INTERNATIONAL MARITIME ORGANIZATION

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# REPORT OF THE MARITIME SAFETY COMMITTEE ON ITS NINETIETH SESSION

Attached are annexes 1 to 3 and 5 to 42 to the report of the Maritime Safety Committee on its ninetieth session (MSC 90/28).

**LIST OF ANNEXES**

**(See document MSC 90/28/Add.2 for the first part of annex 4 (annex 1, Amendments to the International Maritime Dangerous Goods (IMDG) Code (amendment 36-12), List of contents, foreword, preamble and parts 1 to 7, including appendices A and B), document MSC 90/28/Add.3 for the second part of annex 4 (annex 2, Dangerous Goods List) and MSC 90/28/Add.4 for the third part of annex 4 (annex 3, Index))**

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**ANNEX 1**

**RESOLUTION MSC.325(90)**
**(adopted on 24 May 2012)**

**ADOPTION OF AMENDMENTS TO THE INTERNATIONAL CONVENTION FOR THE SAFETY OF LIFE AT SEA, 1974, AS AMENDED**

THE MARITIME SAFETY COMMITTEE,

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

RECALLING FURTHER article VIII(b) of the International Convention for the Safety of Life at Sea (SOLAS), 1974 (hereinafter referred to as "the Convention"), concerning the amendment procedure applicable to the Annex to the Convention, other than to the provisions of chapter I thereof,

HAVING CONSIDERED, at its ninetieth session, amendments to the Convention, proposed and circulated in accordance with article VIII(b)(i) thereof,

1. ADOPTS, in accordance with article VIII(b)(iv) of the Convention, amendments to the Convention, the text of which is set out in the annex to the present resolution;

2. DETERMINES, in accordance with article VIII(b)(vi)(2)(bb) of the Convention, that the said amendments shall be deemed to have been accepted on 1 July 2013, unless, prior to that date, more than one third of the Contracting Governments to the Convention or Contracting Governments the combined merchant fleets of which constitute not less than 50 per cent of the gross tonnage of the world's merchant fleet, have notified their objections to the amendments;

3. INVITES SOLAS Contracting Governments to note that, in accordance with article VIII(b)(vii)(2) of the Convention, the amendments shall enter into force on 1 January 2014 upon their acceptance in accordance with paragraph 2 above;

4. REQUESTS the Secretary-General, in conformity with article VIII(b)(v) of the Convention, to transmit certified copies of the present resolution and the text of the amendments contained in the Annex to all Contracting Governments to the Convention;

5. FURTHER REQUESTS the Secretary-General to transmit copies of this resolution and its Annex to Members of the Organization which are not Contracting Governments to the Convention.

ANNEX

**AMENDMENTS TO THE INTERNATIONAL CONVENTION FOR THE SAFETY OF LIFE AT SEA, 1974, AS AMENDED**

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

**Part B-1**
**Stability**

**Regulation 8-1 – System capabilities after a flooding casualty on passenger ships**

1 The existing regulation II-1/8-1 is replaced by the following:

"**Regulation 8-1 – System capabilities and operational information after a flooding casualty on passenger ships**

**1 Application**

Passenger ships having length, as defined in regulation II-1/2.5, of 120 m or more or having three or more main vertical zones shall comply with the provisions of this regulation.

**2 Availability of essential systems in case of flooding damage**[*]

A passenger ship constructed on or after 1 July 2010 shall be designed so that the systems specified in regulation II-2/21.4 remain operational when the ship is subject to flooding of any single watertight compartment.

**3 Operational information after a flooding casualty**

For the purpose of providing operational information to the Master for safe return to port after a flooding casualty, passenger ships constructed on or after 1 January 2014 shall have:

.1 onboard stability computer; or

.2 shore-based support,

based on guidelines developed by the Organization[**]."

[*] Refer to the Interim Explanatory Notes for the assessment of passenger ship systems' capabilities after a fire or flooding casualty (MSC.1/Circ.1369).

[**] Refer to the Guidelines on operational information for Masters of passenger ships for safe return to port by own power or under tow (MSC.1/Circ.1400).

## CHAPTER III
## LIFE-SAVING APPLIANCES AND ARRANGEMENTS

### Part B
### Requirements for ships and life-saving appliances

**Regulation 20 – Operational readiness, maintenance and inspections**

2 In paragraph 11.2, the following new subparagraph .4 is added after the existing subparagraph .3:

".4 notwithstanding subparagraph .3 above, the operational testing of free-fall lifeboat release systems shall be performed either by free-fall launch with only the operating crew on board or by a simulated launching carried out based on guidelines developed by the Organization[*]."

[*] Refer to Measures to prevent accidents with lifeboats (MSC.1/Circ.1206/Rev.1).

## CHAPTER V
## SAFETY OF NAVIGATION

**Regulation 14 – Ships' manning**

3 The existing paragraph 2 is replaced by the following new paragraph:

"2 For every ship to which chapter I applies, the Administration shall:

.1 establish appropriate minimum safe manning following a transparent procedure, taking into account the relevant guidance adopted by the Organization[*]; and

.2 issue an appropriate minimum safe manning document or equivalent as evidence of the minimum safe manning considered necessary to comply with the provisions of paragraph 1."

[*] Refer to the Principles of minimum safe manning, adopted by the Organization by resolution A.1047(27).

## CHAPTER VI
## CARRIAGE OF CARGOES

### Part A
### General provisions

4 The following new regulation 5-2 is added after the existing regulation 5-1:

"**Regulation 5-2 – Prohibition of the blending of bulk liquid cargoes and production processes during sea voyages**

1 The physical blending of bulk liquid cargoes during sea voyages is prohibited. Physical blending refers to the process whereby the ship's cargo pumps and pipelines are used to internally circulate two or more different cargoes with the intent to achieve a cargo with a new product designation. This prohibition does not preclude the master from undertaking cargo transfers for the safety of the ship or protection of the marine environment.

2 The prohibition in paragraph 1 does not apply to the blending of products for use in the search and exploitation of seabed mineral resources on board ships used to facilitate such operations.

3 Any production process on board a ship during sea voyages is prohibited. Production processes refer to any deliberate operation whereby a chemical reaction between a ship's cargo and any other substance or cargo takes place.

4 The prohibition in paragraph 3 does not apply to the production processes of cargoes for use in the search and exploitation of seabed mineral resources on board ships used to facilitate such operations.[*]

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

## CHAPTER VII
## CARRIAGE OF DANGEROUS GOODS

### Part A
### Carriage of dangerous goods in packaged form

**Regulation 4 – Documents**

5 The text of the regulation is replaced by the following:

"1 Transport information relating to the carriage of dangerous goods in packaged form and the container/vehicle packing certificate shall be in accordance with the relevant provisions of the IMDG Code and shall be made available to the person or organization designated by the port State authority.

2 Each ship carrying dangerous goods in packaged form shall have a special list, manifest or stowage plan setting forth, in accordance with the relevant provisions of the IMDG Code, the dangerous goods on board and the location thereof. A copy of one of these documents shall be made available before departure to the person or organization designated by the port State authority."

## CHAPTER XI-1
## SPECIAL MEASURES TO ENHANCE MARITIME SAFETY

### Regulation 2 – Enhanced surveys

6 The words "the guidelines adopted by the Assembly of the Organization by resolution A.744(18)" are replaced by the words "the International Code on the Enhanced Programme of Inspections during Surveys of Bulk Carriers and Oil Tankers, 2011 (2011 ESP Code), adopted by the Assembly of the Organization by resolution A.1049(27)".

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**ANNEX 2**

**RESOLUTION MSC.326(90)**
**(adopted on 24 May 2012)**

**ADOPTION OF AMENDMENTS TO THE INTERNATIONAL CODE OF SAFETY FOR HIGH-SPEED CRAFT, 2000 (2000 HSC CODE)**

THE MARITIME SAFETY COMMITTEE,

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

NOTING resolution MSC.97(73), by which it adopted the International Code of Safety for High-Speed Craft, 2000 (hereinafter referred to as "the 2000 HSC Code"), which has become mandatory under chapter X of the International Convention for the Safety of Life at Sea (SOLAS), 1974 (hereinafter referred to as "the Convention"),

NOTING ALSO article VIII(b) and regulation X/1.2 of the Convention concerning the procedure for amending the 2000 HSC Code,

HAVING CONSIDERED, at its ninetieth session, amendments to the 2000 HSC Code proposed and circulated in accordance with article VIII(b)(i) of the Convention,

1. ADOPTS, in accordance with article VIII(b)(iv) of the Convention, amendments to the 2000 HSC Code, the text of which is set out in the annex to the present resolution;

2. DETERMINES, in accordance with article VIII(b)(vi)(2)(bb) of the Convention, that the amendments shall be deemed to have been accepted on 1 July 2013 unless, prior to that date, more than one third of the Contracting Governments to the Convention or Contracting Governments the combined merchant fleets of which constitute not less than 50 per cent of the gross tonnage of the world's merchant fleet, have notified their objections to the amendments;

3. INVITES Contracting Governments to the Convention to note that, in accordance with article VIII(b)(vii)(2) of the Convention, the amendments shall enter into force on 1 January 2014 upon their acceptance in accordance with paragraph 2 above;

4. REQUESTS the Secretary-General, in conformity with article VIII(b)(v) of the Convention, to transmit certified copies of the present resolution and the text of the amendments contained in the Annex to all Contracting Governments to the Convention;

5. FURTHER REQUESTS the Secretary-General to transmit copies of this resolution and its Annex to Members of the Organization, which are not Contracting Governments to the Convention.

ANNEX

**AMENDMENTS TO THE INTERNATIONAL CODE OF SAFETY FOR HIGH-SPEED CRAFT, 2000 (2000 HSC CODE)**

**Chapter 14 – Radiocommunications**

In paragraph 14.15.10, subparagraph .1 is replaced by the following:

".1 annually tested for all aspects of operational efficiency, with special emphasis on checking the emission on operational frequencies, coding and registration, at intervals within 3 months before the expiry date, or 3 months before or after the anniversary date, of the High-Speed Craft Safety Certificate;

The test may be conducted on board the craft or at an approved testing station; and"

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**ANNEX 3**

**RESOLUTION MSC.327(90)**
**(adopted on 25 May 2012)**

**ADOPTION OF AMENDMENTS TO THE INTERNATIONAL CODE FOR FIRE SAFETY SYSTEMS (FSS CODE)**

THE MARITIME SAFETY COMMITTEE,

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

NOTING resolution MSC.98(73) by which it adopted the International Code for Fire Safety Systems (hereinafter referred to as "the FSS Code"), which has become mandatory under chapter II-2 of the International Convention for the Safety of Life at Sea, 1974 (hereinafter referred to as "the Convention"),

NOTING ALSO article VIII(b) and regulation II-2/3.22 of the Convention concerning the procedure for amending the FSS Code,

HAVING CONSIDERED, at its ninetieth session, amendments to the FSS Code, proposed and circulated in accordance with article VIII(b)(i) of the Convention,

1. ADOPTS, in accordance with article VIII(b)(iv) of the Convention, amendments to the International Code for Fire Safety Systems, the text of which is set out in the annex to the present resolution;

2. DETERMINES, in accordance with article VIII(b)(vi)(2)(bb) of the Convention, that the amendments shall be deemed to have been accepted on 1 July 2013, unless, prior to that date, more than one third of the Contracting Governments to the Convention or Contracting Governments the combined merchant fleets of which constitute not less than 50 per cent of the gross tonnage of the world's merchant fleet, have notified their objections to the amendments;

3. INVITES Contracting Governments to the Convention to note that, in accordance with article VIII(b)(vii)(2) of the Convention the amendments shall enter into force on 1 January 2014, upon their acceptance in accordance with paragraph 2 above;

4. REQUESTS the Secretary-General, in conformity with article VIII(b)(v) of the Convention, to transmit certified copies of the present resolution and the text of the amendments contained in the Annex to all Contracting Governments to the Convention;

5. FURTHER REQUESTS the Secretary-General to transmit copies of this resolution and its Annex to Members of the Organization, which are not Contracting Governments to the Convention.

ANNEX

**AMENDMENTS TO THE INTERNATIONAL CODE FOR FIRE SAFETY SYSTEMS (FSS CODE)**

**CHAPTER 6**
**FIXED FOAM FIRE-EXTINGUISHING SYSTEMS**

5 The existing text of the chapter is replaced by the following:

"**1 Application**

This chapter details the specifications for fixed foam fire-extinguishing systems for the protection of machinery spaces in accordance with regulation II-2/10.4.1.1.2 of the Convention, cargo spaces in accordance with regulation II-2/10.7.1.1, cargo pump-rooms in accordance with regulation II-2/10.9.1.2 and vehicle, special category and ro-ro spaces in accordance with regulation II-2/20.6.1.3. This chapter does not apply to cargo pump-rooms of chemical tankers carrying liquid cargoes referred to in regulation II-2/1.6.2 of the Convention, unless the Administration specifically accepts the use of these systems based on additional tests with alcohol-based fuel and alcohol resistant foam. Unless expressly provided otherwise, the requirements of this chapter shall apply to ships constructed on or after 1 January 2014.

**2 Definitions**

2.1 *Design filling rate* is at least the minimum nominal filling rate used during the approval tests.

2.2 *Foam* is the extinguishing medium produced when foam solution passes through a foam generator and is mixed with air.

2.3 *Foam solution* is a solution of foam concentrate and water.

2.4 *Foam concentrate* is a liquid which, when mixed with water in the appropriate concentration forms a foam solution.

2.5 *Foam delivery ducts* are supply ducts for introducing high-expansion foam into the protected space from foam generators located outside the protected space.

2.6 *Foam mixing ratio* is the percentage of foam concentrate mixed with water forming the foam solution.

2.7 *Foam generators* are discharge devices or assemblies through which high-expansion foam solution is aerated to form foam that is discharged into the protected space. Foam generators using inside air typically consist of a nozzle or set of nozzles and a casing. The casing is typically made of perforated steel/stainless steel plates shaped into a box that enclose the nozzle(s). Foam generators using outside air typically consist of nozzles enclosed within a casing that spray onto a screen. An electric, hydraulic or pneumatically driven fan is provided to aerate the solution.

2.8 *High-expansion foam fire-extinguishing systems* are fixed total flooding extinguishing systems that use either inside air or outside air for aeration of the foam solution. A high-expansion foam system consists of both the foam generators and the dedicated foam concentrate approved during the fire testing specified in 3.1.3.

2.9 *Inside air foam system* is a fixed high-expansion foam fire-extinguishing system with foam generators located inside the protected space and drawing air from that space.

2.10 *Nominal flow rate* is the foam solution flow rate expressed in *l*/min.

2.11 *Nominal application rate* is the nominal flow rate per area expressed in *l*/min/$m^2$.

2.12 *Nominal foam expansion ratio* is the ratio of the volume of foam to the volume of foam solution from which it was made, under non-fire conditions, and at an ambient temperature of e.g. around 20ºC.

2.13 *Nominal foam production* is the volume of foam produced per time unit, i.e. nominal flow rate times nominal foam expansion ratio, expressed in $m^3$/min.

2.14 *Nominal filling rate* is the ratio of nominal foam production to the area, i.e. expressed in $m^2$/min.

2.15 *Nominal filling time* is the ratio of the height of the protected space to the nominal filling rate, i.e. expressed in minutes.

2.16 *Outside air foam system* is a fixed high-expansion foam system with foam generators installed outside the protected space that are directly supplied with fresh air.

## 3 Fixed high-expansion foam fire-extinguishing systems

### 3.1 Principal performance

3.1.1 The system shall be capable of manual release, and shall be designed to produce foam at the required application rate within 1 minute of release. Automatic release of the system shall not be permitted unless appropriate operational measures or interlocks are provided to prevent any local application systems required by regulation II-2/10.5.6 of the Convention from interfering with the effectiveness of the system.

3.1.2 The foam concentrates shall be approved by the Administration based on the guidelines developed by the Organization[*]. Different foam concentrate types shall not be mixed in a high-expansion foam system.

3.1.3 The system shall be capable of fire extinction and manufactured and tested to the satisfaction of the Administration based on the guidelines developed by the Organization[**].

[*] Refer to the Guidelines for the performance and testing criteria and surveys of high-expansion foam concentrates for fixed fire-extinguishing systems (MSC/Circ.670).

[**] Refer to the Guidelines for the approval of fixed high-expansion foam systems (MSC.1/Circ.1384).

3.1.4 The system and its components shall be suitably designed to withstand ambient temperature changes, vibration, humidity, shock, clogging and corrosion normally encountered on ships. Piping, fittings and related components inside the protected spaces (except gaskets) shall be designed to withstand 925°C.

3.1.5 System piping, foam concentrate storage tanks, components and pipe fittings in contact with the foam concentrate shall be compatible with the foam concentrate and be constructed of corrosion resistant materials such as stainless steel, or equivalent. Other system piping and foam generators shall be full galvanized steel or equivalent. Distribution pipework shall have self-draining capability.

3.1.6 Means for testing the operation of the system and assuring the required pressure and flow shall be provided by pressure gauges at both inlets (water and foam concentrate supply) and at the outlet of the foam proportioner. A test valve shall be installed on the distribution piping downstream of the foam proportioner, along with orifices which reflect the calculated pressure drop of the system. All sections of piping shall be provided with connections for flushing, draining and purging with air. All nozzles shall be able to be removed for inspection in order to prove clear of debris.

3.1.7 Means shall be provided for the crew to safely check the quantity of foam concentrate and take periodic control samples for foam quality.

3.1.8 Operating instructions for the system shall be displayed at each operating position.

3.1.9 Spare parts shall be provided based on the manufacturer's instruction.

3.1.10 If an internal combustion engine is used as a prime mover for the seawater pump for the system, the fuel oil tank to the prime mover shall contain sufficient fuel to enable the pump to run on full load for at least 3 h and sufficient reserves of fuel shall be available outside the machinery space of category A to enable the pump to be run on full load for an additional 15 h. If the fuel tank serves other internal combustion engines simultaneously, the total fuel tank capacity shall be adequate for all connected engines.

3.1.11 The arrangement of foam generators and piping in the protected space shall not interfere with access to the installed machinery for routine maintenance activities.

3.1.12 The system source of power supply, foam concentrate supply and means of controlling the system shall be readily accessible and simple to operate, and shall be arranged at positions outside the protected space not likely to be cut off by a fire in the protected space. All electrical components directly connected to the foam generators shall have at least an IP 54 rating.

3.1.13 The piping system shall be sized in accordance with a hydraulic calculation technique* to ensure availability of flows and pressures required for correct performance of the system.

3.1.14 The arrangement of the protected spaces shall be such that they may be ventilated as the space is being filled with foam. Procedures shall be provided to ensure that upper level dampers, doors and other suitable openings are kept open in case of a fire. For inside air foam systems, spaces below 500 $m^3$ need not comply with this requirement.

3.1.15 Onboard procedures shall be established to require personnel re-entering the protected space after a system discharge to wear breathing apparatus to protect them from oxygen deficient air and products of combustion entrained in the foam blanket.

3.1.16 Installation plans and operating manuals shall be supplied to the ship and be readily available on board. A list or plan shall be displayed showing spaces covered and the location of the zone in respect of each section. Instructions for testing and maintenance shall be available on board.

3.1.17 All installation, operation and maintenance instructions/plans for the system shall be in the working language of the ship. If the working language of the ship is not English, French, nor Spanish, a translation into one of these languages shall be included.

3.1.18 The foam generator room shall be ventilated to protect against overpressure, and shall be heated to avoid the possibility of freezing.

3.1.19 The quantity of foam concentrate available shall be sufficient to produce a volume of foam equal to at least five times the volume of the largest protected space enclosed by steel bulkheads, at the nominal expansion ratio, or enough for 30 min of full operation for the largest protected space, whichever is greater.

3.1.20 Machinery spaces, cargo pump-rooms, vehicle spaces, ro-ro spaces and special category spaces shall be provided with audible and visual alarms within the protected space warning of the release of the system. The alarms shall operate for the length of time needed to evacuate the space, but in no case less than 20 s.

### 3.2 Inside air foam systems

#### 3.2.1 *Systems for the protection of machinery spaces and cargo pump-rooms*

3.2.1.1 The system shall be supplied by both main and emergency sources of power. The emergency power supply shall be provided from outside the protected space.

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* Where the Hazen-Williams method is used, the following values of the friction factor *C* for different pipe types which may be considered should apply:

| *Pipe type* | *C* |
|---|---|
| Black or galvanized mild steel | 100 |
| Copper or copper alloys | 150 |
| Stainless steel | 150 |

3.2.1.2 Sufficient foam-generating capacity shall be provided to ensure the minimum design filling rate for the system is met and in addition shall be adequate to completely fill the largest protected space within 10 min.

3.2.1.3 The arrangement of foam generators shall in general be designed based on the approval test results. A minimum of two generators shall be installed in every space containing combustion engines, boilers, purifiers, and similar equipment. Small workshops and similar spaces may be covered with only one foam generator.

3.2.1.4 Foam generators shall be uniformly distributed under the uppermost ceiling in the protected spaces including the engine casing. The number and location of foam generators shall be adequate to ensure all high risk areas are protected in all parts and at all levels of the spaces. Extra foam generators may be required in obstructed locations. The foam generators shall be arranged with at least 1 m free space in front of the foam outlets, unless tested with less clearance. The generators shall be located behind main structures, and above and away from engines and boilers in positions where damage from an explosion is unlikely.

### 3.2.2 *Systems for the protection of vehicle, ro-ro, special category and cargo spaces*

3.2.2.1 The system shall be supplied by the ship's main power source. An emergency power supply is not required.

3.2.2.2 Sufficient foam-generating capacity shall be provided to ensure the minimum design filling rate for the system is met and in addition shall be adequate to completely fill the largest protected space within 10 min. However, for systems protecting vehicle and ro-ro spaces and special category spaces, with decks that are reasonably gas-tight and that have a deck height of 3 m or less, the filling rate shall be not less than two thirds of the design filling rate and in addition sufficient to fill the largest protected space within 10 min.

3.2.2.3 The system may be divided into sections, however, the capacity and design of the system shall be based on the protected space demanding the greatest volume of foam. Adjacent protected spaces need not be served simultaneously if the boundaries between the spaces are "A" class divisions.

3.2.2.4 The arrangement of foam generators shall in general be designed based on the approval test results. The number of generators may be different, but the minimum design filling rate determined during approval testing shall be provided by the system. A minimum of two generators shall be installed in every space. The foam generators shall be arranged to uniformly distribute foam in the protected spaces, and the layout shall take into consideration obstructions that can be expected when cargo is loaded on board. As a minimum, generators shall be located on every second deck, including movable decks. The horizontal spacing of the generators shall ensure rapid supply of foam to all parts of the protected space. This shall be established on the basis of full scale tests.

3.2.2.5 The foam generators shall be arranged with at least 1 m free space in front of the foam outlets, unless tested with less clearance.

### 3.3 Outside air foam systems

#### 3.3.1 *Systems for the protection of machinery spaces and cargo pump-rooms*

3.3.1.1 The system shall be supplied by both main and emergency sources of power. The emergency power supply shall be provided from outside the protected machinery space.

3.3.1.2 Sufficient foam-generating capacity shall be provided to ensure the minimum design filling rate for the system is met and in addition shall be adequate to completely fill the largest protected space within 10 min.

3.3.1.3 The arrangement of foam delivery ducts shall in general be designed based on the approval test results. The number of ducts may be different, but the minimum design filling rate determined during approval testing shall be provided by the system. A minimum of two ducts shall be installed in every space containing combustion engines, boilers, purifiers, and similar equipment. Small workshops and similar spaces may be covered with only one duct.

3.3.1.4 Foam delivery ducts shall be uniformly distributed under the uppermost ceiling in the protected spaces including the engine casing. The number and location of ducts shall be adequate to ensure all high risk areas are protected in all parts and at all levels of the spaces. Extra ducts may be required in obstructed locations. The ducts shall be arranged with at least 1 m free space in front of the foam delivery ducts, unless tested with less clearance. The ducts shall be located behind main structures, and above and away from engines and boilers in positions where damage from an explosion is unlikely.

3.3.1.5 The arrangement of the foam delivery ducts shall be such that a fire in the protected space will not affect the foam-generating equipment. If the foam generators are located adjacent to the protected space, foam delivery ducts shall be installed to allow at least 450 mm of separation between the generators and the protected space, and the separating divisions shall be class "A-60" rated. Foam delivery ducts shall be constructed of steel having a thickness of not less than 5 mm. In addition, stainless steel dampers (single or multi-bladed) with a thickness of not less than 3 mm shall be installed at the openings in the boundary bulkheads or decks between the foam generators and the protected space. The dampers shall be automatically operated (electrically, pneumatically or hydraulically) by means of remote control of the foam generator related to them, and arranged to remain closed until the foam generators begin operating.

3.3.1.6 The foam generators shall be located where an adequate fresh air supply can be arranged.

#### 3.3.2 *Systems for the protection of vehicle and ro-ro spaces and special category and cargo spaces*

3.3.2.1 The system shall be supplied by the ship's main power source. An emergency power supply is not required.

3.3.2.2 Sufficient foam-generating capacity shall be provided to ensure the minimum design filling rate for the system is met and in addition shall be adequate to completely fill the largest protected space within 10 min. However, for systems protecting vehicle and ro-ro spaces and special category spaces, with decks that are

reasonably gas-tight and that have a deck height of 3 m or less, the filling rate shall be not less than two thirds of the design filling rate and in addition sufficient to fill the largest protected space within 10 min.

3.3.2.3 The system may be divided into sections, however, the capacity and design of the system shall be based on the protected space demanding the greatest volume of foam. Adjacent protected spaces need not be served simultaneously if the boundaries between the spaces are "A" class divisions.

3.3.2.4 The arrangement of foam delivery ducts shall in general be designed based on the approval test results. The number of ducts may be different, but the minimum design filling rate determined during approval testing shall be provided by the system. A minimum of two ducts shall be installed in every space. The foam generators shall be arranged to uniformly distribute foam in the protected spaces, and the layout shall take into consideration obstructions that can be expected when cargo is loaded on board. As a minimum, ducts shall be led to every second deck, including movable decks. The horizontal spacing of the ducts shall ensure rapid supply of foam to all parts of the protected space. This shall be established on the basis of full scale tests.

3.3.2.5 The system shall be arranged with at least 1 m free space in front of the foam outlets, unless tested with less clearance.

3.3.2.6 The arrangement of the foam delivery ducts shall be such that a fire in the protected space will not affect the foam-generating equipment. If the foam generators are located adjacent to the protected space, foam delivery ducts shall be installed to allow at least 450 mm of separation between the generators and the protected space, and the separating divisions shall be class "A-60" rated. Foam delivery ducts shall be constructed of steel having a thickness of not less than 5 mm. In addition, stainless steel dampers (single or multi-bladed) with a thickness of not less than 3 mm shall be installed at the openings in the boundary bulkheads or decks between the foam generators and the protected space. The dampers shall be automatically operated (electrically, pneumatically or hydraulically) by means of remote control of the foam generator related to them, and arranged to remain closed until the foam generators begin operating.

3.3.2.7 The foam generators shall be located where an adequate fresh air supply can be arranged.

### 3.4 Installation testing requirements

3.4.1 After installation, the pipes, valves, fittings and assembled systems shall be tested to the satisfaction of the Administration, including functional testing of the power and control systems, water pumps, foam pumps, valves, remote and local release stations and alarms. Flow at the required pressure shall be verified for the system using orifices fitted to the test line. In addition, all distribution piping shall be flushed with freshwater and blown through with air to ensure that the piping is free of obstructions.

3.4.2 Functional tests of all foam proportioners or other foam mixing devices shall be carried out to confirm that the mixing ratio tolerance is within +30 to -0% of the nominal mixing ratio defined by the system approval. For foam proportioners using foam concentrates of Newtonian type with kinematic viscosity equal to or less than 100 cSt at 0ºC and density equal to or less than 1,100 kg/m$^3$, this test can be

performed with water instead of foam concentrate. Other arrangements shall be tested with the actual foam concentrate.

### 3.5 Systems using outside air with generators installed inside the protected space

Systems using outside air but with generators located inside the protected space and supplied by fresh air ducts may be accepted by the Administration provided that these systems have been shown to have performance and reliability equivalent to systems defined in 3.3. For acceptance, the Administration should consider the following minimum design features:

.1 lower and upper acceptable air pressure and flow rate in supply ducts;

.2 function and reliability of damper arrangements;

.3 arrangements and distribution of air delivery ducts including foam outlets; and

.4 separation of air delivery ducts from the protected space.

## 4 Fixed low-expansion foam fire-extinguishing systems

### 4.1 Quantity and foam concentrates

4.1.1 The foam concentrates of low-expansion foam fire-extinguishing systems shall be approved by the Administration based on the guidelines adopted by the Organization*. Different foam concentrate types shall not be mixed in a low-expansion foam system. Foam concentrates of the same type from different manufacturers shall not be mixed unless they are approved for compatibility.

4.1.2 The system shall be capable of discharging through fixed discharge outlets, in no more than 5 min, a quantity of foam sufficient to produce an effective foam blanket over the largest single area over which oil fuel is liable to spread.

### 4.2 Installation requirements

4.2.1 Means shall be provided for effective distribution of the foam through a permanent system of piping and control valves or cocks to suitable discharge outlets, and for the foam to be effectively directed by fixed sprayers onto other main fire hazards in the protected space. The means for effective distribution of the foam shall be proven acceptable to the Administration through calculation or by testing.

4.2.2 The means of control of any such systems shall be readily accessible and simple to operate and shall be grouped together in as few locations as possible at positions not likely to be cut off by a fire in the protected space."

* Refer to the Revised Guidelines for the performance and testing criteria and surveys of low-expansion foam concentrates for fixed fire-extinguishing systems (MSC.1/Circ.1312).

## CHAPTER 8
## AUTOMATIC SPRINKLER, FIRE DETECTION AND FIRE ALARM SYSTEMS

6 In paragraph 2.1.1, the following sentence is inserted between the existing first and second sentences:

> "Control stations, where water may cause damage to essential equipment, may be fitted with a dry pipe system or a pre-action system as permitted by regulation II-2/10.6.1.1 of the Convention."

***

**ANNEX 5**

**DRAFT ASSEMBLY RESOLUTION**

**ADOPTION OF AMENDMENTS TO THE INTERNATIONAL CONVENTION ON LOAD LINES, 1966**

THE ASSEMBLY,

RECALLING Article 15(j) of the Convention on the International Maritime Organization concerning the functions of the Assembly in relation to regulations and guidelines concerning maritime safety,

NOTING proposed amendments to shift the Winter Seasonal Zone off the southern tip of Africa further southward by 50 miles,

NOTING ALSO that the Maritime Safety Committee, at its ninetieth session, adopted the proposed amendments in accordance with article 29(3)(a) of the International Convention on Load Lines, 1966 (1966 LL Convention),

HAVING CONSIDERED the proposed amendments to regulation 47 of the 1966 LL Convention,

1. ADOPTS, in accordance with article 29(3)(b) of the 1966 LL Convention, the amendments to regulation 47, set out in the annex to the present resolution;

2. REQUESTS the Secretary-General, in accordance with article 29(3)(b) of the 1966 LL Convention, to transmit certified copies of the present resolution and its annex to all Contracting Governments to the said Convention, for consideration and acceptance, and also to transmit copies to all Members of the Organization;

3. URGES all Governments concerned to accept the amendments at the earliest possible date;

4. RESOLVES that, should the entry into force of the aforementioned amendments take place following their unanimous acceptance in accordance with article 29(2) of the 1966 LL Convention, prior to entry into force based on their acceptance as requested by this resolution, this resolution shall become invalid.

ANNEX

**AMENDMENTS TO THE INTERNATIONAL CONVENTION ON LOAD LINES, 1966**

**ANNEX II**
**Zones, areas and seasonal periods**

**Regulation 47 – Southern Winter Seasonal Zone**

The existing text of regulation 47 is replaced by the following:

"The northern boundary of the Southern Winter Seasonal Zone is:

the rhumb line from the east coast of the American continent at Cape Tres Puntas to the point latitude 34° S, longitude 50° W, thence the parallel of latitude 34° S to longitude 16° E, thence the rhumb line to the point latitude 36° S, longitude 20° E, thence the rhumb line to the point latitude 34° S, longitude 30° E, thence along the rhumb line to the point latitude 35° 30' S, longitude 118° E, and thence the rhumb line to Cape Grim on the north-west coast of Tasmania; thence along the north and east coasts of Tasmania to the southernmost point of Bruny Island, thence the rhumb line to Black Rock Point on Stewart Island, thence the rhumb line to the point latitude 47° S, longitude 170° E, thence along the rhumb line to the point latitude 33° S, longitude 170° W, and thence the parallel of latitude 33° S to the west coast of the American continent.

*Seasonal periods:*

WINTER: 16 April to 15 October
SUMMER: 16 October to 15 April"

***

**ANNEX 6**

**RESOLUTION MSC.329(90)**
**(adopted on 24 May 2012)**

**ADOPTION OF AMENDMENTS TO THE PROTOCOL OF 1988 RELATING TO THE INTERNATIONAL CONVENTION ON LOAD LINES, 1966, AS AMENDED**

THE MARITIME SAFETY COMMITTEE,

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

RECALLING FURTHER article VI of the Protocol of 1988 relating to the International Convention on Load Lines, 1966 (hereinafter referred to as the "1988 Load Lines Protocol") concerning amendment procedures,

HAVING CONSIDERED, at its ninetieth session, amendments to the 1988 Load Lines Protocol proposed and circulated in accordance with paragraph 2(a) of article VI thereof,

1. ADOPTS, in accordance with paragraph 2(d) of article VI of the 1988 Load Lines Protocol, amendments to the 1988 Load Lines Protocol, the text of which is set out in the annex to the present resolution;

2. DETERMINES, in accordance with paragraph 2(f)(ii)(bb) of article VI of the 1988 Load Lines Protocol, that the said amendments shall be deemed to have been accepted on 1 July 2013, unless, prior to that date, more than one third of the Parties to the 1988 Load Lines Protocol or Parties the combined merchant fleets of which constitute not less than 50 per cent of the gross tonnage of the world's merchant fleet, have notified their objections to the amendments;

3. INVITES the Parties concerned to note that, in accordance with paragraph 2(g)(ii) of article VI of the 1988 Load Lines Protocol, the amendments shall enter into force on 1 January 2014 upon their acceptance in accordance with paragraph 2 above;

4. REQUESTS the Secretary-General, in conformity with paragraph 2(e) of article VI of the 1988 Load Lines Protocol, to transmit certified copies of the present resolution and the text of the amendments contained in the Annex to all Parties to the 1988 Load Lines Protocol;

5. FURTHER REQUESTS the Secretary-General to transmit copies of this resolution and its Annex to Members of the Organization, which are not Parties to the 1988 Load Lines Protocol.

ANNEX

**AMENDMENTS TO THE PROTOCOL OF 1988 RELATING TO THE INTERNATIONAL CONVENTION ON LOAD LINES, 1966, AS AMENDED**

**ANNEX B**
**ANNEXES TO THE CONVENTION AS MODIFIED BY THE PROTOCOL OF 1988 RELATING THERETO**

**ANNEX II**
**Zones, areas and seasonal periods**

**Regulation 47 – Southern Winter Seasonal Zone**

The existing text of regulation 47 is replaced by the following:

"The northern boundary of the Southern Winter Seasonal Zone is:

the rhumb line from the east coast of the American continent at Cape Tres Puntas to the point latitude 34° S, longitude 50° W, thence the parallel of latitude 34° S to longitude 16° E, thence the rhumb line to the point latitude 36° S, longitude 20° E, thence the rhumb line to the point latitude 34° S, longitude 30° E, thence along the rhumb line to the point latitude 35° 30' S, longitude 118° E, and thence the rhumb line to Cape Grim on the north-west coast of Tasmania; thence along the north and east coasts of Tasmania to the southernmost point of Bruny Island, thence the rhumb line to Black Rock Point on Stewart Island, thence the rhumb line to the point latitude 47° S, longitude 170° E, thence along the rhumb line to the point latitude 33° S, longitude 170° W, and thence the parallel of latitude 33° S to the west coast of the American continent.

*Seasonal periods:*

WINTER: 16 April to 15 October
SUMMER: 16 October to 15 April"

***

# ANNEX 7

## DRAFT AMENDMENTS TO THE INTERNATIONAL CONVENTION FOR THE SAFETY OF LIFE AT SEA, 1974, AS AMENDED

## APPENDIX

## CERTIFICATES

The existing form of the Passenger Ship Safety Certificate, Record of Equipment for the Passenger Ship Safety Certificate (Form P), form of the Cargo Ship Safety Construction Certificate, form of the Cargo Ship Safety Equipment Certificate, Record of Equipment for the Cargo Ship Safety Equipment Certificate (Form E), form of the Cargo Ship Safety Radio Certificate, Record of Equipment for the Cargo Ship Safety Radio Certificate (Form R), form of the Exemption Certificate, form of the Nuclear Passenger Ship Safety Certificate, Record of Equipment for the Nuclear Passenger Ship Safety Certificate (PNUC), form of the Nuclear Cargo Ship Safety Certificate and Record of Equipment for the Nuclear Cargo Ship Safety Certificate (CNUC) are replaced by the following:

## *FORM OF SAFETY CERTIFICATE FOR PASSENGER SHIPS*

## PASSENGER SHIP SAFETY CERTIFICATE

This Certificate shall be supplemented by a Record of Equipment for Passenger Ship Safety (Form P)

*(Official seal)* *(State)*

for *an/a short*[1] international voyage

Issued under the provisions of the
INTERNATIONAL CONVENTION FOR THE SAFETY OF LIFE
AT SEA, 1974, as amended

under the authority of the Government of

_____
*(name of the State)*

by _____
*(person or organization authorized)*

***Particulars of ship***[2]

Name of ship .....
Distinctive number or letters .....
Port of registry .....
Gross tonnage .....
Sea areas in which ship is certified to operate (regulation IV/2) .....
IMO Number[3] .....
Date of build:
Date of building contract .....
Date on which keel was laid or ship was at similar stage of construction .....
Date of delivery .....
Date on which work for a conversion or an alteration or modification of a major character was commenced (where applicable) .....

All applicable dates shall be completed.

***THIS IS TO CERTIFY***:

1 That the ship has been surveyed in accordance with the requirements of regulation I/7 of the Convention.

2 That the survey showed that:

2.1 the ship complied with the requirements of the Convention as regards:

.1 the structure, main and auxiliary machinery, boilers and other pressure vessels;
.2 the watertight subdivision arrangements and details;
.3 the following subdivision load lines:

| Subdivision load lines assigned and marked on the ship's side amidships (regulation II-1/18)[4] | Freeboard | To apply when the spaces in which passengers are carried include the following alternative spaces |
|---|---|---|
| P.1 | …… | …….. |
| P.2 | …… | …….. |
| P.3 | …… | …….. |

1 Delete as appropriate.

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

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

4 For ships constructed before 1 January 2009, the applicable subdivision notation "C.1, C.2 and C.3" should be used.

2.2 the ship complied with the requirements of the Convention 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 requirements of the Convention;

2.4 the ship was provided with a line-throwing appliance and radio installations used in life-saving appliances in accordance with the requirements of the Convention;

2.5 the ship complied with the requirements of the Convention as regards radio installations;

2.6 the functioning of the radio installations used in life-saving appliances complied with the requirements of the Convention;

2.7 the ship complied with the requirements of the Convention 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 requirements of the Convention and the International Regulations for Preventing Collisions at Sea in force;

2.9 in all other respects the ship complied with the relevant requirements of the Convention;

2.10 the ship was/was not[1] subjected to an alternative design and arrangements in pursuance of regulation(s) II-1/55 / II-2/17 / III/38[1] of the Convention;

2.11 a Document of approval of alternative design and arrangements for machinery and electrical installations/fire protection/life-saving appliances and arrangements[1] is/is not[1] appended to this Certificate.

3 That an Exemption Certificate has/has not[1] been issued.

***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)*

[1] Delete as appropriate.

# RECORD OF EQUIPMENT FOR PASSENGER SHIP SAFETY (FORM P)

RECORD OF EQUIPMENT FOR COMPLIANCE WITH
THE INTERNATIONAL CONVENTION FOR THE SAFETY
OF LIFE AT SEA, 1974, AS AMENDED

## 1 *Particulars of ship*

Name of ship .....
Distinctive number or letters .....
Number of passengers for which certified .....
Minimum number of persons 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/21 and LSA Code, section 4.5) | …… | …… |
| 2.3 | Number of self-righting partially enclosed lifeboats (regulation III/43[1]) | …… | …… |
| 2.4 | Number of totally enclosed lifeboats (regulation III/21 and LSA Code, section 4.6) | …… | …… |
| 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 | …… | |
| 4.2 | Number of boats which are fast rescue boats | …… | |
| 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 | Number of Marine Evacuation Systems (MES) | …… | |
| 6.1 | Number of liferafts served by them | …… | |
| 6.2 | Number of persons accommodated by them | …… | |
| 7 | Buoyant apparatus | | |
| 7.1 | Number of apparatus | …… | |
| 7.2 | Number of persons capable of being supported | …… | |

[1] Refer to 1983 amendments to SOLAS (MSC.6(48)) and it is applicable to ships constructed on or after 1 July 1986, but before 1 July 1998.

2 ***Details of life-saving appliances*** *(continued)*

| | | |
|---|---|---|
| 8 | Number of lifebuoys | ..... |
| 9 | Number of lifejackets (total) | ..... |
| 9.1 | Number of adult lifejackets | ..... |
| 9.2 | Number of child lifejackets | ..... |
| 9.3 | Number of infant lifejackets | ..... |
| 10 | Immersion suits | ..... |
| 10.1 | Total number | ..... |
| 10.2 | Number of suits complying with the requirements for lifejackets | ..... |
| 11 | Number of anti-exposure suits | ..... |
| 12 | Number of thermal protective aids[2] | ..... |
| 13 | Radio installations used in life-saving appliances | |
| 13.1 | Number of search and rescue locating devices | |
| 13.1.1 | Radar search and rescue transponders (SART) | ..... |
| 13.1.2 | AIS search and rescue transmitters (AIS-SART) | ..... |
| 13.2 | Number of two-way VHF radiotelephone apparatus | ..... |

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 | ..... |
| 5 | VHF EPIRB | ..... |
| 6 | Ship's search and rescue locating device | |
| 6.1 | Radar search and rescue transponder (SART) | ..... |
| 6.2 | AIS search and rescue transmitter (AIS- SART) | ..... |

[2] Excluding those required by the LSA Code, paragraphs 4.1.5.1.24, 4.4.8.31 and 5.1.2.2.13.

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

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

5 ***Details of navigational systems and equipment***

| | Item | Actual provision |
|---|---|---|
| 1.1 | Standard magnetic compass[3] | …… |
| 1.2 | Spare magnetic compass[3] | …… |
| 1.3 | Gyro-compass[3] | …… |
| 1.4 | Gyro-compass heading repeater[3] | …… |
| 1.5 | Gyro-compass bearing repeater[3] | …… |
| 1.6 | Heading or track control system[3] | …… |
| 1.7 | Pelorus or compass bearing device[3] | …… |
| 1.8 | Means of correcting heading and bearings | …… |
| 1.9 | Transmitting heading device (THD)[3] | …… |
| 2.1 | Nautical charts/Electronic chart display and information system (ECDIS)[4] | …… |
| 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[3,4] | …… |
| 3.2 | 9 GHz radar[3] | …… |
| 3.3 | Second radar (3 GHz/9 GHz[4])[3] | …… |
| 3.4 | Automatic radar plotting aid (ARPA)[3] | …… |
| 3.5 | Automatic tracking aid[3] | …… |
| 3.6 | Second automatic tracking aid[3] | …… |
| 3.7 | Electronic plotting aid[3] | …… |
| 4.1 | Automatic identification system (AIS) | …… |
| 4.2 | Long-range identification and tracking system | …… |
| 5 | Voyage data recorder (VDR) | …… |
| 6.1 | Speed and distance measuring device (through the water)[3] | …… |
| 6.2 | Speed and distance measuring device (over the ground in the forward and athwartships direction)[3] | …… |
| 7 | Echo-sounding device[3] | …… |
| 8.1 | Rudder, propeller, thrust, pitch and operational mode indicator[3] | …… |
| 8.2 | Rate-of-turn indicator[3] | …… |
| 9 | Sound reception system[3] | …… |
| 10 | Telephone to emergency steering position[3] | …… |
| 11 | Daylight signalling lamp[3] | …… |
| 12 | Radar reflector[3] | …… |
| 13 | International Code of Signals | …… |
| 14 | IAMSAR Manual, Volume III | …… |
| 15 | Bridge navigational watch alarm system (BNWAS) | |

[3] Alternative means of meeting this requirement are permitted under regulation V/19. In case of other means they shall be specified.

[4] 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)*

## *FORM OF SAFETY CONSTRUCTION CERTIFICATE FOR CARGO SHIPS*

## CARGO SHIP SAFETY CONSTRUCTION CERTIFICATE

*(Official seal)* *(State)*

Issued under the provisions of the
INTERNATIONAL CONVENTION FOR THE SAFETY OF LIFE AT SEA, 1974, as amended

under the authority of the Government of

_____
*(name of the State)*

by _____
*(person or organization authorized)*

***Particulars of ship***[1]

Name of ship .....
Distinctive number or letters……
Port of registry .....
Gross tonnage .....
Deadweight of ship (metric tons)[2] .....
IMO Number[3].....

Type of ship[4]

Bulk carrier
Oil tanker
Chemical tanker
Gas carrier
Cargo ship other than any of the above

Date of build:

Date of building contract.....
Date on which keel was laid or ship was at similar stage of construction.....
Date of delivery .....
Date on which work for a conversion or an alteration or modification of a major character was commenced (where applicable) .....

All applicable dates shall be completed.

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

2 For oil tankers, chemical tankers and gas carriers only.

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

4 Delete as appropriate.

***THIS IS TO CERTIFY***:

1. That the ship has been surveyed in accordance with the requirements of regulation I/10 of the Convention.

2. That the survey showed that the condition of the structure, machinery and equipment as defined in the above regulation was satisfactory and the ship complied with the relevant requirements of chapters II-1 and II-2 of the Convention (other than those relating to fire safety systems and appliances and fire control plans).

3. That an Exemption Certificate has/has not[4] been issued.

4. That the ship was/was not[4] subjected to an alternative design and arrangements in pursuance of regulation(s) II-1/55 / II-2/17[4] of the Convention.

5. That a Document of approval of alternative design and arrangements for machinery and electrical installations/fire protection[4] is/is not[4] appended to this Certificate.

***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)*

[4] Delete as appropriate.

## *FORM OF SAFETY EQUIPMENT CERTIFICATE FOR CARGO SHIPS*

## CARGO SHIP SAFETY EQUIPMENT CERTIFICATE

This Certificate shall be supplemented by a Record of Equipment for Cargo Ship Safety (Form E)

*(Official seal)* *(State)*

Issued under the provisions of the
INTERNATIONAL CONVENTION FOR THE SAFETY OF LIFE AT SEA, 1974, as amended

under the authority of the Government of

_____
*(name of the State)*

by _____
*(person or organization authorized)*

***Particulars of ship***[1]

Name of ship .....
Distinctive number or letters .....
Port of registry.....
Gross tonnage .....
Deadweight of ship (metric tons)[2] .....
Length of ship (regulation III/3.12) .....
IMO Number[3] .....

Type of ship[4]

Bulk carrier
Oil tanker
Chemical tanker
Gas carrier
Cargo ship other than any of the above

Date on which keel was laid or ship was at 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.....

***THIS IS TO CERTIFY***:

1 That the ship has been surveyed in accordance with the requirements of regulation I/8 of the Convention.

2 That the survey showed that:

2.1 the ship complied with the requirements of the Convention as regards fire safety systems and appliances and fire control plans;

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

2 For oil tankers, chemical tankers and gas carriers only.

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

4 Delete as appropriate.

2.2 the life-saving appliances and the equipment of the lifeboats, liferafts and rescue boats were provided in accordance with the requirements of the Convention;

2.3 the ship was provided with a line-throwing appliance and radio installations used in life-saving appliances in accordance with the requirements of the Convention;

2.4 the ship complied with the requirements of the Convention as regards shipborne navigational equipment, means of embarkation for pilots and nautical publications;

2.5 the ship was provided with lights, shapes and means of making sound signals and distress signals in accordance with the requirements of the Convention and the International Regulations for Preventing Collisions at Sea in force;

2.6 in all other respects the ship complied with the relevant requirements of the Convention;

2.7 the ship was/was not[4] subjected to an alternative design and arrangements in pursuance of regulation(s) II-2/17 / III/38[4] of the Convention;

2.8 a Document of approval of alternative design and arrangements for fire protection/ life-saving appliances and arrangements[4] is/is not[4] appended to this Certificate.

3 That the ship operates in accordance with regulation III/26.1.1.1[5] within the limits of the trade area ……..

4 That an Exemption Certificate has/has not[4] been issued.

***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)

[4] Delete as appropriate.

