimizing the transfer of invasive aquatic species through bio-fouling of ships
  - 10 Review of the Recommendation for material safety data sheets for MARPOL Annex I cargoes and marine fuel oils
  - 11 Revision of the IGC Code
  - 12 Safety requirements for natural gas hydrate pellet carriers
  - 13 Review of relevant non-mandatory instruments as a consequence of the amended MARPOL Annex VI and the NOx Technical Code
  - 14 Amendments to MARPOL Annex I on the use and carriage of heavy grade oil on ships in the Antarctic area
  - 15 Work programme and agenda for BLG 14
  - 16 Election of Chairman and Vice-Chairman for 2010
  - 17 Any other business
  - 18 Report to the Committees

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\* Agenda item numbers do not necessarily indicate priority.

**SUB-COMMITTEE ON DANGEROUS GOODS, SOLID CARGOES AND CONTAINERS (DSC) – 13<sup>TH</sup> 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 (35-10) to the IMDG Code and supplements
  - 4 Amendments to the IMSBC Code, including evaluation of properties of solid bulk cargoes
  - 5 Amendments to the CSS Code
  - 6 Casualty and incident reports and analysis
  - 7 Extension of the BLU Code to include grain
  - 8 Guidance on providing safe working conditions for securing of containers
  - 9 Review of the Recommendations on the safe use of pesticides in ships
  - 10 Guidance on protective clothing
  - 11 Revision of the Code of safe practice for ships carrying timber deck cargoes
  - 12 Form and procedure for approval of the Cargo securing manual
  - 13 Stowage of water-reactive materials
  - 14 Amendments to the International Convention for Safe Containers, 1972
  - 15 Review of the Guidelines for packing of cargo transport units
  - 16 Review of documentation requirements for dangerous goods in packaged form
  - 17 Work programme and agenda for DSC 14
  - 18 Election of Chairman and Vice-Chairman for 2009
  - 19 Any other business
  - 20 Report to the Maritime Safety Committee

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\* Agenda item numbers do not necessarily indicate priority.

**SUB-COMMITTEE ON FIRE PROTECTION (FP) – 53<sup>RD</sup> 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 Measures to prevent explosions on oil and chemical tankers transporting low-flash point cargoes
  - 6 Fire resistance of ventilation ducts
  - 7 Guidelines for drainage systems in closed vehicle and ro-ro spaces and special category spaces
  - 8 Clarification of SOLAS chapter II-2 requirements regarding interrelation between central control station and safety centre
  - 9 Recommendation on evacuation analysis for new and existing passenger ships
  - 10 Measures to prevent fires in engine-rooms and cargo pump-rooms
  - 11 Development of provisions for gas-fuelled ships
  - 12 Consideration of IACS unified interpretations
  - 13 Fixed hydrocarbon gas detection systems on double-hull oil tankers
  - 14 Harmonization of the requirements for the location of entrances, air inlets and openings in the superstructures of tankers
  - 15 Amendments to SOLAS chapter II-2 related to the releasing controls and means of escape for spaces protected by fixed carbon dioxide systems
  - 16 Means of escape from machinery spaces
  - 17 Review of fire protection requirements for on-deck cargo areas
  - 18 Explanatory notes for the application of the safe return to port requirements
  - 19 Analysis of fire casualty records

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\* Agenda item numbers do not necessarily indicate priority.

- 20 Work programme and agenda for FP 54
- 21 Election of Chairman and Vice-Chairman for 2010
- 22 Any other business
- 23 Report to the Maritime Safety Committee

**SUB-COMMITTEE ON FLAG STATE IMPLEMENTATION (FSI) – 16<sup>TH</sup> 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
  - 5 Port reception facilities-related issues
  - 6 Casualty statistics and investigations
  - 7 Harmonization of port State control activities
  - 8 Development of guidelines on port State control under the 2004 BWM Convention
  - 9 PSC Guidelines on seafarers' working hours
  - 10 Comprehensive analysis of difficulties encountered in the implementation of IMO instruments
  - 11 Review of the Survey Guidelines under the HSSC (resolution A.948(23))
  - 12 Consideration of IACS Unified Interpretations
  - 13 Illegal, unregulated and unreported (IUU) fishing and implementation of resolution A.925(22)
  - 14 Review of the Code for the Implementation of Mandatory IMO Instruments
  - 15 Work programme and agenda for FSI 17
  - 16 Election of Chairman and Vice-Chairman for 2009
  - 17 Any other business
  - 18 Report to the Committees

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\* Agenda item numbers do not necessarily indicate priority.

