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## REPORT TO THE MARITIME SAFETY COMMITTEE

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## 1 GENERAL

### Introduction

1.1 The Sub-Committee on Ship Design and Equipment (DE) held its fifty-fifth session from 21 to 25 March 2011 under the chairmanship of Mrs. Anneliese Jost (Germany). The Vice-Chairman, Dr. Susumu Ota (Japan), was also present.

1.2 The session was attended by delegations from the following Member Governments:

ALGERIA	LATVIA
ANGOLA	LIBERIA
ANTIGUA AND BARBUDA	LIBYAN ARAB JAMAHIRIYA
ARGENTINA	MALAYSIA
AUSTRALIA	MALTA
AZERBAIJAN	MARSHALL ISLANDS
BAHAMAS	MEXICO
BELGIUM	MONTENEGRO
BELIZE	MOROCCO
BRAZIL	NETHERLANDS
CANADA	NEW ZEALAND
CHILE	NIGERIA
CHINA	NORWAY
COLOMBIA	PANAMA
COOK ISLANDS	PAPUA NEW GUINEA
CROATIA	PERU
CYPRUS	PHILIPPINES
DEMOCRATIC PEOPLE'S REPUBLIC OF KOREA	POLAND
DENMARK	REPUBLIC OF KOREA
DOMINICA	ROMANIA
ECUADOR	RUSSIAN FEDERATION
EGYPT	SAINT KITTS AND NEVIS
FINLAND	SAUDI ARABIA
FRANCE	SINGAPORE
GERMANY	SOUTH AFRICA
GHANA	SPAIN
GREECE	SWEDEN
ICELAND	SYRIAN ARAB REPUBLIC
INDIA	THAILAND
INDONESIA	TONGA
IRAN (ISLAMIC REPUBLIC OF)	TURKEY
IRELAND	TUVALU
ISRAEL	UKRAINE
ITALY	UNITED KINGDOM
JAPAN	UNITED STATES
KENYA	URUGUAY
KIRIBATI	VANUATU

and the following Associate Member of IMO:

HONG KONG, CHINA

1.3 The session was also attended by observers from the following intergovernmental organizations:

EUROPEAN COMMISSION (EC)  
MARITIME ORGANIZATION FOR WEST AND CENTRAL AFRICA (MOWCA)  
INTERNATIONAL MOBILE SATELLITE ORGANIZATION (IMSO)

and by observers from the following non-governmental organizations in consultative status:

INTERNATIONAL CHAMBER OF SHIPPING (ICS)  
INTERNATIONAL ORGANIZATION FOR STANDARDIZATION (ISO)  
INTERNATIONAL SHIPPING FEDERATION (ISF)  
INTERNATIONAL UNION OF MARINE INSURANCE (IUMI)  
COMITÉ INTERNATIONAL RADIO-MARITIME (CIRM)  
BIMCO  
INTERNATIONAL ASSOCIATION OF CLASSIFICATION SOCIETIES (IACS)  
OIL COMPANIES INTERNATIONAL MARINE FORUM (OCIMF)  
INTERNATIONAL MARITIME PILOTS' ASSOCIATION (IMPA)  
FRIENDS OF THE EARTH INTERNATIONAL (FOEI)  
INTERNATIONAL ASSOCIATION OF DRILLING CONTRACTORS (IADC)  
INTERNATIONAL COUNCIL OF MARINE INDUSTRY ASSOCIATIONS (ICOMIA)  
INTERNATIONAL FEDERATION OF SHIPMASTERS' ASSOCIATIONS (IFSMA)  
INTERNATIONAL LIFESAVING APPLIANCES MANUFACTURERS'  
ASSOCIATION (ILAMA)  
COMMUNITY OF EUROPEAN SHIPYARDS' ASSOCIATIONS (CESA)  
INTERNATIONAL ASSOCIATION OF INDEPENDENT TANKER OWNERS  
(INTERTANKO)  
INTERNATIONAL MARITIME RESCUE FEDERATION (IMRF)  
CRUISE LINES INTERNATIONAL ASSOCIATION (CLIA)  
INTERNATIONAL ASSOCIATION OF DRY CARGO SHIPOWNERS  
(INTERCARGO)  
WORLD WIDE FUND FOR NATURE (WWF)  
THE INSTITUTE OF MARINE ENGINEERING, SCIENCE AND TECHNOLOGY  
(IMarEST)  
INTERNATIONAL SHIP MANAGERS' ASSOCIATION (InterManager)  
INTERNATIONAL PARCEL TANKERS ASSOCIATION (IPTA)  
THE INTERNATIONAL MARINE CONTRACTORS ASSOCIATION (IMCA)  
THE ROYAL INSTITUTION OF NAVAL ARCHITECTS (RINA)  
INTERFERRY  
INTERNATIONAL TRANSPORT WORKERS' FEDERATION (ITF)  
INTERNATIONAL PAINT AND PRINTING INK COUNCIL (IPPIC)  
NACE INTERNATIONAL  
THE NAUTICAL INSTITUTE (NI)  
PACIFIC ENVIRONMENT  
SUPERYACHT BUILDERS ASSOCIATION (SYBAss)