[5] Refer to 1983 amendments to SOLAS (MSC.6(48)) and it is applicable to ships constructed on or after 1 July 1986, but before 1 July 1998 in the case of self-righting partially enclosed lifeboat(s) on board.

## RECORD OF EQUIPMENT FOR CARGO SHIP SAFETY (FORM E)

RECORD OF EQUIPMENT FOR COMPLIANCE WITH
THE INTERNATIONAL CONVENTION FOR THE SAFETY
OF LIFE AT SEA, 1974, AS AMENDED

1 ***Particulars of ship***

Name of ship .....
Distinctive number or letters .....

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 self-righting partially enclosed lifeboats (regulation III/43[1]) | …… | …… |
| 2.3 | Number of totally enclosed lifeboats (regulation III/31 and LSA Code, section 4.6) | …… | …… |
| 2.4 | Number of lifeboats with a self-contained air support system (regulation III/31 and LSA Code, section 4.8) | …… | …… |
| 2.5 | Number of fire-protected lifeboats (regulation III/31 and LSA Code, section 4.9) | …… | …… |
| 2.6 | Other lifeboats | | |
| 2.6.1 | Number | …… | …… |
| 2.6.2 | Type | …… | …… |
| 2.7 | Number of freefall lifeboats | …… | |
| 2.7.1 | Totally enclosed (regulation III/31 and LSA Code, section 4.7) | …… | |
| 2.7.2 | Self-contained (regulation III/31 and LSA Code, section 4.8) | …… | |
| 2.7.3 | Fire-protected (regulation III/31 and LSA Code, section 4.9) | …… | |
| 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 | …… | |

[1] Refer to 1983 amendments to SOLAS (MSC.6(48)) and it is applicable to ships constructed on or after 1 July 1986, but before 1 July 1998.

2 ***Details of life-saving appliances*** *(continued)*

| | | |
|---|---|---|
| 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 | ..... |
| 5.3 | Number of liferafts required by regulation III/31.1.4 | ..... |
| 6 | Number of lifebuoys | ..... |
| 7 | Number of lifejackets | ..... |
| 8 | Immersion suits | |
| 8.1 | Total number | ..... |
| 8.2 | Number of suits complying with the requirements for lifejackets | ..... |
| 9 | Number of anti-exposure suits | ..... |
| 10 | Radio installations used in life-saving appliances | |
| 10.1 | Number of search and rescue locating devices | |
| 10.1.1 | Radar search and rescue transponders (SART) | ..... |
| 10.1.2 | AIS search and rescue transmitters (AIS-SART) | ..... |
| 10.2 | Number of two-way VHF radiotelephone apparatus | ..... |

3 ***Details of navigational systems and equipment***

| | Item | Actual provision |
|---|---|---|
| 1.1 | Standard magnetic compass[2] | ..... |
| 1.2 | Spare magnetic compass[2] | ..... |
| 1.3 | Gyro-compass[2] | ..... |
| 1.4 | Gyro-compass heading repeater[2] | ..... |
| 1.5 | Gyro-compass bearing repeater[2] | ..... |
| 1.6 | Heading or track control system[2] | ..... |
| 1.7 | Pelorus or compass bearing device[2] | ..... |
| 1.8 | Means of correcting heading and bearings | ..... |
| 1.9 | Transmitting heading device (THD)[2] | ..... |
| 2.1 | Nautical charts/Electronic chart display and information system (ECDIS)[3] | ..... |
| 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[2, 3] | ..... |
| 3.2 | 9 GHz radar[2] | ..... |
| 3.3 | Second radar (3 GHz/9 GHz[3])[2] | ..... |
| 3.4 | Automatic radar plotting aid (ARPA)[2] | ..... |
| 3.5 | Automatic tracking aid[2] | ..... |
| 3.6 | Second automatic tracking aid[2] | ..... |
| 3.7 | Electronic plotting aid[2] | ..... |

[2] Alternative means of meeting this requirement are permitted under regulation V/19. In case of other means, they shall be specified.

[3] Delete as appropriate.

3 ***Details of navigational systems and equipment*** *(continued)*

| | Item | Actual provision |
|---|---|---|
| 4.1 | Automatic identification system (AIS) | …… |
| 4.2 | Long-range identification and tracking system | …… |
| 5.1 | Voyage data recorder (VDR)[3] | …… |
| 5.2 | Simplified voyage data recorder (S-VDR)[3] | …… |
| 6.1 | Speed and distance measuring device (through the water)[2] | …… |
| 6.2 | Speed and distance measuring device (over the ground in the forward and athwartships direction) [2] | …… |
| 7 | Echo-sounding device[2] | …… |
| 8.1 | Rudder, propeller, thrust, pitch and operational mode indicator[2] | …… |
| 8.2 | Rate-of-turn indicator[2] | …… |
| 9 | Sound reception system[2] | …… |
| 10 | Telephone to emergency steering position[2] | …… |
| 11 | Daylight signalling lamp[2] | …… |
| 12 | Radar reflector[2] | …… |
| 13 | International Code of Signals | …… |
| 14 | IAMSAR Manual, Volume III | …… |
| 15 | Bridge navigational watch alarm system (BNWAS) | …….. |

***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)*

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

3 Delete as appropriate.

## *FORM OF SAFETY RADIO CERTIFICATE FOR CARGO SHIPS*

## CARGO SHIP SAFETY RADIO CERTIFICATE

This Certificate shall be supplemented by a Record of Equipment
for Cargo Ship Safety Radio (Form R)

*(Official seal)* *(State)*

Issued under the provisions of the
INTERNATIONAL CONVENTION FOR THE SAFETY OF LIFE
AT SEA, 1974, as amended

under the authority of the Government of

_____
*(name of the State)*

by _____
*(person or organization authorized)*

***Particulars of ship***[1]

Name of ship.....
Distinctive number or letters.....
Port of registry.....
Gross tonnage .....
Sea areas in which ship is certified to operate (regulation IV/2) .....
IMO Number[2] .....
Date on which keel was laid or ship was at 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 .....

***THIS IS TO CERTIFY:***

1 That the ship has been surveyed in accordance with the requirements of regulation I/9 of the Convention.

2 That the survey showed that:

2.1 the ship complied with the requirements of the Convention as regards radio installations;

2.2 the functioning of the radio installations used in life-saving appliances complied with the requirements of the Convention.

3 That an Exemption Certificate has/has not[3] been issued.

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

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

3 Delete as appropriate.

***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)*

## RECORD OF EQUIPMENT FOR CARGO SHIP SAFETY RADIO (FORM R)

RECORD OF EQUIPMENT FOR COMPLIANCE
WITH THE INTERNATIONAL CONVENTION FOR THE SAFETY
OF LIFE AT SEA, 1974, AS AMENDED

### 1 *Particulars of ship*

Name of ship .....
Distinctive number or letters .....
Minimum number of persons with required
qualifications to operate the radio installations .....

### 2 *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 telegraphy | …….. |
| 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 | …….. |
| 5 | VHF EPIRB | …….. |
| 6 | Ship's search and rescue locating device | |
| 6.1 | Radar search and rescue transponder (SART) | …….. |
| 6.2 | AIS search and rescue transmitter (AIS-SART) | …….. |

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

3.1 Duplication of equipment …….

3.2 Shore-based maintenance …….

3.3 At-sea maintenance capability ……..

***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)*

## *FORM OF EXEMPTION CERTIFICATE*

## EXEMPTION CERTIFICATE

*(Official seal)* *(State)*

Issued under the provisions of the
INTERNATIONAL CONVENTION FOR THE SAFETY OF LIFE
AT SEA, 1974, as amended

under the authority of the Government of

_____
*(name of the State)*

by _____
*(person or organization authorized)*

***Particulars of ship***[1]

Name of ship.....
Distinctive number or letters.....
Port of registry .....
Gross tonnage .....
IMO Number[2] .....

***THIS IS TO CERTIFY:***

That the ship is, under the authority conferred by regulation……..
of the Convention, exempted from the requirements of ……
…… of the Convention.

Conditions, if any, on which the Exemption Certificate is granted:
…….
..……

Voyages, if any, for which the Exemption Certificate is granted:

……
……..

***This certificate is valid until*** .....subject to the ……Certificate, to which this certificate is attached, remaining valid.

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)*

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

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

## *FORM OF NUCLEAR PASSENGER SHIP SAFETY CERTIFICATE*

## NUCLEAR PASSENGER SHIP SAFETY CERTIFICATE

This Certificate shall be supplemented by a Record of Equipment for Passenger Ship Safety (Form P)

*(Official seal)* *(State)*

for *an / a short*[1] international voyage

Issued under the provisions of the
INTERNATIONAL CONVENTION FOR THE SAFETY OF LIFE
AT SEA, 1974, as amended

under the authority of the Government of

_____
*(name of the State)*

by _____
*(person or organization authorized)*

### *Particulars of ship*[2]

Name of ship.....
Distinctive number or letters.....
Port of registry .....
Gross tonnage .....
Sea areas in which ship is certified to operate (regulation IV/2) .....
IMO Number[3] .....

Date of build:

Date of building contract .....
Date on which keel was laid or ship was at similar stage of construction.....
Date of delivery .....
Date on which work for a conversion or an alteration or modification of a major character was commenced (where applicable) .....

All applicable dates shall be completed.

***THIS IS TO CERTIFY:***

1 That the ship has been surveyed in accordance with the requirements of regulation VIII/9 of the Convention.

2 That the ship, being a nuclear ship, complied with all the requirements of chapter VIII of the Convention and conformed to the Safety Assessment approved for the ship; and that:

2.1 the ship complied with the requirements of the Convention as regards:

.1 the structure, main and auxiliary machinery, boilers and other pressure vessels, including the nuclear propulsion plant and the collision protective structure;

---

1 Delete as appropriate.

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

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

.2 the watertight subdivision arrangements and details;

.3 the following subdivision load lines:

| Subdivision load lines assigned and marked on the ship's side amidships (regulation II-1/18)[4] | Freeboard | To apply when the spaces in which passengers are carried include the following alternative spaces |
|---|---|---|
| P.1 | ……. | …….. |
| P.2 | ……. | …….. |
| P.3 | ……. | …….. |

2.2 the ship complied with the requirements of the Convention as regards structural fire protection, fire safety systems and appliances and fire control plans;

2.3 the ship complied with the requirements of the Convention as regards radiation protection systems and equipment;

2.4 the life-saving appliances and the equipment of the lifeboats, liferafts and rescue boats were provided in accordance with the requirements of the Convention;

2.5 the ship was provided with a line-throwing appliance and radio installations used in life-saving appliances in accordance with the requirements of the Convention;

2.6 the ship complied with the requirements of the Convention as regards radio installations;

2.7 the functioning of the radio installations used in life-saving appliances complied with the requirements of the Convention;

2.8 the ship complied with the requirements of the Convention as regards shipborne navigational equipment, means of embarkation for pilots and nautical publications;

2.9 the ship was provided with lights, shapes, means of making sound signals and distress signals, in accordance with the requirements of the Convention and the International Regulations for Preventing Collisions at Sea in force;

2.10 in all other respects the ship complied with the relevant requirements of the Convention;

2.11 the ship was/was not[1] subjected to an alternative design and arrangements in pursuance of regulation(s) II-1/55 / II-2 /17 / III/38[1] of the Convention;

2.12 a Document of approval of alternative design and arrangements for machinery and electrical installations/fire protection/life-saving appliances and arrangements[1] is/is not[1] appended to this Certificate.

***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)*

1 Delete as appropriate.

4 For ships constructed before 1 January 2009, the applicable subdivision notation "c.1, c.2 and c.3" should be used.

## *FORM OF NUCLEAR CARGO SHIP SAFETY CERTIFICATE*

## NUCLEAR CARGO SHIP SAFETY CERTIFICATE

This Certificate shall be supplemented by a Record of Equipment for Cargo Ship Safety (Form C)

*(Official seal)* *(State)*

Issued under the provisions of the

INTERNATIONAL CONVENTION FOR THE SAFETY OF LIFE
AT SEA, 1974, as amended

under the authority of the Government of

_____
*(name of the State)*

by _____
*(person or organization authorized)*

***Particulars of ship***[1]

Name of ship.....
Distinctive number or letters.....
Port of registry .....
Gross tonnage .....
Deadweight of ship (metric tons)[2].....
Length of ship (regulation III/3.12).....
Sea areas in which ship is certified to operate (regulation IV/2) .....
IMO Number[3] .....

Type of ship[4]
Bulk carrier
Oil tanker
Chemical tanker
Gas carrier
Cargo ship other than any of the above

Date of build:

Date of building contract .....
Date on which keel was laid or ship was at similar stage of construction.....
Date of delivery .....
Date on which work for a conversion or an alteration or modification of a major character was commenced (where applicable) .....

All applicable dates shall be completed.

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

2 For oil tankers, chemical tankers and gas carriers only.

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

4 Delete as appropriate.

***THIS IS TO CERTIFY:***

1 That the ship has been surveyed in accordance with the requirements of regulation VIII/9 of the Convention.

2 That the ship, being a nuclear ship, complied with all the requirements of chapter VIII of the Convention and conformed to the Safety Assessment approved for the ship; and that:

2.1 the condition of the structure, machinery and equipment as defined in regulation I/10 (as applicable to comply with regulation VIII/9), including the nuclear propulsion plant and the collision protective structure, was satisfactory and the ship complied with the relevant requirements of chapter II-1 and chapter II-2 of the Convention (other than those relating to fire safety systems and appliances and fire control plans);

2.2 the ship complied with the requirements of the Convention as regards 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 requirements of the Convention;

2.4 the ship was provided with a line-throwing appliance and radio installations used in life-saving appliances in accordance with the requirements of the Convention;

2.5 the ship complied with the requirements of the Convention as regards radio installations;

2.6 the functioning of the radio installations used in life-saving appliances complied with the requirements of the Convention;

2.7 the ship complied with the requirements of the Convention 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 requirements of the Convention and the International Regulations for Preventing Collisions at Sea in force;

2.9 in all other respects the ship complied with the relevant requirements of the regulations, so far as these requirements apply thereto;

2.10 the ship was/was not[3] subjected to an alternative design and arrangements in pursuance of regulation(s) II-1/55 / II-2/17 / III/38[3] of the Convention;

2.11 a Document of approval of alternative design and arrangements for machinery and electrical installations/fire protection/life-saving appliance and arrangements[3] is/is not[3] appended to this Certificate.

***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)*

[3] Delete as appropriate.

# RECORD OF EQUIPMENT FOR CARGO SHIP SAFETY (FORM C)

RECORD OF EQUIPMENT FOR COMPLIANCE WITH
THE INTERNATIONAL CONVENTION FOR THE SAFETYOF
LIFE AT SEA, 1974, AS AMENDED

## 1 *Particulars of ship*

Name of ship.....
Distinctive number or letters.....
Minimum number of persons 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 self-righting partially enclosed lifeboats (regulation III/43[1]) | ..... | ..... |
| 2.3 | Number of totally enclosed lifeboats (regulation III/31 and LSA Code, section 4.6) | ..... | ..... |
| 2.4 | Number of lifeboats with a self-contained air support system (regulation III/31 and LSA Code, section 4.8) | ..... | ..... |
| 2.5 | Number of fire-protected lifeboats (regulation III/31 and LSA Code, section 4.9) | ..... | ..... |
| 2.6 | Other lifeboats | | |
| 2.6.1 | Number | ..... | ..... |
| 2.6.2 | Type | ..... | ..... |
| 2.7 | Number of freefall lifeboats | ..... | |
| 2.7.1 | Totally enclosed (regulation III/31 and LSA Code, section 4.7) | ..... | |
| 2.7.2 | Self-contained (regulation III/31 and LSA Code, section 4.8) | ..... | |
| 2.7.3 | Fire-protected (regulation III/31 and LSA Code, section 4.9) | ..... | |
| 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 | ..... | |

[1] Refer to 1983 amendments to SOLAS (MSC.6(48)) and it is applicable to ships constructed on or after 1 July 1986, but before 1 July 1998.

2 ***Details of life-saving appliances*** *(continued)*

| | | |
|---|---|---|
| 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 | ..... |
| 5.3 | Number of liferafts required by regulation III/31.1.4 | ..... |
| 6 | Number of lifebuoys | ..... |
| 7 | Number of lifejackets | ..... |
| 8 | Immersion suits | |
| 8.1 | Total number | ..... |
| 8.2 | Number of suits complying with the requirements for lifejackets | ..... |
| 9 | Number of anti-exposure suits | ..... |
| 10 | Radio installations used in life-saving appliances | |
| 10.1 | Number of search and rescue locating devices | |
| 10.1.1 | Radar search and rescue transponders (SART) | ..... |
| 10.1.2 | AIS search and rescue transmitters (AIS-SART) | ..... |
| 10.2 | Number of two-way VHF radiotelephone apparatus | ..... |

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 telegraphy | …….. |
| 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 | …….. |
| 5 | VHF EPIRB | …….. |
| 6 | Ship's search and rescue locating device | |
| 6.1 | Radar search and rescue transponder (SART) | …….. |
| 6.2 | AIS search and rescue transmitter (AIS-SART) | …….. |

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

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

5 ***Details of navigational systems and equipment***

| Item | | Actual provision |
|---|---|---|
| 1.1 | Standard magnetic compass[2] | …….. |
| 1.2 | Spare magnetic compass[2] | …….. |
| 1.3 | Gyro-compass[2] | …….. |
| 1.4 | Gyro-compass heading repeater[2] | …….. |
| 1.5 | Gyro-compass bearing repeater[2] | …….. |
| 1.6 | Heading or track control system[2] | …….. |
| 1.7 | Pelorus or compass bearing device[2] | …….. |
| 1.8 | Means of correcting heading and bearings | …….. |
| 1.9 | Transmitting heading device (THD)[2] | …….. |
| 2.1 | Nautical charts/Electronic chart display and information system (ECDIS)[3] | …….. |
| 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[2, 3] | …….. |
| 3.2 | 9 GHz radar[2] | …….. |
| 3.3 | Second radar (3 GHz/9 GHz[3])[2] | …….. |
| 3.4 | Automatic radar plotting aid (ARPA)[2] | …….. |
| 3.5 | Automatic tracking aid[2] | …….. |
| 3.6 | Second automatic tracking aid[2] | …….. |
| 3.7 | Electronic plotting aid[2] | …….. |
| 4.1 | Automatic identification system (AIS) | …….. |
| 4.2 | Long-range identification and tracking system | …….. |
| 5.1 | Voyage data recorder (VDR)[3] | …….. |
| 5.2 | Simplified voyage data recorder (S-VDR)[3] | …….. |
| 6.1 | Speed and distance measuring device (through the water)[2] | …….. |
| 6.2 | Speed and distance measuring device (over the ground in the forward and athwartships direction)[2] | …….. |
| 7 | Echo-sounding device[2] | …….. |

[2] Alternative means of meeting this requirement are permitted under regulation V/19. In case of other means they shall be specified.

[3] Delete as appropriate.

5 ***Details of navigational systems and equipment*** *(continued)*

| | | |
|---|---|---|
| 8.1 | Rudder, propeller, thrust, pitch and operational mode indicator[2] | …….. |
| 8.2 | Rate-of-turn indicator[2] | …….. |
| 9 | Sound reception system[2] | …….. |
| 10 | Telephone to emergency steering position[2] | …….. |
| 11 | Daylight signalling lamp[2] | …….. |
| 12 | Radar reflector[2] | …….. |
| 13 | International Code of Signals | …….. |
| 14 | IAMSAR Manual, Volume III | …….. |
| 15 | Bridge navigational watch alarm system (BNWAS) | …… |

***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)*

***

[2] Alternative means of meeting this requirement are permitted under regulation V/19. In case of other means they shall be specified.

# ANNEX 8

## DRAFT AMENDMENTS TO THE PROTOCOL OF 1978 RELATING TO THE INTERNATIONAL CONVENTION FOR THE SAFETY OF LIFE AT SEA, 1974, AS AMENDED

## ANNEX

## MODIFICATIONS AND ADDITIONS TO THE ANNEX TO THE INTERNATIONAL CONVENTION FOR THE SAFETY OF LIFE AT SEA, 1974

## APPENDIX

The existing forms of the Cargo Ship Safety Construction Certificate and Cargo Ship Safety Equipment Certificate are replaced by the following:

***FORM OF SAFETY CONSTRUCTION CERTIFICATE FOR CARGO SHIPS***

## CARGO SHIP SAFETY CONSTRUCTION CERTIFICATE

(Official seal) (State)

Issued under the provisions of the
INTERNATIONAL CONVENTION FOR THE SAFETY OF LIFE
AT SEA, 1974, as modified by the Protocol of 1978 relating thereto

under the authority of the Government of

_____
(*name of the State*)

by _____
(*person or organization authorized*)

***Particulars of ship***[1]

Name of ship .....

Distinctive number or letters .....

Port of registry .....

Gross tonnage .....

Deadweight of ship (metric tons)[2] .....

IMO Number[3] .....

Type of ship[4]

Bulk carrier
Oil tanker
Chemical tanker
Gas carrier
Cargo ship other than any of the above

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

2 For oil tankers, chemical tankers and gas carriers only.

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

4 Delete as appropriate.

Date of build:

Date of building contract …….
Date on which keel was laid or ship was at similar stage of construction.....
Date of delivery .....
Date on which work for a conversion or an alteration or modification of a major character was commenced (where applicable) .....

All applicable dates shall be completed.

***THIS IS TO CERTIFY:***

1 That the ship has been surveyed in accordance with the requirements of regulation I/10 of the Convention.

2 That the survey showed that the condition of the structure, machinery and equipment as defined in the above regulation was satisfactory and the ship complied with the relevant requirements of chapters II-1 and II-2 of the Convention (other than those relating to fire safety systems and appliances and fire control plans).

3 That in implementing regulation I/6(b) the Government has instituted:

- mandatory annual surveys;
- unscheduled inspections.

4 That an Exemption Certificate has/has not[4] been issued.

5 The ship was/was not[4] subjected to an alternative design and arrangements in pursuance of regulation(s) II-1/55 / II-2/17[4] of the Convention.

6 A Document of approval of alternative design and arrangements for machinery and electrical installations/fire protection[4] is/is not[4] appended to this Certificate.

***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)

[4] Delete as appropriate.

**INTERMEDIATE SURVEY**

(for tankers of 10 years of age and over)

This is to certify that at an intermediate survey required by regulation I/10 of the Convention, as modified by the 1978 Protocol, this ship was found to comply with relevant provisions of the Convention.

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

Place: ……

Date: ……..
(Seal or stamp of the Authority, as appropriate)

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

Place: ……

Date: ……..
(Seal or stamp of the Authority, as appropriate)

**MANDATORY ANNUAL SURVEYS OR UNSCHEDULED INSPECTIONS**

This is to certify that the ship has been surveyed in accordance with regulation I/6(b) of the Convention, as modified by the 1978 Protocol and the relevant recommendations of the Organization[5].

1st mandatory annual survey[4,6]
1st unscheduled inspection[4]

Signed: ……..……
Place: …….....
Date: ……..……..
(Seal or stamp of the Authority as appropriate)

2nd mandatory annual survey[4,6]
2nd unscheduled inspection[4]

Signed: …….…….
Place: ……..
Date: …….……...
(Seal or stamp of the Authority as appropriate)

[4] Delete as appropriate.

[5] Reference is made to the Guidelines on surveys required by the 1978 SOLAS Protocol, the International Bulk Chemical Code and the International Gas Carrier Code adopted by the Organization by resolution A.560(14), as amended by MSC.84(70), and applicable parts of resolution A.1053(27) on the Survey Guidelines under the Harmonized System of Survey and Certification, 2011, as may be amended.

[6] An intermediate survey, but not an unscheduled inspection, may take the place of a mandatory annual survey.

| | |
|---|---|
| 3rd mandatory annual survey[4,6] | Signed: ……..…… |
| 3rd unscheduled inspection[4] | Place: ……..…….. |
| | Date: ……..……... |
| | (Seal or stamp of the Authority as appropriate) |
| 4th mandatory annual survey[4,6] | Signed: ……..……. |
| 4th unscheduled inspection[4] | Place: ……..…….. |
| | Date: ……..……... |
| | (Seal or stamp of the Authority as appropriate) |

[4] Delete as appropriate.

[6] An intermediate survey, but not an unscheduled inspection, may take the place of a mandatory annual survey.

## *FORM OF SAFETY EQUIPMENT CERTIFICATE FOR CARGO SHIPS*

## CARGO SHIP SAFETY EQUIPMENT CERTIFICATE

This Certificate shall be supplemented by a Record of Equipment for Cargo Ship Safety (Form E)

(Official seal) (State)

Issued under the provisions of the
INTERNATIONAL CONVENTION FOR THE SAFETY OF LIFE
AT SEA, 1974, as modified by the Protocol of 1978 relating thereto

under the authority of the Government of

_____
(*name of the State*)

by _____
(*person or organization authorized*)

***Particulars of ship***[1]

Name of ship .....

Distinctive number or letters .....

Port of registry.....

Gross tonnage .....

Deadweight of ship (metric tons)[2].....

Length of ship (regulation III/3.12 ) .....

IMO Number[3].....

Type of ship[4]

Bulk carrier
Oil tanker
Chemical tanker
Gas carrier
Cargo ship other than any of the above

Date on which keel was laid or ship was at 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.....

1 Alternatively, the particulars of the ship may be placed horizontally in boxes.
2 For oil tankers, chemical tankers and gas carriers only.
3 In accordance with IMO ship identification number scheme adopted by the Organization by resolution A.600(15).
4 Delete as appropriate.

***THIS IS TO CERTIFY:***

1 That the ship has been surveyed in accordance with the requirements of regulation I/8 of the Convention, as modified by the 1978 Protocol.

2 That the survey showed that:

2.1 the ship complied with the requirements of the Convention as regards fire safety systems and appliances and fire control plans;

2.2 the life-saving appliances and the equipment of the lifeboats, liferafts and rescue boats were provided in accordance with the requirements of the Convention;

2.3 the ship was provided with a line-throwing appliance and radio installations used in life-saving appliances in accordance with the requirements of the Convention;

2.4 the ship complied with the requirements of the Convention as regards shipborne navigational equipment, means of embarkation for pilots and nautical publications;

2.5 the ship was provided with lights, shapes and means of making sound signals and distress signals in accordance with the requirements of the Convention and the International Regulations for Preventing Collisions at Sea in force;

2.6 in all other respects the ship complied with the relevant requirements of the Convention;

2.7 the ship was/was not[4] subjected to an alternative design and arrangements in pursuance of regulation(s) II-2/17 / III/38[4] of the Convention;

2.8 a Document of approval of alternative design and arrangements for fire protection/ life-saving appliances and arrangements[4] is/is not[4] appended to this Certificate.

3 That the ship operates in accordance with regulation III/26.1.1.1[5] within the limits of the trade area ……

4 That in implementing regulation I/6(b) the Government has instituted:

- mandatory annual surveys;
- unscheduled inspections.

5 That an Exemption Certificate has/has not[4] been issued.

***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)

[4] Delete as appropriate.

[5] Refer to 1983 amendments to SOLAS (MSC.6(48)) and it is applicable to ships constructed on or after 1 July 1986, but before 1 July 1998 in the case of self-righting partially enclosed lifeboat(s) on board.

**INTERMEDIATE SURVEY**

(for tankers of 10 years of age and over)

This is to certify that at an intermediate survey required by regulation I/8 of the Convention, as modified by the 1978 Protocol, this ship was found to comply with relevant provisions of the Convention.

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

Place: ……

Date: ……..
(Seal or stamp of the Authority, as appropriate)

**MANDATORY ANNUAL SURVEYS OR UNSCHEDULED INSPECTIONS**

This is to certify that the ship has been surveyed in accordance with regulation I/6(b) of the Convention, as modified by the 1978 Protocol and the relevant recommendations of the Organization[6].

mandatory annual survey[4,7]

unscheduled inspection[4]

Signed: ……..……..…….

Place: ……..……..……..

Date: ……..……..…...
(Seal or stamp of the Authority as appropriate)

* * *

Under the provisions of regulation I/14 of the Convention, as modified by the 1978 Protocol, the validity of this Certificate is extended until …….....

Signed: …….....

Place: ……..…

Date: ……..
(Seal or stamp of the Authority as appropriate)

***

4 Delete as appropriate.

6 Reference is made to the *Guidelines on surveys required by the 1978 SOLAS Protocol, the International Bulk Chemical Code and the International Gas Carrier Code*, adopted by the Organization by resolution A.560(14), as amended by MSC.84(70), and applicable parts of resolution A.1053(27) on the *Survey Guidelines under the Harmonized System of Survey and Certification (HSCC), 2011*, as may be amended.

7 An intermediate survey, but not an unscheduled inspection, may take the place of a mandatory annual survey.

# ANNEX 9

# DRAFT AMENDMENTS TO THE PROTOCOL OF 1988 RELATING TO THE INTERNATIONAL CONVENTION FOR THE SAFETY OF LIFE AT SEA, 1974, AS AMENDED

## ANNEX

## MODIFICATIONS AND ADDITIONS TO THE ANNEX TO THE INTERNATIONAL CONVENTION FOR THE SAFETY OF LIFE AT SEA, 1974

## APPENDIX

## MODIFICATIONS AND ADDITIONS TO THE APPENDIX TO THE ANNEX TO THE INTERNATIONAL CONVENTION FOR THE SAFETY OF LIFE AT SEA, 1974

The existing form of the Passenger Ship Safety Certificate, Record of Equipment for the Passenger Ship Safety Certificate (Form P), form of the Cargo Ship Safety Construction Certificate, form of the Cargo Ship Safety Equipment Certificate, Record of Equipment for the Cargo Ship Safety Equipment Certificate (Form E), form of the Cargo Ship Safety Radio Certificate, form of the Record of Equipment for the Cargo Ship Safety Radio Certificate (Form R), form of the Cargo Ship Safety Certificate, Record of equipment for the Cargo Ship Safety Certificate (Form C) and form of the Exemption Certificate are replaced by the following forms of certificates:

## *FORM OF SAFETY CERTIFICATE FOR PASSENGER SHIPS*

## PASSENGER SHIP SAFETY CERTIFICATE

This Certificate shall be supplemented by a Record of Equipment for Passenger Ship Safety (Form P)

*(Official seal)* *(State)*

for *an/a short*[1] international voyage

Issued under the provisions of the
INTERNATIONAL CONVENTION FOR THE SAFETY OF LIFE
AT SEA, 1974, as modified by the Protocol of 1988 relating thereto

under the authority of the Government of

_____
*(name of the State)*

by _____
*(person or organization authorized)*

***Particulars of ship***[2]

Name of ship .....

Distinctive number or letters .....

Port of registry .....

Gross tonnage .....

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

IMO Number[3] .....

Date of build:

Date of building contract.....
Date on which keel was laid or ship was at similar stage of construction.....
Date of delivery .....
Date on which work for a conversion or an alteration or modification of a major character was commenced (where applicable) ……..

All applicable dates shall be completed.

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

***THIS IS TO CERTIFY:***

1 That the ship has been surveyed in accordance with the requirements of regulation I/7 of the Convention.

2 That the survey showed that:

2.1 the ship complied with the requirements of the Convention as regards:

.1 the structure, main and auxiliary machinery, boilers and other pressure vessels;
.2 the watertight subdivision arrangements and details;
.3 the following subdivision load lines:

| Subdivision load lines assigned and marked on the ship's side amidships (regulation II-1/18)[4] | Freeboard | To apply when the spaces in which passengers are carried include the following alternative spaces |
|---|---|---|
| P.1<br>P.2<br>P.3 | ……<br>……<br>…… | ……..<br>……..<br>…….. |

2.2 the ship complied with the requirements of the Convention 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 requirements of the Convention;

2.4 the ship was provided with a line-throwing appliance and radio installations used in life-saving appliances in accordance with the requirements of the Convention;

2.5 the ship complied with the requirements of the Convention as regards radio installations;

2.6 the functioning of the radio installations used in life-saving appliances complied with the requirements of the Convention;

2.7 the ship complied with the requirements of the Convention 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 requirements of the Convention and the International Regulations for Preventing Collisions at Sea in force;

2.9 in all other respects the ship complied with the relevant requirements of the Convention;

2.10 the ship was/was not[1] subjected to an alternative design and arrangements in pursuance of regulation(s) II-1/55/II-2/17/III/38[1] of the Convention;

2.11 a Document of approval of alternative design and arrangements for machinery and electrical installations/fire protection/life-saving appliances and arrangements[1] is/is not[1] appended to this Certificate.

3 That an Exemption Certificate has/has not[1] been issued.

[1] Delete as appropriate.

[4] For ships constructed before 1 January 2009, the applicable subdivision notation "C.1, C.2 and C.3" should be used.

***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)*

***Endorsement where the renewal survey has been completed and regulation I/14(d) applies***

The ship complies with the relevant requirements of the Convention, and this certificate shall, in accordance with regulation I/14(d) of the Convention, 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 survey or for a period of grace where regulation I/14(e) or I/14(f) applies***

This certificate shall, in accordance with regulation I/14(e)/I/14(f)[1] of the Convention, be accepted as valid until ……

Signed: .....

*(Signature of authorized official)*

Place:.....

Date:.....

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

[1] Delete as appropriate.

## *FORM OF SAFETY CONSTRUCTION CERTIFICATE FOR CARGO SHIPS*

## CARGO SHIP SAFETY CONSTRUCTION CERTIFICATE

*(Official seal)* *(State)*

Issued under the provisions of the
INTERNATIONAL CONVENTION FOR THE SAFETY OF LIFE
AT SEA, 1974, as modified by the Protocol of 1988 relating thereto

under the authority of the Government of

_____
*(name of the State)*

by _____
*(person or organization authorized)*

***Particulars of ship***[1]

Name of ship .....

Distinctive number or letters .....

Port of registry .....

Gross tonnage .....

Deadweight of ship (metric tons)[2] .....

IMO Number[3] .....

Type of ship[4]

Bulk carrier
Oil tanker
Chemical tanker
Gas carrier
Cargo ship other than any of the above

Date of build:

Date of building contract .....
.....
Date on which keel was laid or ship was at similar stage of construction .....
Date of delivery .....
Date on which work for a conversion or an alteration or modification of a major character was commenced (where applicable) .....

All applicable dates shall be completed.

1 Alternatively, the particulars of the ship may be placed horizontally in boxes.
2 For oil tankers, chemical tankers and gas carriers only.
3 In accordance with *IMO ship identification number scheme*, adopted by the Organization by resolution A.600(15).
4 Delete as appropriate.

***THIS IS TO CERTIFY:***

1. That the ship has been surveyed in accordance with the requirements of regulation I/10 of the Convention.

2. That the survey showed that the condition of the structure, machinery and equipment as defined in the above regulation was satisfactory and the ship complied with the relevant requirements of chapters II-1 and II-2 of the Convention (other than those relating to fire safety systems and appliances and fire control plans).

3. That the last two inspections of the outside of the ship's bottom took place on …….. and …..……*(dates)*

4. That an Exemption Certificate has/has not[4] been issued.

5. The ship was/was not[4] subjected to an alternative design and arrangements in pursuance of regulation(s) II-1/55 / II-2/17[4] of the Convention.

6. A Document of approval of alternative design and arrangements for machinery and electrical installations/fire protection[4] is/is not[4] appended to this Certificate.

***This certificate is valid until*** .....[5] subject to the annual and intermediate surveys and inspections of the outside of the ship's bottom in accordance with regulation 1/10 of the Convention.

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)*

4 Delete as appropriate.

5 Insert the date of expiry as specified by the Administration in accordance with regulation I/14(a) of the Convention. The day and the month of this date correspond to the anniversary date, as defined in regulation I/2(n) of the Convention, unless amended in accordance with regulation I/14(h).

***Endorsement for annual and intermediate surveys***

THIS IS TO CERTIFY that, at a survey required by regulation I/10 of the Convention, the ship was found to comply with the relevant requirements of the Convention.

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

Annual/Intermediate[4] survey: Signed: .....
*(Signature of authorized official)*
Place: .....
*(Seal or stamp of the authority, as appropriate)*

Annual/Intermediate[4] 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/intermediate survey in accordance with regulation I/14(h)(iii)***

*THIS IS TO CERTIFY* that, at an annual/intermediate survey[4] in accordance with regulation I/14(h)(iii) of the Convention, this ship was found to comply with the relevant requirements of the Convention.

Signed: .....

*(Signature of authorized official)*

Place: .....

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

[4] Delete as appropriate.

***Endorsement for inspections of the outside of the ship's bottom***[6]

THIS IS TO CERTIFY that, at an inspection required by regulation I/10 of the Convention, the ship was found to comply with the relevant requirements of the Convention.

First inspection:

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

Second inspection:

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

***Endorsement to extend the certificate if valid for less than 5 years where regulation I/14(c) applies***

The ship complies with the relevant requirements of the Convention, and this certificate shall, in accordance with regulation I/14(c) of the Convention, be accepted as valid until .....

Signed: .....

(Signature of authorized official)

Place: .....

Date: .....

(Seal or stamp of the authority, as appropriate)

***Endorsement where the renewal survey has been completed and regulation I/14(d) applies***

The ship complies with the relevant requirements of the Convention, and this certificate shall, in accordance with regulation I/14(d) of the Convention, be accepted as valid until .....

Signed .....

(Signature of authorized official)

Place: .....

Date: .....

(Seal or stamp of the authority, as appropriate)

[6] Provision may be made for additional inspections.

***Endorsement to extend the validity of the certificate until reaching the port of survey or for a period of grace where regulation I/14(e) or I/14(f) applies***

The certificate shall, in accordance with regulation I/14(e)/I/14(f)[4] of the Convention, be accepted as valid until ……..

Signed: .....

(Signature of authorized official)

Place: .....

Date: .....

(Seal or stamp of the authority, as appropriate)

***Endorsement for advancement of anniversary date where regulation I/14(h) applies***

In accordance with regulation I/14(h) of the Convention, the new anniversary date is .....

Signed: .....

(Signature of authorized official)

Place: .....

Date: .....

(Seal or stamp of the authority, as appropriate)

In accordance with regulation I/14(h) of the Convention, the new anniversary date is .....

Signed: .....

(Signature of authorized official)

Place: .....

Date: .....

(Seal or stamp of the authority, as appropriate)

[4] Delete as appropriate.

## *FORM OF SAFETY EQUIPMENT CERTIFICATE FOR CARGO SHIPS*

## CARGO SHIP SAFETY EQUIPMENT CERTIFICATE

This Certificate shall be supplemented by a Record of Equipment for Cargo Ship Safety (Form E)

*(Official seal)* *(State)*

Issued under the provisions of the
INTERNATIONAL CONVENTION FOR THE SAFETY OF LIFE
AT SEA, 1974, as modified by the Protocol of 1988 relating thereto

under the authority of the Government of

_____
*(name of the State)*

by _____
*(person or organization authorized)*

***Particulars of ship***[1]

Name of ship .....

Distinctive number or letters .....

Port of registry.....

Gross tonnage .....

Deadweight of ship (metric tons)[2].....

Length of ship (regulation III/3.12) .....

IMO Number[3].....

Type of ship[4]

Bulk carrier
Oil tanker
Chemical tanker
Gas carrier
Cargo ship other than any of the above

Date on which keel was laid or ship was at 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.....

1 Alternatively, the particulars of the ship may be placed horizontally in boxes.
2 For oil tankers, chemical tankers and gas carriers only.
3 In accordance with *IMO ship identification number scheme*, adopted by the Organization by resolution A.600(15).
4 Delete as appropriate.

***THIS IS TO CERTIFY:***

1 That the ship has been surveyed in accordance with the requirements of regulation I/8 of the Convention.

2 That the survey showed that:

2.1 the ship complied with the requirements of the Convention as regards fire safety systems and appliances and fire control plans;

2.2 the life-saving appliances and the equipment of the lifeboats, liferafts and rescue boats were provided in accordance with the requirements of the Convention;

2.3 the ship was provided with a line-throwing appliance and radio installations used in life-saving appliances in accordance with the requirements of the Convention;

2.4 the ship complied with the requirements of the Convention as regards shipborne navigational equipment, means of embarkation for pilots and nautical publications;

2.5 the ship was provided with lights, shapes and means of making sound signals and distress signals in accordance with the requirements of the Convention and the International Regulations for Preventing Collisions at Sea in force;

2.6 in all other respects the ship complied with the relevant requirements of the Convention;

2.7 the ship was/was not[4] subjected to an alternative design and arrangements in pursuance of regulation(s) II-2/17 / III/38[4] of the Convention;

2.8 a Document of approval of alternative design and arrangements for fire protection/life-saving appliances and arrangements[4] is/is not[4] appended to this Certificate.

3 That the ship operates in accordance with regulation III/26.1.1.1[5] within the limits of the trade area ……..

4 That an Exemption Certificate has/has not[4] been issued.

***This certificate is valid until*** ……[6] subject to the annual and periodical surveys in accordance with regulation I/8 of the Convention.

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)

4 Delete as appropriate.

5 Refer to 1983 amendments to SOLAS (MSC.6(48)) and it is applicable to ships constructed on or after 1 July 1986, but before 1 July 1998 in the case of self-righting partially enclosed lifeboat(s) on board.

6 Insert the date of expiry as specified by the Administration in accordance with regulation I/14(a) of the Convention. The day and the month of this date correspond to the anniversary date as defined in regulation I/2(n) of the Convention, unless amended in accordance with regulation I/14(h).

***Endorsement for annual and periodical surveys***

THIS IS TO CERTIFY that, at a survey required by regulation I/8 of the Convention, the ship was found to comply with the relevant requirements of the Convention.

Annual survey:

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

Annual/Periodical[4] survey:

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

Annual/Periodical[4] 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/periodical survey in accordance with regulation I/14(h)(iii)***

THIS IS TO CERTIFY that, at an annual/periodical[4] survey in accordance with regulation I/14(h)(iii) of the Convention, this ship was found to comply with the relevant requirements of the Convention.

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

[4] Delete as appropriate.

***Endorsement to extend the certificate if valid for less than 5 years where regulation I/14(c) applies***

The ship complies with the relevant requirements of the Convention, and this certificate shall, in accordance with regulation I/14(c) of the Convention, be accepted as valid until .....

Signed: .....

(Signature of authorized official)

Place: .....

Date: .....

(Seal or stamp of the authority, as appropriate)

***Endorsement where the renewal survey has been completed and regulation I/14(d) applies***

The ship complies with the relevant requirements of the Convention, and this certificate shall, in accordance with regulation I/14(d) of the Convention, 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 survey or for a period of grace where regulation I/14(e) or I/14(f) applies***

The certificate shall, in accordance with regulation I/14(e)/l/14(f)[4] of the Convention, be accepted as valid until .....

Signed: .....

(Signature of authorized official)

Place: .....

Date: .....

(Seal or stamp of the authority, as appropriate)

[4] Delete as appropriate.

***Endorsement for advancement of anniversary date where regulation I/14(h) applies***

In accordance with regulation I/14(h) of the Convention, the new anniversary date is .....

Signed: .....

(Signature of authorized official)

Place: .....

Date: .....

(Seal or stamp of the authority, as appropriate)

In accordance with regulation I/14(h) of the Convention, the new anniversary date is .....

Signed: .....

(Signature of authorized official)

Place: .....

Date: .....

(Seal or stamp of the authority, as appropriate)

## *FORM OF SAFETY RADIO CERTIFICATE FOR CARGO SHIPS*

## CARGO SHIP SAFETY RADIO CERTIFICATE

This Certificate shall be supplemented by a Record of Equipment
for Cargo Ship Safety Radio (Form R)

*(Official seal)* *(State)*

Issued under the provisions of the
INTERNATIONAL CONVENTION FOR THE SAFETY OF LIFE
AT SEA, 1974, as modified by the Protocol of 1988 relating thereto

under the authority of the Government of

_____
*(name of the State)*

by _____
*(person or organization authorized)*

***Particulars of ship***[1]

Name of ship .....

Distinctive number or letters .....

Port of registry .....

Gross tonnage .....

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

IMO Number[2] .....

Date on which keel was laid or ship was at 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 .....

[1] Alternatively, the particulars of the ship may be placed horizontally in boxes.

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

***THIS IS TO CERTIFY***:

1 That the ship has been surveyed in accordance with the requirements of regulation I/9 of the Convention.

2 That the survey showed that:

2.1 the ship complied with the requirements of the Convention as regards radio installations;

2.2 the functioning of the radio installations used in life-saving appliances complied with the requirements of the Convention.

3 That an Exemption Certificate has/has not[3] been issued.

***This certificate is valid until*** ……..[4] subject to the periodical surveys in accordance with regulation I/9 of the Convention.

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)*

[3] Delete as appropriate.

[4] Insert the date of expiry as specified by the Administration in accordance with regulation I/14(a) of the Convention. The day and the month of this date correspond to the anniversary date as defined in regulation I/2(n) of the Convention, unless amended in accordance with regulation I/14(h).

***Endorsement for periodical surveys***

THIS IS TO CERTIFY that, at a survey required by regulation I/9 of the Convention, the ship was found to comply with the relevant requirements of the Convention.

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)

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

***Periodical survey in accordance with regulation I/14(h)(iii)***

THIS IS TO CERTIFY that, at a periodical survey in accordance with regulation I/14(h)(iii) of the Convention, the ship was found to comply with the relevant requirements of the Convention.

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

(Seal or stamp of the authority, as appropriate)

***Endorsement to extend the certificate if valid for less than 5 years where regulation I/14(c) applies***

The ship complies with the relevant requirements of the Convention, and this certificate shall, in accordance with regulation I/14(c) of the Convention, be accepted as valid until .....

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

***Endorsement where the renewal survey has been completed and regulation I/14(d) applies***

The ship complies with the relevant requirements of the Convention, and this certificate shall, in accordance with regulation I/14(d) of the Convention, 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 survey or for a period of grace where regulation I/14(e) or I/14(f) applies***

The certificate shall, in accordance with regulation I/14(e)/I/14(f)[3] of the Convention, be accepted as valid until .....

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

***Endorsement for advancement of anniversary date where regulation I/14(h) applies***

In accordance with regulation I/14(h) of the Convention, the new anniversary date is

……..

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

In accordance with regulation I/14(h) of the Convention, the new anniversary date is
……..

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

[3] Delete as appropriate.

## *FORM OF SAFETY CERTIFICATE FOR CARGO SHIPS*

## CARGO SHIP SAFETY CERTIFICATE

This Certificate shall be supplemented by a Record of Equipment for Cargo Ship Safety (Form C)

*(Official seal)* *(State)*

Issued under the provisions of the
INTERNATIONAL CONVENTION FOR THE SAFETY OF LIFE
AT SEA, 1974, as modified by the Protocol of 1988 relating thereto
under the authority of the Government of

_____
*(name of the State)*

by _____
*(person or organization authorized)*

***Particulars of ship***[1]

Name of ship.....
Distinctive number or letters.....
Port of registry .....
Gross tonnage .....
Deadweight of ship (metric tons)[2].....
Length of ship (regulation III/3.12) .....
Sea areas in which ship is certified to operate (regulation IV/2) .....
IMO Number[3] .....

Type of ship[4]

Bulk carrier
Oil tanker
Chemical tanker
Gas carrier
Cargo ship other than any of the above

Date of build:
Date of building contract .....
Date on which keel was laid or ship was at similar stage of construction.....
Date of delivery .....
Date on which work for a conversion or an alteration or modification of a major character was commenced (where applicable) .....
All applicable dates shall be completed.

1 Alternatively, the particulars of the ship may be placed horizontally in boxes.
2 For oil tankers, chemical tankers and gas carriers only.
3 In accordance with *IMO ship identification number scheme*, adopted by the Organization by resolution A.600(15).
4 Delete as appropriate.

***THIS IS TO CERTIFY:***

1 That the ship has been surveyed in accordance with the requirements of regulations I/8, I/9 and I/10 of the Convention.

2 That the survey showed that:

2.1 the condition of the structure, machinery and equipment as defined in regulation I/10 was satisfactory and the ship complied with the relevant requirements of chapter II-1 and chapter II-2 of the Convention (other than those relating to fire safety systems and appliances and fire control plans);

2.2 the last two inspections of the outside of the ship's bottom took place on ……and …… *(dates)*

2.3 the ship complied with the requirements of the Convention as regards fire safety systems and appliances and fire control plans;

2.4 the life-saving appliances and the equipment of the lifeboats, liferafts and rescue boats were provided in accordance with the requirements of the Convention;

2.5 the ship was provided with a line-throwing appliance and radio installations used in life-saving appliances in accordance with the requirements of the Convention;

2.6 the ship complied with the requirements of the Convention as regards radio installations;

2.7 the functioning of the radio installations used in life-saving appliances complied with the requirements of the Convention;

2.8 the ship complied with the requirements of the Convention as regards shipborne navigational equipment, means of embarkation for pilots and nautical publications;

2.9 the ship was provided with lights, shapes, means of making sound signals and distress signals in accordance with the requirements of the Convention and the International Regulations for Preventing Collisions at Sea in force;

2.10 in all other respects the ship complied with the relevant requirements of the Convention;

2.11 the ship was/was not[4] subjected to an alternative design and arrangements in pursuance of regulation(s) II-1/55 / II-2/17 / III/38[4] of the Convention;

2.12 a Document of approval of alternative design and arrangements for machinery and electrical installations/fire protection/life-saving appliances and arrangements[4] is/is not[4] appended to this Certificate.