**SUB-COMMITTEE ON RADIOCOMMUNICATIONS AND SEARCH AND RESCUE (COMSAR) – 13<sup>TH</sup> 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 coordination provisions of maritime safety information (MSI) services, including review of the related documents
- 4 ITU maritime radiocommunication matters
  - .1 Radiocommunication ITU-R Study Group 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 routing distress information in the GMDSS
- 7 Developments in maritime radiocommunication systems and technology
- 8 Revision of the IAMSAR Manual
- 9 Development of procedures for updating shipborne navigation and communication equipment
- 10 Measures to protect the safety of persons rescued at sea
- 11 Work programme and agenda for COMSAR 14
- 12 Election of Chairman and Vice-Chairman for 2010
- 13 Any other business
- 14 Report to the Maritime Safety Committee

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\* Agenda item numbers do not necessarily indicate priority.

**SUB-COMMITTEE ON SAFETY OF NAVIGATION (NAV) – 54<sup>TH</sup> SESSION\***

- Opening of the session
- 1 Adoption of the agenda
  - 2 Decisions of other IMO bodies
  - 3 Routeing of ships, ship reporting and related matters
  - 4 Development of guidelines for IBS, including performance standards for bridge alert management
  - 5 Amendments to the General Provisions on Ships' Routeing
  - 6 Carriage requirements for a bridge navigational watch alarm system
  - 7 Review of COLREGs regarding the right of way of vessels over pleasure craft
  - 8 Amendments to COLREG Annex I related to colour specification of lights
  - 9 ITU matters, including Radiocommunication ITU-R Study Group 8 matters
  - 10 Code of conduct during demonstrations/campaigns against ships on high seas
  - 11 Measures to minimize incorrect data transmissions by AIS 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 Review of vague expressions in SOLAS regulation V/22
  - 18 Revision of the Guidance on the application of AIS binary message
  - 19 Improved safety of pilot transfer arrangements
  - 20 Casualty analysis

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\* Agenda item numbers do not necessarily indicate priority.

- 21 Consideration of IACS unified interpretations
- 22 Work programme and agenda for NAV 55
- 23 Election of Chairman and Vice-Chairman for 2009
- 24 Any other business
- 25 Report to the Maritime Safety Committee

**SUB-COMMITTEE ON SHIP DESIGN AND EQUIPMENT (DE) – 52<sup>ND</sup> SESSION\***

- Opening of the session
- 1 Adoption of the agenda
  - 2 Decisions of other IMO bodies
  - 3 Amendments to resolution A.744(18)
  - 4 Revision of the Code on Alarms and Indicators
  - 5 Amendments to the MODU Code
  - 6 Measures to prevent accidents with lifeboats
  - 7 Compatibility of life-saving appliances
  - 8 Test standards for extended service intervals of inflatable liferafts
  - 9 Amendments to the Guidelines for ships operating in Arctic ice-covered waters
  - 10 Revision of resolution A.760(18)
  - 11 Guidelines for uniform operating limitations of high-speed craft
  - 12 Guidelines for maintenance and repair of protective coatings
  - 13 Performance standards for recovery systems
  - 14 Cargo oil tank coating and corrosion protection
  - 15 Guidance to ensure consistent policy for determining the need for watertight doors to remain open during navigation
  - 16 Development of a new framework of requirements for life-saving appliances
  - 17 Consideration of IACS unified interpretations
  - 18 Work programme and agenda for DE 53
  - 19 Election of Chairman and Vice-Chairman for 2010
  - 20 Any other business
  - 21 Report to the Maritime Safety Committee

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\* Agenda item numbers do not necessarily indicate priority.

**SUB-COMMITTEE ON STABILITY AND LOAD LINES AND ON FISHING VESSELS SAFETY (SLF) –  
51<sup>ST</sup> 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 Guidance on the impact of open watertight doors on existing and new ship survivability
  - 11 Stability and sea-keeping characteristics of damaged passenger ships in a seaway when returning to port by own power or under tow
  - 12 Guidelines for drainage systems in closed vehicle and ro-ro spaces and special category spaces
  - 13 Guidelines for verification of damage stability requirements for tankers and bulk carriers
  - 14 Work programme and agenda for SLF 52
  - 15 Election of Chairman and Vice-Chairman for 2009
  - 16 Any other business
  - 17 Report to the Maritime Safety Committee

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\* Agenda item numbers do not necessarily indicate priority.