### **Opening address of the Secretary-General**

1.4 The Secretary-General delivered his opening address, the full text of which is reproduced in document DE 55/INF.6.

1.5 The Sub-Committee shared the sentiments of sadness, compassion, sympathy and solidarity conveyed by the Secretary-General to the Government of Japan and the Japanese people concerning the devastating effects of the 11 March earthquake and tsunami on the country. The statement made by the delegation of Japan in response is set out in annex 21.

### **Chairman's remarks**

1.6 The Chairman, in thanking the Secretary-General, stated that his words of encouragement as well as his advice and requests would be given every consideration and that his helpful guidance on the subjects to be considered by the Sub-Committee was very much appreciated, in particular his useful advice concerning the work on the evaluation and replacement of lifeboat release and retrieval systems, the development of a mandatory Polar Code and the development of performance standards for recovery systems for all types of ship.

### **Statements**

1.7 The delegation of the Islamic Republic of Iran made a statement with regard to the celebration of the International Nowruz Day, which was mentioned in the Secretary-General's opening address, as set out in annex 22.

1.8 The delegation of Indonesia made a statement regarding a recent attack on an Indonesian vessel by pirates off the coast of Somalia, which is set out in annex 23.

### **Adoption of the agenda**

1.9 The Sub-Committee adopted the agenda for its fifty-fifth session (DE 55/1) and agreed to be guided in its work, in general, by the annotations contained in document DE 55/1/1 (Secretariat). The agenda, as adopted, with the list of documents considered under each agenda item, is set out in document DE 55/INF.7.

## **2 DECISIONS OF OTHER IMO BODIES**

2.1 The Sub-Committee noted the decisions and comments pertaining to its work made by MSC 88 (DE 55/2) and SLF 53 and STW 42 (DE 55/2/1) and took them into account in its deliberations when dealing with relevant agenda items.

2.2 Having been informed, as requested by FSI 18, of the outcome of the Concentrated Inspection Campaign on lifeboat launching arrangements recently carried out by the Paris MoU on PSC, the Sub-Committee agreed to consider this matter under agenda item 7 (Making the provisions of MSC.1/Circ.1206/Rev.1 mandatory).

## **3 CONSIDERATION OF IACS UNIFIED INTERPRETATIONS**

3.1 The Sub-Committee recalled that this was a continuous item on its biennial agenda, established by MSC 78, so that IACS could submit any newly developed or updated unified interpretations for the consideration of the Sub-Committee with a view to developing appropriate IMO interpretations, if deemed necessary.

### **Arrangements for steering capability and function on ships**

3.2 The Sub-Committee considered document DE 55/3 (IACS), providing the text of an IACS Unified Interpretation (UI SC 242) relating to the arrangements for steering capability and function on ships fitted with propulsion and steering systems other than traditional arrangements for a ship's directional control required by SOLAS chapter II-1.