3 That the ship operates in accordance with regulation III/26.1.1.1[5] within the limits of the trade area……

4 That an Exemption Certificate has/has not[4] been issued.

[4] Delete as appropriate.

[5] Refer to 1983 amendments to SOLAS (MSC.6(48)) and it is applicable to ships constructed on or after 1 July 1986, but before 1 July 1998 in the case of self-righting partially enclosed lifeboat(s) on board.

***This certificate is valid until*** ……[6] subject to the annual, intermediate and periodical surveys and inspections of the outside of the ship's bottom in accordance with regulations I/8, I/9 and I/10 of the Convention.

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)*

[6] Insert the date of expiry as specified by the Administration in accordance with regulation I/14(a) of the Convention. The day and the month of this date correspond to the anniversary date as defined in regulation I/2(n) of the Convention, unless amended in accordance with regulation I/14(h).

***Endorsement for annual and intermediate surveys relating to structure, machinery and equipment referred to in paragraph 2.1 of this certificate***

THIS IS TO CERTIFY that, at a survey required by regulation I/10 of the Convention, the ship was found to comply with the relevant requirements of the Convention.

Annual survey:

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

Place: .....

Date: .....

(Seal or stamp of the authority, as appropriate)

Annual/Intermediate[4] survey:

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

Place: .....

Date: .....

(Seal or stamp of the authority, as appropriate)

Annual/Intermediate[4] 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/intermediate survey in accordance with regulation I/14(h)(iii)***

THIS IS TO CERTIFY that, at an annual/intermediate[4] survey in accordance with regulations I/10 and I/14(h)(iii) of the Convention, the ship was found to comply with the relevant requirements of the Convention.

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

Place: .....

Date: .....

(Seal or stamp of the authority, as appropriate)

[4] Delete as appropriate.

***Endorsement for inspections of the outside of the ship's bottom***[7]

THIS IS TO CERTIFY that, at an inspection required by regulation I/10 of the Convention, the ship was found to comply with the relevant requirements of the Convention.

First inspection: Signed: .....
(Signature of authorized official)
Place: .....
Date: .....
(Seal or stamp of the authority, as appropriate)

Second inspection: 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 paragraphs 2.3, 2.4, 2.5, 2.8 and 2.9 of this certificate***

THIS IS TO CERTIFY that, at a survey required by regulation I/8 of the Convention, the ship was found to comply with the relevant requirements of the Convention.

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

Annual/Periodical[4] survey: Signed: .....
(Signature of authorized official)
Place: .....
Date: .....
(Seal or stamp of the authority, as appropriate)

Annual/Periodical[4] 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)

[4] Delete as appropriate.
[7] Provision may be made for additional inspections.

***Annual/periodical survey in accordance with regulation I/14(h)(iii)***

THIS IS TO CERTIFY that, at an annual/periodical[4] survey in accordance with regulations I/8 and I/14(h)(iii) of the Convention, the ship was found to comply with the relevant requirements of the Convention.

Signed: .....

(Signature of authorized official)

Place: .....

Date: .....

(Seal or stamp of the authority, as appropriate)

***Endorsement for periodical surveys relating to radio installations referred to in paragraphs 2.6 and 2.7 of this certificate***

THIS IS TO CERTIFY that, at a survey required by regulation I/9 of the Convention, the ship was found to comply with the relevant requirements of the Convention.

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)

Periodical survey: Signed: .....

(Signature of authorized official)

Place: .....

Date: .....

(Seal or stamp of the authority, as appropriate

[4] Delete as appropriate.

***Periodical survey in accordance with regulation I/14(h)(iii)***

THIS IS TO CERTIFY that, at a periodical survey in accordance with regulations I/9 and I/14(h)(iii) of the Convention, the ship was found to comply with the relevant requirements of the Convention.

Signed: .....

(Signature of authorized official)

Place: .....

Date: .....

(Seal or stamp of the authority, as appropriate)

***Endorsement to extend the certificate if valid for less than 5 years where regulation I/14(c) applies***

The ship complies with the relevant requirements of the Convention, and this certificate shall, in accordance with regulation I/14(c) of the Convention, be accepted as valid until .....

Signed: .....

(Signature of authorized official)

Place: .....

Date: .....

(Seal or stamp of the authority, as appropriate)

***Endorsement where the renewal survey has been completed and regulation I/14(d) applies***

The ship complies with the relevant requirements of the Convention, and this certificate shall, in accordance with regulation I/14(d) of the Convention, 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 survey or for a period of grace where regulation I/14(e) or I/14(f) applies***

The certificate shall, in accordance with regulation I/14(e)/I/14(f)[4] of the Convention, be accepted as valid until .....

Signed: .....

(Signature of authorized official)

Place: .....

Date: .....

(Seal or stamp of the authority, as appropriate)

[4] Delete as appropriate.

***Endorsement for advancement of anniversary date where regulation I/14(h) applies***

In accordance with regulation I/14(h) of the Convention, the new anniversary date is ……

Signed: .....

(Signature of authorized official)

Place: .....

Date: .....

(Seal or stamp of the authority, as appropriate)

In accordance with regulation I/14(h) of the Convention, the new anniversary date is ……

Signed: .....

(Signature of authorized official)

Place: .....

Date: .....

(Seal or stamp of the authority, as appropriate)

***FORM OF EXEMPTION CERTIFICATE***

**EXEMPTION CERTIFICATE**

*(Official seal)* *(State)*

Issued under the provisions of the
INTERNATIONAL CONVENTION FOR THE SAFETY OF LIFE
AT SEA, 1974, as modified by the Protocol of 1988 relating thereto

under the authority of the Government of

_____
*(name of the State)*

by _____
*(person or organization authorized)*

***Particulars of ship***[1]

Name of ship.....

Distinctive number or letters.....

Port of registry .....

Gross tonnage .....

IMO Number[2].....

[1] Alternatively, the particulars of the ship may be placed horizontally in boxes.

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

***THIS IS TO CERTIFY:***

That the ship is, under the authority conferred by regulation ……of the Convention, exempted from the requirements……..…….. of the Convention.

Conditions, if any, on which the Exemption Certificate is granted: .....

……

Voyages, if any, for which the Exemption Certificate is granted: ……

.....

.....

***This certificate is valid until*** .....subject

to the …… Certificate, to which this certificate is attached, remaining valid.

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)

***Endorsement to extend the certificate if valid for less than 5 years where regulation I/14(c) applies***

This certificate shall, in accordance with regulation I/14(c) of the Convention, be accepted as valid until .....
subject to the .....Certificate, to which this certificate is attached, remaining valid.

Signed: .....

(Signature of authorized official)

Place: .....

Date: .....

(Seal or stamp of the authority, as appropriate)

***Endorsement where the renewal survey has been completed and regulation I/14(d) applies***

This certificate shall, in accordance with regulation I/14(d) of the Convention, be accepted as valid until .....
subject to the .....Certificate, to which this certificate is attached, remaining valid.

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 survey or for a period of grace where regulation I/14(e) or I/14(f) applies***

This certificate shall, in accordance with regulation I/14(e)/I/14(f)[3] of the Convention, be accepted as valid until .....
subject to the .....Certificate, to which this certificate is attached, remaining valid.

Signed: .....

(Signature of authorized official)

Place: .....

Date: .....

(Seal or stamp of the authority, as appropriate)

***

[3] Delete as appropriate.

**ANNEX 10**

**EDITORIAL CORRECTIONS TO THE ANNEX TO RESOLUTION MSC.170(79) FOR ISSUING AS A NOTE VERBALE OF RECTIFICATION**

1 In the existing paragraph 18, the words under the title "Form of Safety Certificate for Nuclear Passenger Ships", which read "Issued under the provisions of the International Convention for the Safety of Life at Sea, 1974, as modified by the Protocol of 1988 relating thereto" are replaced by the words "Issued under the provisions of the International Convention for the Safety of Life at Sea, 1974, as amended".

2 In the existing paragraph 19, the words under the title "Record of Equipment for the Nuclear Passenger Ship Safety Certificate (Form PNUC)", which read "Record of Equipment for Compliance with the International Convention for the Safety of Life at Sea, 1974, as modified by the Protocol of 1988 relating thereto" are replaced by the phrase "Record of Equipment for Compliance with the International Convention for the Safety of Life at Sea, 1974, as amended".

3 In the existing paragraph 20, the words under the title "Form of Safety Certificate for Nuclear Cargo Ships", which read "Issued under the provisions of the International Convention for the Safety of Life at Sea, 1974, as modified by the Protocol of 1988 relating thereto" are replaced by the words "Issued under the provisions of the International Convention for the Safety of Life at Sea, 1974, as amended".

4 In the existing paragraph 21, the words under the title "Record of Equipment for the Nuclear Cargo Ship Safety Certificate (Form CNUC)", which read "Record of Equipment for Compliance with the International Convention for the Safety of Life at Sea, 1974, as modified by the Protocol of 1988 relating thereto" are replaced by the words "Record of Equipment for Compliance with the International Convention for the Safety of Life at Sea, 1974, as amended".

***

**ANNEX 11**

**RESOLUTION MSC.330(90)**
**(adopted on 25 May 2012)**

**ADOPTION OF AMENDMENTS TO THE REVISED PERFORMANCE STANDARDS AND FUNCTIONAL REQUIREMENTS FOR THE LONG-RANGE IDENTIFICATION AND TRACKING OF SHIPS (RESOLUTION MSC.263(84))**

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,

BEARING IN MIND the provisions of regulation V/19-1 of the International Convention for the Safety of Life at Sea, 1974 (the Convention), relating to the long-range identification and tracking of ships, and the Revised performance standards and functional requirements for the long-range identification and tracking of ships (Revised performance standards), adopted by resolution MSC.263(84),

NOTING that, at its eighty-eighth session, it had concurred with the establishment of a cost model for the provision of LRIT information, as from 3 December 2010 (the "US$0.25 1:2:6" cost model, i.e. single LRIT position report: US$0.25, polled LRIT position report: US$0.50, and changes of the rate of transmission: US$3.00 (US$1.50 x 2)),

NOTING ALSO that, at its eighty-ninth session, it had agreed that, due to the establishment of the above-mentioned cost model, the master list maintained by the International LRIT Data Exchange related to charges levied by LRIT Data Centres when providing LRIT information was no longer necessary,

HAVING CONSIDERED, at its ninetieth session, the need to adopt certain amendments to the Revised performance standards,

1. ADOPTS amendments to the Revised performance standards and functional requirements for the long-range identification and tracking of ships (resolution MSC.263(84)), the text of which is set out in the annex to the present resolution;

2. INVITES Contracting Governments to the Convention to bring the above amendments to the attention of all parties concerned.

ANNEX

**AMENDMENTS TO THE REVISED PERFORMANCE STANDARDS AND FUNCTIONAL REQUIREMENTS FOR THE LONG RANGE IDENTIFICATION AND TRACKING OF SHIPS (RESOLUTION MSC.263(84))**

1 The existing subparagraph 7.4.3 is deleted.

2 The existing text of subparagraph 10.3.15 is deleted and replaced by the following text:

"10.3.15 receive pricing information from LRIT Data Centres."

***

**ANNEX 12**

**RESOLUTION MSC.331(90)**
**(adopted on 25 May 2012)**

**ADOPTION OF AMENDMENTS TO RESOLUTION MSC.298(87) ON ESTABLISHMENT OF A DISTRIBUTION FACILITY**

THE MARITIME SAFETY COMMITTEE,

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

RECALLING ALSO that, at its eighty-seventh session, it had approved resolution MSC.298(87) on Establishment of a distribution facility for the provision of LRIT information to security forces operating in waters of the Gulf of Aden and the western Indian Ocean to aid their work in the repression of piracy and armed robbery against ships (the distribution facility),

NOTING that the Secretariat had established a distribution facility at IMO Headquarters and that a number of naval forces engaged in operations against the perpetrators in waters of the Gulf of Aden and the western Indian Ocean (the area) had advised that the use of the distribution facility had proven to be efficient and was providing security forces with a holistic picture of the ships operating in the area, enabling them to more effectively and efficiently deploy the limited available naval and military assets and enhancing the protection they offered to shipping and mariners transiting the area,

NOTING ALSO that, at its eighty-ninth session, it had agreed that the addition of polling functionalities to the distribution facility should be implemented as an "opt-in" arrangement in the LRIT system where each flag State would have the ability to determine which security force, if any, would be entitled to transmit polling request messages to any of their own ships,

HAVING CONSIDERED, at its ninetieth session, a technical solution for adding polling functionalities to the distribution facility,

1. AGREES that the addition of polling functionalities to the distribution facility will allow security forces to more accurately identify the current position of ships approaching areas of high risk of piracy attack;

2. AGREES ALSO to the implementation of the above polling functionality as an "opt-in" arrangement where the participation of flag States will be completely voluntary and each flag State will have the ability to determine which security force, if any, will be authorized to poll the position of any of their own ships that might be approaching areas of high risk of piracy attack;

3. ADOPTS amendments to resolution MSC.298(87) on Establishment of a distribution facility, the contents of which are set out in the annex to the present resolution;

4. INSTRUCTS the Secretariat to implement and test the above functionalities in the distribution facility, taking into account the relevant decisions of the Committee, and to amend the Web interface of the LRIT Data Distribution Plan so as to allow SOLAS Contracting Governments to decide which security force(s), if any, would be authorized to transmit polling request messages to any of their own ships;

5. ENCOURAGES SOLAS Contracting Governments to consider, in case they have not done so, providing flag State LRIT information to security forces operating in the area and allowing them to transmit polling request messages to ships flying their flag when approaching areas of high risk of piracy attack;

6. INVITES the Secretary-General to issue a circular letter advising all SOLAS Contracting Governments on the availability of the above functionality within the distribution facility and describing the "opt-in" process.

ANNEX

**AMENDMENTS TO RESOLUTION MSC.298(87) ON ESTABLISHMENT OF A DISTRIBUTION FACILITY**

1 The existing text of paragraph 5 is replaced by the following:

"5 The distribution facility will not have the capability to present the flag State LRIT information in a graphical manner."

2 The following three new paragraphs and heading are added after existing paragraph 9:

"**Polling the current location of a specific ship**

10 Security forces wishing to poll the current position of a specific ship that may be approaching an area of high risk of attack should indicate the IMO ship identification number and the LRIT ID of the Administration whose flag the ship is flying (the Data User Provider).

11 Polling position request messages will be transmitted by the distribution facility to the LRIT Data Centre associated with the Administration of the ship, through the IDE, only if the SOLAS Contracting Government concerned has authorized the security force in question to poll the current position of their own flag ships.

12 The provision of flag State LRIT information in response to a polling request message received from a security force is completely voluntary. SOLAS Contracting Governments have the right to decide, at any moment, and instruct their LRIT Data Centres whether polling request messages transmitted by security forces should be processed and responded."

3 The existing paragraphs 10 to 16 are renumbered as paragraphs 13 to 19, respectively.

***

# ANNEX 13

## DRAFT NEW SOLAS REGULATION III/17-1

## CHAPTER III
## LIFE-SAVING APPLIANCES AND ARRANGEMENTS

After existing regulation III/17, the following new regulation III/17-1 is inserted:

"**Regulation 17-1**
**Recovery of persons from the water**

1 All ships shall have ship-specific plans and procedures for recovery of persons from the water, taking into account the guidelines developed by the Organization.* The plans and procedures shall identify the equipment intended to be used for recovery purposes and measures to be taken to minimize the risk to shipboard personnel involved in recovery operations. Ships constructed before [1 July 2014] shall comply with this requirement by the first intermediate or first renewal survey of the ship to be carried out after [1 July 2014], whichever comes first.

2 Ro-ro passenger ships which comply with regulation 26.4 shall be deemed to comply with this regulation.

---

* Refer to the Guidelines for the development of plans and procedures for recovery of persons from the water (MSC.1/Circ…)."

***

**ANNEX 14**

**DRAFT CODE ON NOISE LEVELS ON BOARD SHIPS**

## PREAMBLE

1 The Code on noise levels on board ships (hereinafter referred to as "the Code") has been developed to provide international standards for protection against noise regulated by regulation [II-1/3-12] of the International Convention for the Safety of Life at Sea (SOLAS), 1974, as amended. Although the Code is legally treated as a mandatory instrument under the SOLAS Convention, certain provisions of the Code remain recommendatory or informative (see paragraph 1.1.3).

2 These regulations, recommendations and advice are intended to provide Administrations with the tools to promote "hearing saving" environments on board ships. This is, however, a dynamic topic, dealing with the human and technical environments in which they interface. Rules and recommendations will necessarily evolve, on a case-by-case basis, as a result of various technological as well as safety management practice developments. For this reason Administrations are encouraged to pass on experience and information received from recognized organizations, ship operators and equipment designers to improve this Code.

3 The Code has been developed having regard to conventional passenger and cargo ships. While certain types and sizes of ships have been excluded from its application, it should be recognized that full application to ships which differ appreciably from the conventional types of ships regarding design or operations might need specific consideration.

4 The Organization adopted a Recommendation on methods of measuring noise levels at listening posts (resolution A.343(IX)), which this Code is not intended to supersede. That Recommendation relates to interference by shipborne noise with the proper reception of external audible navigation signals and although the methods of measuring noise levels in accordance with the Recommendation and with the Code differ, these documents are to be considered compatible inasmuch as this Code is concerned primarily with the effect of noise on health and comfort. Care will be needed to ensure that there is compatibility between the general requirements and the requirements for audibility of navigation signals.

# CHAPTER 1 – GENERAL

## 1.1 Scope

1.1.1 The Code is intended to provide standards to prevent the occurrence of potentially hazardous noise levels on board ships and to provide standards for an acceptable environment for seafarers. These standards were developed to address passenger and cargo ships. Since some sizes and certain service types of ships have been exempted from these requirements; it should be recognized that full application of the Code to ships that differ appreciably from conventional ships will require special considerations. The Code is intended to provide the basis for a design standard, with compliance based on the satisfactory conclusion of sea trials that result in issuance of a Noise Survey Report. Ongoing operational compliance is predicated on the crew being trained in the principles of personal protection and maintenance of mitigation measures. These would be enforced under the dynamic processes and practices put in place under SOLAS chapter IX.

1.1.2 Requirements and recommendations are made for:

.1 measurement of noise levels and exposure;

.2 protecting the seafarer from the risk of noise-induced hearing loss under conditions where at present it is not feasible to limit the noise to a level which is not potentially harmful;

.3 limits on acceptable maximum noise levels for all spaces to which seafarers normally have access; and

.4 verification of acoustic insulation between accommodation spaces.

1.1.3 Although this Code is legally treated as a mandatory instrument under the SOLAS Convention, the following provisions of this Code remain recommendatory, options for compliance, or informative in nature:

Paragraphs 1.3.2 and 1.3.3
Paragraph 3.4.3
Chapter 5
Section 6.3
Section 7.3
Appendix 2
Appendix 3
Appendix 4

## 1.2 Purpose

The purpose of the Code is to limit noise levels and to reduce seafarers' exposure to noise, in order to:

.1 provide for safe working conditions by giving consideration to the need for speech communication and for hearing audible alarms, and to an environment where clear-headed decisions can be made in control stations, navigation and radio spaces and manned machinery spaces;

.2 protect the seafarer from excessive noise levels which may give rise to a noise-induced hearing loss; and

.3 provide the seafarer with an acceptable degree of comfort in rest, recreation and other spaces and also provide conditions for recuperation from the effects of exposure to high noise levels.

**1.3 Application**

1.3.1 The Code applies to new ships of 1,600 gross tonnage and above.

1.3.2 The specific provisions relating to potentially hazardous noise levels, mitigation and personal protective gear contained in the Code may be applied to existing ships of 1,600 gross tonnage and above, as far as reasonable and practical, to the satisfaction of the Administration.

1.3.3 The Code may be applied to new ships of less than 1,600 gross tonnage, as far as reasonable and practical, to the satisfaction of the Administration.

1.3.4 The Code does not apply to:

.1 dynamically supported craft;

.2 high-speed craft;

.3 fishing vessels;

.4 pipe-laying barges;

.5 crane barges;

.6 mobile offshore drilling units;

.7 pleasure yachts not engaged in trade;

.8 ships of war and troopships;

.9 ships not propelled by mechanical means;

.10 pile driving vessels; and

.11 dredgers.

1.3.5 The Code applies to ships in service, i.e. in port or at sea with seafarers on board.

1.3.6 Dispensations from certain requirements may in special circumstances be granted by the Administration, if it is documented that compliance will not be possible despite relevant and reasonable technical noise reduction measures. Such dispensation shall not include cabins, unless exceptional circumstances prevail. If dispensation is granted, it shall be ensured that the goal of this Code is achieved, and the noise exposure limits shall be considered in conjunction with chapter 5.

1.3.7 For ships designed for and employed on voyages of short duration, or on other services involving short periods of operation of the ship, to the satisfaction of the Administration, paragraphs 4.2.3 and 4.2.4 may be applied only with the ship in the port condition, provided that the periods under such conditions are adequate for seafarers' rest and recreation.

1.3.8 The Code is not intended to apply to passenger cabins and other passenger spaces, except in so far as they are work spaces and are covered by the provisions of the Code.

1.3.9 In case of repairs, alterations and modifications of a major character and outfitting related thereto of existing ships, it shall be ensured that areas, in which changes have been made, meet the requirements of this Code for new ships, insofar as the Administration deems reasonable and practicable.

1.3.10 The Code covers only noise sources related to the ship such as machinery and propulsion but does not include wind/wave/ice noise, alarms, public address systems, etc.

**1.4 Definitions**

For the purpose of the Code the following definitions apply. Additional definitions are given elsewhere in the Code.

1.4.1 *Accommodation spaces:* Cabins, offices (for carrying out ship's business), hospitals, messrooms, recreation rooms (such as lounges, smoke rooms, cinemas, gymnasiums, libraries and hobbies and games rooms) and open recreation areas to be used by seafarers.

1.4.2 *Apparent weighted sound reduction index $R'_w$*: A single number value expressed in decibels (dB) which describes the overall sound insulation performance in situ of walls, doors or floors provides (see ISO 717-1:1996 as amended by 1:2006).

1.4.3 *A-weighted equivalent continuous sound level $L_{Aeq}(T)$:* A-weighted sound pressure level of a continuous steady sound that, within a measurement time interval, T, has the same mean square sound pressure as a sound under consideration which varies with time. It is expressed in decibels A (dB(A)) and is given by the following equation:

$$L_{Aeq,T} = 10log\frac{1}{T}\int_0^T \frac{pa(t)^2}{{p_0}^2}.dt$$

where: T = measurement time
$p_a$ (t) = A-weighted instantaneous sound pressure
$p_o$ = 20 µPa (the reference level).

1.4.4 *A-weighted sound pressure level or noise level:* The quantity measured by a sound level meter in which the frequency response is weighted according to the A-weighting curve (see IEC 61672-1).

1.4.5 *C-weighted equivalent continuous sound level $L_{Ceq}(T)$:* C-weighted sound pressure level of a continuous steady sound that within a measurement time interval, T, has the same mean square sound pressure as a sound under consideration which varies with time. It is expressed in decibels C (dB(C)) and is given by the following equation:

$$L_{Ceq,T} = 10log\frac{1}{T}\int_0^T \frac{pc(t)^2}{{p_0}^2}.dt$$

where: T = measurement time
$p_c$ (t) = C-weighted instantaneous sound pressure
$p_o$ = 20 µPa (the reference level).

1.4.6 *C-weighted peak sound level $L_{Cpeak}$*: C-weighted maximum instantaneous sound pressure level. It is expressed in decibels C (dB(C)) and is given by the following equation:

$$L_{Cpeak} = 10\log \frac{p_{peak}^{\ 2}}{p_0^{\ 2}}$$

where: $p_{peak}$ = C-weighted maximum instantaneous sound pressure
$p_o$ = 20 µPa (the reference level).

1.4.7 *C-weighted sound pressure level or noise level:* The quantity measured by a sound level meter in which the frequency response is weighted according to the C-weighting curve (see IEC 61672-1 (2002-05)).

1.4.8 *Continuously manned spaces:* Spaces in which the continuous or prolonged presence of seafarers is necessary for normal operational periods.

1.4.9 *Crane barge:* A vessel with permanently installed cranes designed principally for lifting operations.

1.4.10 *Daily noise exposure level ($L_{ex,24h}$)* represents the equivalent noise exposure level for a period of 24 hours.

$$L_{ex,24h}=L_{Aeq},T + 10 \log( T/T_0)$$

where: T is the effective duration on board
$T_0$ is the reference duration 24 h.

The total equivalent continuous A-weighted sound pressure level ($L_{Aeq}$ T), shall be calculated by using the different noise levels ($L_{Aeq}$, $T_i$) and associated time periods with the following equation:

$$L_{Aeq,T} = 10 \lg \left[ \frac{1}{T} \sum_{i=1}^{n} (T_i \times 10^{0,1 L_{Aeq,T_i}}) \right]$$

where

$L_{Aeq,T_i}$ is the equivalent continuous A-weighted sound pressure level, in decibels, averaged over time interval $T_i$;

$$T = \sum_{i=1}^{n} T_i$$

$L_{ex,24h}$ = $L_{Aeq,24h}$ when seafarers are on board over a period of 24 hours.

1.4.11 *Dredger:* A vessel undertaking operations to excavate bottom sediment, where the vessel has permanently installed excavation equipment.

1.4.12 *Duty stations:* Those spaces in which the main navigating equipment, the ship's radio or the emergency source of power are located or where the fire recording or fire control equipment is centralized and also those spaces used for galleys, main pantries, stores (except isolated pantries and lockers), mail and specie rooms, workshops other than those forming part of the machinery spaces and similar such spaces.

1.4.13 *Dynamically supported craft:* A craft which is operable on or above water and which has characteristics different from those of conventional displacement ships. Within the aforementioned generality, a craft which complies with either of the following characteristics:

.1 the weight, or a significant part thereof, is balanced in one mode of operation by other than hydrostatic forces;

.2 the craft is able to operate at speeds such that the function $\frac{v}{\sqrt{gL}}$ is equal to or greater than 0.9, where "v" is the maximum speed, "L" is the water-line length and "g" is the acceleration due to gravity, all in consistent units.

1.4.14 *Existing ship: A* ship which is not a new ship.

1.4.15 *Fishing vessel:* A vessel used commercially for catching fish, whales, seals, walrus or other living resources of the sea.

1.4.16 *Hearing loss:* Hearing loss is evaluated in relation to a reference auditory threshold defined conventionally in ISO Standard 389-1 (1998). The hearing loss corresponds to the difference between the auditory threshold of the subject being examined and the reference auditory threshold.

1.4.17 *Hearing protector:* A device worn to reduce the level of noise reaching the ears. Passive noise-cancelling headsets block noise from reaching the ear. Active noise-cancelling headphones generate a signal that cancels out the ambient noise within the headphone.

1.4.18 *Integrating sound level meter:* A sound level meter designed or adapted to measure the level of the mean squared time averaged A-weighted and C-weighted sound pressure.

1.4.19 *Machinery spaces:* Any space which contains steam or internal-combustion machinery, pumps, air compressors, boilers, oil fuel units, major electrical machinery, oil filling stations, thrusters, refrigerating, stabilizing, steering gear, ventilation and air conditioning machinery, etc., and trunks to such spaces.

1.4.20 *Mobile offshore drilling unit:* A vessel capable of engaging in drilling operations for the exploration for, or exploitation of, resources beneath the seabed, such as liquid or gaseous hydrocarbons, sulphur or salt.

1.4.21 *Navigating bridge wings:* Those parts of the ship's navigating bridge extending towards the ship's sides.

1.4.22 *New ship:* means a ship the keel of which is laid, or which is at a similar stage of construction, on or after the [date of coming into force of this Code].

1.4.23 *Noise:* For the purpose of the Code all sound which can result in hearing impairment, or which can be harmful to health or be otherwise dangerous or disruptive.

1.4.24 *Noise induced hearing loss:* A hearing loss, originating in the nerve cells within the cochlea, attributable to the effects of sound.

1.4.25 *Noise level:* See A-weighted sound pressure level (1.4.4).

1.4.26 *Occasional exposures:* Those exposures typically occurring once per week, or less frequently.

1.4.27 *Pile driving vessel:* A vessel undertaking operations to install pilings in the seabed.

1.4.28 *Pipe-laying barge:* A vessel specifically constructed for, or used in conjunction with, operations associated with the laying of submarine pipelines.

1.4.29 *Port condition:* The condition in which all machinery solely required for propulsion is stopped.

1.4.30 *Potentially hazardous noise levels:* Those levels at and above which persons exposed to them without protection are at risk of sustaining a noise induced hearing loss.

1.4.31 *Repairs, alterations and modifications of a major character:* means a conversion of a ship which substantially alters the dimensions, carrying capacity or engine power of the ship, which change type of the ship, which otherwise so alters the ship that, if it were a new ship, it would become subject to the relevant provisions.

1.4.32 *Sound:* Energy that is transmitted by pressure waves in air or other materials and is the objective cause of the sensation of hearing.

1.4.33 *Sound pressure level $L_p$ or SPL:* Sound pressure level expressed in decibel (dB), of a sound or noise given by the following equation:

$$L_p = 10\log\frac{p^2}{p_0{}^2}$$

where: p = sound pressure, in Pascal
$p_o$ = 20 µPa (the reference level).

1.4.34 *Voyages of short duration:* Voyages where the ship is not generally underway for periods long enough for seafarers to require sleep, or long off-duty periods, during the voyages.

1.4.35 *Weighted sound reduction index, $R_w$*: A single number value expressed in decibels (dB) which describes the overall sound insulation performance (in laboratory) of walls, doors or floors provides (see ISO 717-1:1997 as amended by 1:2006).

## CHAPTER 2 – MEASURING EQUIPMENT

### 2.1 Equipment specifications

#### 2.1.1 *Sound level meters*

Measurement of sound pressure levels shall be carried out using precision integrating sound level meters subject to the requirements of this chapter. Such meters shall be manufactured to IEC 61672-1(2002-05)[1] type/class 1 standard as applicable, or to an equivalent standard acceptable to the Administration[2].

[1] Recommendation for sound level meters.

[2] Sound level meters class/type 1 manufactured according to Publication IEC 651/IEC 804 may be used until [End date of 2-year transition period from date of Code coming into force].

### 2.1.2 *Octave filter set*

When used alone, or in conjunction with a sound level meter, as appropriate, an octave filter set shall conform to IEC 61260 (1995)[3] or an equivalent standard acceptable to the Administration.

## 2.2 Use of equipment

### 2.2.1 *Calibration*

Sound calibrators shall comply with the standard IEC 60942 (2003-01) and shall be approved by the manufacturer of the sound level meter used.

### 2.2.2 *Check of measuring instrument and calibrator*

Calibrator and sound level meter shall be verified at least every two years by a national standard laboratory or a competent laboratory accredited according to ISO 17025 (2005) as corrected by (Cor 1:2006).

### 2.2.3 *Microphone wind screen*

A microphone wind screen shall be used when taking readings outside, e.g. on navigating bridge wings or on deck, and below deck where there is any substantial air movement. The wind screen should not affect the measurement level of similar sounds by more than 0.5 dB(A) in "no wind" conditions.

# CHAPTER 3 – MEASUREMENT

## 3.1 General

3.1.1 On completion of the construction of the ship, or as soon as practicable thereafter, measurement of noise levels in all spaces specified in chapter 4 shall take place under the operating conditions specified in sections 3.3 and 3.4 and shall be suitably recorded as required by section 4.3.

3.1.2 Measurements of the A-weighted equivalent continuous sound level, $L_{Aeq}(T)$ shall be made for the purpose of ensuring compliance with chapter 4.

3.1.3 Measurements of the C-weighted equivalent continuous sound level $L_{Ceq}(T)$ and the C-weighted peak sound level $L_{Cpeak}$ shall be made in spaces where $L_{Aeq}(T)$ exceeds 85 dB(A) for the purpose of determining appropriate hearing protection according to the HML-method, see chapter 7 and appendix 2.

## 3.2 Personnel requirements

3.2.1 In order to ensure an acceptable and comparable quality of the measurement results and the reports the measuring institutes or experts shall prove their competence with view to noise measurements.

[3] Octave-band and fractional-octave-band filters.

3.2.2 This person conducting measurements shall have[4]:

.1 knowledge in the field of noise, sound measurements and handling of used equipment;

.2 training concerning the procedures specified in this Code.

**3.3 Operating conditions at sea trials**

3.3.1 Measurements should be taken with the ship in the loaded or ballast condition. The course of the ship shall be as straight as possible. The actual conditions during the measurements shall be recorded on the survey report.

3.3.2 Noise measurements shall be taken at normal service speed and no less than 80% of the maximum continuous rating (MCR). Controllable pitch and Voith-Schneider propellers, if any, shall be in the normal seagoing position. For special ship types and for ships with special propulsion and power configurations, such as diesel-electric systems, the Administration may, in cooperation with the shipyard and shipowners, give due consideration to actual ship design or operating parameters when applying the requirements of paragraphs 3.3.1 and 3.3.2.

3.3.3 All machinery, navigation instruments, radio and radar sets, etc., normally in use at normal seagoing condition and levels, including squelch shall operate throughout the measurement period. However, neither energized fog signals nor helicopter operations shall take place during the taking of these measurements.

3.3.4 Measurements in spaces containing emergency diesel engine driven generators, fire pumps or other emergency equipment that would normally be run only in emergency, or for test purposes, shall be taken with the equipment operating. Measurements are not intended for determining compliance with maximum noise level limits, but as a reference for personal protection of seafarers carrying out maintenance, repair and test activities in such spaces.

3.3.5 Mechanical ventilation, heating and air-conditioning equipment shall be in normal operation, taking into account that the capacity shall be in accordance with the design conditions.

3.3.6 Doors and windows should in general be closed.

3.3.7 Spaces should be furnished with all necessary equipment. Measurements without soft furnishings may be taken but no allowance should be made for their absence. Rechecks or follow-up readings may be taken with soft furnishings included.

3.3.8 Ships fitted with bow thrusters, stabilizers, etc., may be subject to high noise levels when this machinery is in operation. For thrusters, measurements shall be made at 40% thruster power and the ship's speed shall be appropriate for thruster operation. Measurements shall be taken at positions around such machinery when in operation and in adjacent accommodation spaces and duty stations. If such equipment is intended for continuous operation for longer periods, which should be considered the case for stabilizers, measurements shall be made for ensuring compliance with chapter 4. If such systems are intended for short temporary use only, for instance during port manoeuvres, measurements are only relevant for ensuring compliance with chapter 5 on noise exposure.

[4] Testing institutions which support a quality management system according to ISO 17020/25 are considered to fulfil these requirements (IACS-Members can proceed according to UR Z 17 – requirements for service suppliers).

3.3.9 In case of ships with Dynamical Positioning (DP), which is intended for use in normal working condition, additional noise measurements at DP mode shall be made at control stations, duty stations, and accommodation areas to ensure that the maximum noise level limits in these spaces are not exceeded. The Administration, classification societies, shipyard and DP designers, as appropriate, shall agree on a process to simulate the operation of the DP thruster system under conditions which would approximate station-holding at or above 40% of maximum thruster power for design environmental conditions that the ship operates in.

### 3.4 Operating conditions in port

3.4.1 Measurements as specified in paragraphs 3.4.2, 3.4.3 and 3.4.4 shall be taken with the ship in port condition.

3.4.2 When the noise from the ship's cargo handling equipment may lead to noise above maximum levels in duty stations and accommodation spaces affected by its operation, measurements shall be taken. Noise originating from sources external to the ship should be discounted as indicated in paragraph 3.5.3.

3.4.3 Where the ship is a vehicle carrier and noise during loading and discharging originates from vehicles, the noise level in the cargo spaces and the duration of the exposure should be considered in conjunction with chapter 5. Such noise levels originating from vehicles may be estimated theoretically by the shipyard and shipowners in cooperation with the Administration.

3.4.4 Measurements shall be taken in machinery spaces with the machinery operating in the port condition if the provisions of paragraph 5.3.5 in respect of hearing protection shall be met in lieu of the provisions of paragraph 4.2.1 during maintenance, overhaul or similar port conditions.

### 3.5 Environmental conditions

3.5.1 The readings obtained may be affected if the water depth is less than five times the draught or if there are large reflecting surfaces in the ship's vicinity. Such conditions shall therefore be noted in the noise survey report.

3.5.2 The meteorological conditions such as wind and rain, as well as sea state, should be such that they do not influence the measurements. Wind force 4 and 1 m wave height should not be exceeded. If this cannot be achieved, the actual conditions shall be reported.

3.5.3 Care shall be taken to see that noise from extraneous sound sources, such as people, entertainment, construction and repair work, does not influence the noise level on board the ship at the positions of measurement. If necessary, measured values may be corrected for steady state background noise according to the energy summation principle.

### 3.6 Measurement procedures

3.6.1 During noise level measurement, only seafarers necessary for the operation of the ship and persons taking the measurements shall be present in the space concerned.

3.6.2 Sound pressure level readings shall be taken in decibels using an A-weighting (dB(A)) and C-weighting (dB(C)) filter and if necessary also in octave bands between 31.5 and 8,000 Hz.

3.6.3 The noise level measurements shall be taken with the integrating sound level meter using spatial averaging (as described in paragraph 3.13.1) and over a time period until stable readings are found or at least 15 s in order to represent the average value from variations due to irregular operation or variations in the sound field. Readings shall be made only to the nearest decibel. If first decimal of the dB reading is 5 or higher, the reading shall be made to nearest higher integer.

### 3.7 Determination of noise exposure

In addition to the continuous sound level measurements the noise exposure level of seafarers (see chapter 5) shall be determined based upon ISO 9612:2009. A simplified procedure based on ISO 9612 and a work place related noise exposure is given in appendix 4.

### 3.8 Calibration

The sound level meter shall be calibrated with the calibrator referred to in paragraph 2.2.1 before and after measurements are taken.

### 3.9 Measurement uncertainties

The uncertainty of measurements on board vessels depends on several factors, for example, measurement techniques and environmental conditions. Measurements made in conformity with this Code with few exceptions results in reproducibility standard deviation of the equivalent continuous A-weighted sound pressure level equal to or less than 1.5 dB.

### 3.10 Points of measurement

#### 3.10.1 *Measurement positions*

If not otherwise stated, measurements shall be taken with the microphone at a height of between 1.2 m (seated person) and 1.6 m (standing person) from the deck. The distance between two measurement points should be at least 2 m, and in large spaces not containing machinery, measurements should be taken at intervals not greater than 10 m throughout the space including positions of maximum noise level. In no case shall measurements be taken closer than 0.5 m from the boundaries of a space. The microphone positions shall be as specified in paragraphs 3.10.3 and sections 3.11 to 3.14. Measurements shall be taken at positions where the personnel work, including at communication stations.

#### 3.10.2 *Duty stations*

The noise level shall be measured at all points where the work is carried out. Additional measurements shall be performed in spaces containing duty stations if variations in noise level are thought to occur in the vicinity of the duty stations.

#### 3.10.3 *Intake and exhaust openings*

When measuring noise levels at the intake and exhaust of engines and near ventilation, air-conditioning and cooler systems, the microphone should, where possible, be placed outside the gas stream at a distance of 1 m from the edge of the intake or exhaust opening and at a 30° angle away from the direction of the gas stream and as far as possible from reflecting surfaces.

### 3.11 Measurements in machinery spaces

3.11.1 Measurements shall be taken at the principal working and control stations of the seafarers in the machinery spaces and in the adjacent control rooms, if any, special attention being paid to telephone locations and to positions where voice communication and audible signals are important.

3.11.2 Measurements should not normally be taken closer than 1 m from operating machinery, or from decks, bulkheads or other large surfaces, or from air inlets. Where this is not possible, measurement shall be taken at a position midway between the machinery and adjacent reflecting surface.

3.11.3 Measurements from machinery which constitutes a sound source should be taken at 1 m from the machinery. Measurement should be made at a height of between 1.2 m to 1.6 m above the deck, platform or walkway as follows:

.1 at a distance of 1 m from, and at intervals not greater than 3 m around, all sources such as:

- main turbines or engines at each level
- main gearing
- turbo-blowers
- purifiers
- electrical alternators and generators
- boiler firing platform
- forced and/or induced draught fans
- compressors
- cargo pumps (including their driving motors or turbines)

In order to avoid an unnecessarily large and impractical number of measurements and recordings in the case of large engines and of machinery spaces where the measured sound pressure level in dB(A) at the intervals above does not vary significantly, it will not be necessary to record each position. Full measurement at representative positions and at the positions of maximum sound pressure level shall, however, be made and recorded, subject to at least four measurements being recorded at each level;

.2 at local control stations, e.g. the main manoeuvring or emergency manoeuvring stand on the main engine and the machinery control rooms;

.3 at all other locations not specified in .1 and .2 which would normally be visited during routine inspection, adjustment and maintenance;

.4 at points on all normally used access routes, unless covered by positions already specified above, at intervals not greater than 10 m; and

.5 in rooms within the machinery space, e.g. workshops. In order to restrict the number of measurements and recordings, the number of recordings can be reduced as in .1, subject to a total of at least four measurements (including those specified in this paragraph) being recorded at each machinery space level up to upper deck.

### 3.12 Measurements in navigation spaces

Measurements shall be taken on both navigating bridge wings but should only be taken when the navigating bridge wing to be measured is on the lee side of the ship.

### 3.13 Measurements in accommodation spaces

3.13.1 One measurement shall be taken in the middle of the space. The microphone shall be moved slowly horizontally and/or vertically over a distance of 1 m (+/- 0.5m, taking into account the measurement criteria in paragraph 3.10.1). Additional measurements should be performed at other points if appreciable differences, i.e. greater than 10 dB(A), in the level of sound inside the room occur, especially near the head positions of a sitting or lying person.

3.13.2 The number of measurement cabins shall be not less than 40% of total number of cabins. Cabins which are obviously affected by noise, i.e. cabins adjacent to machinery or casings, must be considered in any case.

3.13.3 For ships with a large number of crew cabins, such as passenger/cruise ships, it will be acceptable to reduce the number of measurement positions. The selection of cabins to be tested shall be representative for the group of cabins being tested by selecting those cabins in closer proximity to noise sources, to the satisfaction of the Administration.

3.13.4 On open deck, measurements shall be taken in any areas provided for the purpose of recreation and additionally where a preliminary investigation indicates that the limits specified in 5.3.5 may be exceeded.

### 3.14 Measurements in normally unoccupied spaces

3.14.1 In addition to the spaces referred to in sections 3.10 to 3.13, measurements shall be taken in all locations with unusually high noise levels where seafarers may be exposed, even for relatively short periods, and at intermittently used machinery locations, for example cargo discharge pumps.

3.14.2 In order to restrict the number of measurements and recordings, noise levels need not be measured for normally unoccupied spaces, holds, deck areas and other spaces which are remote from sources of noise and where a preliminary investigation shows that the noise levels are well below the limit specified in chapter 4.

3.14.3 Where a preliminary investigation shows that the noise levels in large cargo holds are not well below the limit specified in chapter 4, at least three microphone positions in parts of holds where personnel are likely to carry out work shall be used.

## CHAPTER 4 – MAXIMUM ACCEPTABLE SOUND PRESSURE LEVELS

### 4.1 General

4.1.1 The limits specified in this section shall be regarded as maximum levels and not as desirable levels. Where reasonably practicable, it is desirable for the noise level to be lower than the maximum levels specified.

4.1.2 Before the ship is put in service, the limits specified in section 4.2 shall be assessed by the equivalent continuous sound level measurement for that space. In large rooms with many measurement positions the individual positions shall be compared to the limits.

4.1.3 Personnel entering spaces with nominal noise levels greater than 85 dB(A) should be required to wear hearing protectors while in those spaces (see chapter 5). The limit of 110 dB(A) given in paragraph 4.2.1 assumes that hearing protectors giving protection meeting the requirements for hearing protectors in chapter 7 are worn.

4.1.4 Limits are specified in terms of A-weighted sound pressure levels (see paragraphs 1.4.4 and 1.4.24).

## 4.2 Noise level limits

Limits for noise levels (dB(A)) are specified for various spaces as follows:

| Designation of rooms and spaces | Ship size | |
|---|---|---|
| | 1,600 up to 10,000 GT | ≥10,000 GT |
| **4.2.1 Work spaces (see 5.1)** | | |
| Machinery spaces[5] | 110 | 110 |
| Machinery control rooms | 75 | 75 |
| Workshops | 85 | 85 |
| Non–specified work spaces[6] (other work areas) | 85 | 85 |
| **4.2.2 Navigation spaces** | | |
| Navigating bridge and chartrooms | 65 | 65 |
| Listening posts, incl. navigating bridge wings[7] and windows | 70 | 70 |
| Radio rooms (with radio equipment operating but not producing audio signals) | 60 | 60 |
| Radar rooms | 65 | 65 |
| **4.2.3 Accommodation spaces** | | |
| Cabin and hospitals[8] | 60 | 55 |
| Messrooms | 65 | 60 |
| Recreation rooms | 65 | 60 |
| Open recreation areas (external recreation areas) | 75 | 75 |
| Offices | 65 | 60 |
| **4.2.4 Service spaces** | | |
| Galleys, without food processing equipment operating | 75 | 75 |
| Serveries and pantries | 75 | 75 |
| **4.2.5 Normally unoccupied spaces** | | |
| Spaces not specified | 90 | 90 |

## 4.3 Survey report

4.3.1 A noise survey report shall be made for each ship. The report shall comprise information on the noise levels in the various spaces on board. The report shall show the

5 If the maximum noise levels are exceeded when machinery is operating (only permitted if dispensation is granted in accordance with paragraph 1.3.6), stay should be limited to very short periods or not allowed at all. The area should be marked according to section 7.4.

6 Examples are open deck work spaces that are not machinery spaces, and open deck work spaces where communication is relevant.

7 Reference is made to the Recommendation on methods of measuring noise levels at listening posts (resolution A.343(IX)) which also applies.

8 Hospitals: treatment rooms with beds.

reading at each specified measuring point. The points shall be marked on a general arrangement plan, or on accommodation drawings attached to the report, or shall otherwise be identified.

4.3.2 The format for noise survey reports is set out in appendix 1.

4.3.3 The noise survey report shall always be carried on board and be accessible for the crew.

## CHAPTER 5 – NOISE EXPOSURE LIMITS

### 5.1 General

5.1.1 The noise level limits as set out in chapter 4 are designed so that if they are complied with seafarers will not be exposed to an $L_{ex}(24)$ exceeding 80 dB(A), i.e. within each day or 24-hour period the equivalent continuous noise exposure would not exceed 80 dB(A). For a new ship, compliance with these criteria should be verified on the basis of sea trial measurements of noise levels by calculation of the expected noise exposure of each category of crew members in accordance with the method prescribed in section 3.7.

5.1.2 In spaces with sound pressure levels exceeding 85 dB(A), suitable hearing protection should be used, or to apply time limits for exposure, as set out in this section, to ensure that an equivalent level of protection is maintained.

5.1.3 Each ship to which these regulations apply should include in their Safety Management System a section on the company's policy regarding hearing protection, exposure limits and conduct training on those matters, which will be logged in their training records.

5.1.4 Consideration should be given to the instruction of seafarers on these aspects, as recorded in appendix 2. No crew member should be exposed unprotected to peak values exceeding 135 dB(C).

### 5.2 Conservation of hearing and use of hearing protectors

In order to comply with the exposure criteria of this section, the use of hearing protectors complying with chapter 7 is permitted. Even when hearing protectors are required for compliance with the Code, risk assessments, a hearing conservation programme and other measures may be implemented by the Administration.

### 5.3 Limits of exposure of seafarers to high-noise levels

Seafarers should not be exposed to noise in excess of the levels and durations shown in figure 5.1 and described in paragraphs 5.3.1 to 5.3.5.

#### 5.3.1 *Maximum exposure with protection (zone A, Figure 1)*

No seafarer, even when wearing hearing protectors, should be exposed to levels exceeding 120 dB(A) or to an $L_{eq}$ (24) exceeding 105 dB(A).

#### 5.3.2 *Occasional exposure (zone B, Figure 1)*

Only occasional exposures should be allowed in zone B and hearing protectors with an attenuation between 25 and 35 dB(A) should be used.

### 5.3.3 *Occasional exposure (zone C, Figure 1)*

In zone C only occasional exposures should be allowed and hearing protectors with an attenuation of at least 25 dB(A) should be used.

### 5.3.4 *Daily exposure (zone D, Figure 1)*

If seafarers routinely work (daily exposure) in spaces with noise levels within zone D hearing protectors with an attenuation up to at least 25 dB(A) should be used and risk assessment and a hearing conservation programme may be considered.