**SUB-COMMITTEE ON STANDARDS OF TRAINING AND WATCHKEEPING (STW) – 40<sup>TH</sup> SESSION \***

- Opening of the session
- 1 Adoption of the agenda
  - 2 Decisions of other IMO bodies
  - 3 Validation of model training courses
  - 4 Unlawful practices associated with certificates of competency
  - 5 Training for seafarer safety representatives
  - 6 Casualty analysis
  - 7 Comprehensive review of the STCW Convention and Code
    - .1 chapter I of the STCW Convention and Code
    - .2 chapter II of the STCW Convention and Code
    - .3 chapter III of the STCW Convention and Code
    - .4 chapter IV of the STCW Convention and Code
    - .5 chapter V of the STCW Convention and Code
    - .6 chapter VI of the STCW Convention and Code
    - .7 chapter VII of the STCW Convention and Code
    - .8 chapter VIII of the STCW Convention and Code
  - 8 Review of the principles for establishing the safe manning level of ships
  - 9 Measures to enhance maritime security
  - 10 Mandatory requirements for determining safe manning
  - 11 Work programme and agenda for STW 41
  - 12 Election of Chairman and Vice-Chairman for 2010
  - 13 Any other business
  - 14 Report to the Maritime Safety Committee

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\* Agenda item numbers do not necessarily indicate priority.



**ANNEX 23****STATEMENT BY THE DELEGATION OF PANAMA**

While we welcome the submission of this document, we wish to begin by saying that the proposal it contains is neither sufficiently justified nor practicable to merit inclusion of a new item in the agenda and work programme of the FSI Sub-Committee.

Before proceeding with a proposal on this scale it is essential to define certain aspects clearly, in particular with respect to the competence and responsibility of each administration.

Maritime administrations have delegated to recognized organizations (ROs) the responsibility for survey and for issuing statutory and technical certificates, on the basis of duly approved IMO resolutions and guidelines and their own legislation.

What cannot be delegated – for any reason – is an administration’s ultimate responsibility to supervise what it has delegated.

Each administration has the power and responsibility to verify that delegated tasks are carried out in accordance with law.

IMO has already adopted and brought into effect instruments to ensure effective supervision of Ros, examples being Assembly resolutions A.739(18), A.789(19) and A.973(24). These are supplemented by the maritime legislation approved by each country and by the recently developed Voluntary IMO Member State Audit Scheme, whose results are still being evaluated.

What added value do initiatives of the kind under discussion bring to what has already been put in place? The Audit Scheme must be given time to achieve its planned and expected objectives.

Turning to document MSC 84/22/13, we note that in paragraphs 4.1 and 4.2 no justification or reasoning for the proposal is given, although they deal with the proposed Code’s scope and purpose – matters which are already specifically addressed in the above-mentioned instruments. With regard to paragraph 5.3, appointing other suitable qualified personnel who would also be independent could have the result that the proposed Code would contradict an administration’s regulations in this area. In other words, there already exist auditors suitably qualified to audit an activity as delegated: our administration has already established regulations for auditing its Ors, and it is only the administration that does this.

We consider that paragraphs 9.2 to 9.4 call into question not only the mechanisms that administrations currently use, but also the latter’s transparency and independence. Reducing the burden on administrations has to be examined at the level of the administrations and on the basis of how they decide to exercise their duties and responsibilities towards their Ros as an unavoidable obligation. These paragraphs especially call into question the Audit Scheme and its effectiveness, denying the scheme, which has only recently been brought into operation, the opportunity to acquire necessary experience.

Paragraph 13 again refers to using the proposed Code as part of the IMO regulatory process, when in reality, as mentioned in paragraph 3, it only has a bearing on the consistency with which the Organization's Members apply the regulations already in place. Panama maintains that we must focus our efforts on ratifying the existing instruments.

On the basis of the foregoing, Panama considers that this proposal should not be accepted until the aspects we have mentioned are clarified and evaluated, particularly those of a political and jurisdictional nature.

In conclusion, we wish to reiterate the importance of ensuring that the Committee's efforts are directed towards development and implementation of the existing instruments.

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