### 5.3.5 *Maximum exposure without protection (zone E, Figure 1)*

For exposures of less than eight hours, seafarers without hearing protection should not be exposed to noise levels exceeding 85 dB(A). When seafarers remain for more than eight hours in spaces with a high noise level, an $L_{eq}$ (24) of 80 dB(A) should not be exceeded. Consequently, for at least a third of each 24 hours each seafarer should be subject to an environment with a noise level below 75 dB(A).

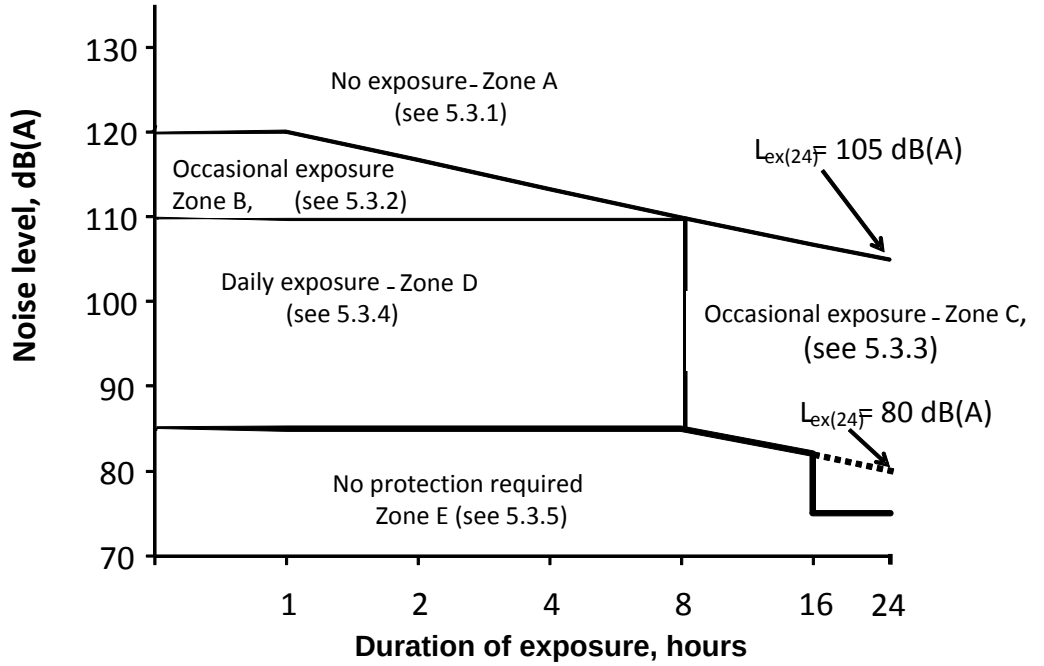



**Figure 1: Allowable daily and occasionally occupational zones**

To work in Zone A – D hearing protectors attenuating the sound to the ear down to below 85 dB(A) are required. To work in Zone E hearing protectors are not required but should be accessible if the sound level is over 80 dB(A) for more than eight hours.

### 5.4 24-hour equivalent continuous sound level limit

As an alternative to compliance with the provisions of section 5.3 (Figure 1), no unprotected seafarer should be exposed to a 24-hour equivalent continuous sound level greater than 80 dB(A). Each individual's daily exposure duration in spaces requiring the use of hearing protectors should not exceed four hours continuously or eight hours in total.

### 5.5 Hearing conservation programme

5.5.1 A hearing conservation programme may be provided for seafarers working in spaces with LAeq>85 dB(A) in order to train them in the hazards of noise and use of hearing protection, and to monitor hearing acuity. Some elements of a hearing conservation programme are as follows:

.1 Initial and periodic audiometric tests administered by a trained and appropriately qualified person, to the satisfaction of the Administration.

.2 Instruction of exposed persons on the hazards of high and long duration noise exposures and on the proper use of ear protectors (see appendix 2).

.3 Maintenance of audiometric test records.

.4 Periodic analysis of records and hearing acuity of individuals with high hearing loss.

5.5.2 An optional element of a hearing conservation programme is to control the 24-hour equivalent continuous sound level to which individuals working in high noise level spaces are exposed. Such control requires calculation of the 24-hour equivalent continuous sound level. If this 24-hour level does not meet the limits, the duration of exposure should be controlled or hearing protectors used at appropriate times to bring the individual's exposure within the limit.

## CHAPTER 6 – ACOUSTIC INSULATION BETWEEN ACCOMMODATION SPACES

### 6.1 General

Consideration shall be given to the acoustic insulation between accommodation spaces in order to make rest and recreation possible even if activities are going on in adjacent spaces, e.g. music, talking, cargo handling, etc.

### 6.2 Sound insulation index

6.2.1 The airborne sound insulation properties for bulkheads and decks within the accommodation shall comply at least with the following weighted sound reduction index ($R_w$) according to ISO Standard 717-1:1996 as amended (1:2006), part 1[9]:

| | |
|---|---|
| Cabin to cabin | $R_w = 35$ |
| Messrooms, recreation rooms, public spaces and entertainment areas to cabins and hospitals | $R_w = 45$ |
| Corridor to cabin | $R_w = 30$ |
| Cabin to cabin with communicating door | $R_w = 30$. |

6.2.2 The airborne sound insulation properties shall be determined by laboratory tests in accordance with ISO 10140-2:2010, to the satisfaction of the Administration.

[9] ISO Standard 717-1 – Acoustics – Rating of sound insulation in buildings and of building elements – part 1: Airborne sound insulation, and its amendment published in 2006.

### 6.3 Erection of materials

6.3.1 Care should be taken in the erection of materials and in the construction of accommodation spaces. During sea trial testing, if the erection of materials is in doubt then measurements should be taken on board ships for a representative selection of each type of partition, floors, doors as requested in paragraph 6.2.1 and to the satisfaction of the Administration.

6.3.2 The apparent weighted sound reduction index $R'_w$ should comply with the requirements of the paragraph 6.2.1 with tolerance of up to 3 dB.

***Note:*** Field measurements should be performed according to ISO 140-4:1998[10]. When the area of the materials tested is <10 $m^2$, a minimum value of 10 $m^2$ should be considered for the calculation of the $R'_w$ index.

## CHAPTER 7 – HEARING PROTECTION AND WARNING INFORMATION

### 7.1 General

When the application of means for controlling sound at source does not reduce the noise level in any space to that specified in paragraph 4.1.3, seafarers who are required to enter such spaces shall be supplied with effective hearing protection on an individual basis. The provision of hearing protectors shall not be considered to be a substitute for effective noise control. Appendix 3 summarizes current noise abatement methods which may be applied on new ships.

### 7.2 Requirements for hearing protectors

7.2.1 The individual hearing protectors shall be so selected as to eliminate the risk to hearing or to reduce the risk to an acceptable level as specified in paragraph 7.2.2. The ship operator shall make every effort to ensure the wearing of hearing protectors and shall be responsible for checking the effectiveness of measures taken in compliance of this Code.

7.2.2 Hearing protectors shall be of a type such that they can reduce sound pressure levels to 85 dB(A) or less (see section 5.1). Selection of suitable hearing protectors should be in accordance with the HML-method described in ISO 4869-2:1994 (see explanation and example in appendix 2). Noise-cancelling technology may be used if the headset(s) have equivalent performance to hearing protectors in their unpowered condition.

7.2.2.1 Noise-cancelling headsets specifications should be as per confirmed manufacturer specifications.

### 7.3 Selection and use of hearing protectors

Seafarers should be instructed in the proper use of hearing protectors as provided or used on board in accordance with appendix 2.

### 7.4 Warning notices

Where the noise level in machinery spaces (or other spaces) is greater than 85 dB(A), entrances to such spaces shall carry a warning notice comprising symbol and supplementary sign in the working language of the ship as prescribed by the Administration (see below an

[10] ISO 140-4 Acoustics – Measurement of sound insulation in buildings and of building elements – part 4: field measurements of airborne sound insulation between rooms.

example of the warning notice and signs in English). If only a minor portion of the space has such noise levels the particular location(s) or equipment shall be identified at eye level, visible from each direction of access.

| **Signs at the entrance to noisy rooms (example in English)** | |
|---|---|
| 80-85 dB(A) | HIGH-NOISE LEVEL – USE HEARING PROTECTORS |
| 85-110 dB(A) | DANGEROUS NOISE – USE OF HEARING PROTECTORS MANDATORY |
| 110-115 dB(A) | CAUTION: DANGEROUS NOISE – USE OF HEARING PROTECTORS MANDATORY – SHORT STAY ONLY |
| >115 dB(A) | CAUTION: EXCESSIVELY HIGH-NOISE LEVEL – USE OF HEARING PROTECTORS MANDATORY – NO STAY LONGER THAN 10 MINUTES |

## Appendix 1

## FORMAT FOR NOISE SURVEY REPORT

### 1 Ship particulars

.1 Name of ship
.2 Port of registry
.3 Name and address of shipowner, managing owner or agent
.4 Name and address of shipbuilder
.5 Place of build
.6 IMO number
.7 Gross tonnage
.8 Type of ship
.9 Ship's dimensions – length
breadth
depth
maximum draught (summer load line)
.10 Displacement at maximum draught
.11 Date of keel laying
.12 Date of delivery

### 2 Machinery particulars

.1 Propulsion machinery

| | | |
|---|---|---|
| Manufacturer: | Type: | Number of units: |
| Maximum cont. rating – power | | kW |
| Normal designed service shaft speed: | | rpm |
| Normal service rating – power: | | kW |

.2 Auxiliary diesel engines

| | | |
|---|---|---|
| Manufacturer: | | Type: |
| Output: | kW | Number of units: |

.3 Main reduction gear:

.4 Type of propeller (fixed propeller, controllable pitch propeller, Voith-Schneider propeller)

| | |
|---|---|
| Number of propellers: | Number of blades: |
| Designed propeller shaft speed: | rpm |

.5 Other (in case of special propulsion and power configurations)

.6 Engine room ventilation

| | | | |
|---|---|---|---|
| Manufacturer: | | | Type: |
| Number of units: | | | |
| Fan diameter: | m | Fan speed: | rpm /variable speed (Y/N) |
| Airflow capacity: | $m^3/h$ | Total pressure: | Pa |

**Measuring instrumentation and personnel**

.1 Instrumentation Make Type Serial No.
- Sound level meter
- Microphone
- Filter
- Windscreen
- Calibrator
- Other equipment

.2 Calibration of sound level meter Date Calibration Start Finish
- at survey by competent authority

.3 Identification of persons/organizations carrying out measurements

## 4 Conditions during measurement

.1 Date of measurement: Starting time: Completion time:
.2 Ship's position during measurement
.3 Loading condition of the ship
.4 Conditions during measurement
- Draught forward
- Draught aft
- Depth of water under keel

.5 Weather conditions
- Wind force
- Sea state

.6 Ship speed
.7 Actual propeller shaft speed: rpm
.8 Propeller pitch:
.9 Propulsion machinery speed: rpm
.10 Propulsion machinery power: kW
.11 Number of propulsion machinery units operating:
.12 Number of diesel auxiliary engines operating:
.13 Number of turbogenerators operating:
.14 Engine room ventilation speed mode (high/low/variable)
.15 Engine load (%MCR)
.16 Other auxiliary equipment operating:
Ventilation, heating and air conditioning equipment in operation

## 5 Measuring data

Noise limits dB(A)

Measured sound pressure levels
$L_{Aeq}$ dB(A)
$L_{Ceq}$ dB(C)
$L_{Cpeak}$ dB(C)

***Note:*** Measurement of sound pressure level $L_{Ceq}$ and $L_{Cpeak}$ should be done only in the case of exceeding 85dB(A) and hearing protectors are required.

**Work spaces**

Machinery spaces
Machinery control rooms
Workshops
Non-specified workspaces

**Navigation spaces**

Navigating bridge and chartrooms
Listening posts, including navigating bridge wings and windows
Radio rooms
Radar rooms

**Accommodation spaces**

Cabins and hospitals
Messrooms
Recreation rooms
Open recreation areas
Offices

**Service spaces**

Galleys, without food processing equipment operating
Serveries and pantries

**Normally unoccupied spaces**

**6** **Main noise abatement measures** (list measures taken)

**7** **Remarks** (list any exceptions to the Code)

…….. ……..

Name ……..

Address ……..

……..

…….. ……. ……
Place Date Signature

ATTACHMENT

PAGES OF FREQUENCY ANALYSIS

Frequency analysis for certain areas may result in more accurate and precise noise level predictions and will aide in the detection of specific frequency bands which exceed the established limits in chapter 4. Further guidance may be found in ISO 1996-2:2007.

## Appendix 2

## GUIDANCE ON THE INCLUSION OF NOISE ISSUES IN SAFETY MANAGEMENT SYSTEMS

### 1 Instruction to seafarers

1.1 Seafarers should be instructed in the hazards of high and long duration noise exposures and the risk of noise-induced hearing loss. Instruction should be given to all seafarers on initial employment and periodically thereafter to those regularly working in spaces with noise levels in excess of 85 dB(A). Instruction in the provisions of the Code should include:

.1 noise exposure limits and the use of warning notices;

.2 the types of hearing protectors provided, their approximate attenuation and their proper use, fitting, and the effects on normal communications when first wearing such protection;

.3 company policies and procedures related to hearing protection and where appropriate any monitoring programme which may be available for seafarers working in spaces covered by warning notices; and

.4 guidance on the possible signs of hearing loss such as ringing in the ear, dead ear, or fullness in the ear and mitigating techniques to be effected when those signs occur.

1.2 Appropriate seafarers should receive such instruction as is necessary in the correct use and maintenance of machinery and silencers or attenuators in order to avoid the production of unnecessary noise.

### 2 Responsibility of ship operators

2.1 The ship operator should be responsible for ensuring that means for noise reduction and control are applied and maintained such that the requirements of the Code are met.

2.2 Where noise levels in any space exceed the limit of 85 dB(A), shipowners should ensure that:

.1 the space is identified and relevant provisions of the Code are complied with;

.2 the master and senior officers of the ship are aware of the importance of controlling entry into the space and the importance of the use of suitable hearing protection;

.3 suitable and sufficient hearing protection is provided for distribution on an individual basis to all relevant crew members; and

.4 the master, senior officers and any safety officer on board a ship are aware of the need for the relevant training and information to be provided on board.

2.3 Where hand tools, galley and other portable equipment produce noise levels above 85 dB(A) in normal working conditions, shipowners should ensure that warning information should be provided.

## 3 Responsibility of seafarers

Seafarers should be made aware of the need to ensure that:

.1 all measures adopted for noise control are utilized;

.2 any defective noise control equipment is reported to responsible persons under the ship's safety management system;

.3 suitable hearing protectors are always worn when entering areas in which their use is required by warning notices and that those protectors are not removed in those spaces, even for short periods; and

.4 the hearing protectors provided for their use are not damaged or misused and are maintained in a sanitary condition.

## 4 Selection of hearing protectors

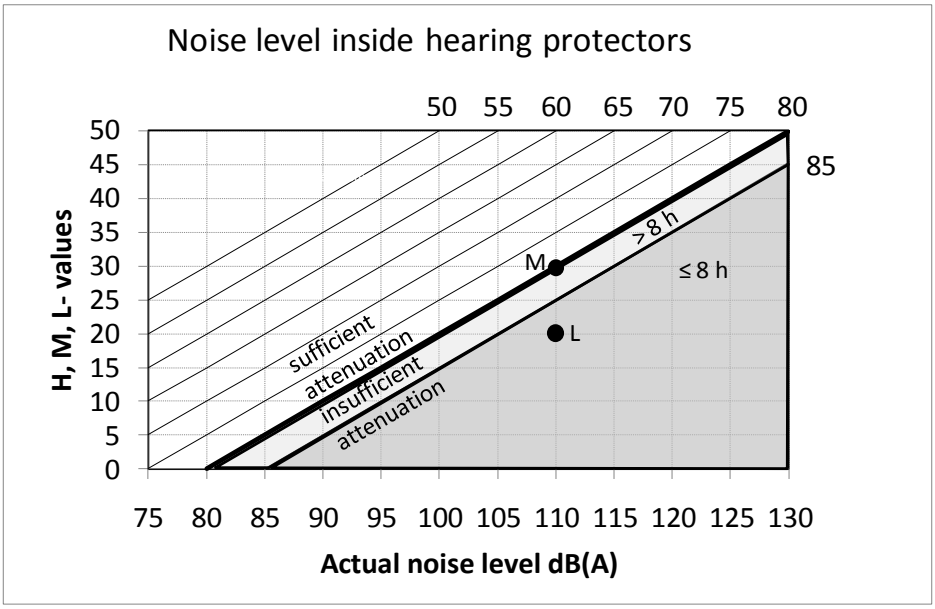
4.1 Selection of suitable hearing protectors should be carried out according to the HML-method described in ISO 4869-2:1994. In order to give guidance to ship operators and seafarers in choosing proper hearing protection, a short description of the HML-method and its use is given below.

4.2 The HML-method is a rating which is calculated in accordance with ISO 4869-2:1994, "Estimation of effective A-weighted sound pressure levels when hearing protectors are worn". Using the H, M, and L ratings requires both A-weighted ($L_{Aeq}$) and C-weighted ($L_{Ceq}$) sound pressure levels of the noise and the HML values for the hearing protector in question, which will be provided by the manufacturer.

4.2.1 The HML values for a hearing protector are related to the attenuation that the protector offers in noise of high, medium and low frequencies. These H and M values are used in the calculation of the protected exposure level for noises which have primary energy in the middle and high frequencies. This is considered the case if the measured $L_{Ceq}$ and $L_{Aeq}$ levels differ by 2 dB or less.

4.2.2 The M and L values for the hearing protector are used in the calculation of the protected exposure level for noises which have appreciable low-frequency components and for which the measured $L_{Ceq}$ and $L_{Aeq}$ levels differ by more than 2 dB in those spaces where the protector is intended to be used.

4.3 An example of simple use of the HML method:




On a given ship, the measured sound level in the machinery room is 110 dB(A), 115 dB(C). The chosen hearing protectors have the following attenuation according to the manufacturer: H= 35 dB, M=30 dB, L=20 dB.

.1 Mark the hearing protectors' L and M values on the vertical line starting at the actual noise level (110 dB(A)).

.2 Settle if the noise has low or high/medium frequency. If the difference LCeq-LAeq is more than 2 dB the noise has low frequency (L) and if Lceq-LAeq is less than 2 dB the noise has high or medium frequency (M).

.3 If the sound is of high/medium frequency (LCeq-LAeq≤2), follow the diagonal line from the M-value and take a reading of the noise level inside the hearing protectors. In this case the noise level inside the hearing protectors is 80 dB(A) which means that the attenuation of the hearing protectors are sufficient for work over 8 hours a day.

.4 If the sound has low frequency (LCeq-LAeq>2), follow the diagonal lines from the L-value and take a reading of the noise level inside the hearing protectors. In this case, the noise level inside the hearing protectors is >85 dB(A) which means that the hearing protectors are not good enough even for a working day of 8 hours. Choose a hearing protector that has an L-value above 25 dB instead.

4.4 ***Calculation by the HML-method – Principle and example***

Determination of feasibility of a particular protector in a specific noise environment can also be calculated. The values H, M and L may be used to estimate L'A (total A-weighted noise level at the ear) for a particular protector in specific noise situation.

.1 Calculate $L_{Ceq}$-$L_{Aeq}$ (This requires measurements of $L_{Aeq}$ and $L_{Ceq}$. All class 1 sound level meter can apply A-weighted or C-weighted.)

.2 If $L_{Ceq}$-$L_{Aeq}$ is ≤2 dB, the Predicted Noise Reduction level (PNR) is calculated using the equation:

$$PNR = M - (\frac{H - M}{4} * (LCeq - LAeq - 2))$$

If $L_{Ceq}$-$L_{Aeq}$ is >2 dB, PNR is calculated using the equation:

$$PNR = M - (\frac{M - L}{8} * (LCeq - LAeq - 2))$$

.3 The PNR is then subtracted from the total A-weighted noise level to give the effective A-weighted level at the ear under the protector L'A:

$L'A = L_{Aeq} - PNR$

Example: Hearing protector H = 35 dB, M = 25 dB, L = 20 dB

Noise level in engine-room:

$L_{Aeq}$ = 108.7 dB(A)
$L_{Ceq}$ = 109.0 dB(C)

$L_{Ceq}$-$L_{Aeq}$ = 0.3 dB

PNR = 25 - ((35-25)/4)*(0.3-2) = 29.3 dB

L'A = 108.7-29.3 = 79.4 dB(A).

In this case, the noise level inside the hearing protectors is below 80 dB(A) which means that the attenuation of the hearing protectors is sufficient for work over eight hours a day.

## Appendix 3

## SUGGESTED METHODS OF ATTENUATING NOISE

### 1 General

1.1 In order to obtain a noise reduction on board ships to comply with the limits given in chapters 4 and 5 of the Code, careful consideration should be given to means of such reduction. This appendix is intended to provide information for the design of a ship in this respect.

1.2 Design and construction of noise control measures should be supervised by persons skilled in noise control techniques.

1.3 Some of the measures which can be taken to control the noise level or reduce the exposure of seafarers to potentially harmful noise are indicated in sections 2 to 10 of this appendix. It is emphasized that it will not be necessary to implement all or any of the measures recommended in this appendix on all ships. This Code does not provide detailed technical information needed for putting constructional noise control measures into effect, or for deciding which measures are appropriate in particular circumstances.

1.4 In applying noise control measures, care should be taken to ensure that rules and regulations concerning ship structure, accommodation and other safety matters are not infringed and the use of sound reduction materials should not introduce fire, safety or health hazards nor should such material, by virtue of flimsy construction or attachment, introduce hazards that may tend to impede either evacuation or de-watering of the spaces.

1.5 The need for noise control should be taken into account at the design stage when deciding which of different designs of engines and machinery are to be installed, the method of installation and the siting of machinery in relation to other spaces, and the acoustic insulation and siting of the accommodation spaces.

1.6 Due to the normal method of ship construction, it is most probable that noise originating from machinery and propellers reaching the accommodation and other spaces outside the machinery spaces will be of the structure-borne type.

1.7 When designing efficient and economic measures for noise control of machinery installations in existing ships, the measurement of sound produced in terms of A-weighted sound level may need to be supplemented by some form of frequency analysis.

### 2 Isolation of sources of noise

2.1 Where practicable, any engines or machinery producing noise levels in excess of the limits set out in section 4.2 of the Code should be installed in compartments which do not require continuous attendance (see also paragraph 6.1 of this appendix).

2.2 Accommodation should be sited both horizontally and vertically as far away as is practicable from sources of noise such as propellers and propulsion machinery.

2.3 Machinery casings should, where practicable, be arranged outside superstructures and deckhouses containing accommodation spaces. Where this is not feasible, passageways should be arranged between the casings and accommodation spaces, if practicable.

2.4 Consideration should be given, where practicable, to the placing of accommodation spaces in deck houses not in superstructures extending to the ship's side.

2.5 Consideration may also be given, where applicable, to the separation of accommodation spaces from machinery spaces by unoccupied spaces, sanitary and washing rooms.

2.6 Suitable partitions, bulkheads, decks, etc., may be needed to prevent the spread of sound. It is important that these be of the correct construction and location in relation to the source of sound and the frequency of the sound to be attenuated.

2.7 Where a space, such as a machinery space, is being divided into noisy (not continually manned) and less noisy (capable of being continually manned) spaces, it is preferable to have complete separation[11].

2.8 It may be advisable to provide sound absorbing material in certain spaces in order to prevent increase of noise level due to reflection from partitions, bulkheads, decks, etc.

## 3 Exhaust and intake silencing

3.1 Exhaust systems from internal combustion engines, air-intake systems to machinery spaces, accommodation spaces and other spaces should be so arranged that the inflow or discharge orifices are remote from places frequented by seafarers.

3.2 Silencers, noise-cancelling equipment or attenuators should be fitted when necessary.

3.3 To minimize accommodation noise levels it is normally necessary to reduce structure-borne noise by isolating exhaust systems and certain pipe work and duct work from casings, bulkheads, etc.

## 4 Machinery enclosure

4.1 In continuously manned spaces or spaces where seafarers might reasonably be expected to spend lengthy periods of time on maintenance or overhaul work, and where separation as detailed in section 2 of this appendix is not practicable, consideration should be given to the fitting of sound insulating enclosures or partial enclosures to engines or machinery producing sound pressure levels in excess of the limits set out in section 4.2 of the Code.

4.2 Where the noise level produced by engines or machinery installed in spaces as in paragraph 4.1 above falls within the criteria of paragraph 5.3.1 of the Code and zone A of Figure 5.1, it is essential that noise reduction measures are provided.

4.3 When sound insulating enclosures are fitted, it is important that they entirely enclose the noise source.

## 5 Reduction of noise in the aft body

To reduce the noise influence in the aft body of the ship, especially to the accommodation spaces, consideration may be given to noise emission problems during the design procedures relating to the aft body, propeller, etc.

[11] In these cases it may be necessary to ensure the supervision of the plant by installing alarms in the less noisy compartments and to arrange means of escape so that seafarers may leave these compartments without danger.

## 6 Enclosure of the operator

6.1 In most machinery spaces it would be desirable and advisable to protect operating or watchkeeping seafarers by providing a sound reducing control room or other similar space (see paragraph 2.1 of this appendix).

6.2 In continuously manned machinery spaces of small ships and of existing ships where noise levels are in excess of 85 dB(A), it would be desirable to provide a noise refuge at the control station or manoeuvring platform where the watch keeper might be expected to spend the major part of the time.

## 7 Control of noise accentuation into accommodation spaces

7.1 To reduce noise levels in accommodation spaces it may be necessary to consider the isolation of deckhouses containing such spaces from the remaining structure of the ship by resilient mountings.

7.2 Consideration may also be given to the provision of flexible connections to bulkheads, linings and ceilings and the installation of floating floors within accommodation spaces.

7.3 The provision of curtains to side scuttles and windows and the use of carpets within accommodation spaces assist in absorbing noise.

## 8 Selection of machinery

8.1 The sound produced by each item of machinery to be fitted should be taken into account at the design stage. It may be possible to control noise by using a machine producing less airborne, fluid-borne or structure-borne sound.

8.2 Manufacturers should be requested to supply information on the sound produced by their machinery and also to provide recommended methods of installation in order to keep noise levels to a minimum.

## 9 Inspection and maintenance

All items of machinery, equipment and associated working spaces should be periodically inspected as part of the onboard safety management system with respect to any noise control/reduction features. Should such inspection reveal defects in the means for noise control, or other defects causing excessive noise, these should be rectified as soon as is practical.

## 10 Vibration isolation

10.1 Where necessary, machines should be supported on carefully selected resilient mountings. To ensure the effectiveness of the isolation, the mountings should be installed on a sufficient stiff foundation.

10.2 Where structure-borne sound from auxiliary machinery, compressors, hydraulic units, generating sets, vents, exhaust pipes and silencers produces unacceptable noise levels in accommodation spaces or on the navigating bridge, use of resilient mountings should be considered.

10.3 When sound insulating enclosures are fitted consideration may be given to the machine being resiliently mounted and pipe, trunk and cable connections to it being flexible.

## 11 Noise prediction

11.1 In the design phase of new ships, the designer/yard may predict by calculations, qualified assessments or the like, the expected noise levels in areas of the ship likely to have noise levels over acceptable levels from chapter 4.

11.2 The noise predictions referred to in paragraph 11.1 should be used in the design phase to identify possible areas in the ship where special consideration must be given to noise reduction measures in order to observe the noise level limits stipulated in section 4.2 of the Code.

11.3 The noise predictions and any noise reduction measures planned in the design phase should be documented, especially in cases where, according to the noise predictions, it must be expected that compliance with any of the noise level limits of section 4.2 of the Code will be difficult to achieve, despite reasonable technical initiatives.

## 12 Noise-cancelling equipment

12.1 Noise cancellation, also known as anti-noise, is the process whereby mostly low-frequency (below 500 Hz) repetitive noises such as made by engines and rotating machinery, is cancelled out by introducing a cancelling anti-noise signal which is equal to but 180 degrees out of phase with the noise. This anti-noise is introduced to the environment in a way that it matches the noise in the region of interest. The two signals then cancel each other out, effectively removing a significant portion of the noise energy from the environment.

12.2 Several applications for this technology exist. They include:

.1 Active mufflers – have been shown in other modes of transportation to reduce exhaust noise from internal combustion engines, compressors, and vacuum pumps without the inefficiencies caused by back pressure.

.2 Active mounts – these can contain vibration from rotating machines to improve comfort, decrease wear on moving parts, and reduce secondary acoustic noise from vibration.

.3 Noise-cancelled quiet zones – currently silent seats and (automobile) cabin quieting systems for various modes of transportation exist. The possibility exists for producing active-quieted bunks of other spaces for seafarer comfort and recovery.

.4 Noise-cancelling headsets – these can extend hearing protection beyond passive ear defenders to include low frequencies. Active headsets can also allow communication, by permitting normal conversation, and improve work place safety.

12.3 It is suggested that information concerning experience from these active noise-reducing systems be provided to the Organization to better evaluate the performance parameters of these systems.

## 13 Noise recovery areas

13.1 Incorporation of noise recovery areas may be used as an alternative design approach for the construction of ships under 1,600 GT or ice-breaking vessels. Noise recovery areas may also be considered for incorporation in ship-specific applications where noisy operations (examples are extended air/helicopter operations or heavy weather operation of dynamic positioning equipment) are undertaken for time periods over and above those of normal, routine seagoing practices. The use of these spaces should be integrated into ship safe operations policies under the ISM Code.

13.2 Noise recovery areas should be provided if no other technical or organizational solutions are feasible to reduce excessive noise from sound sources.

## Appendix 4

## SIMPLIFIED PROCEDURE FOR DETERMINING NOISE EXPOSURE

### 1 General

1.1 In order to ensure that seafarers will not be exposed to an $L_{ex}(24)$ exceeding 80 dB(A), this appendix is providing information on a simplified procedure for determining the related noise exposure.

1.2 The determination of noise exposure should be usually carried out based on ISO 9612:2009.

1.3 A simplified method based on the noise measurements during sea trail/harbour stay and a job profile for crew members is described in the following:

### 2 Work analysis/Job profiling and off-duty hours

2.1 With the help of a crew list, different job categories (groups) will be defined.

Example:

- Master
- Chief engineer
- Electrician
- Cook
- etc.

2.2 For each job category, a job profile has to be defined individually. The job profile is related to the work spaces on board the vessel.

Example:

- Wheelhouse
- Ship office
- Machinery control room
- Workshop
- Engine-room
- Galley
- etc.

2.3 For each job category, the working shift is to be divided into partitions (i) related to the work spaces. A similar assessment should be made for off-duty hours (the partitions are based on estimations by the owner/operator/employer).

Example:

A full day for an electrician may be divided into the following partitions:

| | | | |
|---|---|---|---|
| i = 1 | Workshop | = | $T_i$ = 5 hours |
| i = 2 | Machinery control room | = | $T_i$ = 2 hours |
| i = 3 | Ship office | = | $T_i$ = 2 hours |
| i = 4 | Engine-room | = | $T_i$ = 1 hour |
| i =5 | Off-duty | = | $T_i$ = 14 hours |
| | Total | = | $T_{total}$ = 24 hours |

## 3 Determination of estimated noise exposure levels

3.1 Based on the noise report and the estimated working times and off-duty hours for each job category, the noise exposure level can be calculated. It is assumed that the noise limits for cabins and recreation spaces according to this Code will not be exceeded. Using well-selected hearing protectors is recommendatory according to this Code. It is assumed that the maximum noise level of workers wearing hearing protectors does not exceed 85 dB(A).

3.2 The noise contribution from each space is calculated as follows:

$$L_{ex,24h,i}=L_{Aeq,i} + 10 \log( Ti/T_0)$$

where: Ti is the effective duration on board for each space
$T_0$ is the reference duration 24 h
$L_{Aeq,i}$ is the A-weighted equivalent continuous sound level for each space

3.3 The A-weighted noise exposure level is calculated from the noise contribution from each space as follows:

$$L_{ex,24h} = 10\log\left(\sum_{i=1}^{n} 10^{\frac{L_{ex,24h,i}}{10}}\right)$$

Example: Result Sheet

| Job category | **Electrician** | Location/Space | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | Navigating bridge | Ship Office | Machinery Control Room | Workshops | Engine-room | Galley | Off-duty |
| Measured A-weighted equivalent continuous sound level $L_{Aeq,i}$ [dB(A)] | | 64 | 63 | 75 | 84 | 85 | 72 | 60 |
| Duration/Stay $T_i$ [h] | | 0 | 2 | 2 | 5 | 1 | 0 | 14 |
| Noise contribution $L_{ex,24h,i}$ [dB] | | 0 | 52.2 | 64.2 | 77.2 | 71.2 | 0 | 57.7 |
| A-weighted noise exposure level $L_{ex,24h}$ [dB] | **78.3** | | | | | | | |

***

# ANNEX 15

## DRAFT NEW SOLAS REGULATION II-1/3-12

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

### Part A-1 – Structure of ships

1 The following new regulation 3-12 is added after the existing regulation 3-11:

"**Regulation 3-12 – Protection against noise**

1 This regulation shall apply to ships of not less than 1,600 gross tonnage the keel of which is laid or which is at a similar stage of construction on or after [*effective date*], unless the Administration deems that compliance with a particular provision is unreasonable or impractical.

2 Notwithstanding the requirements of paragraph 1, this regulation does not apply to the following types of ships:

.1 dynamically supported craft;
.2 high-speed craft;
.3 pipe-laying barges;
.4 crane barges;
.5 mobile offshore drilling units;
.6 pile driving vessels; and
.7 dredgers.

3 Ships shall be constructed to reduce onboard noise and to protect personnel from the noise in accordance with the Code on noise levels on board ships, adopted by the Maritime Safety Committee 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. For the purpose of this regulation, although the Code on noise levels on board ships is treated as a mandatory instrument, recommendatory parts as specified in chapter I of the Code shall be treated as non-mandatory, provided that amendments to such recommendatory parts are adopted by the Maritime Safety Committee in accordance with its Rules of Procedure."

### Part C – Machinery installations

2 The existing regulation 36 is deleted and left blank[*].

***

[*] Intentionally left blank to maintain the existing numbering of the following regulations.

**ANNEX 16**

**DRAFT AMENDMENTS TO THE PERFORMANCE STANDARD FOR PROTECTIVE COATINGS FOR DEDICATED SEAWATER BALLAST TANKS IN ALL TYPES OF SHIPS AND DOUBLE-SIDE SKIN SPACES OF BULK CARRIERS (RESOLUTION MSC.215(82))**

1 In paragraph 2.1, the reference to "the Guidelines on the enhanced programme of inspections during surveys of bulk carriers and oil tankers (resolution A.744(18), as amended)" is replaced by a reference to "the International Code on the enhanced programme of inspections during surveys of bulk carriers and oil tankers, 2011 (2011 ESP Code) (resolution A.1049(27))".

2 In paragraph 2.6, the reference to "resolution A.744(18)" is replaced by a reference to "the 2011 ESP Code".

***

# ANNEX 17

## DRAFT AMENDMENTS TO THE PERFORMANCE STANDARD FOR PROTECTIVE COATINGS FOR CARGO OIL TANKS OF CRUDE OIL TANKERS (RESOLUTION MSC.288(87))

1 In paragraph 2.6, the reference to "resolution A.744(18)" is replaced by a reference to "the International Code on the enhanced programme of inspections during surveys of bulk carriers and oil tankers, 2011 (2011 ESP Code) (resolution A.1049(27))".

***

# ANNEX 18

## NEW AND AMENDED TRAFFIC SEPARATION SCHEMES

### IN NORRA KVARKEN

(Reference chart: Finnish chart number 47 edition 2005 V based on World Geodetic System (WGS 84))

***Part I***

(a) A traffic separation zone 0.1 mile wide is centred upon the following geographical positions:

(1) 63° 27′.22 N 020º 37′.58 E (2) 63º 27′.94 N 020º 38′.61 E

(b) A traffic lane for the northbound traffic is established between the traffic separation line described in paragraph (a) and a line connecting the following geographical positions:

(3) 63º 27′.03 N 020º 38′.32 E (4) 63º 27′.77 N 020° 39′.28 E

(c) A traffic lane for the southbound traffic is established between the traffic separation line described in paragraph (a) and a line connecting the following geographical positions:

(5) 63º 28′.12 N 020º 37′.93 E (6) 63º 27′.42 N 020º 36′.84 E

***Part II***

(d) A traffic separation zone 0.1 mile wide is centred upon the following geographical positions:

(7) 63º 31′.60 N 020º 42′.72 E (8) 63º 31′.84 N 020º 43′.00′ E
(9) 63º 32′.50 N 020º 45′.82 E

(e) A traffic lane for the northbound traffic is established between the traffic separation line described in paragraph (d) and a line connecting the following geographical positions:

(10) 63º 31′.19 N 020º 43′.77 E (11) 63º 32′.29 N 020º 46′.24 E

(f) A traffic lane for the southbound traffic is established between the traffic separation line described in paragraph (d) and a line connecting the following geographical positions:

(12) 63º 32′.71 N 020º 45′.40 E (13) 63º 32′.23 N 020° 41′.09 E

***Part III***

(g) A traffic separation zone 0.1 mile wide is centred upon the following geographical positions:

(14) 63º 34′.73 N 021º 01′.51 E (15) 63º 35′.06 N 021º 03′.60 E

(h) A traffic lane for the northbound traffic is established between the traffic separation line described in paragraph (g) and a line connecting the following geographical positions:

(16) 63º 34′.42 N 021º 01′.76 E (17) 63º 34′.72 N 021º 03′.88 E

(i) A traffic lane for the southbound traffic is established between the traffic separation line described in paragraph (g) and a line connecting the following geographical positions:

(18) 63º 35′.40 N 021º 03′.33 E (19) 63º 35′.04′ N 021º 01′.26′ E

**AMENDMENTS TO THE EXISTING TRAFFIC SEPARATION SCHEME "SUNK East"**

(Reference Charts: British Admiralty 1610

***Note**: Chart is based on World Geodetic System 1984 Datum (WGS 84)*)

**1 Description**

1.1 The proposed amendment to the SUNK routeing measure comprises of amendments to the SUNK TSS East to be extended 5.5 nautical miles eastwards.

**2 Details of proposed Amendments**

SUNK East traffic separation scheme

(g) A separation zone bounded by a line connecting the following geographical positions:

(22) 51º 53′.07 N 002º 07′.46 E
(23) 51º 53′.39 N 002º 07′.55 E
(24) 51º 48′.84 N 001º 51′.86 E
(25) 51º 48′.54 N 001º 51′.85 E

(h) A separation zone bounded by a line connecting the following geographical positions:

(26) 51º 54′.59 N 002º 07′.93 E
(27) 51º 49′.92 N 001º 51′.89 E
(28) 51º 52′.06 N 001º 49′.37 E
(29) 51º 53′.90 N 001º 49′.96 E
(30) 51º 55′.72 N 001º 50′.54 E
(31) 51º 55′.59 N 001º 51′.73 E
(32) 51º 52′.31 N 001º 50′.68 E
(33) 51º 50′.99 N 001º 52′.27 E
(34) 51º 55′.63 N 002º 08′.24 E

(i) A traffic lane for eastbound traffic between the separation zone described in (g) above and a line connecting the following geographical positions:

(35) 51º 47′.45 N 001º 51′.82 E (36) 51º 51′.89 N 002º 07′.08 E

(j) A traffic lane for westbound traffic between the separation zone described in (g) above and that portion of the separation zone described in (h) above connecting the following geographical positions:

(26) 51º 54′.59 N 002º 07′.93 E (27) 51º 49′.92 N 001º 51′.89 E

**AMENDMENTS TO THE EXISTING TRAFFIC SEPARATION SCHEME "AT WEST HINDER"**

(Reference charts: D11 and 102INT1480 published by the Agency of Maritime and Coastal Services, Flemish Hydrography.

***Note**: These charts are based on World Geodetic System 1984 Datum (WGS 84)*)

1 A new extended Precautionary Area with recommended direction of traffic flow is established connecting the following geographical positions:

| | | |
|---|---|---|
| 1 | 51° 23′.45 N | 002° 32′.95 E joining TSS |
| 2 | 51° 23′.45 N | 002° 36′.92 E AN Buoy |
| 3 | 51° 24′.25 N | 002° 44′.52 E GZ Buoy |
| 4 | 51° 23′.38 N | 002° 46′.21 E VG Buoy |
| 5 | 51° 20′.82 N | 002° 46′.29 E MBN Buoy |
| 6 | 51° 21′.39 N | 002° 31′.33 E near Oost Dyck Buoy joining the TSS. |

2 Consequently, the revised coordinates of the geographical positions (East end) of the eastbound traffic lane, the westbound traffic lane and the separation line are as follows:

| | | |
|---|---|---|
| (7(revised)) | 51° 23′.45 N | 002° 32′.95 E |
| (1(revised)) | 51° 22′.43 N | 002° 32′.15 E |
| (13(revised) | 51° 21′.39 N | 002° 31′.33 E |

***

# ANNEX 19

## ROUTEING MEASURES OTHER THAN TRAFFIC SEPARATION SCHEMES

### ESTABLISHMENT OF THREE NEW TWO-WAY ROUTES IN "NORRA KVARKEN"

(Reference chart: Finnish chart number 47 edition 2005 V based on World Geodetic System (WGS 84))

***Part I***

(a) A two-way route is established bounded by a line connecting the following geographical positions:

| | | | |
|---|---|---|---|
| (20) | 63º 25′.21 N 020º 35′.75 E | (21) | 63º 25′.54 N 020º 33′.94 E |
| (6) | 63º 27′.42 N 020º 36′.84 E | (3) | 63º 27′.03 N 020º 38′.32 E |

***Part II***

(b) A two-way route is established bounded by a line connecting the following geographical positions:

| | | | |
|---|---|---|---|
| (4) | 63º 27′.77 N 020º 39′.24 E | (5) | 63º 28′.12 N 020º 37′.93 E |
| (13) | 63º 32′.23 N 020º 41′.09 E | (10) | 63º 31′.19 N 020º 43′.77 E |

***Part III***

(c) A two-way route is established bounded by a line connecting the following geographical positions:

| | | | |
|---|---|---|---|
| (11) | 63º 32′.29 N 020º 46′.24 E | (12) | 63º 32′.71 N 020º 45′.40 E |
| (23) | 63º 33′.49 N 020º 52′.35 E | (19) | 63º 35′.04 N 021° 01′.26 E |
| (16) | 63º 34′.42 N 021° 01′.76 E | (22) | 63º 32′.90 N 020º 51′.03 E |

### ESTABLISHMENT OF A NEW AREA TO BE AVOIDED "AT WEST HINDER" TRAFFIC SEPARATION SCHEME

(Reference charts: D11 and 102INT1480 published by the Agency of Maritime and Coastal Services, Flemish Hydrography.

***Note**: These charts are based on World Geodetic System 1984 Datum (WGS 84)*)

An Area To Be Avoided is established bounded by a line connecting the following geographical positions:

| | | |
|---|---|---|
| 1 | 51° 23′.45 N | 002° 36′.92 E AN Buoy |
| 2 | 51° 23′.95 N | 002° 36′.90 E |
| 3 | 51° 24′.40 N | 002° 40′.30 E |
| 4 | 51° 23′.81 N | 002° 40′.30 E |

**ESTABLISHMENT OF A NEW DEEP-WATER ROUTE IN THE APPROACHES TO THE RIVER SCHELDT**

(Reference charts: D11 and 102INT1480 published by the Agency of Maritime and Coastal Services, Flemish Hydrography.

***Note**: These charts are based on World Geodetic System 1984 Datum (WGS 84)*)

**Description of the Deep-water route**

A Deep-water route for ships with a draught of more than 13.1 m is bounded by a line connecting the following geographical positions:

| | | |
|---|---|---|
| 1 | 51° 24′.25 N | 002° 44′.52 E GZ buoy |
| 2 | 51° 25′.95 N | 002° 48′.12 E VG2 buoy |
| 3 | 51° 25′.50 N | 002° 52′.92 E VG4 buoy |
| 4 | 51° 25′.07 N | 002° 57′.92 E VG6 buoy |
| 5 | 51° 25′.03 N | 003° 02′.85 E S4 buoy |
| 6 | 51° 24′.53 N | 002° 59′.92 E VG7 buoy |
| 7 | 51° 24′.63 N | 002° 57′.92 E VG5 buoy |
| 8 | 51° 25′.05 N | 002° 52′.92 E VG3 buoy |
| 9 | 51° 25′.03 N | 002° 49′.05 E VG1 buoy |
| 10 | 51° 23′.38 N | 002° 46′.21 E VG buoy |

**ESTABLISHMENT OF A NEW PRECAUTIONARY AREA IN THE VICINITY OF THORNTON AND BLIGH BANKS**

(Reference chart: 1630INT1416 published jointly by the Hydrographer of the Royal Netherlands Navy at Den Haag and by the United Kingdom National Hydrographer at Taunton.

***Note**: This chart is based on World Geodetic System 1984 Datum (WGS 84)*)

**Description of the Precautionary Area**

A new **Precautionary Area** is established bounded by a line joining the following geographical positions:

| | | |
|---|---|---|
| 1 | 51° 32′.664 N | 003° 05′.562 E |
| 2 | 51° 33′.051 N | 003° 04′.805 E |
| 3 | 51° 44′.687 N | 002° 45′.364 E |
| 4 | 51° 44′.112 N | 002° 42′.448 E |
| 5 | 51° 42′.305 N | 002° 41′.845 E |
| 6 | 51° 39′.130 N | 002° 44′.779 E |
| 7 | 51° 38′.015 N | 002° 47′.146 E |
| 8 | 51° 36′.973 N | 002° 47′.745 E |
| 9 | 51° 35′.774 N | 002° 50′.363 E |
| 10 | 51° 35′.195 N | 002° 53′.014 E |
| 11 | 51° 34′.053 N | 002° 55′.013 E |
| 12 | 51° 32′.842 N | 002° 52′.365 E |
| 13 | 51° 28′.198 N | 002° 59′.626 E |

**AMENDMENT TO THE DESCRIPTION OF THE AREA TO BE AVOIDED "OFF THE WASHINGTON COAST"**

(Reference charts: United States 18003, 18500, 2008 edition, and 18480, 2006 edition.

***Note***: These charts are based on North American 1983 datum which is equivalent to WGS 1984 datum)

**Description of the area to be avoided**

"In order to reduce the risk of a marine casualty and resulting pollution and damage to the environment of the Olympic Coast National Marine Sanctuary, all ships and barges* that carry oil or hazardous materials in bulk as cargo or cargo residue and all ships 400 gross tonnage and above solely in transit should avoid the area bounded by a line connecting the following geographical positions:"

**AMENDMENT TO THE TEXT OF THE NOTE RELATING TO THE DEEP-WATER ROUTE OFF THE EAST COAST OF LANGELAND**

***Note***: The Deep-water route is intended for use by ships which, because of their draught, are unable to navigate safely in areas outside the Deep-water route.

Ships with a draught of 10 metres or less should use the nationally recommended Route H, which lies to the east. The recommended Route H has a minimum depth of water below mean sea level of 12 metres.

Ship masters should take into account the information given in the IMO publication, Ships' Routeing on *Recommendation on navigation through the entrances to the Baltic Sea*.

**RECOMMENDATION ON NAVIGATION THROUGH THE STRAIT OF BONIFACIO**

**1 Use of ships' routeing**

Vessels navigating in the Strait shall exercise full diligence and regard for the requirements of the existing recommended two-way route in the Strait of Bonifacio. Due to the narrowness of the Strait, masters of vessels shall ensure that an appropriate monitoring of the ship's route is done on board in order to avoid groundings and collisions.

**2 Ship reporting and navigation information**

Ships of 300 GT and over entering the Strait shall participate in the mandatory ship reporting system (BONIFREP) established by the competent authorities as described in IMO's publication on Ships' Routeing (section G I/8).

**3 Pilotage**

Masters of vessels passing through the Strait are recommended to avail themselves of the services of a qualified pilot.

* This ATBA does not apply to any warship, naval auxiliary, barge (whether towed by a Government or commercial tug), or other ship owned or operated by a Contracting Government and used, for the time being, only on Government non-commercial service.

### 3.1 Categories of ships concerned

Ships for which the IMO Assembly recommends in its resolution A.766(18) of 17 November 1993 to Governments to prohibit or at least strongly discourage the transit in the Strait of Bonifacio: laden oil tankers and ships carrying dangerous chemicals or substances in bulk, as listed in the annex to resolution MEPC.49(31) adopted on 4 July 1991.

### 3.2 Description of the applicable procedure for requesting a pilot

Vessels wishing to order a Bonifacio Strait pilot should, as much as possible, send by e-mail or by fax the following information to the service named "Bonifacio Strait pilotage":

- ship's name and call sign;
- type of vessel and gross tonnage;
- draught;
- destination port/name and address of the local agent;
- boarding position and ETA.

24 hours prior to arrival, vessels should inform or confirm their ETA to the head office of the Bonifacio Strait pilotage service.

Once on Bonifacio Strait road, vessels should confirm their ETA 2 hours prior to arrival calling "Bonifacio Traffic" on VHF 10.

### 3.3 Description of the pilotage service

The pilotage area covers the Strait and its approaches. Usually the vessels entering the Strait board their pilots out of the "BONIFREP" zone.

The boarding positions are the following (WGS 84):

- Eastern boarding position: 41° 24′.80 N 009° 30′.00 E;
- Western boarding position: 41° 17′.28 N 008° 58′.50 E.

## ESTABLISHMENT OF RECOMMENDED TWO-WAY ROUTES AND TWO PRECAUTIONARY AREAS TO THE NORTH-WEST OF THE PORT OF ISLA DEL CARMEN, CAMPECHE

(Reference chart: Chart of the Bay of Campeche S.M. 840, Ministry of the Navy (fourth edition October 2010)

***Note***: This chart is based on World Geodetic System 1984 Datum (WGS 84))

Establishment of recommended routes and precautionary areas within the Gulf of Campeche oil exploration and production area. These recommended routes are primarily intended for oil exploration and production support vessels. Other vessels are strongly recommended to avoid the recommended system.

The ships' routeing measures from the port of Isla del Carmen, Campeche, to the oil exploitation area of the Gulf of Campeche consist of the following:

- **One precautionary area labelled "A"**
- **Four two-way routes**

**Precautionary area "A"**

All the proposed recommended two-way routes to/away from the precautionary area labelled "A" located to the north-west of the port of Isla del Carmen, Campeche, with the direction of traffic flow indicated; it is bounded by a line connecting the following geographical positions:

| | | |
|---|---|---|
| (1) | 18° 45´.45 N | 091° 53´.41 W |
| (2) | 18° 49´.01 N | 091° 54´.07 W |
| (3) | 18° 49´.03 N | 091° 59´.04 W |
| (4) | 18° 44´.14 N | 091° 56´.15 W |

**Recommended two-way route 1**
The following routes are only to be used for ships involved in oil-related activities.

Established at the north-north-west of the port of Isla del Carmen, Campeche:

| | | |
|---|---|---|
| (2) | 18° 49´.01 N | 091° 54´.07 W |
| (5) | 19° 15´.45 N | 091° 59´.05 W |
| (7) | 19° 13´.88 N | 092° 01´.09 W |
| (8) | 18° 49´.02 N | 091° 56´.44 W |

**Recommended two-way route 2**
The following routes are only to be used for ships involved in oil-related activities.

Established at the north-west of the port of Isla del Carmen, Campeche:

| | | |
|---|---|---|
| (7) | 18° 49´.02 N | 091° 56´.44 W |
| (8) | 19° 09´.74 N | 092° 08´.68 W |
| (9) | 19° 08´.83 N | 092° 10´.84 W |
| (3) | 18° 49´.03 N | 091° 59´.04 W |

**Recommended two-way route 3**
The following routes are only to be used for ships involved in oil-related activities.

Established at the west-north-west of the port of Isla del Carmen, Campeche:

| | | |
|---|---|---|
| (3) | 18° 49´.03 N | 091° 59´.04 W |
| (10) | 18° 55´.69 N | 092° 35´.10 W |
| (11) | 18° 53´.09 N | 092° 33´.27 W |
| (12) | 18° 46´.50 N | 091° 57´.55 W |

**Recommended two-way route 4 with precautionary area "B"**
The following routes are recommended for use by ships of 50 gross tonnage and upwards.

Established at the west of the port of Isla del Carmen, Campeche:

A junction with a precautionary area labelled "B" bounded by a line connecting the following geographical positions:

| | | |
|---|---|---|
| (13) | 18° 46´.50 N | 092° 47´.07 W |
| (14) | 18° 46´.50 N | 092° 50´.70 W |
| (15) | 18° 44´.70 N | 092° 53´.00 W |
| (16) | 18° 44´.70 N | 092° 49´.37 W |

A two-way route limited by the following geographical positions:

| | | |
|---|---|---|
| (12) | 18° 46´.50 N | 091° 57´.55 W |
| (13) | 18° 46´.50 N | 092° 47´.07 W |
| (16) | 18° 44´.70 N | 092° 49´.37 W |
| (17) | 18° 44´.70 N | 091° 56´.47 W |

***Note 1***: An anchorage is established for vessels arriving at or manoeuvring north-east of the port of Isla del Carmen, Campeche, located north-west of the sea buoy.

***Note 2***: An anchorage is established for vessels arriving at or manoeuvring west to the port of Frontera, Tabasco.

**ESTABLISHMENT OF RECOMMENDED TWO-WAY ROUTES TO THE NORTH-EAST OF THE PORT OF DOS BOCAS, TABASCO**

The ships' routeing measures from the port of Dos Bocas, Tabasco, to the oil exploitation area of the Gulf of Campeche consist of the following:

The following routes are only to be used for ships involved in oil-related activities.

Established at the north-east of the port of Dos Bocas, Tabasco

Three two-way routes limited by the following geographical positions:

| | | |
|---|---|---|
| (18) | 18° 27´.63 N | 093° 10´.78 W |
| (16) | 18° 44´.70 N | 092° 49´.37 W |
| (15) | 18° 44´.70 N | 092° 53´.00 W |
| (19) | 18° 29´.32 N | 093° 12´.23 W |
| | | |
| (13) | 18° 46´.50 N | 092° 47´.07 W |
| (20) | 18° 53´.02 N | 092° 38´.88 W |
| (21) | 18° 54´.43 N | 092° 40´.74 W |
| (14) | 18° 46´.50 N | 092° 50´.70 W |
| | | |
| (10) | 18° 55´.69 N | 092° 35´.10 W |
| (22) | 19° 05´.35 N | 092° 23´.46 W |
| (23) | 19° 07´.09 N | 092° 25´.02 W |
| (24) | 18° 57´.45 N | 092° 36´.50 W |

A junction with a precautionary area labelled "B" as defined above.

***Note 1***: An anchorage is established for vessels other than tankers involved in cargo exportation activities, arriving at or manoeuvring northwest to the port of Dos Bocas, Tabasco.

***Note 2***: An anchorage is established for vessels involved in oil-related activities to the west of the Taratunich oil exploitation field.

***Note 3***: An anchorage is established for vessels involved in oil-related activities to the west of the oil exploitation area of the Rebombeo oilfield.

**ESTABLISHMENT OF RECOMMENDED TWO-WAY ROUTES AND FOUR PRECAUTIONARY AREAS OFF THE PORTS OF CAYO ARCAS, TA'KUNTAH AND YÚUM K'AK NAAB**

The ships' routeing measures for tankers coming from abroad involved in loading crude for exportation and heading to the ports of Cayo Arcas, Ta'kuntah and Yúum K'ak Naab in the Gulf of Mexico consist of the following elements:

- **Four precautionary areas labelled C, D, E and F**
- **Five two-way routes**

The following routes are only to be used for oil tankers.

**Routeing System I – Two two-way routes and a precautionary area**

Established at the west and south-west of the port of Cayo Arcas for tankers arriving at the port or heading to the proposed anchorage east of the port of Ta'kuntah and vice versa.

**Two-way route 1**

| | | |
|---|---|---|
| (25) | 20° 12´.00 N | 092° 16´.45 W |
| (26) | 20° 05´.50 N | 092° 07´.20 W |
| (27) | 20° 05´.50 N | 092° 03´.36 W |
| (28) | 20° 14´.80 N | 092° 16´.45 W |

A precautionary area labelled "C" bounded by a line connecting the following geographical positions:

| | | |
|---|---|---|
| (27) | 20° 05´.50 N | 092° 03´.36 W |
| (26) | 20° 05´.50 N | 092° 07´.20 W |
| (29) | 20° 03´.30 N | 092° 06´.50 W |
| (30) | 20° 01´.30 N | 092° 04´.30 W |
| (31) | 20° 03´.30 N | 092° 02´.90 W |

**Two-way route 2**

| | | |
|---|---|---|
| (30) | 20° 01´.30 N | 092° 04´.30 W |
| (32) | 19° 45´.00 N | 091° 53´.98 W |
| (33) | 19° 45´.00 N | 091° 51´.20 W |
| (31) | 20° 03´.30 N | 092° 02´.90 W |

***Note***: An anchorage for vessels involved in oil-related activities is established to the east of the Cantarell oilfield.

**Routeing System II – Two two-way routes and a precautionary area**

Established at the south-west and south of the port of Cayo Arcas with a two-way route for tankers arriving at the port or heading to the proposed anchorage for this port.

**Two-way route 1**

| | | |
|---|---|---|
| (34) | 20° 03´.30 N | 092° 16´.45 W |
| (29) | 20° 03´.30 N | 092° 06´.50 W |
| (26) | 20° 05´.50 N | 092° 07´.20 W |
| (35) | 20° 05´.50 N | 092° 16´.45 W |

A precautionary area labelled "D" bounded by a line connecting the following geographical positions:

| | | |
|---|---|---|
| (35) | 20° 05´.50 N | 092° 16´.45 W |
| (36) | 20° 05´.50 N | 092° 18´.65 W |
| (37) | 20° 03´.30 N | 092° 18´.65 W |
| (34) | 20° 03´.30 N | 092° 16´.45 W |

**Two-way route 2**

| | | |
|---|---|---|
| (31) | 20° 03´.30 N | 092° 02´.90 W |
| (38) | 20° 03´.30 N | 091° 55´.00 W |
| (39) | 20° 05´.50 N | 091° 55´.00 W |
| (27) | 20° 05´.50 N | 092° 03´.36 W |

***Note***: An anchorage for tankers involved in loading operation in the port of Cayo Arcas is established to the south-east of the port of Cayo Arcas.

**Routeing System III – Two two-way routes and a precautionary area**

Established at the west and south-west of the port of Cayo Arcas with a two-way route for tankers arriving at the port of Yúum K'ak Naab.

**Two-way route 1**

| | | |
|---|---|---|
| (40) | 20° 13´.55 N | 092° 18´.65 W |
| (36) | 20° 05´.50 N | 092° 18´.65 W |
| (35) | 20° 05´.50 N | 092° 16´.45 W |
| (25) | 20° 12´.00 N | 092° 16´.45 W |

A precautionary area labelled "D" as defined above.

**Two-way route 2**

| | | |
|---|---|---|
| (37) | 20° 03´.30 N | 092° 18´.65 W |
| (41) | 19° 40´.71 N | 092° 18´.65 W |
| (42) | 19° 41´.65 N | 092° 16´.45 W |
| (34) | 20° 03´.30 N | 092° 16´.45 W |

A precautionary area labelled "E" bounded by a line connecting the following geographical positions:

| | | |
|---|---|---|
| (41) | 19° 40´.90 N | 092° 18´.65 W |
| (43) | 19° 38´.70 N | 092° 18´.65 W |
| (44) | 19° 39´.45 N | 092° 16´.45 W |
| (42) | 19° 41´.65 N | 092° 16´.45 W |

**Routeing System IV – One two-way route and a precautionary area**

Established at the south of the port of Cayo Arcas with a two-way route for tankers heading from the precautionary area labelled "C" to precautionary area labelled "F" and vice versa.

**Two-way route**

| | | |
|---|---|---|
| (29) | 20° 03´.30 N | 092° 06´.50 W |
| (45) | 19° 45´.00 N | 092° 06´.50 W |
| (46) | 19° 45´.00 N | 092° 04´.30 W |
| (30) | 20° 01´.30 N | 092° 04´.30 W |

A precautionary area labelled "F" bounded by a line connecting the following geographical positions:

| | | |
|---|---|---|
| (47) | 19° 42´.80 N | 092° 06´.50 W |
| (48) | 19° 42´.80 N | 092° 04´.30 W |
| (46) | 19° 45´.00 N | 092° 04´.30 W |
| (45) | 19° 45´.00 N | 092° 06´.50 W |

**Routeing System V – Two two-way routes**

Established at the north of the port of Ta'kuntah with a two-way route for tankers sailing from the proposed anchorage to the east of this port and going on to handle cargo for the ports of Ta'kuntah, Yúum K'ak Naab and Dos Bocas, Tabasco.

**Two-way route 1**

| | | |
|---|---|---|
| (49) | 19° 45´.00 N | 091° 55´.00 W |
| (46) | 19° 45´.00 N | 092° 04´.30 W |
| (48) | 19° 42´.80 N | 092° 04´.30 W |
| (50) | 19° 42´.80 N | 091° 55´.00 W |

Precautionary areas labelled "E" and "F" as defined above.

**Two-way route 2**

| | | |
|---|---|---|
| (45) | 19° 45´.00 N | 092° 06´.50 W |
| (42) | 19° 41´.65 N | 092° 16´.45 W |
| (44) | 19° 39´.45 N | 092° 16´.45 W |
| (47) | 19° 42´.80 N | 092° 06´.50 W |

***Note***: An anchorage is established for exportation tankers involved in loading operations in the ports of Ta'kuntah and Yúum K'ak Naab.

**FIVE AREAS TO BE AVOIDED IN THE GULF OF CAMPECHE AND THE PORTS OF CAYO ARCAS, T'AKUNTAH AND YÚUM K'AK NAAB**

Five polygons are proposed delimiting areas to be avoided at tanker loading terminals for exporting crude and in the oil exploitation area of the Gulf of Mexico, specifically in the port of Cayo Arcas, in the Gulf of Campeche, in the Rebombeo oilfield, in the Enlace Litoral Tabasco oilfield and at the monobuoys in the port of Dos Bocas, Tabasco.

## 1 Amendment to the area to be avoided at the port of Cayo Arcas

The area to be avoided by ships not involved in oil-related activities in the port of Cayo Arcas is bounded by a line connecting the following geographical positions:

| | | |
|---|---|---|
| (51) | 20° 08´.54 N | 092° 00´.58 W |
| (52) | 20° 08´.54 N | 091° 56´.67 W |
| (53) | 20° 10´.24 N | 091° 56´.67 W |
| (54) | 20° 12´.65 N | 091° 59´.60 W |
| (55) | 20° 12´.65 N | 092° 00´.58 W |

## 2 Amendment to the area to be avoided in the Gulf of Campeche

The area to be avoided by ships not involved in oil-related activities in the Gulf of Campeche is bounded by a line connecting the following geographical positions:

| | | |
|---|---|---|
| (22) | 19° 05´.35 N | 092° 23´.46 W |
| (56) | 19° 08´.00 N | 092° 12´.80 W |
| (57) | 19° 12´.09 N | 092° 03´.40 W |
| (58) | 19° 17´.50 N | 091° 56´.40 W |
| (59) | 19° 30´.50 N | 091° 56´.40 W |
| (60) | 19° 36´.30 N | 092° 04´.00 W |
| (61) | 19° 42´.20 N | 092° 04´.00 W |
| (62) | 19° 42´.20 N | 092° 06´.20 W |
| (63) | 19° 37´.50 N | 092° 06´.20 W |
| (64) | 19° 37´.50 N | 092° 18´.65 W |
| (65) | 19° 16´.20 N | 092° 23´.95 W |
| (23) | 19° 07´.09 N | 092° 25´.02 W |

## 3 Establishment of an area to be avoided at the Rebombeo oilfield

The area to be avoided by ships not involved in oil-related activities in the Rebombeo oilfield is bounded by a line connecting the following geographical positions:

| | | |
|---|---|---|
| (66) | 18° 56´.80 N | 092° 43´.80 W |
| (67) | 18° 51´.80 N | 092° 37´.30 W |
| (11) | 18° 53´.09 N | 092° 33´.27 W |
| (68) | 18° 58´.80 N | 092° 37´.60 W |

## 4 Establishment of an area to be avoided at the May oilfield

The area to be avoided by ships not involved in oil-related activities in the May oilfield is bounded by a line connecting the following geographical positions:

| | | |
|---|---|---|
| (69) | 18° 42´.60 N | 092° 37´.10 W |
| (70) | 18° 41´.85 N | 092° 34´.10 W |
| (71) | 18° 42´.50 N | 092° 33´.70 W |
| (72) | 18° 44´.00 N | 092° 36´.10 W |

## 5 Establishment of an area to be avoided in the loading buoy area in the port of Dos Bocas, Tabasco

The area to be avoided by ships not involved in crude loading and loading operations for exportation in the loading buoy area in the port of Dos Bocas, Tabasco, is bounded by a line connecting the following geographical positions:

| | | |
|---|---|---|
| (73) | 18° 36´.50 N | 093° 12´.10 W |
| (74) | 18° 36´.50 N | 093° 08´.70 W |
| (75) | 18° 38´.70 N | 093° 08´.70 W |
| (76) | 18° 38´.70 N | 093° 12´.10 W |

## REVOCATION OF THE EXISTING ROUTEING MEASURES OTHER THAN TRAFFIC SEPARATION SCHEMES IN THE GULF OF CAMPECHE, AT MARITIME OIL TERMINAL OFF CAYO ARCAS AND RECOMMENDED TRACKS IN THE GULF OF CAMPECHE

Existing routeing measures other than traffic separation schemes as detailed in sections 2.5, 2.6 and 3.2 of annex 1 to resolution A.527(13), namely in the Gulf of Campeche, at maritime oil terminal off Cayo Arcas and recommended tracks in the Gulf of Campeche respectively are revoked.

***

**ANNEX 20**

**RESOLUTION MSC.332(90)**
**(adopted on 22 May 2012)**

**ADOPTION OF AMENDMENTS TO THE EXISTING MANDATORY SHIP REPORTING SYSTEM "IN THE STOREBÆLT (GREAT BELT) TRAFFIC AREA (BELTREP)"**

THE MARITIME SAFETY COMMITTEE,

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

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

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

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

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

1. ADOPTS, in accordance with SOLAS regulation V/11, the amendments to the existing mandatory ship reporting system "In the Storebælt (Great Belt) traffic area (BELTREP)";

2. DECIDES that the said amended mandatory ship reporting system "In the Storebælt (Great Belt) traffic area (BELTREP)" will enter into force at 0000 hours UTC on 1 July 2013;

3. REQUESTS the Secretary-General to bring this resolution and its annex to the attention of the Member Governments and Contracting Governments to the 1974 SOLAS Convention.

ANNEX

**MANDATORY SHIP REPORTING SYSTEM
"IN THE STOREBÆLT (GREAT BELT) TRAFFIC AREA (BELTREP)"**

## 1 Categories of ships required to participate in the system

1.1 Ships passing through or proceeding to and from ports and anchorages in the BELTREP area are required to participate in the ship reporting system as follows:

1.1.1 ships with a gross tonnage of 50 and above;

1.1.2 all ships with an air draught of 15 m or more; and

1.1.3 pleasure craft with a length less than 15 m or with a gross tonnage less than 50 are exempted from participation.

## 2 Geographical coverage of the system and the number and edition of the reference chart used for delineation of the system

2.1 The mandatory ship reporting system BELTREP is operated by Great Belt VTS. The call sign is "Belt Traffic".

2.2 The operational area of BELTREP covers the central and northern part of the Storebælt (Great Belt) and the Hatter Barn area north of Storebælt (Great Belt) at the entrance to the Baltic Sea, as shown below and on the chartlet given in appendix 1-A. The area includes the routeing systems at Hatter Barn, in the Storebælt (Great Belt) area and Langelandsbælt, all adopted by the Organization. The BELTREP area also includes the central part of route Tango. Datum; World Geodetic System 1984 (WGS 84):

2.2.1 Report- and borderline West (RW)

| | | |
|---|---|---|
| Fyn: | 1) | 55° 36′.00 N, 010° 38′.00 E (Korshavn) |
| Samsø: | 2) | 55° 47′.00 N, 010° 38′.00 E (East coast of Samsø) |

2.2.2 Report- and borderline North (RN)

| | | |
|---|---|---|
| Samsø: | 2) | 55° 47′.00 N, 010° 38′.00 E (East coast of Samsø) |
| | 3) | 56° 00′.00 N, 010° 56′.00 E (At sea near Marthe Flak) |
| Sjælland: | 4) | 56° 00′.00 N, 011° 17′.00 E (Sjællands Odde) |

2.2.3 Report- and borderline South (RS)

| | | |
|---|---|---|
| Stigsnæs: | 5) | 55° 12′.00 N, 011° 15′.40 E (Gulfhavn) |
| Omø: | 6) | 55° 08′.40 N, 011° 09′.00 E (Ørespids, Omø) |
| | 7) | 55° 05′.00 N, 011° 09′.00 E (At sea south of Ørespids) |
| Langeland E: | 8) | 55° 05′.00 N, 010° 56′.10 E (Snøde Øre) |

2.2.4 Report- and borderline Southwest (RSW)

| | | |
|---|---|---|
| Langeland W: | 9) | 55° 00′.00 N, 010° 48′.70 E (South of Korsebølle Rev) |
| Thurø Rev: | 10) | 55° 01′.20 N, 010° 44′.00 E (Thurø Rev Light buoy) |

2.2.5 Sector division

The BELTREP area is divided into two sectors at latitude 11) 55°35′.00 N; sector 1 northerly and sector 2 southerly. Each sector has an assigned VHF channel as shown in appendix 2.

2.3 The reference charts (Datum: World Geodetic System 1984, WGS 84), which include the operational area of BELTREP, are Danish charts nos. 112 (15th edition 2010), 128 (10th edition 2009), 141 (21st edition 2010), 142 (18th edition 2010), 143 (19th edition 2009) and 160 (7th edition 2007).

## 3 Format, content of reports, times and geographical positions for submitting reports, authority by whom reports should be sent and available services

3.1 *Procedures of reporting*

3.1.1 All BELTREP reports must be made to Great Belt VTS using VHF voice transmissions. However, ships are encouraged to fulfil certain reporting requirements of the reporting system by the use of correct and updated AIS information (Automatic Identification System) class A as approved by the Organization and by non-verbal means as e-mail or similar, prior to entering the ship reporting area. Details are given in appendix 3.

3.1.2 The use of correct and updated AIS information can accomplish the reporting requirements for designators A, B, C, E, F, G and I, O and W. Details are given in appendix 3.

3.1.3 To minimize the time reporting on the VHF radio channels and to avoid interference with essential navigational duties, ships are encouraged to forward the reporting requirements for designators L, P, T and X by e-mail or similar prior to entering the ship reporting area. Such non-verbal partial reports must also state designators A and H. Reporting designators L, P, T and X prior to entry using mobile phone is also accepted as a means of communication. Details are given in subparagraph 3.5 and appendix 3.

3.1.4 A ship which fulfils the reporting requirements of the BELTREP mandatory ship reporting system by the use of correct and updated AIS information and prior non-verbal means must, as a minimum, carry out a VHF voice transmission to communicate the name of the ship (part of designator A), air draught and deadweight tonnage (designator U) and the report line of entry to the Great Belt VTS when actually entering the area. The same procedure must be followed before departing a port or leaving an anchorage in the BELTREP area. Details are given in appendix 3.

3.1.5 Designator Q or R, if applicable, shall at all times be given using VHF voice transmission to Great Belt VTS. Details are given in appendix 3.

3.2 Verbal reporting is not required when a ship passes the BELTREP sector line at latitude 55° 35′.00 N. However, sector change of VHF frequency is required according to appendix 2.

3.3 *Format*

3.3.1 The mandatory ship report shall be drafted in accordance with the format shown in appendix 3. The information requested from ships is derived from the Standard Reporting Format shown in paragraph 2 of the appendix to resolution A.851(20).

3.4 *Content*

3.4.1 A report from a ship to BELTREP by AIS, non-verbal means or by voice transmission or combinations thereof must contain the following information; details are given in appendix 3:

A name of the ship, call sign, MMSI no. and, if available, IMO identification number;
B date and time;
C position expressed in latitude and longitude;
E true course;
F speed;
G and I last port of call, destination and ETA;
H date, time (UTC) and report line of entry into the BELTREP area;
L route information on the intended route through the BELTREP area;
O maximum present draught;
P cargo and, if dangerous goods present on board, quantity and IMO class. Dangerous goods information must be summarized in total tonnes per IMO class;
Q or R defects, deficiencies, limitations – pollution or dangerous goods lost overboard;
T address for the communication of cargo information;
U air draught, deadweight tonnage;
W total number of persons on board; and
X type and estimated quantity of bunker fuel, for ships of 1,000 GT and above. Must be summarized in total tonnes per type.

***Note***:
a) The master of the ship must forthwith inform the Great Belt VTS concerned of any change in navigational status or in previous information notified, particularly in relation to designator Q or R.

3.5 *Geographical position for submitting reports*

3.5.1 Ships entering the BELTREP operational area shall submit a report when crossing the report line or on departure from a port or anchorage within the operational area.

3.5.2 Previously forwarded reports can be submitted at any time after entering the Danish Exclusive Economic Zone (EEZ) and until in reach of VHF range of Great Belt VTS at an approximate distance of 20 NM from the BELTREP area. As the Great Belt VTS must be able to timely handle incoming prior reporting, it will not be possible to undertake pre-entry reports within the 20 NM VHF range. The reporting option is then verbal reporting by VHF when crossing the report line of entry. Details of areas are shown on the chartlet in appendix 1-B. The Danish EEZ border lines are shown in nautical charts.

3.5.3 Ships departing a port or leaving an anchorage within the 20 NM range of the BELTREP area or in the BELTREP area, may submit a pre-entry report for designators H, L, P, T and X if transmitted one hour before departure for enabling the Great Belt VTS to timely handle incoming prior reports.

3.6 *Crossing traffic*

3.6.1 Ferries frequently cross route Tango in sector 1, including high-speed ferries. The ferries generally operate according to published schedules; special reporting arrangements can be authorized.

3.7 *Authority*

The Admiral Danish Fleet is the VTS Authority for Great Belt VTS which operates the BELTREP system with call sign "Belt Traffic". Details in appendix 2.

## 4 Information to be provided to ships and procedures to be followed

4.1 Ships are required to keep a continuous listening watch in the BELTREP area on the relevant VHF sector channels and VHF channel 16.

4.2 Great Belt VTS will provide information service to ships about specific and urgent situations which could cause conflicting traffic movements as well as other information concerning safety of navigation, for instance, information about weather, current, ice, water level, navigational problems or other hazards.

4.2.1 Information of general interest to ships in the area will be broadcast by the Great Belt VTS on VHF channel as specified by the VTS operator or will be given upon request. A broadcast will be preceded by an announcement on VHF channel 16 and sector channels. All ships navigating in the area should listen to the announced broadcast.

4.2.2 If necessary, Great Belt VTS can provide individual information to a ship particularly in relation to positioning or local conditions.

4.2.3 If deemed necessary by the Great Belt VTS or upon request of a ship, navigational assistance can be provided. Great Belt VTS will inform the identifiable ship when the navigational assistance starts and subsequently terminates.

4.2.4 The following IMO Standard Marine Communication Phrases (SMCP), section A1/6, for VTS message markers can be used: ADVICE, WARNING, INFORMATION, QUESTION, ANSWER, REQUEST and INTENTION.

4.3 If a ship needs to anchor due to breakdown, low visibility, adverse weather, changes in the indicated depth of water, etc., Great Belt VTS can recommend suitable anchorages or other places of refuge within the operational area. The anchorages in the vicinity of the Storebælt (Great Belt) bridges are marked on the nautical charts covering the area and are shown on the chartlet in appendix 1-A.

## 5 Communication required for the BELTREP system

5.1 The language used for communication shall be English, using IMO Standard Marine Communication Phrases, when deemed necessary by Great Belt VTS.

5.2 Ship-to-ship communication of navigational intentions should be carried out on the BELTREP working channels enabling the Great Belt VTS and other ships to be kept informed.

5.3 Details of communication and contact information are given in appendix 2.

## 6 Rules, regulations and recommendation in force in the area of the system

6.1 *Regulation for preventing collisions at sea*

The International Regulations for Preventing Collisions at Sea (COLREGs) are applicable throughout the operational area of BELTREP.

6.2 *Traffic separation scheme* "*At Hatter Barn*" *(TSS-T5)*

6.2.1 The separation scheme, "At Hatter Barn", is situated in Samsø Bælt north of the Storebælt (Great Belt) between the islands of Sjælland and Samsø. It has been adopted by IMO and rule 10 of the International Regulations for Preventing Collisions at Sea applies.

6.2.2 The minimum depth in the traffic separation scheme is 15 metres at mean sea level. Ships with a draught of more than 13 metres should use the deep-water route "Between Hatter Rev and Hatter Barn", which lies northwest of the traffic separation scheme.

6.3 *Deep-water route* "*Between Hatter Rev and Hatter Barn*" *(DW-T3)*

6.3.1 The IMO-adopted deep-water route "Between Hatter Rev and Hatter Barn" has a minimum depth of water below mean sea level of 19 metres. Ships which are not obliged by reason of their draught (13 metres or less) to use the deep-water route should use the traffic separation scheme which lies southeast of the deep-water route, where there is a minimum depth of water below mean sea level of 15 metres.

6.3.2 Ships should be aware that other ships sailing in the deep-water route can be constrained by draught and exhibit signals according to COLREGs.

6.4 *Traffic separation scheme* "*Between Korsoer and Sprogoe*" *(TSS-T6)*

6.4.1 The traffic separation scheme "Between Korsoer and Sprogoe", situated in the narrows of the Eastern Channel in Storebælt (Great Belt) between the islands of Fyn and Sjælland, have been adopted by the IMO, and rule 10 of the International Regulations for Preventing Collisions at Sea applies.

6.4.2 The minimum free water depth in the northbound traffic lane is 17 metres and in the southbound traffic lane, 19 metres, both below mean sea level.

6.4.3 There is a recommended speed limit of 20 knots in the traffic separation scheme.

6.5 *The Great Belt Bridges – Safety regulations*

6.5.1 Passage through the marked spans at the West Bridge (a combined road and rail bridge), is allowed only for ships below 1,000 tonnes deadweight and with an air draught of less than 18.00 metres. This passage has route designator BW.

6.5.2 Passage through the traffic separation scheme under the East Bridge (a suspension bridge for road traffic), is allowed only for ships with an air draught of less than 65.00 metres. This passage has route designator BE and includes route T.

6.6 *Deep-water route* "*Off the east coast of Langeland*" *(DW-T4)*

6.6.1 The deep-water route "*Off the east coast of Langeland*" has a minimum depth of water below mean sea level of 19 metres. Ships with draughts in excess of 10 metres are recommended to use the deep-water route because of navigational difficulties for such ships in following the national recommended route Hotel which lies to the east of the deep-water route.

6.6.2 Ships should be aware that other ships sailing in the deep-water route can be constrained by draught and exhibit signals according to COLREGs.

6.7 *Route Hotel*

6.7.1 East of the deep-water route "Off the east coast of Langeland", the national route H is established, which has a minimum depth of 12 metres below mean sea level. Ships with a draught of 10 metres or less should follow route H.

6.8 *IMO Recommendation on Navigation through the entrances to the Baltic Sea*

6.8.1 The recent amendment of the IMO Recommendation on Navigation through the entrances to the Baltic Sea was adopted by MSC in October 2007 and promulgated in SN.1/Circ.263, section 1.9 and is given in the IMO publication Ships' Routeing, Part C. It recommends, among other things, that ships with a draught of 11 metres or more navigating route T or ships, irrespective of size or draught carrying a shipment of irradiated nuclear fuel, plutonium or high-level radioactive wastes (INF-cargoes), should use the pilotage services established locally by the coastal States for passing ships.

6.8.2 Ship masters should, in due time, when planning the passage, carefully note the content as regards route Tango in the IMO Recommendation on Navigation through the entrances to the Baltic Sea.

6.9 *Mandatory pilotage*

6.9.1 Harbours within the BELTREP area are covered by provisions on the subject of mandatory pilotage for certain ships bound for or coming from Danish harbours.

## 7 Shore-based facilities to support the operation of the system

7.1 *System capability*

7.1.1 The VTS centre is situated at the Naval Logistic Support Regional Centre at Korsør. The VTS system comprises several remote sensor sites. The sites provide surveillance of the VTS area using a combination of radar, radio direction finding, Automatic Identification System (AIS) and electro-optic sensors. An integrated network system of eight radar sensors integrated with AIS provides surveillance of the VTS area.

7.1.2 All the sensors mentioned will be controlled or monitored by the VTS operators.

7.1.3 There are a number of operator consoles in the control centre, one of which is intended for system maintenance and diagnostic purposes, which allows these activities to be carried out without disruption of normal operations. The operator can from each of the consoles control and display the status of the sensors. The VTS centre will, at all times, be manned with a duty officer and three operators.

7.1.4 Recording equipment automatically stores information from all tracks which can be replayed. In case of incidents, the VTS authority can use records as evidence. VTS operators have access to different ship registers, pilot information and hazardous cargo data.

7.2 *Radar, electro-optic facilities and other sensors*

7.2.1 Information necessary to evaluate the traffic activities within the operational area of BELTREP is compiled via VTS area remote controlled sensors comprising:

- high-resolution radar systems;
- infra-red sensor systems;
- daylight TV systems;
- VHF communications systems; and
- DF systems.

7.3 *Radio communication facilities*

7.3.1 Radio communication equipment in the VTS centre consists of six VHF radios, including DSC facilities. The VHF channels used are given in appendix 2.

7.4 *AIS facilities*

7.4.1 BELTREP is linked to the national shore-based AIS network and can continually monitor AIS information on ships such as identity and position. The information is displayed as part of the VTS system and covers the VTS area.

7.5 *Personnel qualifications and training*

7.5.1 The VTS centre is staffed with civilian personnel, all experienced, as officers at a competency level required in the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers, chapter II, section A-II/1 or A-II/2.

7.5.2 Training of personnel will meet the standards recommended by the IMO. Furthermore, it will comprise an overall study of the navigation safety measures established in Danish waters and, in particular, the operational area of BELTREP, including a study of relevant international and national provisions with respect to safety of navigation. The training also includes real-time training in simulators.

7.5.3 Refresher training is carried out at least every third year.

## 8 Information concerning the applicable procedures if the communication facilities of the shore-based Authority fail

8.1 The system is designed with sufficient system redundancy to cope with normal equipment failure.

8.2 In the event that the radio communication system or the radar system at the VTS centre breaks down, communication will be maintained via a standby VHF system. To continue the VTS operation in order to avoid collisions in the bridge area, Great Belt VTS has an emergency back-up VTS centre at Sprogø covering sector 2. The VTS emergency centre is equipped with radar, VHF radio sets and CCTV cameras.

8.3 If the radar system or other essential equipment suffers a breakdown, information of reduced operational capability will be given by Great Belt VTS or broadcast as national navigational warnings.

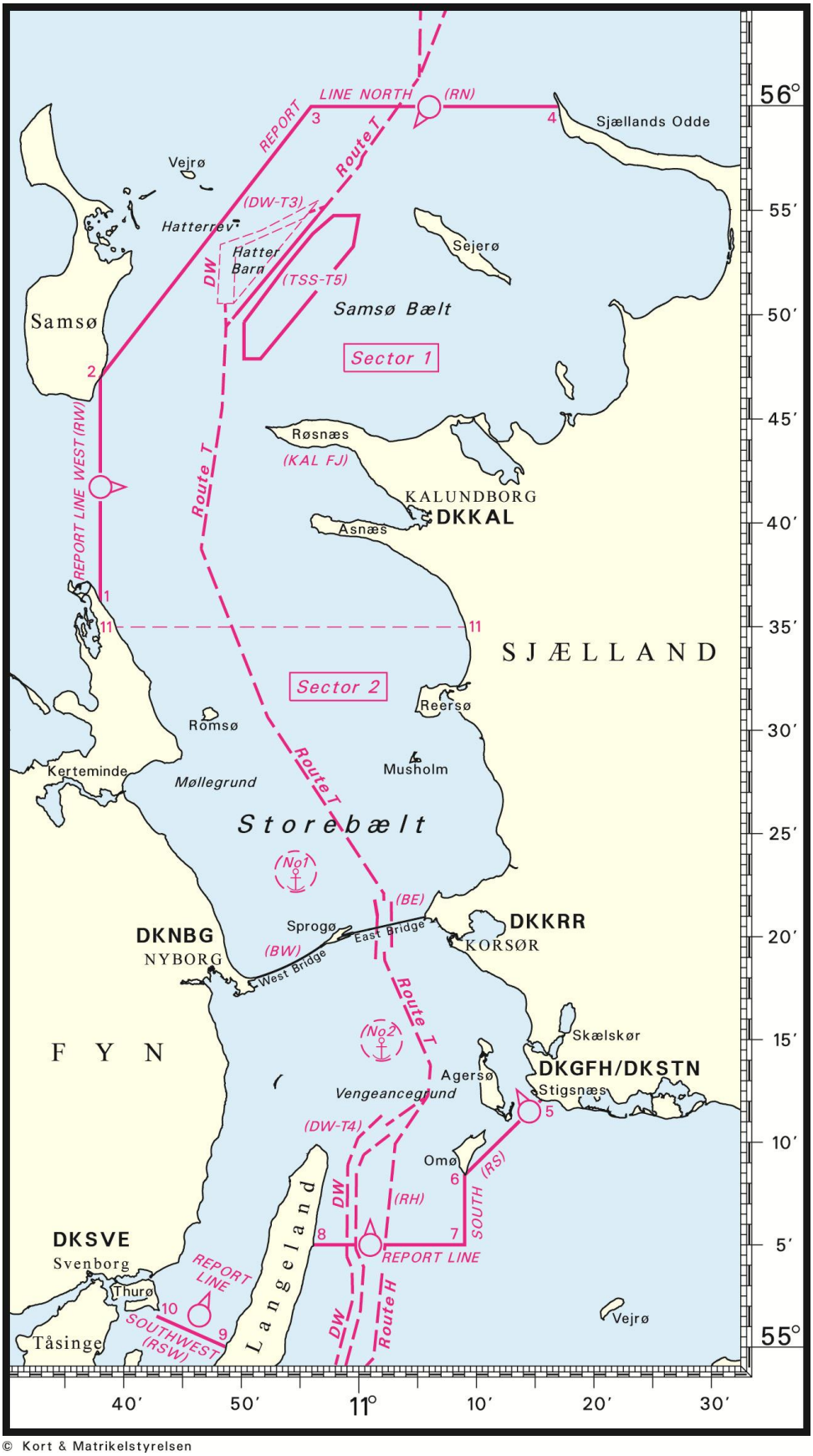
## 9 Measures to be taken if a ship fails to comply with the requirements of the system

9.1 The objective of Great Belt VTS is to facilitate the exchange of information between the ship and the shore in order to ensure safe passages of the bridges, support safety of navigation and protect the marine environment.

9.2 Great Belt VTS seeks to prevent ship collisions with the bridges crossing Storebælt (Great Belt). If a ship appears to be on a collision course with one of the bridges, Great Belt VTS will arrange for an emergency stop for road and rail traffic on the bridges.

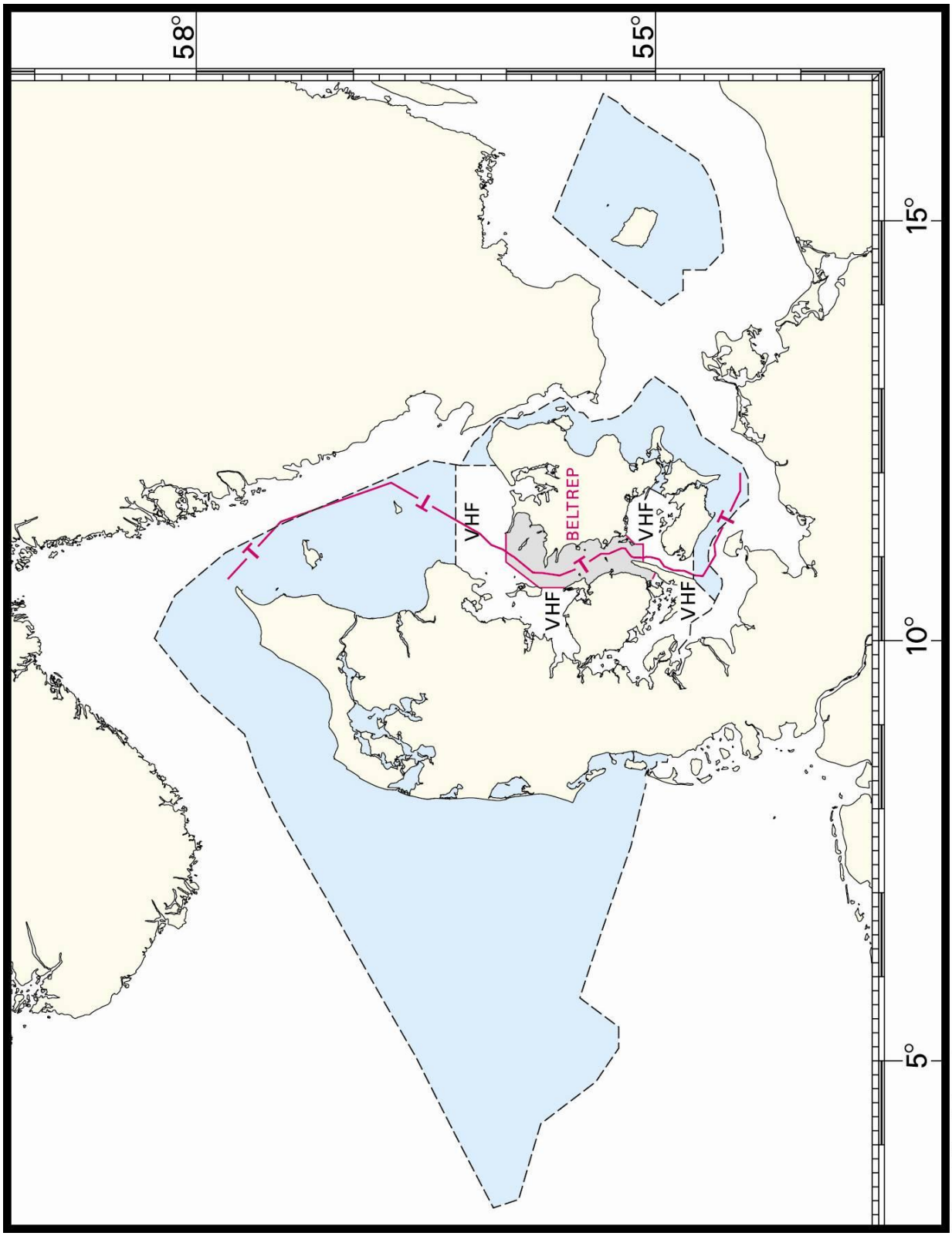
9.3 All means will be used to encourage and promote the full participation of ships required to submit reports under SOLAS regulation V/11. If reports are not submitted or contraventions are made of the safety regulations in sections 6.5.1 and 6.5.2 for passing the bridges and the offending ship can be positively identified, then information will be passed to the relevant flag State Authority for investigation and possible prosecution in accordance with national legislation. Information will also be made available to port State Control inspectors.

**Appendix 1-A**



## Appendix 1-B

## Pre-entry reporting areas – Danish EEZ



## Appendix 2

## Contact information and assigned VHF channels for sectors in the mandatory ship reporting system "BELTREP"

| **BELTREP radio call sign:** | **"Belt Traffic"** |
|---|---|

| **VHF Channels** | **Operational use** |
|---|---|
| VHF Channel 74 | Great Belt VTS – Sector 1 North |
| VHF Channel 11 | Great Belt VTS – Sector 2 South |
| VHF Channel 10 | Great Belt VTS – Broadcast, individual assistance, reserve channel |
| VHF Channel 16 | Great Belt VTS – Continuous monitoring |

The Great Belt VTS operating BELTREP is located in Korsør at the bridge area:

H24 contact information:

1) Great Belt VTS is monitoring VHF channels 74, 11 and 16 continuously.
2) Duty officer phone: +45 58 37 68 68
3) Fax: +45 58 37 28 19
4) MMSI: 002190001
5) E-mail: beltrep@sok.dk
   Web page: www.beltrep.org

Address:

Great Belt VTS
Sylowsvej 8
DK – 4220 Korsør
Denmark

## Appendix 3

## Drafting of reports to the mandatory ship reporting system "BELTREP"

Summary:
Reporting is to be done by VHF, but can also be accomplished partly by the use of AIS and pre-entry non-verbal means as, e.g. e-mail.

- Correct and updated AIS information can accomplish reporting of designators A, B, C, E, F, G and I, O and W.
- Non-verbal means can accomplish reporting of designators (A, H), L, P, T and X.
- VHF must as a minimum be used for accomplishing designators A (part of) and U.

The scheme below gives the optimal use of reporting combined by AIS, non-verbal and VHF.

| 1<br><br>**Designator** | 2<br><br>**AIS** | 3<br><br>**Non-verbal (e.g. e-mail)** | 4<br><br>**VHF** | 5<br><br>**Function** | 6<br><br>**Information required** |
|---|---|---|---|---|---|
| **A** | Yes | Yes | Yes | Ship | 1) Name of ship: AIS, non-verb, VHF<br>2) MMSI number: AIS<br>3) Call sign: AIS<br>– and when available –<br>4) IMO number: AIS, non-verbal |
| **B** | Yes | - | - | Date and time | A 6-digit group event giving day of month and hours and minutes in Universal Coordinated Time (UTC). |
| **C** | Yes | - | - | Position | A 5-digit group giving latitude in degrees and minutes, decimal, suffixed with N and a 6-digit group giving longitude in degrees and minutes, decimal, suffixed with E. |
| **E** | Yes | - | - | True course | A 3-digit group |
| **F** | Yes | - | - | Speed in knots and tenths of knots | A 3-digit group |
| **G** and **I** | Yes | - | - | Last port of call<br><br>Destination and ETA | The name of last port of call and next port of call; both given in UN LOCODE by AIS. For details and procedures see IMO SN/Circ.244 and www.unece.org/cefact/locode/service/main.htm.<br>ETA date and time group expressed as in (B) |
| **H** | - | Yes | - | Date, time (UTC) and report line of entry into the BELTREP area | This information is only required if reporting designators L, P, T and X are transmitted non-verbally (e.g. e-mail) prior to entry of the BELTREP |

| 1<br><br>Designator | 2<br><br>AIS | 3<br><br>Non-verbal (e.g. e-mail) | 4<br><br>VHF | 5<br><br>Function | 6<br><br>Information required |
|---|---|---|---|---|---|
| **L** | - | Yes | - | Route information in the BELTREP area | A brief description of the intended route in the BELTREP area as planned by the master and stated by coded designators as given below (see also chartlet in Appendix 1-A for references):<br><br><u>Report lines:</u><br>RN **–** *report line North*<br>RW **–** *report line West*<br>RS **–** *report line South*<br>RSW **–** *report line Southwest*<br><br><u>Routeing systems:</u><br>DW-T3 **–** *Deep-water Hatter*<br>TSS-T5 **–** *Separation At Hatter Barn*<br><br><u>Bridges:</u><br>BE **–** *East bridge/Route T*<br>BW **–** *West bridge*<br><br><u>Routeing system:</u><br>DW-T4 **–** *Deep-water Langeland*<br><br><u>Route:</u><br>RH **–** *Route Hotel*<br><br><u>Anchorage **–** Kalundborg Fjord</u><br>KAL FJ<br>See examples below. |
| **O** | Yes | - | - | Maximum present draught in metres | A 2-digit or 3-digit group giving the present maximum draught in metres (e.g. 6.1 or 10.4). |
| **P** | - | Yes | - | Cargo on board | Cargo and, if dangerous goods present on board, quantity and IMO class. Dangerous goods information must be summarized in total tonnes per IMO class when transmitted. |
| **Q** or **R** | - | - | Yes | Defects and deficiencies<br><br>Pollution or dangerous goods overboard | Q: Details of defects and deficiencies affecting the equipment of the ship or any other circumstances affecting normal navigation and manoeuvrability.<br><br>R: Pollution or dangerous goods lost overboard. |
| **T** | - | Yes | - | Ship's representative and/or owner | Address and particulars from which detailed information on the cargo may be obtained. |
| **U** | - | - | Yes | Ship's size | Information of maximum air draught and deadweight tonnage, required for all ships, including ship's tow or other floating equipment. This information shall be given by voice transmissions when entering the BELTREP area, irrespective of whether the information has also been given by, e.g. non-verbal means. |

| 1<br><br>Designator | 2<br><br>AIS | 3<br><br>Non-verbal (e.g. e-mail) | 4<br><br>VHF | 5<br><br>Function | 6<br><br>Information required |
|---|---|---|---|---|---|
| **W** | Yes | - | - | Total number of persons on board | State number |
| **X** | - | Yes | - | Miscellaneous | Type and estimated quantity of bunker fuel, for ships of 1,000 gross tonnage and above. Must be summarized in total tonnes per type when transmitted. |

**Examples of reporting route, coded in the format as given under designator L**

*1)* *A northbound ship leaving the port of Gulfhavn planning to sail north route T via deep-water route "Between Hatter Rev and Hatter Barn" leaving at report line North (UN LOCODE format for Gulfhavn is DK GFH):*

L: DK GFH, BE, DW-T3, RN

*2)* *A southbound ship in passage and planning to enter at report line North, sailing through TSS "At Hatter Barn", then route T, route H and leaving at report line South:*

L: RN, TSS-T5, BE, RH, RS

3) *A northbound ship entering via deep-water route "Off the east coast of Langeland", route Tango, East Bridge and leaving through report line West, bound for the port of Fredericia:*

L: RS, DW-T4, BE, RW

*4)* *A ship entering at report line North sailing via TSS "At Hatter Barn", route T and then anchoring in Kalundborg fjord:*

L: RN, TSS-T5, KAL FJ

***

**ANNEX 21**

**DRAFT RESOLUTION MSC.333(90)**
**(adopted on 22 May 2012)**

**ADOPTION OF REVISED PERFORMANCE STANDARDS FOR SHIPBORNE VOYAGE DATA RECORDERS (VDRs)**

THE MARITIME SAFETY COMMITTEE,

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

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

RECALLING FURTHER that, by resolution A.861(20), the Assembly, at its twentieth session, adopted *Performance standards for shipborne voyage data recorders (VDRs)*, which were amended by resolution MSC.214(81), adopted by the Committee, at its eighty-first session,

RECOGNIZING the need to revise the performance standards for VDRs to assist in investigations into casualties,

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

1. ADOPTS the Revised Recommendation on performance standards for voyage data recorders (VDRs), set out in the annex to the present resolution;

2. RECOMMENDS Governments to ensure that VDRs:

.1 if installed on or after 1 July 2014, conform to performance standards not inferior to those specified in the annex to the present resolution; and

.2 if installed before 1 July 2014, conform to performance standards not inferior to those specified in the annex to resolution A.861(20), as amended by resolution MSC.214(81).

ANNEX

**RECOMMENDATION ON PERFORMANCE STANDARDS FOR SHIPBORNE VOYAGE DATA RECORDERS (VDRs)**

## 1 PURPOSE

The purpose of a voyage data recorder (VDR) is to maintain a store, in a secure and retrievable form, of information concerning the position, movement, physical status, command and control of a ship over the period leading up to and following an incident having an impact thereon. Information contained in a VDR should be made available to both the Administration and the shipowner. This information is for use during any subsequent safety investigation to identify the cause(s) of the incident.

## 2 APPLICATION

A VDR with capabilities not inferior to those defined in these performance standards is required to be fitted to ships of classes defined in SOLAS chapter V, as amended.

## 3 REFERENCES

3.1 IMO resolutions:

- A.694(17) General requirements for shipborne radio equipment forming part of the GMDSS and for electronic navigational aids;
- A.810(19) Performance standards for float-free satellite emergency position-indicating radio beacons (EPIRBs) operating on 406 MHz; and
- A.1021(26) Code on Alerts and Indicators, 2009.

3.2 IMO circular:

- MSC/Circ.982 Guidelines on ergonomic criteria for bridge equipment and layout.

## 4 DEFINITIONS

4.1 *Voyage data recorder (VDR)* means a complete system, including any items required to interface with the sources of input signals, their processing and encoding, the final recording medium, the playback equipment, the power supply and dedicated reserve power source.

4.2 *Signal source* means any sensor or device external to the VDR, to which the VDR is connected and from which it obtains signals and data to be recorded.

4.3 *Final recording medium* means the items of hardware on which the data is recorded such that access to any one of them would enable the data to be recovered and played back by use of suitable equipment. The combination of a fixed recording medium and float-free recording medium and long-term recording medium, together, is recognized as the final recording medium.

4.4 *Fixed recording medium* means a part of the final recording medium which is protected against fire, shock, penetration and a prolonged period on the ocean floor. It is expected to be recovered from the deck of the ship that has sunk. It has a means of indicating location.

4.5 *Float-free recording medium* means a part of the final recording medium which should float-free after a sinking. It has a means of indicating location.

4.6 *Long-term recording medium* means a permanently installed part of the Final Recording Medium. It provides the longest record duration and has a readily accessible interface for downloading the stored data.

4.7 *Playback equipment* means any data medium with the playback software, the operational instructions and any special parts required for connecting a commercial off-the-shelf laptop computer to the VDR.

4.8 *Playback software* means a copy of the software program to provide the capability to download the stored data and play back the information. The software should be compatible with an operating system available with commercial off-the-shelf laptop computers and where non-standard or proprietary formats are used for storing the data in the VDR, the software should convert the stored data into open industry standard formats.

4.9 *Dedicated reserve power source* means a battery, with suitable automatic charging arrangements, dedicated solely to the VDR, of sufficient capacity to operate it as required by 5.4.2.

4.10 *Configuration data* describes the vessel's equipment, its installation on the vessel and its relation to the VDR. The storage and playback software uses this data to store the data record and to convert the data record into information that assists casualty investigation during playback.

## 5 OPERATIONAL REQUIREMENTS

### 5.1 General

5.1.1 The VDR should continuously maintain sequential records of preselected data items relating to the status and output of the ship's equipment, and command and control of the ship, referred to in 5.5.

5.1.2 To permit subsequent analysis of factors surrounding an incident, the method of recording should ensure that the various data items can be co-related in date and time during playback on suitable equipment.

5.1.3 The system should include functions to perform a performance test at any time, e.g. annually or following repair or maintenance work to the VDR or any signal source providing data to the VDR. This test may be conducted using the playback equipment and should ensure that all the required data items are being correctly recorded.

5.1.4 The design and construction, which should be in accordance with the requirements of resolution A.694(17) and international standards acceptable to the Organization[1], should take special account of the requirements for data security and continuity of operation as detailed in 5.3 and 5.4.

[1] Refer to publication IEC 60945 – Maritime navigation and radiocommunication equipment and systems – General requirements, methods of testing and required test results.

### 5.2 Final recording medium

The final recording medium should consist of the following items:

.1 fixed recording medium;

.2 float-free recording medium; and

.3 long-term recording medium.

#### 5.2.1 Fixed recording medium

The fixed recording medium should be installed in a fixed protective capsule which should meet all of the following requirements:

.1 be capable of being accessed following an incident but secure against a physical or electronically manipulated change or deletion of recorded data;

.2 maintain the recorded data for a period of at least two years following termination of recording;

.3 maximize the probability of survival against fire, shock, penetration and deep-sea-pressure and recovery of the final recorded data after any incident;

.4 be of a highly visible colour and marked with retro-reflective materials; and

.5 be fitted with an appropriate device to aid location under water.

#### 5.2.2 Float-free recording medium

The float-free recording medium should be installed in a float-free capsule which should meet all of the following requirements:

.1 be fitted with means to facilitate grappling and recovery;

.2 maintain the recorded data for a period of at least six months following termination of recording;

.3 be so constructed as to comply with the requirements specified in resolution A.810(19) and to minimize risk of damage during recovery operations;

.4 be capable of transmitting an initial locating signal and further locating homing signal for at least 48 hours over a period of not less than seven days/168 hours; and

.5 be capable of being accessed following an incident but secure against a physical or electronically manipulated change or deletion of recorded data.

### 5.2.3 Long-term recording medium

The long-term recording medium should:

.1 be capable of being accessed from an internal, easily accessible area of the ship; and

.2 provide access to the data held on it but be secured against a physical or electronically manipulated change or deletion of recorded data.

## 5.3 Data selection and security

5.3.1 The minimum amount of data items to be recorded by the VDR is specified in 5.5. Optionally, additional items may be recorded provided that the requirements for the recording and storage of the specified selections are not compromised.

5.3.2 The equipment should be so designed that, as far as is practical, it is not possible to manipulate the amount of data being recorded by the VDR, the data itself nor the data which has already been recorded. Any attempt to interfere with the integrity of the data or the recording should be recorded.

5.3.3 The recording method should be such that each item of the recorded data is checked for integrity and an alarm given if a non-correctable error is detected.

## 5.4 Continuity of operation

5.4.1 The VDR should be capable of operating from the ship's main and emergency source of electrical power.

5.4.2 If the ship's source of electrical power supply fails, the VDR should continue to record Bridge Audio (see 5.5.5) from the dedicated reserve power source for a period of 2 hours. At the end of this 2 hour period all recording should cease automatically.

5.4.3 Recording should be continuous unless terminated in accordance with 5.4.2. The time for which all stored data items are retained should be at least 30 days/720 hours on the long-term recording medium and at least 48 hours on the fixed and float-free recording media. Data items which are older than this may be overwritten with new data.

## 5.5 Data items to be recorded

### 5.5.1 Date and time

Date and time, referenced to UTC, should be obtained from a source external to the ship and an internal clock should be synchronized with valid date and time data. During times of a loss of the external source, the internal clock should be used. The recording should indicate which source is in use. The recording method should be such that the timing of all other recorded data items can be derived on playback with a resolution and continuity sufficient to reconstruct the history of the incident in detail.

### 5.5.2 Ship's position

Latitude and longitude, and the datum used, should be derived from an electronic position-fixing system (EPFS). The recording should ensure that the identity and status of the EPFS can always be determined on playback.

### 5.5.3 Speed

Speed through the water and speed over the ground, including an indication of which it is, derived from the ship's speed and distance measuring equipment, as required by SOLAS regulations.

### 5.5.4 Heading

Heading as indicated by the ship's heading source.

### 5.5.5 Bridge audio

Microphones should be positioned on the bridge covering all work stations as described in MSC/Circ.982 so that conversation is recorded. The recording should be such that, on playback, a normal speaking voice should provide adequate intelligibility while the ship is performing its normal operations. This performance should be maintained at all work stations while there is a single audio alarm anywhere on the bridge or any noise, including noise from faulty equipment or mounting, or wind. This should be achieved through the use of at least two channels of audio recording. Microphones positioned outside on bridge wings, should be recorded on at least one additional separate channel.

### 5.5.6 Communications audio

VHF communications relating to ship operations should be recorded on an additional separate channel to those referred to in 5.5.5.

### 5.5.7 Radar

The electronic signals of the main displays of both ship's radar installations as required by SOLAS regulations. The recording method should be such that, on playback, it is possible to present a faithful replica of the entire radar display that was on view at the time of recording, albeit within the limitations of any bandwidth compression techniques that are essential to the working of the VDR.

### 5.5.8 ECDIS

Where a vessel is fitted with an ECDIS installation, the VDR should record the electronic signals of the ECDIS display in use at the time as the primary means of navigation. The recording method should be such that, on playback, it is possible to present a faithful replica of the entire ECDIS display that was on view at the time of recording, albeit within the limitations of any bandwidth compression techniques that are essential to the working of the VDR and in addition the source of the chart data and the version used.

### 5.5.9 Echo sounder

The depth information. This should include, where available, depth under keel, the depth scale currently being displayed and other status information.

### 5.5.10 Main alarms

This should include the status of all mandatory alarms on the bridge[2] or as received from the Bridge Alert Management System, if installed, recorded as individually identified alarms.

[2] Resolution A.1021(26), *Code on Alerts and Indicators, 2009*, table 10.1.1.

### 5.5.11 Rudder order and response

This should include status and settings of heading or track controller, if fitted and indicate the control station, mode, and power unit(s) in use.

### 5.5.12 Engine and thruster order and response

This should include the positions of any engine telegraphs or direct engine/propeller controls and feedback indications on the bridge, if fitted, including ahead/astern indicators and indicate the control station in use. This should also include any thrusters if fitted and indicate the control station in use.

### 5.5.13 Hull openings status

This should include all mandatory status information required to be displayed on the bridge.

### 5.5.14 Watertight and fire door status

This should include all mandatory status information required to be displayed on the bridge.

### 5.5.15 Accelerations and hull stresses

Where a ship is fitted with hull stress and response monitoring equipment, all the data items that have been pre-selected within that equipment should be recorded.

### 5.5.16 Wind speed and direction

Where a ship is fitted with a suitable sensor, wind speed and direction should be recorded, including its true or relative status.

### 5.5.17 AIS

All AIS data should be recorded.

### 5.5.18 Rolling motion

The VDR should be connected to an electronic inclinometer if installed. The recording method should be such that the rolling motion can be reconstructed during playback.

### 5.5.19 Configuration data

In addition to the data items specified in 5.5.1 to 5.5.18, a data block defining the configuration of the VDR and the sensors to which it is connected should be written into the final recording medium during commissioning of the VDR. The data block should be maintained up to date with respect to the vessel installation. It should include details on the manufacturer, type and version number of a sensor, the identification and location of the sensor and the interpretation of the sensor data. This configuration data should be permanently retained in the final recording media and protected from modification other than by a duly authorized person following any change to the configuration.

### 5.5.20 Electronic logbook

Where a ship is fitted with an electronic logbook in accordance with the standards of the Organization the information from this should be recorded.

## 6 OPERATION

The unit should be entirely automatic in normal operation.

## 7 DOCUMENTATION

Information describing the location of the long-term recording medium interface and instructions describing the means of interfacing with it as referred to in 9 should be provided in at least the English language. The equipment documentation should include guidance for the placement of the information and instructions at a prominent position as close to the long-term recording medium interface as practicable.

## 8 INTERFACING

Interfacing to the various signal sources required should be in accordance with the relevant international interface standard, where possible[3]. Any connection to any item of the ship's equipment should be such that the operation of that equipment suffers no deterioration, even if the VDR system develops faults.

## 9 DOWNLOAD AND PLAYBACK EQUIPMENT FOR INVESTIGATION AUTHORITIES

### 9.1 Data output interface

The VDR should provide an interface for downloading the stored data and play back the information to an external computer. The interface should be compatible with an internationally recognized format, such as Ethernet, USB, FireWire, or equivalent. It should be possible to perform a download of the recorded data for a user-defined period of time.

### 9.2 Software for data downloading and play back

9.2.1 A copy of the software program providing the capability to download the stored data and play back the information onto a connected external laptop computer and for the playback of the data should be provided for each VDR installation.

9.2.2 The software should be compatible with an operating system available with commercial-off-the-shelf laptop computers and provided on a portable storage device such as a CD-ROM, DVD, USB-memory stick, etc.

9.2.3 Instructions for executing the software and for connecting the external laptop computer to the VDR should be provided.

9.2.4 The portable storage device containing the software, the instructions and any special (not commercial off-the-shelf) parts necessary for the physical connection of the external laptop computer, should be stored within the main unit of the VDR.

9.2.5 Where non-standard or proprietary formats are used for storing the data in the VDR, the software for converting the stored data into open industry standard formats should be provided on the portable storage device or resident in the VDR.

***

[3] Refer to publication IEC 61162 – Maritime navigation and radiocommunication equipment and systems – Digital interfaces.

# ANNEX 22

## TERMS OF REFERENCE FOR THE IMO/IHO HARMONIZATION GROUP ON DATA MODELLING (HGDM)

1 In creating an e-navigation architecture, it is important to identify information and data flows, and the interactions between applications and user interfaces. Consequently, there needs to be a data structure to optimize the use, interoperability, flow and accessibility of relevant information and data within the maritime domain (including both ship and shore aspects). It is therefore important to harmonize efforts in data modelling, with the aim of creating and maintaining a robust and extendable maritime data structure. This maritime information and data structure will require some form of overarching coordination to ensure the ongoing management and maintenance of the structure.

2 There may be several management roles to be performed by such a coordinating body, (for example, the maintenance of registries and the development and adoption of product specifications). This management role may be shared between relevant organizations. The structure is a highly important element by which e-navigation can modernize the operational environment of the maritime industry and also fulfil the requirement of document MSC 85/26, annex 20.

3 The HGDM should be constituted of representatives of IMO and IHO Member States and Secretariats, and organizations with an official IMO/IHO observer status.

4 The HGDM should be chaired by an IMO Member State and supported by the Secretariat of the IMO.

5 The HGDM reports to the IMO Sub-Committee on Safety of Navigation (NAV), and to the IHO through the IHB Directing Committee, as appropriate.

6 The HGDM should:

.1 as requested by the IMO or the IHO, consider matters related to the framework for data access and information services under the scope of SOLAS, using as a baseline IHO's S-100 standard, with a view to harmonize and standardize:

.1 formats for the collection, exchange and distribution of data;

.2 processes and procedures for the collection; and

.3 development of open standard interfaces; and

.2 review the results of studies by the IMO, the IHO and other related organizations which address aspects of access to information services under the scope of SOLAS, and advise the IMO and the IHO as to whether they are compatible with the e-navigation concept taking into account the identified user needs as they exist at the time.

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**ANNEX 23**

**RESOLUTION MSC.334(90)**
**(adopted on 22 May 2012)**

**ADOPTION OF AMENDMENTS TO THE PERFORMANCE STANDARDS FOR DEVICES TO MEASURE AND INDICATE SPEED AND DISTANCE (RESOLUTION MSC.96(72))**

THE MARITIME SAFETY COMMITTEE,

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

RECALLING ALSO resolution A.886(21), by which the Assembly resolved that the functions of adopting performance standards for radio and navigational equipment, as well as amendments thereto, shall be performed by the Maritime Safety Committee on behalf of the Organization,

RECALLING FURTHER resolution MSC.96(72) by which it adopted *Performance standards for devices to measure and indicate speed and distance*,

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

1. ADOPTS amendments to the Performance standards adopted by resolution MSC.96(72), set out in the annex to the present resolution;

2. RECOMMENDS Member Governments to ensure that devices to measure and indicate speed and distance installed on ships constructed on or after 1 July 2014 conform to performance standards not inferior to those set out in resolution MSC.96(72) and in the annex to the present resolution.

ANNEX

**AMENDMENTS TO PERFORMANCE STANDARDS FOR DEVICES TO MEASURE AND INDICATE SPEED AND DISTANCE (RESOLUTION MSC.96(72))**

Add to the existing section 5 the following:

"5.3 If ships are required to carry speed logs measuring speed through the water and speed over the ground, these speed logs should be provided by two separate devices."

***

# ANNEX 24

# DRAFT AMENDMENTS TO THE INTERNATIONAL CODE FOR FIRE SAFETY SYSTEMS (FSS CODE)

## CHAPTER 3
## PERSONNEL PROTECTION

### 2.1.2 Breathing apparatus

1 The existing paragraph 2.1.2 is replaced by the following:

"This paragraph applies to ships constructed on or after [date of entry into force]. Ships constructed before [date of entry into force] shall comply with the requirements of this paragraph by [five years after date of entry into force].

Breathing apparatus shall be a self-contained compressed air-operated breathing apparatus for which the volume of air contained in the cylinders shall be at least 1,200 *l*, or other self-contained breathing apparatus which shall be capable of functioning for at least 30 min. The breathing apparatus shall be fitted with an audible alarm and a visual or other device which will alert the user before the volume of the air in the cylinder has been reduced to no less than 200 *l*. All air cylinders for breathing apparatus shall be interchangeable."

## CHAPTER 5
## FIXED GAS FIRE-EXTINGUISHING SYSTEMS

2 In paragraph 2.1.1.1, after the second sentence, the following new sentence is inserted:

"Adjacent spaces not separated by at least A-0 class divisions with independent ventilation systems should be considered as the same space."

3 In paragraph 2.1.1.3, after the first sentence, the following new sentence is inserted:

"It shall not be necessary to move the containers completely from their fixing position for this purpose. For carbon dioxide systems, hanging bars for a weighing device above each bottle row, or other means shall be provided. For other types of extinguishing media, suitable surface indicators may be used."

4 In paragraph 2.1.3.2, the first sentence is replaced by the following:

"Means shall be provided for automatically giving audible and visual warning of the release of fire-extinguishing medium into any ro-ro spaces, container holds equipped with integral reefer containers, spaces accessible by doors or hatches, and other spaces in which personnel normally work or to which they have access."

5 In paragraph 2.2.2, the first sentence is replaced by the following:

"Carbon dioxide systems for the protection of ro-ro spaces, container holds equipped with integral reefer containers, spaces accessible by doors or hatches, and other spaces in which personnel normally work or to which they have access shall comply with the following requirements."

## CHAPTER 8
## AUTOMATIC SPRINKLER, FIRE DETECTION AND FIRE ALARM SYSTEMS

6 In paragraph 2.5.2.3, after the first sentence, the following new sentence is inserted:

"For this purpose, nominal area shall be taken as the gross horizontal projection of the area to be covered."

## CHAPTER 9
## FIXED FIRE DETECTION AND FIRE ALARM SYSTEMS

7 In paragraph 2.2.1, after the third sentence, the following new sentence is inserted:

"The changeover switch shall be arranged such that a fault will not result in the loss of both power supplies."

8 The following new paragraph is inserted after paragraph 2.2.1 and the existing paragraph 2.2.2 is renumbered as paragraph 2.2.3:

"2.2.2 Operation of the automatic changeover switch or a failure of one of the power supplies shall not result in loss of fire detection capability. Where a momentary loss of power would cause degradation of the system, a battery of adequate capacity shall be provided to ensure continuous operation during changeover."

9 The existing paragraph 2.2.3 is deleted and the following new paragraphs are added after the renumbered paragraph 2.2.3:

"2.2.4 The emergency source of power specified in 2.2.1 above may be supplied by accumulator batteries or from the emergency switchboard. The power source shall be sufficient to maintain the operation of the fire detection and fire alarm system for the periods required under regulations II-1/42 and II-1/43 of the Convention and at the end of that period shall be capable of operating all connected visual and audible fire alarm signals for a period of at least 30 min.

2.2.5 Where the system is supplied from accumulator batteries, they shall be located in or adjacent to the control panel for the fire detection system, or in another location suitable for use in an emergency. The rating of the battery charge unit shall be sufficient to maintain the normal output power supply to the fire detection system while recharging the batteries from a fully discharged condition."

10 In paragraphs 2.3.1.2, 2.3.1.3 and 2.3.1.5, the referenced standard "IEC 60092 505:2001" is replaced by "IEC 60092-504".

11 In paragraph 2.5.1.3, after the second sentence, the following new sentence is inserted:

"In ships with a cargo control room, an additional indicating unit shall be located in the cargo control room."

12 In paragraph 2.5.2.1, after the second sentence, the following new sentence is inserted:

"Detectors installed within cold spaces such as refrigerated compartments shall be tested using procedures having due regard for such locations.*

* Refer to the recommendations of the International Electrotechnical Commission, in particular publication IEC 60068-2-1 – Section one – Test Ab, *Environmental Testing – part 2-1: Tests – Test A: Cold.*"

## CHAPTER 12
## FIXED EMERGENCY FIRE PUMPS

13 The existing paragraph 2.2.2.1 is replaced by the following:

"2.2.2.1 Starting of diesel engine

Any diesel-driven power source for the pump shall be capable of being readily started in its cold condition down to the temperature of 0°C by hand (manual) cranking. Where ready starting cannot be assured, if this is impracticable, or if lower temperatures are likely to be encountered, and if the room for the diesel driven power source is not heated, electric heating of the diesel engine cooling water or lubricating oil system shall be fitted, to the satisfaction of the Administration. If hand (manual) starting is impracticable, the Administration may permit compressed air, electricity, or other sources of stored energy, including hydraulic power or starting cartridges to be used as a means of starting. These means shall be such as to enable the diesel-driven power source to be started at least six times within a period of 30 min and at least twice within the first 10 min."

## CHAPTER 13
## ARRANGEMENT OF MEANS OF ESCAPE

14 The existing paragraph 2.2.4 is replaced by the following:

"2.2.4 With the exception of intermediate landings, landings at each deck level shall be not less than 2 $m^2$ in area and shall increase by 1 $m^2$ for every 10 persons provided for in excess of 20 persons, but need not exceed 16 $m^2$, except for those landings servicing public spaces having direct access onto the stairway enclosure. Intermediate landings shall be sized in accordance with 2.3.1."

## CHAPTER 14
## FIXED DECK FOAM SYSTEMS

15 The existing chapter 14 is replaced by the following:

"**1 Application**

1.1 This chapter details the specification of fixed deck foam systems which are required to be provided by chapter II-2 of the Convention.

## 2 Engineering specifications

### 2.1 *General*

2.1.1 The arrangements for providing foam shall be capable of delivering foam to the entire cargo tanks deck area as well as into any cargo tank the deck of which has been ruptured.

2.1.2 The deck foam system shall be capable of simple and rapid operation.

2.1.3 Operation of a deck foam system at its required output shall permit the simultaneous use of the minimum required number of jets of water at the required pressure from the fire main. Where the deck foam system is supplied by a common line from the fire main, additional foam concentrate shall be provided for operation of two nozzles for the same period of time required for the foam system. The simultaneous use of the minimum required jets of water shall be possible on deck over the full length of the ship, in the accommodation, service spaces, control stations and machinery spaces.

### 2.2 *Component requirements*

2.2.1 *Foam solution and foam concentrate*

2.2.1.1 For tankers carrying:

.1 crude oil or petroleum products having a flashpoint not exceeding 60ºC (closed cup), as determined by an approved flashpoint apparatus, and a Reid vapour pressure which is below atmospheric pressure or other liquid products having a similar fire hazard, including cargoes in chapter 18 of the IBC Code, having a flashpoint not exceeding 60ºC (closed cup) for which a regular foam fire-fighting system is effective (refer to regulations II-2/1.6.1 and 10.8 of the Convention); or

.2 petroleum products with a flashpoint exceeding 60ºC (closed cup), as determined by an approved flashpoint apparatus (refer to regulation II-2/1.6.4 of the Convention); or

.3 IBC Code chapter 17 products with a flashpoint exceeding 60$^{o}$C (closed cup) determined by an approved flashpoint apparatus (refer to paragraph 11.1.3 of the IBC Code and regulation II-2/1.6.4 of the Convention),

the rate of supply of foam solution shall be not less than the greatest of the following:

.1 0.6 *l*/min per square metre of cargo tanks deck area, where cargo tanks deck area means the maximum breadth of the ship multiplied by the total longitudinal extent of the cargo tank spaces;

.2 6 *l*/min per square metre of the horizontal sectional area of the single tank having the largest such area; or

.3 3 *l*/min per square metre of the area protected by the largest monitor, such area being entirely forward of the monitor, but in no case should the output of any monitor be less than 1,250 *l*/min.

2.2.1.2 For tankers carrying chemicals in bulk listed in chapter 17 of the IBC Code having a flashpoint not exceeding 60ºC (closed cup), the rate of supply of foam solution shall be as required by the IBC Code.

2.2.1.3 Sufficient foam concentrate shall be supplied to ensure at least 20 min of foam generation in tankers fitted with an inert gas installation or 30 min of foam generation in tankers not fitted with an inert gas installation or not required to use an inert gas system.

2.2.1.4 The foam concentrate supplied on board shall be approved by the Administration* for the cargoes intended to be carried. Type B foam concentrates shall be supplied for the protection of crude oil, petroleum products and non-polar solvent cargoes. Type A foam concentrates shall be supplied for polar solvent cargoes, as listed in the table of chapter 17 of the IBC Code. Only one type of foam concentrate shall be supplied, and it shall be effective for the maximum possible number of cargoes intended to be carried. For cargoes for which foam is not effective or is incompatible, additional arrangements to the satisfaction of the Administration shall be provided.

2.2.1.5 Liquid cargoes with a flashpoint not exceeding 60°C for which a regular foam fire-fighting system is not effective shall comply with the provisions of regulation II-2/1.6.2.1 of the Convention.

2.2.2 *Monitors and foam applicators*

2.2.2.1 Foam from the fixed foam system shall be supplied by means of monitors and foam applicators. Prototype tests of the monitors and foam applicators shall be performed to ensure the foam expansion and drainage time of the foam produced does not differ more than ± 10% of that determined in 2.2.1.4. When medium expansion ratio foam (between 21 to 1 and 200 to 1 expansion ratio) is employed, the application rate of the foam and the capacity of a monitor installation shall be to the satisfaction of the Administration. At least 50% of the foam solution supply rate required shall be delivered from each monitor. On tankers of less than 4,000 tonnes deadweight the Administration may not require installation of monitors but only applicators. However, in such a case the capacity of each applicator shall be at least 25% of the foam solution supply rate required.

2.2.2.2 The capacity of any applicator shall be not less than 400 *l*/min and the applicator throw in still air conditions shall be not less than 15 m.

## 2.3 *Installation requirements*

2.3.1 *Main control station*

2.3.1.1 The main control station for the system shall be suitably located outside the cargo area, adjacent to the accommodation spaces and readily accessible and operable in the event of fire in the areas protected.

* Refer to the Guidelines for performance and testing criteria and surveys of foam concentrates for fixed fire-extinguishing systems (MSC.1/Circ.1312).

2.3.2 *Monitors*

2.3.2.1 The number and position of monitors shall be such as to comply with 2.1.1.

2.3.2.2 The distance from the monitor to the farthest extremity of the protected area forward of that monitor shall not be more than 75 per cent of the monitor throw in still air conditions.

2.3.2.3 A monitor and hose connection for a foam applicator shall be situated both port and starboard at the front of the poop or accommodation spaces facing the cargo tanks deck. The monitors and hose connections shall be aft of any cargo tanks, but may be located in the cargo area above pump-rooms, cofferdams, ballast tanks and void spaces adjacent to cargo tanks if capable of protecting the deck below and aft of each other. On tankers of less than 4,000 tonnes deadweight a hose connection for a foam applicator shall be situated both port and starboard at the front of the poop or accommodation spaces facing the cargo tanks deck.

2.3.3 *Applicators*

2.3.3.1 At least four foam applicators shall be provided on all tankers. The number and disposition of foam main outlets shall be such that foam from at least two applicators can be directed on to any part of the cargo tanks deck area.

2.3.3.2 Applicators shall be provided to ensure flexibility of action during fire-fighting operations and to cover areas screened from the monitors.

2.3.4 *Isolation valves*

2.3.4.1 Valves shall be provided in the foam main, and in the fire main when this is an integral part of the deck foam system, immediately forward of any monitor position to isolate damaged sections of those mains."

16 **Footnote to be added in paragraph 2.1.1.4 of chapter 3**

In paragraph 2.1.1.4, after the second sentence, a footnote is added as follows:

"* Refer to the recommendations of the International Electrotechnical Commission, in particular publication IEC 60079, *Electrical Apparatus for Explosive Gas Atmospheres.*"

***

# ANNEX 25

## DRAFT AMENDMENTS TO SOLAS CHAPTER II-2

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

### Part C – Suppression of fire

**Regulation 10 – Fire fighting**

1 After the existing paragraph 10.3, the following new paragraph is added:

"10.4 Fire-fighters' communication

A minimum of two two-way portable radiotelephone apparatus for fire-fighters' communication shall be carried. These two-way portable radiotelephone apparatus on tankers and those intended to be used in hazardous areas shall be of an explosion-proof type."

### Part E – Operational requirements

**Regulation 15 – Instructions, on-board training and drills**

2 After the existing paragraph 2.2.5, the following new paragraph is added:

"2.2.6 An onboard means of recharging breathing apparatus cylinders used during drills shall be provided or a suitable number of spare cylinders shall be carried to replace those used."

***

**ANNEX 26**

**DRAFT AMENDMENTS TO THE INTERNATIONAL CONVENTION ON LOAD LINES, 1966, AS MODIFIED BY THE PROTOCOL OF 1988 RELATING THERETO**

**ANNEX I**
**Regulations for determining load lines**

**Chapter III**
**Freeboards**

**Regulation 27 – Types of ships**

***Regulation 27(11) – Initial condition of loading***

1 The first sentence of paragraph (b)(iv) is replaced by the following:

"50% of the ships' total capacity of tanks and spaces fitted to contain each type of consumables and stores is allowed for".

2 After the existing paragraph (b)(iv), a new paragraph (b)(v) is inserted as follows:

"(v) Ballast water tanks shall normally be considered to be empty and no free surface correction shall be made for them.",

and the existing paragraphs (b)(v) and (b)(vi) are renumbered as (b)(vi) and (b)(vii), accordingly.

3 The renumbered paragraph (b)(vi) is replaced by the following:

"(vi) Alternative treatment for free surface may be considered when developing the final condition for application of damage specified in regulation 27(12):

(aa) Method 1 (appropriate to virtual corrections). The virtual centre of gravity for the initial condition is determined as follows:

i. the loading condition shall be developed in accordance with paragraphs (i) to (iv);

ii. the correction for the free surfaces is added to the vertical centre of gravity;

iii. one virtual initial condition with all compartments empty is generated on summer load line draught with level trim, using the vertical centre of gravity from the above loading condition; and

iv. the damage cases will be checked for compliance with the damage stability criteria using the above initial condition.

(bb) Method 2 (appropriate to the use of actual free surface moments according to the assumed tank fillings for damage case). The virtual centre of gravity for the initial condition is determined as follows:

i. the loading condition shall be developed in accordance with paragraphs (i) to (iv);

ii. one virtual initial condition for each damage case with liquid filled compartments may be generated on summer load line draught with level trim, using the initial virtual condition with filled compartments generated on summer load line draught with level trim. Using the vertical centre of gravity and free surface correction from the above loading condition separate calculations for each damage case are performed, only the liquid filled compartments to be damaged are left empty before damage; and

iii. the damage cases will be checked for compliance with the damage stability criteria using above initial conditions (one initial condition for each damage case)."

***Regulation 27(13) – Condition of equilibrium***

4 A new paragraph (g) is added after the existing paragraph (f), as follows:

"(g) Compliance with the residual stability criteria specified in paragraphs (a), (c), (d) and (e) above is not required to be demonstrated in service loading conditions using a stability instrument, stability software or other approved method."

***

**ANNEX 27**

**RESOLUTION MSC.335(90)**
**(adopted on 22 May 2012)**

**ADOPTION OF AMENDMENTS TO THE GUIDELINES FOR THE DESIGN AND CONSTRUCTION OF OFFSHORE SUPPLY VESSELS, 2006 (RESOLUTION MSC.235(82))**

THE MARITIME SAFETY COMMITTEE,

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

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

RECALLING FURTHER resolution MSC.235(82), by which the Committee, at its eighty-second session, adopted the Guidelines for the design and construction of offshore supply vessels, 2006 (2006 OSV Guidelines), superseding the OSV Guidelines adopted by resolution A.469(XII),

RECOGNIZING the need to upgrade the damage stability standard for larger offshore supply vessels,

HAVING CONSIDERED, at its ninetieth session, amendments to the 2006 OSV Guidelines, proposed by the Sub-Committee on Stability and Load Lines and on Fishing Vessels Safety, at its fifty-fourth session,

1. ADOPTS amendments to the Guidelines for the design and construction of offshore supply vessels, 2006, the text of which is set out in the annex to the present resolution;

2. INVITES Governments to take appropriate steps to give effect to the annexed amendments to the 2006 OSV Guidelines.

* * *

ANNEX

**AMENDMENTS TO THE GUIDELINES FOR THE DESIGN AND CONSTRUCTION OF OFFSHORE SUPPLY VESSELS, 2006 (RESOLUTION MSC.235(82))**

**Section 1.2 Definitions**

1 In paragraph 1.2.4, the words ""breadth (B) of a vessel"," are inserted after the words ""length (L) of a vessel",".

**Section 3.2 Damage assumptions**

2 Paragraphs 3.2.2 and 3.2.3 are replaced by the following:

"3.2.2 The assumed extent of damage should be as follows:

.1 longitudinal extent:

.1 for a vessel the keel of which is laid or which is at a similar stage of construction* before 22 November 2012:

with length (L) not greater than 43 m: 10% of L; and
with length (L) greater than 43 m: 3 m plus 3% of L;

.2 for a vessel the keel of which is laid or which is at a similar stage of construction on or after 22 November 2012:

with length (L) not greater than 43 m: 10% of L;
with length (L) greater than 43 m and less than 80 m: 3 m plus 3% of L; and
with length (L) from 80 m to 100 m: $1/3L^{2/3}$;

.2 transverse extent:

.1 for a vessel the keel of which is laid or which is at a similar stage of construction before 22 November 2012:

760 mm measured inboard from the side of the vessel perpendicularly to the centreline at the level of the summer load waterline;

.2 for a vessel the keel of which is laid or which is at a similar stage of construction on or after 22 November 2012:

with length (L) less than 80 m: 760 mm; and
with length (L) from 80 m to 100 m: B/20, but not less than 760 mm;

* *A similar stage of construction* means the stage at which:
.1 construction identifiable with a specific ship begins; and
.2 assembly of that ship has commenced comprising at least 50 tonnes or one per cent of the estimated mass of all structural material, whichever is less.

The transverse extent should be measured inboard from the side of the vessel perpendicularly to the centreline at the level of the summer load waterline; and

.3 vertical extent:

from the underside of the cargo deck, or the continuation thereof, for the full depth of the vessel.

3.2.3 For a vessel the keel of which is laid or which is at a similar stage of construction:

.1 before 22 November 2012:

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

.2 on or after 22 November 2012:

For a vessel with length (L) less than 80 m, a transverse watertight bulkhead extending from the vessel's side to a distance inboard of 760 mm or more at the level of the summer load line joining longitudinal watertight bulkheads may be considered as a transverse watertight bulkhead for the purpose of the damage calculations. For a vessel with length (L) from 80 m to 100 m, a transverse watertight bulkhead extending from the vessel's side to a distance inboard of B/20 or more (but not less than 760 mm) at the level of the summer load line joining longitudinal watertight bulkheads may be considered as a transverse watertight bulkhead for the purpose of the damage calculations."

***

# ANNEX 28

# DRAFT AMENDMENTS TO THE IBC CODE

The existing text of chapters 17, 18 and 19 of the IBC Code is replaced by the following:

## Chapter 17

## Summary of minimum requirements

Mixtures of noxious liquid substances presenting pollution hazards only, and which are assessed or provisionally assessed under regulation 6.3 of MARPOL Annex II, may be carried under the requirements of the Code applicable to the appropriate position of the entry in this chapter for Noxious Liquid Substances, not otherwise specified (n.o.s.).

EXPLANATORY NOTES

| | |
|---|---|
| Product name<br>*(column a)* | The product name shall be used in the shipping document for any cargo offered for bulk shipments. Any additional name may be included in brackets after the product name. In some cases, the product names are not identical with the names given in previous issues of the Code |
| UN Number<br>*(column b)* | Deleted |
| Pollution Category<br>*(column c)* | The letter X, Y, Z means the Pollution Category assigned to each product under MARPOL Annex II |
| Hazards<br>*(column d)* | "S" means that the product is included in the Code because of its safety hazards; "P" means that the product is included in the Code because of its pollution hazards; and "S/P" means that the product is included in the Code because of both its safety and pollution hazards |
| Ship type<br>*(column e)* | 1: ship type 1 (2.1.2.1)<br>2: ship type 2 (2.1.2.2)<br>3: ship type 3 (2.1.2.3) |
| Tank type<br>*(column f)* | 1: independent tank (4.1.1)<br>2: integral tank (4.1.2)<br>G: gravity tank (4.1.3)<br>P: pressure tank (4.1.4) |
| Tank vents<br>*(column g)* | Cont.: controlled venting<br>Open: open venting |
| Tank environmental control<br>*(column h)* | Inert: inerting (9.1.2.1)<br>Pad: liquid or gas padding (9.1.2.2)<br>Dry: drying (9.1.2.3)<br>Vent: natural or forced ventilation (9.1.2.4)<br>No: no special requirements under this Code |

| | |
|---|---|
| Electrical equipment *(column i)* | Temperature classes (i') T1 to T6<br>- indicates no requirements<br>blank no information<br><br>Apparatus group (i'') IIA, IIB or IIC:<br>- indicates no requirements<br>blank no information<br><br>Flashpoint (i''') Yes: flashpoint exceeding 60°C (10.1.6)<br>No: flashpoint not exceeding 60°C (10.1.6)<br>NF: non-flammable product (10.1.6) |
| Gauging *(column j)* | O: open gauging (13.1.1.1)<br>R: restricted gauging (13.1.1.2)<br>C: closed gauging (13.1.1.3) |
| Vapour detection *(column k)* | F: flammable vapours<br>T: toxic vapours<br>No: indicates no special requirements under this Code |
| Fire protection *(column l)* | A: alcohol-resistant foam or multi-purpose foam<br>B: regular foam; encompasses all foams that are not of an alcohol-resistant type, including fluoro-protein and aqueous-film-forming foam (AFFF)<br>C: water-spray<br>D: dry chemical<br>No: no special requirements under this Code |
| Materials of construction *(column m)* | Deleted |
| Emergency equipment *(column n)* | Yes: see 14.3.1<br>No: no special requirements under this Code |
| Specific and operational requirements *(column o)* | When specific reference is made to chapters 15 and/or 16, these requirements shall be additional to the requirements in any other column |

***

**ANNEX 29**

**BIENNIAL AGENDAS OF THE SUB-COMMITTEES**

| SUB-COMMITTEE ON BULK LIQUIDS AND GASES (BLG)* | | | | | |
|---|---|---|---|---|---|
| PLANNED OUTPUTS 2012-2013 (resolution A.1038(27)) | | Parent organ(s) | Coordinating organ(s) | Associated organ(s) | Target completion year |
| Number | Description | | | | |
| 1.1.2.2 | **Consideration of IACS unified interpretations** | MSC<br>MEPC | | BLG | Continuous |
| 2.0.1.8 | **Additional guidelines for implementation of the BWM Convention, including port State control** | MEPC | BLG<br>FSI | | 2013 |
| 2.0.1.9 | **Guidelines for replacement engines not required to meet the Tier III limit (MARPOL Annex VI)** | MEPC | BLG | | 2013 |
| 2.0.1.11 | **Other relevant guidelines pertaining to equivalents set forth in regulation 4 of MARPOL Annex VI and not covered by other guidelines** | MEPC | BLG | | 2013 |
| 2.0.1.12 | **Guidelines called for under paragraph 2.2.5.6 of the $NO_x$ Technical Code** | MEPC | BLG | | 2013 |
| 5.2.1.3 | **Development of international code of safety for ships using gases or other low-flashpoint fuels** | MSC | BLG | DE | 2013 |
| 5.2.1.4 | **Development of a revised IGC Code** | MSC | BLG | FP, SLF, DE, STW | 2013 |
| 7.1.2.5 | **Production of a manual entitled "Ballast Water Management – How to do it"** | MEPC | BLG | | 2013 |

* Items printed in bold have been selected for the provisional agenda of BLG 17.

| SUB-COMMITTEE ON BULK LIQUIDS AND GASES (BLG)* | | | | | |
|---|---|---|---|---|---|
| PLANNED OUTPUTS 2012-2013 (resolution A.1038(27)) | | Parent organ(s) | Coordinating organ(s) | Associated organ(s) | Target completion year |
| Number | Description | | | | |
| 7.1.2.14*** | **Development of international measures for minimizing the transfer of invasive aquatic species through biofouling of ships** | MSC MEPC | BLG | DE | 2013 |
| 7.1.2.15 | **Development of a Code for the transport and handling of limited amounts of hazardous and noxious liquid substances in bulk on offshore support vessels** | MSC MEPC | BLG | DE | 2013 |
| 7.2.2.3 | **Evaluation of safety and pollution hazards of chemicals and preparation of consequential amendments** | MEPC | BLG | | Continuous |
| 7.3.1.1 | **Review of relevant non-mandatory instruments as a consequence of the amended MARPOL Annex VI and the $NO_x$ Technical Code** | MEPC | BLG | | 2013 |
| 7.3.2.2 | **Keep under review IMO measures and contributions to international climate mitigation initiatives and agreements (including $CO_2$ sequestration and ocean fertilization)** | MEPC | | BLG | Annual |
| 12.1.2.1 | **Casualty analysis** | MSC | FSI | BLG | Continuous |
| 13.0.3.1 | **Improved and new technologies approved for ballast water management systems and reduction of atmospheric pollution** | MSC | BLG | | Continuous |

*** Output number refers to the previous HLA as this output has not been included in this biennium's HLA (resolution A.1038(27)). C 108 will assign a new number for this output.

| SUB-COMMITTEE ON DANGEROUS GOODS, SOLID CARGOES AND CONTAINERS (DSC)* | | | | | |
|---|---|---|---|---|---|
| PLANNED OUTPUTS 2012-2013 (resolution A.1038(27)) | | Parent organ(s) | Coordinating organ(s) | Associated organ(s) | Target completion year |
| Number | Description | | | | |
| 5.2.1.7 | Review of general cargo ship safety** | MSC | DSC | | 2013 |
| 5.2.2.6 | **Amendments to SOLAS to mandate enclosed space entry and rescue drills** | MSC | DSC | BLG<br>STW | 2012 |
| 5.2.3.1 | **Development of amendments to CSC 1972 and associated circulars** | MSC | DSC | | 2012 |
| 5.2.3.2 | **Development of measures to prevent loss of containers** | MSC | DSC | | 2013 |
| 5.2.3.3 | **Development of amendments to the IMSBC Code, including evaluation of properties of solid bulk cargoes** | MSC<br>MEPC | DSC | | Continuous |
| 5.2.3.4 | **Development of amendments to the IMDG Code and supplements** | MSC | DSC | | Continuous |
| 5.2.3.5 | **Harmonization of the IMDG Code with the United Nations Recommendations on the Transport of Dangerous Goods** | MSC | DSC | | Continuous |
| 5.2.3.6 | **Review of fire protection arrangements for the stowage of water-reactive materials** | MSC | DSC | FP | 2012 |
| 5.2.3.8 | Amendments to MARPOL Annex III, as required | MEPC | DSC | | Continuous |
| 5.2.3.9 | **Revised Guidelines for packing of cargo transport units** | MSC | DSC | | 2013 |
| 5.3.1.7 | **Development of guidance for Approved Continuous Examination Programmes (ACEP)** | MSC | DSC | | 2013 |
| 12.1.2.1 | **Casualty analysis** | MSC | FSI | DSC | Continuous |
| 12.3.1.3 | **Consideration of reports on incidents involving dangerous goods or marine pollutants in packaged form on board ships or in port areas** | MSC<br>MEPC | DSC | | Continuous |

* Items printed in bold have been selected for the provisional agenda of DSC 17.

** To be included in the provisional agenda for DSC 18.

| SUB-COMMITTEE ON FIRE PROTECTION (FP)* | | | | | |
|---|---|---|---|---|---|
| PLANNED OUTPUTS 2012-2013 (resolution A.1038(27)) | | Parent organ(s) | Coordinating organ(s) | Associated organ(s) | Target completion year |
| Number | Description | | | | |
| 1.1.2.2 | **Consideration of IACS unified interpretations** | MSC | | FP | Continuous |
| 2.0.1.23 | **Development of unified interpretations for chapter 7 of the 2000 HSC Code** | MSC | FP | | 2013 |
| 5.1.1.3 | **Review of the recommendations on evacuation analysis for new and existing passenger ships** | MSC | FP | | 2013 |
| 5.2.1.2 | **Development of requirements for the fire resistance of ventilation ducts** | MSC | FP | | 2013 |
| 5.2.1.6 | **Development of requirements for additional means of escape from machinery spaces** | MSC | FP | | 2013 |
| 5.2.1.7 | **Review of general cargo ship safety** | MSC | FP | | 2013 |
| 5.2.1.8 | **Harmonization of the requirements for the location of entrances, air inlets and openings in the superstructures of tankers** | MSC | FP | BLG | 2013 |
| 5.2.1.9 | **Review of fire protection requirements for on-deck cargo areas** | MSC | FP | DSC | 2013 |
| 5.2.1.10 | **Development of requirements for ships carrying hydrogen and compressed natural gas vehicles** | MSC | FP | | 2013 |
| 5.2.1.17 | **Development of a mandatory Code for ships operating in polar waters** | MSC MEPC | DE | COMSAR FP, SLF NAV, STW | 2014 |
| 5.2.1.23 | **Development of guidelines for use of fibre reinforced plastic (FRP) within ship structures** | MSC | FP | DE | 2013 |

* Items printed in bold have been selected for the provisional agenda of FP 56.

| SUB-COMMITTEE ON DANGEROUS GOODS, SOLID CARGOES AND CONTAINERS (DSC)* | | | | | |
|---|---|---|---|---|---|
| PLANNED OUTPUTS 2012-2013 (resolution A.1038(27)) | | Parent organ(s) | Coordinating organ(s) | Associated organ(s) | Target completion year |
| Number | Description | | | | |
| 5.2.1…** | **Development of amendments to SOLAS chapter II-2, the FTP Code and MSC/Circ.1120 to clarify the requirements for plastic pipes on ships** | MSC | FP | | 2013 |
| 5.2.1…** | **Development of amendments to the requirements for foam-type fire-extinguishers in SOLAS regulation II-2/10.5** | MSC | FP | | 2013 |
| 5.2.1…*** | **Development of an interpretation of SOLAS regulation II-1/13.6 on means of escape from ro-ro cargo spaces** | MSC | FP | | 2013 |
| 5.2.3.10 | **Measures to prevent fires and explosions on chemical tankers and product tankers under 20,000 deadweight tonnes operating without inert gas systems** | MSC | FP | BLG<br>DE | 2013 |
| 7.3.1…** | **Consideration of amendments to SOLAS chapter II-2 on location of EEBDs** | MSC | FP | | 2013 |
| 7.3.1…** | **Development of amendments to SOLAS regulation II-2/20 and associated guidance on air quality management for ventilation of closed vehicle spaces, closed ro-ro and special category spaces** | MSC | FP | | 2013 |
| 12.1.2.1 | **Analysis of fire casualty records** | MSC | FSI | FP | Continuous |

** Transferred from MSC's post-biennial agenda. C 108 will assign an output number.

*** Unplanned output agreed by MSC 90. C 108 will assign an output number.

| SUB-COMMITTEE ON FLAG STATE IMPLEMENTATION (FSI)* | | | | | |
|---|---|---|---|---|---|
| PLANNED OUTPUTS 2012-2013 (resolution A.1038(27)) | | Parent organ(s) | Coordinating organ(s) | Associated organ(s) | Target completion year |
| Number | Description | | | | |
| 1.1.2.1 | **Preparation and holding of the third meeting of the Joint FAO/IMO Working Group on IUU Fishing and related matters, including the adoption of a new treaty to facilitate the implementation of the technical provisions to the 1993 Torremolinos Protocol** | MSC<br>MEPC | FSI<br>SLF | | 2013 |
| 1.1.2.2 | **Consideration of unified interpretations** | MSC<br>MEPC | | FSI | Continuous |
| 1.1.2.5 | **Development of PSC guidelines on seafarers' hours of rest taking into account the Maritime Labour Convention, 2006** | MSC | FSI | | 2013 |
| 1.1.2.23 | **Development of PSC guidelines in the context of the Maritime Labour Convention, 2006** | MSC | FSI | | Continuous |
| 1.1.2.24 | **Preparation and holding of the third meeting of the Joint FAO/IMO ad hoc Working Group on IUU Fishing and related matters (JWG)** | MSC | FSI | SLF | 2013 |
| 1.1.2.26 | **Policy input/guidance to PSC regimes: related to IMO developments** | MSC<br>MEPC | FSI | | Continuous |
| 2.0.1.8 | **Additional guidelines for implementation of the BWM Convention, including port State control** | MEPC | BLG<br>FSI | | 2013 |
| 2.0.1.13 | Development of a Code for recognized organizations | MSC<br>MEPC | FSI | | 2012 |
| 2.0.1.19 | **Comprehensive review of issues related to the responsibilities of Governments and development of measures to encourage flag State compliance** | MSC<br>MEPC | | FSI | 2013 |

* Items printed in bold have been selected for the provisional agenda of FSI 21.

| SUB-COMMITTEE ON FLAG STATE IMPLEMENTATION (FSI)* | | | | | |
|---|---|---|---|---|---|
| PLANNED OUTPUTS 2012-2013 (resolution A.1038(27)) | | Parent organ(s) | Coordinating organ(s) | Associated organ(s) | Target completion year |
| Number | Description | | | | |
| 2.0.1.21 | **Summary reports and analyses of mandatory reports under MARPOL** | MEPC | SEC | FSI | Continuous |
| 2.0.2.1 | **Review of the Code for implementation of mandatory IMO instruments and consolidated audit summary reports, adoption of the new IMO Instruments Implementation (III) Code and making the III Code and auditing mandatory** | ASSEMBLY<br>MSC<br>MEPC | | MSC<br>MEPC<br>FSI | 2013 |
| 4.0.2.2 | Development and management of mandatory IMO number schemes | MSC | | SEC | Continuous |
| 4.0.2.3 | Protocols on data exchange with other international, regional and national data providers | COMMITTEES | FSI | SEC | Continuous |
| 5.1.2.1 | Making the provisions of MSC.1/Circ.1206/Rev.1 mandatory | MSC | DE | FSI, NAV<br>STW | 2013 |
| 5.1.2.2 | **Development of measures to protect the safety of persons rescued at sea** | MSC<br>FAL | COMSAR | FSI | 2013 |
| 5.2.1.7 | **Review of general cargo ship safety** | MSC | FSI | | 2013 |
| 5.2.1.18 | Development of a non-mandatory instrument on regulations for non-convention ships | MSC | FSI | | 2013 |
| 5.2.1.19 | **Review and update of the Survey Guidelines under the Harmonized System of Survey and Certification and the annexes to the Code for the Implementation of Mandatory IMO Instruments** | MSC<br>MEPC | FSI | | Continuous |
| 5.3.1.2 | Review of procedures for PSC | MSC<br>MEPC | FSI | | 2013 |
| 5.3.1.4 | **Promote the harmonization of port State control activities and collect PSC data** | MSC<br>MEPC | FSI | | Continuous |

| SUB-COMMITTEE ON FLAG STATE IMPLEMENTATION (FSI)* | | | | | |
|---|---|---|---|---|---|
| PLANNED OUTPUTS 2012-2013 (resolution A.1038(27)) | | Parent organ(s) | Coordinating organ(s) | Associated organ(s) | Target completion year |
| Number | Description | | | | |
| 5.3.1.5 | Methodology for the in-depth analysis of annual PSC reports | MSC MEPC | FSI | | 2013 |
| 5.3.1.6 | Risk assessment comparison between marine casualties and incidents and PSC inspections | MSC MEPC | FSI | | Continuous |
| 7.1.3.1 | Reports on inadequacy of port reception facilities | MEPC | FSI | | Annual |
| 7.1.3.2 | Follow-up to the implementation of the Action Plan on port reception facilities | MEPC | FSI | | 2013 |
| 12.1.2.1 | **Collection and analysis of casualty and PSC data to identify trends and develop knowledge and risk-based recommendations** | MSC | FSI | | Continuous |
| 12.3.1.1 | **Guidance on the development of GISIS and on access to information** | MSC MEPC | FSI | | Continuous |
| 12.3.1.2 | **PSC data collected and disseminated in cooperation with PSC regimes** | MSC | FSI | | Annual |
| 13.0.2.1 | **Guidance for the Secretariat on the development of GISIS and on access of information** | MEPC | FSI | | Continuous |

| SUB-COMMITTEE ON RADIOCOMMUNICATIONS AND SEARCH AND RESCUE (COMSAR)* | | | | | |
|---|---|---|---|---|---|
| PLANNED OUTPUTS 2012-2013 (resolution A.1038(27)) | | Parent organ(s) | Coordinating organ(s) | Associated organ(s) | Target completion year |
| Number | Description | | | | |
| 1.1.2.10 | Cooperation with ICAO: annual meeting of the Joint ICAO/IMO Working Group on the Harmonization of Aeronautical and Maritime Search and Rescue (monitoring of SAR developments, continuous review of the IAMSAR Manual and developing recommendations) | MSC | COMSAR | DE | Continuous |
| 1.1.2.12 | **Consideration of matters related to the Radiocommunication ITU-R Study Group and ITU World Radiocommunication Conference** | MSC | COMSAR | NAV | Continuous |
| 1.1.2.16 | Liaison statements to/from IEC: radiocommunications and safety of navigation | MSC | COMSAR | NAV | Continuous |
| 1.1.2.19 | Liaison statements to/from ITU: radiocommunications | MSC | COMSAR | NAV | Continuous |
| 1.1.2.20 | Liaison statements to/from UNHCR: persons rescued at sea | MSC FAL | COMSAR | NAV | Continuous |
| 1.3.5.2 | **Development of amendments to the IAMSAR Manual** | MSC | COMSAR | | Continuous |
| 2.0.3.1 | Technical guidance for the establishment of regional MRCCs and MRSCs in Africa, supported by the ISAR Fund | MSC | SEC | COMSAR | Continuous |
| 2.0.3.2 | **Further development of the Global SAR Plan for the provision of maritime SAR services, including procedures for routeing distress information in the GMDSS** | MSC | COMSAR | | Continuous |
| 2.0.3.4 | Reports on the Cospas-Sarsat System monitored and the list of IMO documents and publications which should be held by MRCCs updated | MSC | SEC | COMSAR | Continuous |
| 2.0.3.5 | **Development of guidelines on harmonized aeronautical and maritime search and rescue procedures, including SAR training matters** | MSC | COMSAR | | 2013 |

* Items printed in bold have been selected for the provisional agenda of COMSAR 17.

| SUB-COMMITTEE ON RADIOCOMMUNICATIONS AND SEARCH AND RESCUE (COMSAR)* | | | | | |
|---|---|---|---|---|---|
| PLANNED OUTPUTS 2012-2013 (resolution A.1038(27)) | | Parent organ(s) | Coordinating organ(s) | Associated organ(s) | Target completion year |
| Number | Description | | | | |
| 5.1.2.2 | **Development of measures to protect the safety of persons rescued at sea** | MSC FAL | COMSAR | FSI | 2013 |
| 5.2.1.17 | **Development of a mandatory Code for ships operating in polar waters** | MSC MEPC | DE | COMSAR FP, SLF NAV, STW | 2014 |
| 5.2.1.25 | Development of guidelines for wing-in-ground craft | MSC | DE | COMSAR FP, SLF NAV, STW | 2013 |
| 5.2.4.4 | Implementation of LRIT system | MSC | COMSAR | | Continuous |
| 5.2.4.6 | **Consideration of LRIT matters** | MSC | COMSAR | | Continuous |
| 5.2.5.1 | **Consideration of operational and technical coordination provisions of maritime safety information (MSI) services, including development and review of related documents** | MSC | COMSAR | | Continuous |
| 5.2.5.2 | **Development of measures to avoid false distress alerts** | MSC | COMSAR | | 2013 |
| 5.2.5.3 | **Further development of the GMDSS master plan on shore-based facilities** | MSC | COMSAR | | Continuous |
| 5.2.5.4 | **Consideration of developments in Inmarsat and Cospas-Sarsat** | MSC | COMSAR | | Continuous |
| 5.2.5.5 | **Developments in maritime radiocommunication systems and technology** | MSC | COMSAR | | 2013 |
| 5.2.5…** | **Review and modernization of the Global Maritime Distress and Safety System (GMDSS)** | MSC | COMSAR | NAV STW | 2017 |
| 5.2.6.1 | **Development of an e-navigation strategy implementation plan** | MSC | NAV | COMSAR STW | 2014 |

** Unplanned output approved by MSC 90. C 108 will assign an output number.

| SUB-COMMITTEE ON SAFETY OF NAVIGATION (NAV)* | | | | | |
|---|---|---|---|---|---|
| PLANNED OUTPUTS 2012-2013 (resolution A.1038(27)) | | Parent organ(s) | Coordinating organ(s) | Associated organ(s) | Target completion year |
| Number | Description | | | | |
| 1.1.2.2 | **Consideration of IACS unified interpretations** | MSC | | NAV | Continuous |
| 1.1.2.12 | **Radiocommunication ITU-R Study Group matters** | MSC | NAV | | 2013 |
| 1.1.2.19 | **ITU matters** | MSC | NAV | | Continuous |
| 5.2.1.7 | Review of general cargo ship safety | MSC | NAV | | 2013 |
| 5.2.1.17 | Development of a mandatory Code for ships operating in polar waters | MSC MEPC | DE | COMSAR FP, SLF NAV, STW | 2014 |
| 5.2.1.25 | Development of guidelines for wing-in-ground craft | MSC | DE | COMSAR FP, SLF NAV, STW | 2013 |
| 5.2.4.3 | **Amendments to the General provisions on ships' routeing (resolution A.572(14), as amended)** | MSC | NAV | | 2013 |
| 5.2.4.1 | **Routeing of ships, ship reporting and related matters** | MSC | NAV | | Continuous |
| 5.2.4.8 | **Development of policy and new symbols for AIS aids to navigation** | MSC | NAV | | 2013 |
| 5.2.4.9 | **Development of performance standards for inclinometers** | MSC | NAV | | 2012 |
| 5.2.4…** | Revision of the information contained in the existing annexes to the Recommendation on the use of adequately qualified deep sea pilots in the North Sea, English Channel and Skagerrak (resolution A.486(XII)) | MSC | NAV | | 2013 |
| 5.2.4…** | Revision of the Guidelines for the on board operational use of shipborne automatic identification systems (AIS) | MSC | NAV | COMSAR | 2013 |

* Items printed in bold letters have been selected for the provisional agenda of NAV 58.

** Unplanned output approved by MSC 90. To be included in the provisional agenda for NAV 59. C 108 will assign an output number.

| SUB-COMMITTEE ON RADIOCOMMUNICATIONS AND SEARCH AND RESCUE (COMSAR)* | | | | | |
|---|---|---|---|---|---|
| PLANNED OUTPUTS 2012-2013 (resolution A.1038(27)) | | Parent organ(s) | Coordinating organ(s) | Associated organ(s) | Target completion year |
| Number | Description | | | | |
| 5.2.4…** | Consolidation of ECDIS-related IMO circulars | MSC | NAV | | 2014 |
| 5.2.4…** | Development of explanatory footnotes to SOLAS regulations V/15, V/18, V/19 and V/27 | MSC | NAV | | 2014 |
| 5.2.4…** | Revision of the information contained in the existing annexes to the Recommendation on the use of adequately qualified deep-sea pilots in the Baltic (resolution A.480(XII)) | MSC | NAV | | 2013 |
| 5.2.5…** | Review and modernization of the Global Maritime Distress and Safety System (GMDSS) | MSC | COMSAR | NAV<br>STW | 2017 |
| 5.2.6.1 | **Development of an e-navigation strategy implementation plan** | MSC | NAV | COMSAR<br>STW | 2014 |
| 12.1.2.1 | **Casualty analysis** | MSC | FSI | NAV | Continuous |

| SUB-COMMITTEE ON SHIP DESIGN AND EQUIPMENT (DE)* | | | | | |
|---|---|---|---|---|---|
| PLANNED OUTPUTS 2012-2013 (resolution A.1038(27)) | | Parent organ(s) | Coordinating organ(s) | Associated organ(s) | Target completion year |
| Number | Description | | | | |
| 1.1.2.2 | **Consideration of unified interpretations** | MSC MEPC | | DE | Continuous |
| 1.1.2.3 | Development of amendments to the 2011 ESP Code | MSC | DE | | Continuous |
| 1.1.2.11 | Review of provisions for helicopters in SOLAS | MSC | DE | | Continuous |
| 2.0.1.10 | **Revision of the Standard specification for shipboard incinerators (resolution MEPC.76(40))** | MEPC | DE | | 2013 |
| 2.0.1.24 | **Development of amendments to SOLAS regulation II-1/40.2 concerning general requirements on electrical installations** | MSC | DE | | 2013 |
| 5.1.2.1 | **Making the provisions of MSC.1/Circ.1206/Rev.1 mandatory** | MSC | DE | FSI, NAV STW | 2013 |
| 5.1.2.3 | **Development of a new framework of requirements for life-saving appliances** | MSC | DE | | 2013 |
| 5.2.1.7 | **Review of general cargo ship safety** | MSC | DE | | 2013 |
| 5.2.1.11 | **Development of safety objectives and functional requirements of the Guidelines on alternative design and arrangements for SOLAS chapters II-1 and III** | MSC | DE | | 2013 |
| 5.2.1.12 | **Development of amendments to the LSA Code for thermal performance of immersion suits** | MSC | DE | | 2013 |
| 5.2.1.13 | **Development of amendments to the LSA Code for free-fall lifeboats with float-free capabilities** | MSC | DE | | 2013 |

* Items printed in bold have been selected for the provisional agenda of DE 57.

| SUB-COMMITTEE ON SHIP DESIGN AND EQUIPMENT (DE)* | | | | | |
|---|---|---|---|---|---|
| PLANNED OUTPUTS 2012-2013 (resolution A.1038(27)) | | Parent organ(s) | Coordinating organ(s) | Associated organ(s) | Target completion year |
| Number | Description | | | | |
| 5.2.1.17 | **Development of a mandatory Code for ships operating in polar waters** | MSC MEPC | DE | COMSAR FP, SLF NAV, STW | 2014 |
| 5.2.1.21 | **Classification of offshore industry vessels and consideration of the need for a non-mandatory Code for offshore construction support vessels** | MSC | DE | | 2013 |
| 5.2.1.24 | **Revision of testing requirements for lifejacket RTDs in resolution MSC.81(70)** | MSC | DE | | 2013 |
| 5.2.1.25 | **Development of guidelines for wing-in-ground craft** | MSC | DE | COMSAR FP, SLF NAV, STW | 2013 |
| 5.2.1.27 | **Revision of the Recommendation on conditions for the approval of servicing stations for inflatable liferafts (resolution A.761(18))** | MSC | DE | | 2013 |
| 5.2.1.28 | **Amendments to SOLAS regulation II-1/11 and development of associated Guidelines to ensure the adequacy of testing arrangements for watertight compartments** | MSC | DE | | 2013 |
| 5.2.1…** | **Development of requirements for onboard lifting appliances and winches** | MSC | DE | | 2014 |
| 5.2.1…*** | **Development of amendments to SOLAS regulations II-1/29.3.2 and 29.4.2 clarifying the requirements for steering gear trials** | MSC | DE | | 2013 |
| 7.1.2.3 | **Provision for the reduction of noise from commercial shipping and its adverse impacts on marine life** | MEPC | | DE | 2013 |

** Transferred from the Committee's post-biennial agenda. C 108 will assign an output number.

*** Unplanned output approved by MSC 90. C 108 will assign an output number.

| SUB-COMMITTEE ON STABILITY AND LOAD LINES AND ON FISHING VESSELS SAFETY (SLF)* | | | | | |
|---|---|---|---|---|---|
| PLANNED OUTPUTS 2012-2013 (resolution A.1038(27)) | | Parent organ(s) | Coordinating organ(s) | Associated organ(s) | Target completion year |
| Number | Description | | | | |
| 1.1.2.2 | **Consideration of IACS unified interpretations** | MSC | | SLF | Continuous |
| 2.0.1.3 | **Development of guidelines for verification of damage stability requirements for tankers** | MSC | SLF | DE<br>STW | 2013 |
| 2.0.1.5 | **Development of provisions to ensure the integrity and uniform implementation of the 1969 TM Convention** | MSC | SLF | DE<br>STW | 2013 |
| 2.0.1…** | **Development of mandatory carriage requirements for stability instruments on board tankers** | MSC | SLF | | 2013 |
| 5.1.1.1 | **Development of guidelines on safe return to port passenger ships** | MSC | SLF | | 2013 |
| 5.1.1.2 | **Review of the damage stability regulations for ro-ro passenger ships** | MSC | SLF | | 2013 |
| 5.2.1.1 | **Development of amendments to the criterion for maximum angle of heel in turns of the 2008 IS Code** | MSC | SLF | | 2013 |
| 5.2.1.14 | **Development of second generation intact stability criteria** | MSC | SLF | | 2013 |
| 5.2.1.15 | **Revision of SOLAS chapter II-1 subdivision and damage stability regulations** | MSC | SLF | | 2013 |
| 5.2.1.17 | **Development of a mandatory Code for ships operating in polar waters** | MSC<br>MEPC | DE | COMSAR<br>FP, SLF<br>NAV, STW | 2014 |
| 5.2.1.26 | **Development of amendments to Part B of the 2008 IS Code on towing and anchor handling operations** | MSC | SLF | | 2013 |

* Items printed in bold have been selected for the provisional agenda of SLF 55.

** C 108 will assign an output number.

| SUB-COMMITTEE ON STANDARDS OF TRAINING AND WATCHKEEPING (STW)* | | | | | |
|---|---|---|---|---|---|
| PLANNED OUTPUTS 2012-2013 (resolution A.1038(27)) | | Parent organ(s) | Coordinating organ(s) | Associated organ(s) | Target completion year |
| Number | Description | | | | |
| 5.1.2.1 | Making the provisions of MSC.1/Circ. 1206/Rev.1 mandatory | MSC | DE | FSI, NAV STW | 2013 |
| 5.2.1.4 | Development of a revised IGC Code | MSC | BLG | DE, FP SLF, STW | 2013 |
| 5.2.1.7 | **Review of general cargo ship safety** | MSC | STW | | 2013 |
| 5.2.1.17 | **Development of a mandatory Code for ships operating in polar waters** | MSC MEPC | DE | COMSAR FP, SLF NAV, STW | 2014 |
| 5.2.1.22 | **Promotion of the implementation of the 1995 STCW-F Convention** | MSC | STW | SLF | Continuous |
| 5.2.1.25 | **Development of guidelines for wing-in-ground craft** | MSC | DE | FP COMSAR NAV, SLF STW | 2013 |
| 5.2.2.1 | **Development of guidance for the implementation of the 2010 Manila Amendments** | MSC | STW | | 2013 |
| 5.2.2.3 | **Validation of model training courses** | MSC | STW | | Continuous |
| 5.2.2.4 | **Unlawful practices associated with certificates of competency** | MSC | STW | | Continuous |
| 5.2.2…** | **Development of guidance for personnel involved with tug-barge operations** | MSc | STW | DE | 2014 |
| 5.2.2…** | **Revision of the Recommendations on training of personnel on mobile offshore units (MOUs)** | MSC | STW | | 2013 |

* Items printed in bold have been selected for the draft provisional agenda of STW 44.

** Unplanned output approved by MSC 90. C 108 will assign an output number.

| SUB-COMMITTEE ON STANDARDS OF TRAINING AND WATCHKEEPING (STW)* | | | | | |
|---|---|---|---|---|---|
| **PLANNED OUTPUTS 2012-2013 (resolution A.1038(27))** | | **Parent organ(s)** | **Coordinating organ(s)** | **Associated organ(s)** | **Target completion year** |
| 5.2.5…** | **Review and modernization of the Global Maritime Distress and Safety System (GMDSS)** | MSC | COMSAR | NAV<br>STW | 2017 |
| 5.2.6.1 | **Development of an e-navigation strategy implementation plan** | MSC | NAV | COMSAR<br>STW | 2012 |
| 5.4.1.1 | **Role of the human element: Guidelines on how to present relevant information to seafarers** | MSC<br>MEPC | STW | | 2013 |
| 12.2.1.3 | **Role of the human element: Enhancing the efficiency and user-friendliness of ISM Code** | MSC<br>MEPC | STW | | 2013 |
| 12.1.2.1 | **Casualty analysis** | MSC | FSI | STW | Continuous |

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** Unplanned output approved by MSC 90. C 108 will assign an output number.

**ANNEX 30**

**PROVISIONAL AGENDAS FOR THE SUB-COMMITTEES**

## Sub-Committee on Bulk Liquids and Gases (BLG) – 17th 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 Additional guidelines for implementation of the BWM Convention, including port State control

5 Production of a manual entitled "Ballast Water Management – How to do it"

6 Improved and new technologies approved for ballast water management systems and reduction of atmospheric pollution

7 Development of international measures for minimizing the transfer of invasive aquatic species through biofouling of ships

8 Development of international code of safety for ships using gases or other low-flashpoint fuels

9 Development of a revised IGC Code

10 Consideration of the impact on the Arctic of emissions of black carbon from international shipping

11 Review of relevant non-mandatory instruments as a consequence of the amended MARPOL Annex VI and the $NO_x$ Technical Code

.1 Guidelines for replacement engines not required to meet the Tier III limit (MARPOL Annex VI)

.2 Other relevant guidelines pertaining to equivalents set forth in regulation 4 of MARPOL Annex VI and not covered by other guidelines

.3 Guidelines called for under paragraph 2.2.5.6 of the $NO_x$ Technical Code

12 Development of a Code for the transport and handling of limited amounts of hazardous and noxious liquid substances in bulk on offshore support vessels

13 Consideration of IACS unified interpretations

14 Casualty analysis

15 Biennial agenda and provisional agenda for BLG 18

16 Election of Chairman and Vice-Chairman for 2014

17 Any other business

18 Report to the Committees

**Sub-Committee on Dangerous Goods, Solid Cargoes and Containers (DSC) – 17th session**

Opening of the session and election of Chairman and Vice-Chairman for 2012

1 Adoption of the agenda

2 Decisions of other IMO bodies

3 Amendment 37-14 to the IMDG Code and supplements, including harmonization with the United Nations Recommendations on the transport of dangerous goods

4 Amendment 02-13 to the IMSBC Code and supplements

5 Amendments to SOLAS to mandate enclosed space entry and rescue drills

6 Revision of the Guidelines for packing of cargo transport units

7 Development of measures to prevent loss of containers

8 Development of guidance for Approved Continuous Examination Programmes

9 Development of criteria for the evaluation of environmentally hazardous solid bulk cargoes in relation to the revised MARPOL Annex V

10 Amendments to the International Convention for Safe Containers, 1972, and associated circulars

11 Stowage of water-reactive materials

12 Guidance on protective clothing

13 Casualty and incident reports and analysis

14 Biennial agenda and provisional agenda for DSC 18

15 Election of Chairman and Vice-Chairman for 2013

16 Any other business

17 Report to the Maritime Safety Committee

**Sub-Committee on Fire Protection (FP) – 56th session**

| | |
|---|---|
| | Opening of the session and election of Chairman and Vice-Chairman for 2013 |
| 1 | Adoption of the agenda |
| 2 | Decisions of other IMO bodies |
| 3 | Development of measures to prevent explosions on oil and chemical tankers transporting low-flashpoint cargoes |
| 4 | Development of requirements for the fire resistance of ventilation ducts |
| 5 | Review of fire protection requirements for on-deck cargo areas |
| 6 | Review of the recommendations on evacuation analysis for new and existing passenger ships |
| 7 | Development of requirements for additional means of escape from machinery spaces |
| 8 | Development of requirements for ships carrying hydrogen and compressed natural gas vehicles |
| 9 | Consideration of IACS unified interpretations |
| 10 | Harmonization of the requirements for the location of entrances, air inlets and openings in the superstructures of tankers |
| 11 | Development of unified interpretations for chapter 7 of the 2000 HSC Code |
| 12 | Development of guidelines for use of fibre reinforced plastic (FRP) within ship structures |
| 13 | Analysis of fire casualty records |
| 14 | Development of amendments to SOLAS chapter II-2, the FTP Code and MSC/Circ.1120 to clarify the requirements for plastic pipes on ships |
| 15 | Consideration of amendments to SOLAS chapter II-2 on location of EEBDs |
| 16 | Development of amendments to the requirements for foam-type fire-extinguishers in SOLAS regulation II-2/10.5 |
| 17 | Development of amendments to SOLAS regulation II-2/20 and associated guidance on air quality management for ventilation of closed vehicle spaces, closed ro-ro and special category spaces |
| 18 | Development of a mandatory Code for ships operating in polar waters |
| 19 | Review of general cargo ship safety |
| 20 | Development of an interpretation of SOLAS regulation II-1/13.6 on means of escape from ro-ro cargo spaces |

21 Biennial agenda and provisional agenda for FP 57

22 Election of Chairman and Vice-Chairman for 2014

23 Any other business

24 Report to the Maritime Safety Committee

**Sub-Committee on Flag State Implementation (FSI) – 21st 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 | Casualty statistics and investigations |
| 6 | Harmonization of port State control activities |
| 7 | PSC Guidelines on seafarers' hours of rest and PSC guidelines in relation to the Maritime Labour Convention, 2006 |
| 8 | Development of guidelines on port State control under the 2004 BWM Convention |
| 9 | Comprehensive analysis of difficulties encountered in the implementation of IMO instruments |
| 10 | Review of the Survey Guidelines under the HSSC and the annexes to the Code for the Implementation of Mandatory IMO Instruments |
| 11 | Consideration of IACS Unified Interpretations |
| 12 | Measures to protect the safety of persons rescued at sea |
| 13 | Illegal unregulated and unreported (IUU) fishing and related matters |
| 14 | Review of general cargo ship safety |
| 15 | Biennial agenda and provisional agenda for FSI 22 |
| 16 | Election of Chairman and Vice-Chairman for 2014 |
| 17 | Any other business |
| 18 | Report to the Committees |

**Sub-Committee on Radiocommunications and Search and Rescue (COMSAR) – 17th 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 Review and modernization of the GMDSS

.2 Further development of the GMDSS master plan on shore-based facilities

.3 Consideration of operational and technical coordination provisions of maritime safety information (MSI) services, including the development and review of the related documents

4 ITU maritime radiocommunication matters:

.1 Consideration of radiocommunication ITU-R Study Group matters

.2 Consideration of ITU World Radiocommunication Conference matters

5 Consideration of developments in Inmarsat and Cospas-Sarsat:

6 Search and Rescue (SAR):

.1 Development of guidelines on harmonized aeronautical and maritime search and rescue procedures, including SAR training matters

.2 Further development of the Global SAR Plan for the provision of maritime SAR services, including procedures for routeing distress information in the GMDSS

7 Developments in maritime radiocommunication systems and technology

8 Development of amendments to the IAMSAR Manual

9 Development of measures to avoid false distress alerts

10 Development of measures to protect the safety of persons rescued at sea

11 Development of an e-navigation strategy implementation plan

12 Consideration of LRIT-related matters

13 Development of a mandatory Code for ships operating in polar waters

14 Biennial agenda and provisional agenda for COMSAR 18

15 Election of Chairman and Vice-Chairman for 2014

16 Any other business

17 Report to the Maritime Safety Committee

**Sub-Committee on Safety of Navigation (NAV) – 58th 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 | Amendments to the General Provisions on Ships' Routeing (resolution A.572(14), as amended) |
| 5 | ITU matters, including Radiocommunication ITU-R Study Group matters |
| 6 | Development of an e-navigation strategy implementation plan |
| 7 | Development of policy and new symbols for AIS aids to navigation |
| 8 | Casualty analysis |
| 9 | Consideration of IACS unified interpretations |
| 10 | Development of performance standards for inclinometers |
| 11 | Biennial agenda and provisional agenda for NAV 59 |
| 12 | Election of Chairman and Vice-Chairman for 2013 |
| 13 | Any other business |
| 14 | Report to the Maritime Safety Committee |

**Sub-Committee on Ship Design and Equipment (DE) – 57th session**

Opening of the session

1 Adoption of the agenda

2 Decisions of other IMO bodies

3 Consideration of IACS unified interpretations

4 Revision of the Standard specification for shipboard incinerators (resolution MEPC.76(40))

5 Development of amendments to SOLAS regulation II-1/40.2 concerning general requirements on electrical installations

6 Making the provisions of MSC.1/Circ.1206/Rev.1 mandatory

7 Development of a new framework of requirements for life-saving appliances

8 Development of safety objectives and functional requirements of the Guidelines on alternative design and arrangements for SOLAS chapters II-1 and III

9 Development of amendments to the LSA Code for thermal performance of immersion suits

10 Development of amendments to the LSA Code for free-fall lifeboats with float-free capabilities

11 Development of a mandatory Code for ships operating in polar waters

12 Classification of offshore industry vessels and consideration of the need for a non-mandatory Code for offshore construction support vessels

13 Revision of testing requirements for lifejacket RTDs in resolution MSC.81(70)

14 Development of guidelines for wing-in-ground craft

15 Revision of the Recommendation on conditions for the approval of servicing stations for inflatable liferafts (resolution A.761(18))

16 Amendments to SOLAS regulation II-1/11 and development of associated guidelines to ensure the adequacy of testing arrangements for watertight compartments

17 Provisions for the reduction of noise from commercial shipping and its adverse impacts on marine life

18 Development of requirements for onboard lifting appliances and winches

19 Review of general cargo ship safety

20 Development of amendments to SOLAS regulations II-1/29.3.2 and 29.4.2, clarifying the requirements for steering gear trials

21 Biennial agenda and provisional agenda for DE 58

22 Election of Chairman and Vice-Chairman for 2014

23 Any other business

24 Report to the Maritime Safety Committee

**Sub-Committee on Stability and Load Lines and on Fishing Vessels Safety (SLF) – 55th session**

| | |
|---|---|
| | Opening of the session and election of Chairman and Vice-Chairman for 2013 |
| 1 | Adoption of the agenda |
| 2 | Decisions of other IMO bodies |
| 3 | Development of second generation intact stability criteria |
| 4 | Development of guidelines on safe return to port for passenger ships |
| 5 | Development of guidelines for verification of damage stability requirements for tankers |
| 6 | Development of mandatory carriage requirements for stability instruments on board tankers |
| 7 | Review of the damage stability regulations for ro-ro passenger ships |
| 8 | Revision of SOLAS chapter II-1 subdivision and damage stability regulations |
| 9 | Development of provisions to ensure the integrity and uniform implementation of the 1969 TM Convention |
| 10 | Development of amendments to part B of the 2008 IS Code on towing and anchor handling operations |
| 11 | Consideration of IACS unified interpretations |
| 12 | Development of amendments to the criterion for maximum angle of heel in turns of the 2008 IS Code |
| 13 | Development of a mandatory Code for ships operating in polar waters |
| 14 | Biennial agenda and provisional agenda for SLF 56 |
| 15 | Election of Chairman and Vice-Chairman for 2014 |
| 16 | Any other business |
| 17 | Report to the Maritime Safety Committee |

**Sub-Committee on Standards of Training and Watchkeeping (STW) – 44th 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 Casualty analysis

6 Development of an e-navigation strategy implementation plan

7 Development of guidance for the implementation of the 2010 Manila Amendments

8 Promotion of the implementation of the 1995 STCW-F Convention

9 Development of guidelines for wing-in-ground craft

10 Role of the human element

.1 Guidelines on how to present relevant information to seafarers

.2 Enhancing the efficiency and user-friendliness of ISM Code

11 Development of guidance for personnel involved with tug-barge operations

12 Revision of the Recommendations on training of personnel on mobile offshore units (MOUs)

13 Development of a mandatory Code for ships operating in polar waters

14 Review and modernization of the Global Maritime Distress and Safety System (GMDSS)

15 Review of general cargo ship safety

16 Biennial agenda and provisional agenda for STW 45

17 Election of Chairman and Vice-Chairman for 2014

18 Any other business

19 Report to the Maritime Safety Committee

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**ANNEX 31**

**REPORT ON THE STATUS OF PLANNED OUTPUTS FOR THE 2012-2013 BIENNIUM***

| Planned output number in the HLAP for 2012-2013 | Description | Target completion year | Parent organ(s) | Coordinating organ(s) | Associated organ(s) | Status of output for Year 1 | Status of output for Year 2 | References |
|---|---|---|---|---|---|---|---|---|
| 1.1.1.1 | Permanent analysis, demonstration and promotion of the linkage between a safe, secure, efficient and environmentally friendly maritime transport infrastructure, the development of global trade and the world economy and the achievement of the Millennium Development Goals (MDGs) | Continuous | ASSEMBLY | COUNCIL | COMMITTEES<br>SEC | Ongoing | | |
| 1.1.2.1 | Cooperation with FAO: preparation and holding of the third meeting of the Joint IMO/FAO Working Group on IUU fishing and related matters, including the adoption of a new treaty to facilitate the implementation of the technical provisions to the 1993 Torremolinos Protocol | 2013 | MSC<br>MEPC | FSI<br>SLF | | In progress | | MSC 89/25, paragraphs 9.15 to 9.38 and annex 18;<br>Draft Agreement to facilitate implementation of 1993 Torremolinos Protocol to be adopted by Diplomatic Conference in October 2012 |
| 1.1.2.2 | Cooperation with IACS: consideration of unified interpretations | Continuous | MSC | | SUB-COMMITTEES | Ongoing | | MSC.1/Circs.1416, 1422 to 1427, 1429, 1433 to 1437, LL.3/Circ.208 |
| 1.1.2.3 | Development of amendments to the ESP Code | Continuous | MSC | DE | | Ongoing | | |

* New unplanned outputs proposed for inclusion are shown shaded. Other changes to the HLAP are marked in strike-outs (deletions) and shaded (new text).

| Planned output number in the HLAP for 2012-2013 | Description | Target completion year | Parent organ(s) | Coordinating organ(s) | Associated organ(s) | Status of output for Year 1 | Status of output for Year 2 | References |
|---|---|---|---|---|---|---|---|---|
| 1.1.2.4 | Cooperation with IAEA: formalized emergency arrangements for response to nuclear/radiological emergencies from ships, including IMO contribution to the next version of the "Joint Radiation Emergency Management Plan of the International Organizations" | Continuous | MSC MEPC | SEC | | Ongoing | | |
| 1.1.2.5 | Cooperation with ILO: development of PSC guidelines on seafarers' hours of rest taking into account the Maritime Labour Convention, 2006 | 2013 | MSC | FSI | | In progress | | |
| 1.1.2.7 | Cooperation with IHO: hydrographic issues | Continuous | MSC | NAV | | Ongoing | | MSC 90/28, paragraphs 10.12 and 10.26 |
| 1.1.2.8 | Cooperation with data providers: protocols on data exchange with international, regional and national entities | Continuous | COMMITTEES | SEC | | Ongoing | | |
| 1.1.2.10 | Cooperation with ICAO: annual meeting of the Joint ICAO/IMO Working Group on the Harmonization of Aeronautical and Maritime Search and Rescue (monitoring of SAR developments, continuous review of the IAMSAR Manual and developing recommendations) | Continuous | MSC | COMSAR | DE | Ongoing | | |
| 1.1.2.11 | Review of provisions for helicopters in SOLAS | Continuous | MSC | DE | | Pending | | |

| Planned output number in the HLAP for 2012-2013 | Description | Target completion year | Parent organ(s) | Coordinating organ(s) | Associated organ(s) | Status of output for Year 1 | Status of output for Year 2 | References |
|---|---|---|---|---|---|---|---|---|
| 1.1.2.12 | Cooperation with ITU: consideration of matters related to the Radiocommunication ITU-R Study Group and ITU World Radiocommunication Conference | Continuous | MSC | COMSAR | NAV | Ongoing | | MSC 90/28, paragraphs 8.15 to 8.17 and 25.50 |
| 1.1.2.15 | Liaison statements to/from IALA: VTS, aids to navigation, e-navigation and AIS matters | Continuous | MSC | NAV | | Ongoing | | |
| 1.1.2.16 | Liaison statements to/from IEC: radiocommunications and safety of navigation | Continuous | MSC | COMSAR | NAV | Ongoing | | |
| 1.1.2.17 | Liaison statements to/from IHO: hydrographic matters and promotion of ENCs covering various parts of the globe | Continuous | MSC | NAV | | Ongoing | | |
| 1.1.2.18 | Liaison statements to/from ILO: seafarers' issues | Continuous | MSC | STW | | Ongoing | | |
| 1.1.2.19 | Liaison statements to/from ITU: radiocommunications | Continuous | MSC | COMSAR | NAV | Ongoing | | MSC 90/28, paragraph 8.2 |
| 1.1.2.20 | Liaison statements to/from UNHCR: persons rescued at sea | Continuous | MSC FAL | COMSAR | NAV | Ongoing | | |
| 1.1.2.21 | Liaison statements to/from WMO: meteorological issues | Continuous | MSC | NAV | | Ongoing | | MSC 90/28, paragraph 25.49.9 |
| 1.1.2.22 | Policy input/guidance to IAEA: development of carriage requirements for class 7 radioactive material and development of guidance for coastal States on emergencies at sea involving radioactive material | Continuous | MSC | DSC | | Ongoing | | |

| Planned output number in the HLAP for 2012-2013 | Description | Target completion year | Parent organ(s) | Coordinating organ(s) | Associated organ(s) | Status of output for Year 1 | Status of output for Year 2 | References |
|---|---|---|---|---|---|---|---|---|
| 1.1.2.23 | Policy input/guidance to ILO: development of PSC guidelines in the context of the Maritime Labour Convention (MLC), 2006 | Continuous | MSC | FSI | | Ongoing | | |
| 1.1.2.24 | Policy input/guidance to ILO/FAO: Preparation and holding of the third meeting of the Joint FAO/IMO ad hoc Working Group on IUU Fishing and Related Matters (JWG) | 2013 | MSC | FSI | SLF | In progress | | |
| 1.1.2.25 | Policy input/guidance to ISO TC 8: development of industry consensus standards | Continuous | MSC<br>MEPC | SEC | | Ongoing | | |
| 1.1.2.26 | Policy input/guidance to PSC regimes: related IMO developments | Continuous | MSC<br>MEPC | FSI | | Ongoing | | Resolution A.1052(27) on *Procedures for port State control, 2011* |
| 1.1.2.27 | Policy input/guidance to UN Sub-Committee on Dangerous Goods: harmonization of multimodal transport of dangerous goods | Continuous | MSC | DSC | | Ongoing | | |
| 1.1.2.40 | Policy and strategy input to CTITF and any of its 30 entities for the implementation of the IMO-related aspects of the UN Global Counter-Terrorism Strategy | Continuous | MSC<br>LEG<br>TCC<br>FAL | | | Ongoing | | |
| 1.3.5.1 | Harmonized provisions relating to the safe, secure and efficient carriage of dangerous goods following participation in the activities of UNCOE TDG, GHS and IAEA | Continuous | MSC<br>MEPC | DSC | SEC | Ongoing | | |

| Planned output number in the HLAP for 2012-2013 | Description | Target completion year | Parent organ(s) | Coordinating organ(s) | Associated organ(s) | Status of output for Year 1 | Status of output for Year 2 | References |
|---|---|---|---|---|---|---|---|---|
| 1.3.5.2 | Development of amendments to the IAMSAR Manual | Continuous | MSC | COMSAR | | Ongoing | | |
| 2.0.1.2 | Means for recharging air bottles for air breathing apparatus | 2013 | MSC | FP | | Completed (FP) | | MSC 90/28, annex 25 |
| 2.0.1.3 | Development of guidelines for verification of damage stability requirements for tankers | 2013 | MSC | SLF | DE<br>STW | In progress | | MSC 90/28, paragraphs 13.5 and 13.6 |
| ~~2.0.1.4~~ | ~~Development of guidelines for verification of damage stability requirements for bulk carriers~~ | ~~2013~~ | ~~MSC~~ | ~~SLF~~ | ~~DE~~<br>~~STW~~ | Deleted | | MSC 90/28, paragraph 13.8 |
| 2.0.1.5 | Development of provisions to ensure the integrity and uniform implementation of the 1969 TM Convention | 2013 | MSC | SLF | DE<br>STW | In progress | | |
| 2.0.1.6 | Revised performance testing and approval standards for fire safety systems | 2012 | MSC | FP | | Completed | | MSC.327(90)<br>MSC 90/28, paragraphs 11.7 to 11.9 |
| 2.0.1.13 | Development of a Code for Recognized Organizations | 2012 | MSC<br>MEPC | FSI | | Completed (FSI) | | |
| 2.0.1.19 | Comprehensive review of issues related to the responsibilities of Governments and development of measures to encourage flag State compliance | Continuous | MSC<br>MEPC | | FSI | Ongoing | | |
| 2.0.1.22 | GISIS module on mandatory and non-mandatory requirements | Annual | COMMITTEES | SEC | FSI | Ongoing | | |
| 2.0.1.23 | Development of unified interpretations for chapter 7 of the 2000 HSC Code | 2013 | MSC | FP | | In progress | | |

| Planned output number in the HLAP for 2012-2013 | Description | Target completion year | Parent organ(s) | Coordinating organ(s) | Associated organ(s) | Status of output for Year 1 | Status of output for Year 2 | References |
|---|---|---|---|---|---|---|---|---|
| 2.0.1.24 | Development of amendments to SOLAS regulation II-1/40.2 concerning general requirements on electrical installations | 2013 | MSC | DE | | In progress | | |
| 2.0.1…** | Development of mandatory carriage requirements for stability instruments on board tankers | 2013 | MSC | SLF | | | | MSC 90/28, paragraph 25.37 |
| 2.0.2.1 | Review of the Code for the Implementation of Mandatory IMO Instruments and consolidated audit summary reports, adoption of the new IMO Instruments Implementation (III) Code and making the III Code and auditing mandatory | 2013 | ASSEMBLY | COUNCIL | MSC<br>MEPC<br>FSI | In progress | | A.1054(27) on *Code for the implementation of mandatory IMO instruments, 2011* |
| 2.0.2.2 | Implementation of approved proposals for the further development of the Audit Scheme | Continuous | ASSEMBLY | COUNCIL | COMMITTEES<br>SEC | In progress | | |
| 2.0.3.1 | Technical guidance for the establishment of regional MRCCs and MRSCs in Africa, supported by the ISAR Fund | Continuous | MSC | SEC | COMSAR | Ongoing | | |
| 2.0.3.2 | Further development of the Global SAR Plan for the provision of maritime SAR services, including procedures for routeing distress information in the GMDSS | Continuous | MSC | COMSAR | | Ongoing | | |

** Unplanned output approved by MSC 90 for the 2012-2013 biennium. C 108 to assign an output number.

| Planned output number in the HLAP for 2012-2013 | Description | Target completion year | Parent organ(s) | Coordinating organ(s) | Associated organ(s) | Status of output for Year 1 | Status of output for Year 2 | References |
|---|---|---|---|---|---|---|---|---|
| 2.0.3.4 | Reports on the Cospas-Sarsat System monitored and the list of IMO documents and publications which should be held by MRCCs updated | Continuous | MSC | SEC | COMSAR | Ongoing | | |
| 2.0.3.5 | Development of guidelines on harmonized aeronautical and maritime search and rescue procedures, including SAR training matters | ~~2012~~ 2013 | MSC | COMSAR | | In progress | | |
| 3.4.1.1 | Guidance on identifying the emerging needs of developing countries, in particular SIDS and LDCs | Continuous | COMMITTEES | | | Ongoing | | |
| 3.5.1.2 | Input to the ITCP on maritime safety and security | Continuous | MSC | | | Ongoing | | |
| 4.0.2.1 | Guidance on the establishment or further development of information systems (databases, websites, etc.) as part of GISIS | Continuous | COMMITTEES | | FSI | Ongoing | | |
| 4.0.2.2 | Development and management of mandatory IMO number schemes | Continuous | MSC | FSI | SEC | Ongoing | | |
| 4.0.2.3 | Protocols on data exchange with other international, regional and national data providers | Continuous | COMMITTEES | FSI | SEC | Ongoing | | |
| 4.0.5.1 | Revised guidelines on organization and method of work, as appropriate | Continuous | MSC MEPC | | | Ongoing | | |
| 5.1.1.1 | Development of guidelines on safe return to port for passenger ships | 2013 | MSC | SLF | | In progress | | |

| Planned output number in the HLAP for 2012-2013 | Description | Target completion year | Parent organ(s) | Coordinating organ(s) | Associated organ(s) | Status of output for Year 1 | Status of output for Year 2 | References |
|---|---|---|---|---|---|---|---|---|
| 5.1.1.2 | Review of damage stability regulations for ro-ro passenger ships | 2013 | MSC | SLF | | In progress | | |
| 5.1.1.3 | Review of the Recommendations on evacuation analysis for new and existing passenger ships | 2013 | MSC | FP | | In progress | | |
| 5.1.2.1 | Making the provisions of MSC.1/Circ.1206/Rev.1 mandatory | 2013 | MSC | DE | FSI<br>NAV<br>STW | In progress | | |
| 5.1.2.2 | Development of measures to protect the safety of persons rescued at sea | ~~2012~~<br>2013 | MSC<br>FAL | COMSAR | FSI | In progress | | |
| 5.1.2.3 | Development of a new framework of requirements for life-saving appliances | ~~2012~~<br>2013 | MSC | DE | | In progress | | |
| 5.1.2.4 | Development of performance standards for recovery systems for all types of ship | 2012 | MSC | DE | | Completed (DE) | | MSC 90/28, paragraphs 9.14 to 9.18 and annex 13 |
| 5.1.2.5 | Development of training standards for recovery systems | 2012 | MSC | STW | DE | In progress | | |
| 5.1.3.2 | ITCP support for the implementation of the Djibouti Code of Conduct concerning the repression of piracy and armed robbery against ships in the western Indian Ocean and the Gulf of Aden | Continuous | ASSEMBLY<br>MSC<br>TCC | SEC | | Ongoing | | |
| 5.2.1.1 | Development of amendments to the criterion for maximum angle of heel in turns of the 2008 IS Code | 2013 | MSC | SLF | | In progress | | |

| Planned output number in the HLAP for 2012-2013 | Description | Target completion year | Parent organ(s) | Coordinating organ(s) | Associated organ(s) | Status of output for Year 1 | Status of output for Year 2 | References |
|---|---|---|---|---|---|---|---|---|
| 5.2.1.2 | Amendments to SOLAS related to the fire resistance of ventilation ducts | 2013 | MSC | FP | | In progress | | |
| 5.2.1.3 | Development of international code of safety for ships using gases or other low-flash point fuels | 2013 | MSC | BLG | DE<br>FP | In progress | | |
| 5.2.1.4 | Development of a revised IGC Code | 2014 | MSC | BLG | FP/ DE<br>SLF/STW | In progress | | |
| ~~5.2.1.5~~ | ~~Development of amendments to SOLAS regulation II-1/4 concerning subdivision standards for cargo ships~~ | ~~2013~~ | ~~MSC~~ | ~~BLG~~ | ~~SLF~~ | Deleted | | Combined with output 5.2.1.15 |
| 5.2.1.6 | ~~Amendments~~ Development of requirements for additional means of escape from machinery spaces | 2013 | MSC | FP | | In progress | | |
| 5.2.1.7 | Review of general cargo ship safety | 2013 | MSC | DSC/FP/DE<br>SLF/NAV/STW | | Pending | | |
| 5.2.1.8 | Harmonized requirements for the location of entrances, air inlets and openings in the superstructures of tankers | 2013 | MSC | FP | BLG | In progress | | |
| 5.2.1.9 | Review of fire protection requirements for on-deck cargo areas | 2013 | MSC | FP | DSC | In progress | | |
| 5.2.1.10 | Development of requirements for ships carrying hydrogen and compressed natural gas vehicles | 2013 | MSC | FP | | In progress | | |

| Planned output number in the HLAP for 2012-2013 | Description | Target completion year | Parent organ(s) | Coordinating organ(s) | Associated organ(s) | Status of output for Year 1 | Status of output for Year 2 | References |
|---|---|---|---|---|---|---|---|---|
| 5.2.1.11 | Development of safety objectives and functional requirements of the Guidelines on alternative design and arrangements for SOLAS chapters II-1 and III | 2013 | MSC | DE | | Pending | | |
| 5.2.1.12 | Development of amendments to the LSA Code for thermal performance of immersion suits | ~~2012~~ 2013 | MSC | DE | | In progress | | |
| 5.2.1.13 | Development of amendments to the LSA Code for free-fall lifeboats with float free capabilities | ~~2012~~ 2013 | MSC | DE | | In progress | | |
| 5.2.1.14 | Development of new generation intact stability criteria | ~~2012~~ 2013 | MSC | SLF | | In progress | | |
| 5.2.1.15 | Revision of SOLAS chapter II-1 subdivision and damage stability regulations | 2012 | MSC | SLF | | In progress | | |
| ~~5.2.1.16~~ | ~~Development of amendments to SOLAS chapter II-1 subdivision standards for cargo ships~~ | ~~2012~~ | ~~MSC~~ | ~~SLF~~ | | ~~In progress~~ | | Combined with output 5.2.1.15 |
| 5.2.1.17 | Development of a mandatory Code for ships operating in polar waters | ~~2012~~ 2014 | MSC MEPC | DE | FP/COMSAR NAV/SLF/STW | In progress | | |
| 5.2.1.18 | Development of a non-mandatory instrument on regulations for non-convention ships | 2013 | MSC | FSI | | In progress | | |

| Planned output number in the HLAP for 2012-2013 | Description | Target completion year | Parent organ(s) | Coordinating organ(s) | Associated organ(s) | Status of output for Year 1 | Status of output for Year 2 | References |
|---|---|---|---|---|---|---|---|---|
| 5.2.1.19 | Review and update of the Survey Guidelines under the Harmonized System of Survey and Certification and the annexes to the Code for the Implementation of Mandatory IMO Instruments | 2013 | MSC<br>MEPC | FSI | | Completed | | A.1053(27) on *Survey Guidelines under the Harmonized System of Survey and Certification (HSSC), 2011*;<br>A.1054(27) on *Code for the implementation of mandatory IMO instruments, 2011* |
| 5.2.1.20 | Protection against noise on board ships | 2012 | MSC | DE | | Completed (DE) | | MSC 90/28, paragraphs 9.33 to 9.36 and annex 14 |
| 5.2.1.21 | Classification of offshore industry vessels and consideration of the need for a non-mandatory Code for offshore construction support vessels | 2013 | MSC | DE | | In progress | | |
| 5.2.1.22 | Promotion of the implementation of the 1995 STCW-F Convention | Continuous | MSC | SLF | STW | Ongoing | | |
| 5.2.1.23 | Development of guidelines for use of Fibre Reinforced Plastic (FRP) within ship structures | 2013 | MSC | ~~DE~~<br>FP | ~~FP~~<br>DE | In progress | | |
| 5.2.1.24 | Revision of testing requirements for lifejacket RTDs in resolution MSC.81(70) | ~~2012~~<br>2013 | MSC | DE | | In progress | | |
| 5.2.1.25 | Development of guidelines for wing-in-ground craft | 2013 | MSC | DE | FP/COMSAR NAV/SLF/STW | In progress | | |
| 5.2.1.26 | Development of amendments to Part B of the 2008 IS Code on towing and anchor handling operations | 2013 | MSC | SLF | | In progress | | |

| Planned output number in the HLAP for 2012-2013 | Description | Target completion year | Parent organ(s) | Coordinating organ(s) | Associated organ(s) | Status of output for Year 1 | Status of output for Year 2 | References |
|---|---|---|---|---|---|---|---|---|
| 5.2.1.27 | Revision of the Recommendation on conditions for the approval of servicing stations for inflatable liferafts (resolution A.761(18)) | ~~2012~~ 2013 | MSC | DE | | In progress | | |
| 5.2.1.28 | Amendments to SOLAS regulation II-1/11 and development of associated Guidelines to ensure the adequacy of testing arrangements for watertight compartments | 2013 | MSC | DE | | Pending | | |
| 5.2.1…* | Development of amendments to SOLAS chapter II-2, the FTP Code and MSC/Circ.1120 to clarify the requirements for plastic pipes on ships | 2013 | MSC | FP | | | | |
| 5.2.1…* | Development of amendments to the requirements for foam-type fire extinguishers in SOLAS regulation II 2/10.5 | 2013 | MSC | FP | | | | |
| 5.2.1…* | Development of requirements for onboard lifting appliances and winches | 2014 | MSC | DE | | | | |
| 5.2.1…** | Development of an interpretation of SOLAS regulation II-1/13.6 on means of escape from ro-ro cargo spaces | 2013 | MSC | FP | | | | MSC 90/28, paragraph 25.13 |

* Transferred from the post-biennial agenda of the MSC. C 108 to assign an output number.

** Unplanned output approved by MSC 90 for the 2012-2013 biennium. C 108 to assign an output number.

| Planned output number in the HLAP for 2012-2013 | Description | Target completion year | Parent organ(s) | Coordinating organ(s) | Associated organ(s) | Status of output for Year 1 | Status of output for Year 2 | References |
|---|---|---|---|---|---|---|---|---|
| 5.2.1…** | Development of amendments to SOLAS regulations II-1/29.3.2 and 29.4.2 clarifying the requirements for steering gear trials | 2013 | MSC | DE | | | | MSC 90/28, paragraph 25.33 |
| 5.2.2.1 | Development of guidance for the implementation of the 2010 Manila Amendments | 2013 | MSC | STW | | In progress | | |
| 5.2.2.3 | Validated model training courses | Continuous | MSC | STW | | Ongoing | | |
| 5.2.2.4 | Reports on unlawful practices associated with certificates of competency | Annual | SEC | STW | | Ongoing | | |
| 5.2.2.5 | Reports to the MSC on information communicated by STCW parties | Annual | SEC | | | Ongoing | | |
| 5.2.2.6 | Development of amendment to SOLAS to mandate enclosed space entry and rescue drills | 2012 | MSC | DSC | BLG STW | In progress | | MSC 90/28, paragraph 12.17 |
| 5.2.2.7 | Development of amendments to the FSS Code for communication equipment for fire-fighting teams | 2012 | MSC | FP | | Completed (FP) | | |
| 5.2.2.8 | Preparation of guidelines for the implementation of the medical standards of the Manila amendments | 2013 | MSC | STW | | Completed (STW) | | |
| 5.2.2…** | Development of guidance for personnel involved with tug-barge operations | 2014 | MSC | STW | DE | | | MSC 90/28, paragraph 25.42 |

** Unplanned output approved by MSC 90 for the 2012-2013 biennium. C 108 to assign an output number.

| Planned output number in the HLAP for 2012-2013 | Description | Target completion year | Parent organ(s) | Coordinating organ(s) | Associated organ(s) | Status of output for Year 1 | Status of output for Year 2 | References |
|---|---|---|---|---|---|---|---|---|
| 5.2.2…** | Revision of the Recommendations on training of personnel on mobile offshore units (MOUs) | 2013 | STW | | | | | MSC 90/28, paragraph 25.44 |
| 5.2.3.1 | Development of amendments to CSC 1972 and associated circulars | ~~2012~~ 2013 | MSC | DSC | | In progress | | |
| 5.2.3.2 | Development of measures to prevent loss of containers | 2013 | MSC | DSC | DE/SLF STW | Pending | | Included in agenda for DSC 17 |
| 5.2.3.3 | Development of amendments to the IMSBC Code, including evaluation of properties of solid bulk cargoes | Continuous | MSC MEPC | DSC | | In progress | | |
| 5.2.3.4 | Development of amendments to the IMDG Code and supplements | Continuous | MSC | DSC | | Ongoing | | |
| 5.2.3.5 | Harmonization of the IMDG Code with the UN Recommendations on the Transport of Dangerous Goods | Continuous | MSC | DSC | | Ongoing | | |
| 5.2.3.6 | Review of fire protection arrangements for the stowage of water-reactive materials | ~~2012~~ 2013 | MSC | DSC | FP | In progress | | |
| 5.2.3.9 | Revised Guidelines for packing of cargo transport units | 2013 | MSC | DSC | | In progress | | MSC 90/28, paragraph 12.13 |
| 5.2.3.10 | Measures to prevent fires and explosions on chemical tankers and product tankers under 20,000 deadweight tonnes operating without inert gas systems | 2013 | MSC | FP | BLG DE | In progress | | |

** Unplanned output approved by MSC 90 for the 2012-2013 biennium. C 108 to assign an output number.

| Planned output number in the HLAP for 2012-2013 | Description | Target completion year | Parent organ(s) | Coordinating organ(s) | Associated organ(s) | Status of output for Year 1 | Status of output for Year 2 | References |
|---|---|---|---|---|---|---|---|---|
| 5.2.3.11 | Provisions for the installation of equipment for detection of radioactive sources or radioactive contaminated objects | 2012 | MSC | DSC | | In progress | | |
| 5.2.4.1 | New routeing measures and mandatory ship reporting systems, including associated protective measures for PSSAs | Continuous | MSC | NAV | | Ongoing | | |
| 5.2.4.2 | Revision of the Recommendation for the protection of the AIS VHF Data Link (resolution MSC.140(76)) | 2013 | MSC | ~~SLF~~ COMSAR | | Completed (COMSAR) | | |
| 5.2.4.3 | Amendments to the *General provisions on ships' routeing* (resolution A.572(14), as amended) | 2013 | MSC | NAV | | In progress | | |
| 5.2.4.4 | Implementation of LRIT system | Continuous | MSC | COMSAR | | Ongoing | | |
| 5.2.4.6 | Consideration of LRIT matters | Continuous | MSC | COMSAR | | Ongoing | | |
| 5.2.4.7 | Amendments to the Performance standards for VDR and S-VDR | 2012 | MSC | NAV | | In progress | | MSC.333(90) on Revised *Performance standards for shipborne voyage data recorders (VDRs)* |
| 5.2.4.8 | Development of policy and new symbols for AIS Aids to Navigation | 2013 | MSC | NAV | | In progress | | |
| 5.2.4.9 | Development of performance standards for inclinometers | 2012 | MSC | NAV | | In progress | | |

| Planned output number in the HLAP for 2012-2013 | Description | Target completion year | Parent organ(s) | Coordinating organ(s) | Associated organ(s) | Status of output for Year 1 | Status of output for Year 2 | References |
|---|---|---|---|---|---|---|---|---|
| 5.2.4…* | Revision of the information contained in the existing annexes to the Recommendation on the use of adequately qualified deep sea pilots in the North Sea, English Channel and Skagerrak (resolution A.486(XII)) | 2013 | MSC | NAV | | | | MSC 90/28, paragraph 25.22 |
| 5.2.4…* | Revision of the information contained in the existing annexes to the Recommendation on the use of adequately qualified deep-sea pilots in the Baltic (resolution A.480(XII)) | 2013 | MSC | NAV | | | | MSC 90/28, paragraph 25.23 |
| 5.2.4…* | Revision of the Guidelines for the on board operational use of shipborne automatic identification systems (AIS) | 2013 | MSC | NAV | COMSAR | | | MSC 90/28, paragraph 25.24 |
| 5.2.4…* | Consolidation of ECDIS-related IMO circulars | 2014 | MSC | NAV | | | | MSC 90/28, paragraph 25.26 |
| 5.2.4…* | Development of explanatory footnotes to SOLAS regulations V/15, V/18, V/19 and V/27 | 2014 | MSC | NAV | | | | MSC 90/28, paragraph 25.27 |
| 5.2.5.1 | Consideration of operational and technical coordination provisions of maritime safety information (MSI) services, including development and review of related documents | Continuous | MSC | COMSAR | | Ongoing | | |
| 5.2.5.2 | Development of measures to avoid false distress alerts | 2013 | MSC | COMSAR | | In progress | | |

* Unplanned output approved by MSC 90 for the 2012-2013 biennium. C 108 to assign an output number.

| Planned output number in the HLAP for 2012-2013 | Description | Target completion year | Parent organ(s) | Coordinating organ(s) | Associated organ(s) | Status of output for Year 1 | Status of output for Year 2 | References |
|---|---|---|---|---|---|---|---|---|
| 5.2.5.3 | Further development of the GMDSS master plan on shore-based facilities | Continuous | MSC | COMSAR | | Ongoing | | |
| 5.2.5.4 | Consideration of developments in Inmarsat and Cospas-Sarsat | Continuous | MSC | COMSAR | | Ongoing | | |
| 5.2.5.5 | Developments in maritime radiocommunication systems and technology | ~~2012~~ 2013 | MSC | COMSAR | | In progress | | |
| 5.2.5.6 | Scoping exercise to establish the need for a review of the elements and procedures of the GMDSS | 2012 | MSC | COMSAR | | Completed (COMSAR) | | |
| 5.2.5…* | Review and modernization of the Global Maritime Distress and Safety System (GMDSS) | 2017 | MSC | COMSAR | NAV STW | | | MSC 90/28, paragraph 25.18 |
| 5.2.6.1 | Development of an e-navigation strategy implementation plan | ~~2012~~ 2014 | MSC | NAV | COMSAR STW | In progress | | |
| 5.3.1.1 | Revised Guidelines on control and compliance measures to enhance maritime security, if necessary | Continuous | MSC | | | Ongoing | | |
| 5.3.1.2 | Review of procedures for PSC | 2013 | MSC MEPC | FSI | | In progress | | |
| 5.3.1.3 | Consideration of the efficacy of the Container Inspection Programme | 2013 | MSC | DSC | | In progress | | |
| 5.3.1.4 | Promote the harmonization of PSC activities | Continuous | MSC MEPC | FSI | | Ongoing | | |
| 5.3.1.5 | Methodology for the in-depth analysis of annual PSC report | Continuous | MSC MEPC | FSI | | Ongoing | | |

* Unplanned output approved by MSC 90 for the 2012-2013 biennium. C 108 to assign an output number.

| Planned output number in the HLAP for 2012-2013 | Description | Target completion year | Parent organ(s) | Coordinating organ(s) | Associated organ(s) | Status of output for Year 1 | Status of output for Year 2 | References |
|---|---|---|---|---|---|---|---|---|
| 5.3.1.6 | A risk assessment comparison between marine casualties and incidents and PSC inspections | Continuous | MSC<br>MEPC | FSI | | Ongoing | | |
| 5.3.1.7 | Development of guidance for Approved Continuous Examination Programmes (ACEP) | 2013 | MSC | DSC | | Pending | | |
| 5.4.1.1 | Guidelines on how to present relevant information to seafarers | ~~2012~~<br>2013 | MSC | STW | | Postponed | | |
| 6.1.1.1 | Guidelines and guidance on the implementation and interpretation of SOLAS chapter XI-2 and the ISPS Code | Continuous | MSC | | | In progress | | |
| 6.1.1.2 | Measures to enhance the security of closed cargo transport units and of freight containers | Continuous | MSC<br>FAL | | | In progress | | |
| 6.1.2.1 | Advice and guidance on issues, as may be requested, in connection with implementation of SUA 1988/2005 in the context of international efforts to combat terrorism and proliferation of weapons of mass destruction and related materials | Continuous | LEG | MSC | | Ongoing | | |
| 6.2.1.1 | Monthly and annual reports | Continuous | MSC | | | Ongoing | | |
| 6.2.1.2 | Revised guidance relating to the prevention of piracy and armed robbery to reflect emerging trends and behaviour patterns | Continuous | MSC<br>LEG | | | In progress | | |

| Planned output number in the HLAP for 2012-2013 | Description | Target completion year | Parent organ(s) | Coordinating organ(s) | Associated organ(s) | Status of output for Year 1 | Status of output for Year 2 | References |
|---|---|---|---|---|---|---|---|---|
| 7.1.2.15 | Development of a Code for the transport and handling of limited amounts of hazardous and noxious liquid substances in bulk in offshore support vessels | 2013 | MSC<br>MEPC | BLG | DE | In progress | | |
| 7.2.1.1 | Bi-annual MSC circulars on designation of maritime assistance services (MAS) | Annual | MSC | NAV | | Ongoing | | |
| 7.2.2.1 | Safety aspects of alternative tanker designs assessed | Continuous | MSC | BLG | | Postponed | | |
| 7.3.1…* | Consideration of amendments to SOLAS chapter II-2 on location of EEBDs | 2013 | MSC | FP | | | | |
| 7.3.1…* | Development of amendments to SOLAS regulation II-2/20 and associated guidance on air quality management for ventilation of closed vehicle spaces, closed ro-ro and special category spaces | 2013 | MSC | FP | | | | |
| 8.0.2.5 | Reports and information on illegal migrants | Continuous | MSC<br>FAL | SEC | | Ongoing | | |
| 8.0.3.2 | Electronic access to, or electronic versions of, certificates and documents required to be carried on ships | 2013 | FAL<br>MSC<br>MEPC<br>LEG | | | In progress | | |
| 8.0.4.3 | Identification and assessment of administrative requirements in mandatory IMO instruments that are perceived as being a burden | 2013 | COUNCIL | COMMITTEES | SUB-COMMITTEES<br>SEC | In progress | | |

* Transferred from the post-biennial agenda of the MSC. C 108 to assign an output number.

| Planned output number in the HLAP for 2012-2013 | Description | Target completion year | Parent organ(s) | Coordinating organ(s) | Associated organ(s) | Status of output for Year 1 | Status of output for Year 2 | References |
|---|---|---|---|---|---|---|---|---|
| 10.0.1.1 | Implementation of goal-based new ship construction standards for tankers and bulk carriers | Continuous | MSC | | | Ongoing | | |
| 10.0.1.2 | Development of goal-based ship construction standards for all types of ships, including safety, security and protection of the marine environment | 2013 | MSC MEPC | | | In progress | | MSC 90/28, section 5 |
| 11.1.1.1 | Permanent analysis, demonstration and promotion of the linkage between a safe, secure, efficient and environmentally friendly maritime transport infrastructure, the development of global trade and the world economy and the achievement of the MDGs | Continuous | ASSEMBLY | COUNCIL | COMMITTEES SEC | Ongoing | | |
| 12.1.1.1 | Revised FSA Guidelines | 2012 | MSC | | | In progress | | MSC 90/28, paragraph 19.17 |
| 12.1.1.2 | FSA Experts' Group established to review FSA studies | Continuous | MSC | | | In progress | | MSC 90/28, paragraphs 19.20, 19.21 and 25.50 |
| 12.1.2.1 | Collection and analysis of casualty and PSC data to identify trends and develop knowledge and risk-based recommendations | Continuous | MSC | FSI | | Ongoing | | |
| 12.2.1.1 | Guidelines and associated training to assist companies and seafarers in improving the implementation of the ISM Code | 2012 | MSC MEPC | STW JWGHE | | In progress | | |

| Planned output number in the HLAP for 2012-2013 | Description | Target completion year | Parent organ(s) | Coordinating organ(s) | Associated organ(s) | Status of output for Year 1 | Status of output for Year 2 | References |
|---|---|---|---|---|---|---|---|---|
| 12.2.1.2 | Revised guidelines for Administrations (resolution A.913(22)) to make them more effective and user-friendly | 2012 | MSC MEPC | STW JWGHE | | In progress | | |
| 12.2.1.3 | Enhancing the efficiency and user-friendliness of ISM Code | 2013 | MSC MEPC | STW JWGHE | | In progress | | |
| 12.3.1.1 | Guidance on the development of GISIS and on access to information | Continuous | MSC MEPC | FSI | | Ongoing | | |
| 12.3.1.2 | PSC data collected and disseminated in cooperation with PSC regimes | Annual | MSC | FSI | | Ongoing | | |
| 12.3.1.3 | Consideration of reports of incidents involving dangerous goods or marine pollutants in packaged form on board ships or in port areas | Continuous | MSC MEPC | DSC | FSI | Ongoing | | |
| 13.0.2.2 | Databases as part of GISIS and other means, including electronic ones | Continuous | COMMITTEES | SEC | | Ongoing | | |

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**ANNEX 32**

**POST-BIENNIAL AGENDA OF THE MARITIME SAFETY COMMITTEE**

| MARITIME SAFETY COMMITTEE (MSC) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| ACCEPTED POST-BIENNIAL OUTPUTS | | | | Parent organ(s) | Coordinating organ(s) | Associated organ(s) | Timescale (sessions) | References |
| No. | Reference to Strategic Directions | Reference to high-level actions | Description | | | | | |
| 1 | 2 | 2.0.1 | Mandatory application of the Performance standard for protective coatings for void spaces on bulk carriers and oil tankers | MSC | DE | | 2 | MSC 76/23, paragraphs 20.41.2 and 20.48; DE 50/27, section 4 |
| 2 | 2 | 2.0.1 | Performance standard for protective coatings for void spaces on all types of ships | MSC | DE | | 2 | MSC 76/23, paragraphs 20.41.2 and 20.48 |
| 3 | 2 | 2.0.1 | Revision of the provisions for helicopter facilities in SOLAS and the MODU Code | MSC | DE | | 2 | MSC 86/26, paragraph 23.39 |
| 4 | 5.1 | 5.1.1 | Development of life safety performance criteria for alternative design and arrangements for fire safety (MSC/Circ.1002) | MSC | FP | | 1 | MSC 90/28, paragraph 25.12 |
| 5 | 5.2 | 5.2.1 | Clarification of the STCW-F Convention provisions and follow-up action to the associated Conference resolutions | MSC | STW | | 2 | STW 34/14, paragraph 11.8 |
| 6 | 5.2 | 5.2.1 | Smoke control and ventilation | MSC | FP | | 2 | FP 46/16, section 4 |

| MARITIME SAFETY COMMITTEE (MSC) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| ACCEPTED POST-BIENNIAL OUTPUTS | | | | Parent organ(s) | Coordinating organ(s) | Associated organ(s) | Timescale (sessions) | References |
| No. | Reference to Strategic Directions | Reference to high-level actions | Description | | | | | |
| 7 | 5.2 | 5.2.1 | Finalization of guidance for the implementation of the 2010 Manila amendments | MSC | STW | | 2014 | MSC 89/25, paragraph 22.41 |
| 8 | 5.2 | 5.2.1 | Development of amendments to the 2009 MODU Code concerning lifeboat drills | MSC | DE | | 2 | MSC 89/25, paragraph 22.24 |
| 9 | 5.2 | 5.2.1 | Review of the 2009 Code on Alerts and Indicators | MSC | DE | NAV | 2 | MSC 89/25, paragraph 22.25 |
| 10 | 5.2 | 5.2.1 | Development of amendments to the provisions of SOLAS chapter II-2 relating to secondary means of venting cargo tanks | MSC | FP | BLG | 1 | MSC 90/28, paragraph 25.5 |
| 11 | 5.2 | 5.2.1 | Development of a requirement for hoist winches to be tested following any maintenance, repair or modification (MSC.1/Circ.1331) | MSC | DE | | 1 | MSC 90/28, paragraph 25.31 |
| 12 | 5.2 | 5.2.1 | Development of amendments to the Guidelines for vessels with dynamic positioning (DP) systems (MSC/Circ.645) | MSC | DE | | 2 | MSC 90/28, paragraph 25.34 |
| 13 | 5.2 | 5.2.4 | Development of performance standards for multi-system shipborne navigation systems | MSC | NAV | | 2 | MSC 90/28, paragraph 25.25 |
| 14 | 7.2.2 | 7.2.2.2* | Safety aspects of alternative tanker designs assessed | MSC MEPC | BLG | | Ongoing | BLG 3/18, paragraph 15.7 |

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* Work on this output is to be carried out when a proposal for an alternative tanker design is submitted to the Organization.

**ANNEX 33**

**MSC RESOLUTION MSC.336(90)**
**(adopted on 25 May 2012)**

**ADOPTION OF MEASURES AIMED AT ENHANCING THE SAFETY OF PASSENGER SHIPS**

THE MARITIME SAFETY COMMITTEE,

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

EXPRESSING the desire to further enhance the safety of passengers and crews on board passenger ships in light of the loss of the **Costa Concordia**,

NOTING WITH APPRECIATION the initiative taken by the Secretary-General, calling on the Committee, as a matter of high priority, to review the current international measures and its work programme for matters dealing with passenger ship safety to evaluate whether new measures should be developed and implemented, aimed at enhancing safety of passenger ships, taking into account safety initiatives being undertaken by the cruise industry and the analysis of the relevant marine casualty investigation reports,

RECOGNIZING the urgency for the Organization to consider whether international measures, additional to those already agreed, are necessary to improve the safety of passenger ships,

RECOGNIZING FURTHER that urgent action should be taken on reviewing existing IMO instruments in order to evaluate, develop and implement measures aimed at enhancing the safety of passenger ships, taking into account, inter alia, recommendations stemming from the analysis of the marine casualty investigation report into the loss of the **Costa Concordia**,

HAVING CONSIDERED the information provided by the Government of Italy on the course of the investigation into the **Costa Concordia** incident, as well as preliminary proposals on enhancing the safety of passenger ships brought to the Committee's attention by the Government of Italy, other Member Governments and the Cruise Industry Operational Safety Review,

1. REAFFIRMS the importance of the safety of passenger ships, their passengers and crew on board;

2. INVITES Member Governments to recommend that passenger ship companies conduct a review of operational safety measures with the aim to enhance the safety of passenger ships, taking into consideration the recommended interim measures of an operational character listed in the Recommended interim measures for passenger ship companies to enhance the safety of passenger ships (MSC.1/Circ.1446), on ships flying their flag, on a voluntary basis and with all possible urgency and efficiency;

3. ENCOURAGES Member Governments and the passenger ship industry to take the necessary actions to ensure that their current safety standards, procedures and best management practices are fully and effectively implemented;

4 REQUESTS Member Governments to bring this resolution to the attention of all stakeholders.

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**ANNEX 34**

**Translation**

**STATEMENT BY THE DELEGATION OF PANAMA**

"The Republic of Panama wishes to express its concern at the situation that has arisen in the Argentine Republic in respect of protest action taken by Argentine unions and labour organizations in the port sector, for example the Argentine Confederation of Transport Workers (CATT) and the Union of United Maritime Workers (SOMU), in defence of the Argentine claim against the United Kingdom of Great Britain and Northern Ireland for sovereignty over the Falkland Islands (Malvinas), South Georgia and the South Sandwich Islands.

In this regard, we should like to reaffirm our respect for the Argentine Republic faced with this long-running international dispute. We believe that the position of Panama on this matter up to now has been clear. However, we now wish to state, with the same respect, that our Consulate-General in Buenos Aires has reported that these organizations are taking arbitrary measures against Panamanian-flagged ships as well as those of other countries - actions that are affecting ships of our merchant fleet, which is the largest in the world - on the grounds that they are owned by British interests.

Among the measures taken are those by SOMU, which is maintaining restrictions on the towing service for these ships. At least 11 have been affected, according to the latest report, including the **Star of RBD**, the **Marina Ace**, the **MSC Kristal** and the **MSC Marta**, all Panamanian-flagged.

For the Republic of Panama is has been equally unfortunate that, in implementing these boycott measures against our ships, on the grounds, I repeat, that they belong to British interests, pejorative comments against our shipping register have been made which we cannot accept. The Panamanian Shipping Register has a long history and is acknowledged worldwide for its professionalism and faithful compliance with IMO standards, principally in relation to safety and prevention in the marine environment and safety of life at sea.

Bearing in mind that several requests have already been made through diplomatic channels for my country to be given concrete assurances that this boycotting of Panamanian-flagged ships will be stopped immediately, we await a positive response from the Argentine Government. Not only do the events that have taken place to date affect the maritime industry and the services that Panama provides for international trade, as the largest merchant marine fleet, but they also reveal an even more unsettling situation, namely the imposition of discriminatory measures, not only between Argentina and Great Britain, but against third-party interests. An example of the latter is the case of Panama, a nation which, in the context of the dispute which lies behind these actions, has to date supported the Argentine position at the international level.

On account of all the above, the Republic of Panama appeals to the good will of the Argentine Republic and invokes the long and fraternal bilateral relations between both countries in requesting it to rectify this unfortunate situation."

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**ANNEX 35**

**Translation**

**STATEMENT BY THE DELEGATION OF ARGENTINA**

"Our delegation welcomes the intervention by the distinguished representative of Panama, since it enables us to clarify that the actions referred to have their origins in decisions taken by trade-union representatives, in the exercise of their legal freedom to carry out such activities. In this respect, we should like to confirm that no official restrictions of any kind are in place against Panamanian-flagged ships. The situation is being handled by the authorities of both countries within the framework of our bilateral relations, and we also wish to confirm that our country is complying with the international regulations in force on these matters.

In this regard, we believe that IMO is not the appropriate forum in which to raise these matters, since they are not covered by any instrument of the Organization."

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# ANNEX 36

## STATEMENT BY THE DELEGATION OF GERMANY

"While preparing for MSC 90, the review of document MSC 90/3 and the implementation of resolution MSC.308(88) raised concerns regarding the uniform application of SOLAS chapter II-2.

Both documents include amendments to some regulations under SOLAS chapter II-2 and at the same time introduce a new application date for the entire chapter.

In the past, the application date for a whole chapter has only been changed when there was a complete revision to the regulations or the structure. In those cases all the necessary information on the application where considered in the revision. If, however, only specific regulations were amended, for these amended regulations applicable to ships constructed after a specified date a respective application date was included in the regulation text. For regulations with no specific application statement, the applicability of the chapter remained unchanged.

Concerning SOLAS chapter II-2, regulation II-2/1 determines an application for ships constructed on or after 1 July 2002, the last complete revision of the chapter (MSC.99(73)). Regulations applicable to ships constructed before 1 of July 2002 (retroactive) were added as reference to regulation II-2/1 or directly in the regulation text. All subsequent amendments were drafted based on the chapter's applicability date (ships constructed on or after 1 July 2002).

This principle has been abandoned with resolution MSC.308(88) and a further amendment to chapter II-2 introducing again an amendment to regulation II-2/1, under discussion in document MSC 90/3.

MSC.308(88) introduced the application, ships constructed on or after 1 July 2012, to the chapter, while only amending two regulations in chapter II-2, regulation 3 (Definitions) and regulation 7 (Detection and alarm). According to document MSC 88/26, paragraph 9.8, due to the fact that the whole chapter is now only applicable for ships constructed on or after 1 July 2012, there was no need for specific application provisions to be added to these two regulations.

The concern is that the need for simplification here may jeopardize the more urgent need for the uniform application of said chapter.

The apparent problems may be divided into two categories.

Firstly resolution MSC.308(88) amended regulation II-2/1 without review of the regulations contained in the chapter, having specific dates of application. All those regulations were drafted based on chapter II-2 being applicable to ships constructed on or after 1 July 2002. Now we read the same text based on a chapter being applicable to ships constructed on or after 2012. This may lead to legal conflicts and misinterpretation.

Examples (based on SOLAS July 2012 version):

| Regulation | Application provisions | Comment |
|---|---|---|
| II-2/4.4.4 | Constructed on or after 1 July 2008 | Whole chapter applicable to ships constructed on or after 1 July 2012, could be understood as only II-2/4.4.4 being applicable to passenger ships constructed on or after 1 July 2008. |
| II-2/5.3.1.3.2 | Constructed before 1 July 2008 … by the first survey after 1 July 2008 | And those constructed after 1 July 2008 but before 1 July 2012? |
| II-2/9.7.1.1.2 | Constructed on or after 1 July 2010 | Whole chapter applicable to ships constructed on or after 1 July 2012, could be understood as only II-2/9.7.1.1.2 being applicable to ships constructed on or after 1 July 2010. |
| II-2/10.4.1.5 | By the first scheduled dry-docking after 1 January 2010…ships constructed before 1 July 2002 shall comply … | Now gap in the regulations for ships constructed between 2002 and 2012. |
| II-2/20.6.1.4 | The requirements of this paragraph shall apply to ships constructed on or after 1 January 2010. Ships constructed on or after 1 July 2002 and before 1 January 2010 shall comply with the previously applicable … | No indication of requirements for ships constructed before 2002. Regulation II-2/1 does not provide any assistance as it now refers to all ships constructed before 1 July 2012. |
| Several regulations | 'All ships' | Can be read as only those regulations being applicable also to ships constructed before 1 July 2012, while other regulations of the chapter without this expression apply only to ships constructed after 1 July 2012. |

Those concerns were also mentioned in document MSC 88/26 (paragraphs 9.6 to 9.9) and again in documents FP 55/22/3 (Secretariat) and FP 55/23 (paragraph 22.6). In document MSC 90/11, under paragraph 2.18, the Committee is invited to note these concerns.

Secondly resolution MSC.308(88) changed the application date for chapter II-2, without addressing the ambiguity arising for existing regulations not amended, that lack a specific application provision.

Under the present methodology the application of those regulations is defined by the general application date of the chapter. At the moment those regulations are therefore applicable to ships constructed on or after 1 July 2002. As from 1 July 2012 all regulations without explicit application provisions apply to ships constructed on or after 1 July 2012. It is no longer possible to distinguish from the current SOLAS whether a regulation is new and applies only to newbuild ships constructed after the date specified by regulation II-2/1 or whether it had existed since 2002.

It is questionable, if the intended additions to the reference in regulation II-2/2.2 may solve the problem. According to the present methodology, it normally is not necessary to look into the references to see if a rule also applies to older ships or not. Because the change in the methodology is not made apparent to users of SOLAS, one might assume that the rules as they are, apply not to older ships.

Furthermore, the reference will not lead the user to a single rule he can apply to ships build at a specific date. He has to go through all the changes to draw up the exact rule himself.

The situation gets even worse if an existing regulation without a specific application provision is changed only in part. In those cases the regulation as such is applicable from the new date but in part also applies to older ships, making it even harder to distinguish.

Example:

The amended regulation II-2/7.4.1 reads from 1 July 2012 as follows:

"4.1 Installation

A fixed fire detection and fire alarm system shall be installed in:

.1 periodically unattended machinery spaces

.2 machinery spaces where:

.2.1 the installation of automatic and remote control systems and equipment has been approved in lieu of continuous manning of the space; and

.2.2 the main propulsion and associated machinery including sources of the main sources of electrical power are provided with various degrees of automatic or remote control and are under continuous manned supervision from a control room; and

.3 enclosed spaces containing incinerators."

As a result of the new application date of the chapter, regulation 4.1.as a whole has to be read, as all regulations which do not have a specific application date, to be applicable to ships constructed on or after 1 July 2012. However, in fact only 4.1.3 is applicable to ships constructed on or after 1 July 2012 by amendment by resolution MSC.308(88)."

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**ANNEX 37**

**STATEMENT BY THE DELEGATION OF SOUTH AFRICA**

"The Delegation of South Africa would firstly like to thank the Member States and UN Agencies that have submitted papers regarding the way forward in finally securing a safe working environment for the world' largest maritime sector.

The path to date has been almost 35 year marathon but we are now on the penultimate lap with today and the Diplomatic Conference as the last chance of completing this work. We cannot afford to fail.

MSC 90/13/1 paragraph 7.3 asks us to consider and agree on the aggregate number of vessels necessary for the Agreement to enter into force. It is our expectation that this is where we need to be when you close this item.

The FAO paper MSC 90/13/4 indicates that there are some six thousand fishing vessels of 24 metres in length and over licenced to fish legally on the high seas. We acknowledge that there may be more but our research indicates that this would not exceed a thousand vessels, that has either not been reported in terms of their convention or are not parties to it. Our understanding is that, the FAO figures are used purely to validate the number of vessels recommended in the draft Agreement i.e. either 3000 approximately 50% or 1800 approximately 30%.

In the work that led us to draft the Agreement we recognized that the two major legal issues that had impacted on the entry into force of both the Convention and the Protocol were both the entry into force criteria and the scope of application. These issues are so closely linked that they have to be treated as one issue. The scope of application meant that the Protocol applied to all fishing vessels as opposed to SOLAS that applies only to internationally trading vessels and is considered much more onerous.

In drafting Regulation 3.2 both the number of vessels and the scope of application it was considered appropriate to allow Administrations to exempt vessels only fishing in a country's EEZ/200 nautical miles and also considers the same where a common fishing zone has been agreed.

In addition there were some technical issues that had to be addressed. It has to be recognized that the draft Agreement as it stands is a package.

MSC 90/13/5 paragraph 2 we see the introduction of a new term "High Seas" as an amendment to the draft Agreement. In our view this could be in conflict with draft Regulation 3.2. There is no definition of "High Seas" in the Convention, Protocol or Agreement. The term High Seas is defined in UNCLOS but as not every country has ratified that convention we were advised by the IMO legal office not to use the term hence the current draft. In commenting on this it is also noted that although still in square brackets the common fishing zone is proposed. We feel that the present draft adequately addresses point 4.

MSC 90/13/5 paragraph 7 it is noted that requirements for the use of English is a barrier to acceding to the 1993 Protocol by many developing countries. In the draft Agreement the use of progressive implementation is permitted. When developing ILO Convention C 188 "Work in Fishing" it was recognized that developing countries needed a mechanism that allowed them to ratify a convention where they could not give full effect to it immediately but on certain issues committed to give effect to a requirement within a certain time frame. It should be noted that C 188 does not allow progressive implementation where:

- A vessel is 24 metres or over;
- Spends 7 days or more at sea; and
- Operates more than 200 nautical miles from shore.

The draft agreement is therefore less onerous and we have to reiterate that it is part of a package.

It is our expectation that MSC should agree on the Entry into Force Criteria using the options as contained in the Draft Agreement. We believe this would indeed reduce the work load taking into account that the Conference is only over three days in Cape Town."

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**ANNEX 38**

**Translation**

## STATEMENT BY THE DELEGATION OF SPAIN

"Fishing and aquaculture occupy millions of people worldwide, of whom 60 per cent work in catching this resource; there is a correspondingly high death-related claims rate. It is fairly certain that fishing is one of the most dangerous industries.

Spain is a world power in these matters, and has a special sensitivity concerning the safety of ships and the safety of life at sea. It has always demonstrated a concern for seafarers as a collective, and attaches the same value to their lives as to those of the people on board other types of ship.

The total number of those employed aboard the Spanish fishing fleet is some 40,000. To this figure may be added those working in the industry on shore – taking into account direct and indirect employment, their number is estimated to be four times that of onboard personnel.

A particular feature of Spain's fishing industry is its internationalization. Spanish vessels fish across the world, in the Atlantic and the eastern Pacific as well as Arctic waters and, more recently, the Indian Ocean. Since 1961 they have operated in southern fishing grounds using large freezer trawlers over 70 m in length and weighing 1,600 tonnes, long before the safety of these vessels was regulated.

However, our ships navigate and fish alongside others which operate under conditions that are not so stringent, and which very often fall into the sub-standard category. This leads, inter alia, to Spanish fishing vessels having to rescue the personnel of other fishing vessels because the latter have no safe working platform, or no means of abandoning ship.

The 1977 Torremolinos Convention, adopted after a four-week diplomatic conference, and its 1993 Protocol, adopted after an 18-day conference, are instruments which have not entered into force internationally, although they have at the European level. They regulate the safety requirements applicable to fishing vessels of 24 m in length and over, with mandatory special provisions for vessels over 45 m in length. The prevailing philosophy of these instruments is safety of shipping and of life at sea, so that, from the outset, there has been a clear parallel with the SOLAS and Load Lines Conventions.

Spain has been actively working at the forefront of these matters for years and, since 2007, has done so in every working group and meeting, with the intention of transmitting time and again its special sensitivity, although within limits. One by one, Spain has been "agreeing" to many of the aspects, such as scope of application, gradual implementation, and safety requirements, of the draft instrument which has always been called the "Agreement on the Implementation of the Torremolinos Protocol of 1993 Relating to the 1977 Torremolinos International Convention for the Safety of Fishing Vessels". The above-mentioned aspects were considered vital, while safety levels vary by comparison with the state of the art. All this has been done for the sake of bringing into force safety regulations that are international.

Bearing in mind all of the foregoing, Spain hopes that the diplomatic conference will have a satisfactory outcome for the international maritime community, especially seafarers, and will lead to safer fishing vessels."

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**ANNEX 39**

**STATEMENT BY THE DELEGATION OF KENYA**

"Thank you Mr. Chairman,

In regard to paragraph 20.34 of the report where all Governments and industry have been urged to intensify and coordinate their efforts, this delegation is of the opinion that the role of Africa Mission (AMISON) and IGAD has been understated if not entirely ignored. This is in spite of this committee's recognition in paragraph 20.33 subparagraph 2 of this report, that the number of incidents occurring in the Indian Ocean has decreased from 77 to 63.

Kenya being host to one of the three Information Sharing Centres (ISC) under the Djibouti Code of conduct, has proper statistics which indicate that there has not been any pirate attacks in our region since the Kenya Defence Forces entered Somalia, with the concurrence of TFG and Inter-Governmental Authority on Development (IGAD) on 16th October 2011.

Kenya Defence Forces have since been integrated into AMISOM. Kenya Defence forces together with Uganda, Burundi and others who are in the process of joining them continue to ensure establishment of law and order with the aim of eventual restoration of the rule of law in Somalia.

It is through such effort that there is now a glimmer of hope that has enabled some countries to open diplomatic missions in Mogadishu while others are considering doing so. It is the hope of this delegation that with the recognition of the role being played by AMISOM and IGAD to eliminate piracy on a sustainable basis, more countries will become encouraged to support this effort, so that we can deal conclusively with piracy in the region. This delegation salutes those brave soldiers who have put their lives at risk in this difficult war in order to ensure freedom of navigation for all in the western Indian Ocean and the Gulf of Aden.

Mr. Chairman, as everyone now knows, a lasting solution to piracy off the coast of Somalia will only come from the land, a point which was well articulated by Our Permanent Secretary in the Ministry of Transport Dr. Cyrus Njiru, in his intervention at the High Level Segment at the beginning of this meeting. This delegation therefore requests that, that intervention and this statement be reflected in the records of this meeting.

Thank you Mr. Chairman."

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**ANNEX 40**

**Translation**

**STATEMENT BY THE DELEGATION OF
THE BOLIVARIAN REPUBLIC OF VENEZUELA**

"I have to admit that I am somewhat confused by the manner in which the debate on this subject has been handled in the report, since it has switched between the report of the Working Group and the report on what was covered in the high-level segment. We shall therefore base our comments on basic considerations relating to both documents and areas of action.

The Bolivarian Republic of Venezuela thanks all delegations and organizations that have come together to work on this delicate matter and acknowledges the need to take measures to counter piracy, a concept which is accepted at the international level and is defined in various instruments that confine the use of the term to all acts occurring "in a place outside the jurisdiction of any State" only; that is, in international waters or on the high seas.

Venezuela recognizes that, by strengthening cooperation and solidarity between IMO Member States, efforts towards eradicating the scourge of piracy can be maintained. However, it notes with concern that, as the discussions and dealings on this matter have evolved, the main factor behind them, namely piracy off the coast of Somalia, has been lost from sight. It seems to us that we are referring somewhat broadly only to the term "global piracy" or to something similar and/or applicable to other authorities, and that, overall, this even extends to including the term "armed robbery" indiscriminately in our documents and deliberations (which is a matter that corresponds exclusively to State jurisdiction). Examples of this can be found in the titles of documents MSC 90/WP.8 and MSC 90/WP.6 and even in MSC 90/WP.1.

This leads us to understand that we are endorsing the practice of having on board armed personnel from private companies, a situation that could be seen as the emergence of a new state of affairs in maritime trade whose outcome it is difficult to foresee.

Consequently, Venezuela calls for reflection by all IMO Member States, since initially these measures covered the "high-risk area" of the western Indian Ocean and the Gulf of Aden, and this makes us aware of the real possibility that the measures might be applied more widely, thereby paving the way for the on-board use of private armed personnel anywhere around the world. That ignores to a certain extent the sovereign right of coastal States to exercise full control over their aquatic spaces, and entrusts to third parties the security of those spaces, an aspect which is unacceptable under the constitution and legislation of the Venezuelan State.

We request that our statement of reservation on this matter should be included in the report, since we also note that these points have not been raised in the document, although they were clearly expressed in plenary at the beginning of the Committee's session.

Lastly, we call for this Committee to exercise great caution in all the actions that it takes, and we express our commitment as a sovereign State to adding our efforts to those of the international community in continuing to work towards finding lasting solutions for the complete eradication of piracy, on the basis of the international principles of fairness, solidarity, self-determination of peoples and respect for the sovereignty and integrity of States."

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**ANNEX 41**

**STATEMENT BY THE ISLAMIC REPUBLIC OF IRAN**

"Thank you Mr Chairman and Good Morning to you and everybody,

Mr Chairman, distinguished delegates,

On behalf of the Government of the Islamic Republic of Iran, I would like to inform IMO Maritime Safety Committee that the I.R. of Iran as one of 25 States deploying military vessels to piracy infested areas, in particular waters off the coast of Somalia and Gulf of Aden, has been actively and continuously involved in international efforts towards combating piracy and armed robbery against the ships passing through the area.

Since 2009, more than 2000 commercial ships, registered not only in Iran but also under other flags and ownerships, have been escorted by Iranian navies and nearly 85 military interventions and operations have been taken place in combating pirates and rescuing the vessels as well as seafarers in danger.

Mr Chairman, distinguished delegates,

Let me inform you that, according to official reports, yesterday a Panama registered ship named **Criuser Heilan** attacked by pirates in Gulf of Oman. The captain requested assistance from the navies present at the area. In response, the Iranian navy immediately approached the scene and after a delicate operation, could be able to save the ship under threat. In addition to that, in March and April this year, two ships with the flag of Bolivia and Panama with the names M/V **Eglantine** and **Xianghuamen** have been hijacked by pirates. Having received the message of assistance by the captain of **Eglantine** and the Government of China, Iranian navy present at the region took military operation, boarded the ships and finally rescued the seafarers and the ships. In these two operations, 21 pirates captured and delivered to the relevant judicial authorities.

In conclusion, Mr Chairman, the I.R of Iran would like to express its thanks to IMO Secretariat in particular the former Secretary-General, Mr Mitropoulos, and the current Secretary-General Mr Koji Sekimizu, for their unrested efforts and also any other Member States that have significantly taken part in anti-piracy measures and protection of vital shipping routes for the benefit of the maritime industry as a whole.

In addition, keeping in mind legal and sovereignty aspects of independent states that have to be respected in accordance with international treaties and customary laws in taking all kinds of anti-piracy actions, we support IMO's initiatives and with great interest pay due attention to the issue of using privately contracted Armed Security Personnel on board of the commercial ships. We hope the outcome of the debates and various proposals put forward under agenda item 20 of the current MSC session could be fruitful and satisfactory to all parties.

Thank you Mr Chairman."

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**ANNEX 42**

**STATEMENT BY THE DELGATION OF NORWAY**

"Thank you Mr. Chairman,

Norway favours transparency. Our national law requires that all documents are in the public domain, unless they can be exempted for a specific reason - such as national security.

With regard to the issue before us, the issue of confidentiality, our position is that confidentiality should be the exception and not the rule. The reasons for this are of a more principled nature. Transparency is so important that we as IMO Member States can have confidence that the conventions are being implemented in good faith by all of us.

The world community expects transparency and accountability from international shipping. It is trite to say that shipping is a global activity and that 90% of global trade is carried on ships. But this explains why there is this expectation of transparency and accountability of all States involved in international shipping. Flag States affect the interests of coastal States, as well as the other way around. Also other actors have legitimate interests in how we perform as flag and coastal States, such as shipowners and seafarers' organizations, and other NGO's as well.

Therefore it is so important that we as Member States of IMO adopt a more proactive approach to demonstrate to the international/world community that we are implementing our obligations in good faith. The way to do that is to disclose information about how we have implemented our obligations and any areas for improvement that we may have as well as the actions we are taking to show that we take our obligations seriously.

Some States have expressed concern that mandatory disclosure of audit findings could lead to information being misused or abused. Our response to that concern is that the III Code applies to coastal States as well as flag States. So it is not only the case that flag States are faced with expectations of more transparency and accountability by the world community and coastal States in particular, but flag States should have the same expectations of coastal States. Any shortcomings that Member States have with regard to their coastal State obligations would be part of the findings of audits.

Other States have expressed a concern that the Member State should retain its sovereign right to decide whether audit findings should be disclosed or not. We would argue that in deciding on mandatory disclosure of audit findings, we as Member States are in fact using our sovereignty to make that decision, in a similar way that we have used our sovereignty to accept provisions of tacit acceptance in SOLAS and MARPOL, for example. The key may lie in reconciling their interests both flag States and coastal States. We therefore appeal to those States to reconsider.

We know that there are many different traditions with regard to transparency: it would be surprising if all 170 Member States of IMO had the same way of approaching transparency and disclosure. Some States have more restrictive approaches, which we fully understand and accept. Still we should be able to find a workable compromise in the IMO spirit. The world community expects it of us as responsible members of the international shipping community. Mandatory disclosure shows that we have nothing to hide. The executive summary report that the 5$^{th}$ session of the Joint Working Group on the Member State Audit Scheme drafted should be that compromise, which we can support.

Thank you, Mr. Chairman."