3.3 Following consideration, the Sub-Committee inserted the word "dedicated" before the words "steering gear" in the interpretation of SOLAS regulation II-1/29.1, and, subsequently, agreed to a draft MSC circular on Unified interpretation of SOLAS regulations II-1/28 and II-1/29, as set out in annex 1, for submission to MSC 90 for approval. In this

context, the Sub-Committee clarified that it was not the intention to apply the interpretation retrospectively and, therefore, agreed to insert a place holder for a date of application in paragraph 2 of the draft circular, whereby the date of application should be the date of approval of the interpretation by the Committee.

#### **4 PERFORMANCE STANDARDS FOR RECOVERY SYSTEMS FOR ALL TYPES OF SHIPS**

##### **General**

4.1 The Sub-Committee recalled that DE 54 had agreed that a performance standard based on functional requirements should be prepared, as instructed by MSC 81, which would not require the carriage of dedicated recovery equipment, but would allow sufficient flexibility with regard to the actual equipment used for recovery operations, and that, for the time being, draft SOLAS regulation III/17-1 (Recovery arrangements for rescuing persons) would be maintained as drafted by MSC 81. Member Governments and international organizations were invited to submit concrete proposals in line with the above decision to this session, with a view towards finalization of the output to meet the Committee's 2012 deadline.

##### **Consideration of draft performance standards**

4.2 The Sub-Committee had for its consideration the following documents:

- .1 DE 55/4 and DE 55/INF.5 (IMRF), supporting the compelling need for positive action to be taken to address the problems of recovery of people from survival craft or from the water and providing information about the various types of recovery systems currently available or under development;
- .2 DE 55/4/1 (ICS, BIMCO, CLIA, IMCA, INTERCARGO, INTERTANKO, IPTA, the Nautical Institute and OCIMF), expressing the view that a "performance based" standard for recovery systems is unrealistic, impractical and too restrictive, taking into account that commercial ships are not designed to recover large numbers of people at sea and proposing alternative functional requirements in support of the ISM Code; and
- .3 DE 55/4/2 (Australia, Chile, Germany, Iceland and IMRF), proposing a new draft performance standard for recovery systems, based on functional requirements in accordance with the agreement at DE 54, and presenting a modified draft of proposed new SOLAS regulation III/17-1, based on document MSC 81/WP.6.

4.3 During the discussion, many delegations supported the draft performance standard for recovery systems and functional requirements contained in document DE 55/4/2, taking into account that Administrations would have to approve such recovery systems based on the proposed functional requirements. However, many other delegations expressed concerns regarding the above-mentioned functional requirements, which they considered were too restrictive and appeared to require the carriage of dedicated recovery equipment and, therefore, they supported alternative functional requirements based on the ISM Code, as proposed in document DE 55/4/1.

4.4 Following an extensive debate, the Sub-Committee, having recognized that there were a number of commonalities in the proposals presented in documents DE 55/4/1 and DE 55/4/2, agreed that the performance standards should focus on "recovery capability" for all types of ships (in lieu of "recovery systems") and decided to amalgamate the proposals in the aforementioned documents, for further consideration by the Sub-Committee.

### Consideration of harmonized draft performance standards

4.5 Having considered draft text proposed by the Chairman (DE 55/WP.7), which was based on document DE 55/4/2, containing modifications to draft SOLAS regulation III/17-1 (annex 1) and modifications to the draft performance standard for recovery capability for all types of ships (annex 2), many delegations supported the revised draft performance standard presented in document DE 55/WP.7 as a compromise. However, many other delegations expressed concerns, in particular regarding the functional requirements in section 4, which had been left in square brackets, being of the view that:

- .1 paragraph 4.3, requiring rescue in a horizontal or near-horizontal ("deck chair") position, was difficult for certain ships and this provision duplicated advice already contained in the Guide to recovery techniques (MSC.1/Circ.1182); and
- .2 paragraph 4.5, requiring a capability of recovering at least [10] persons per hour, was too prescriptive.

4.6 In considering how best to proceed, the Sub-Committee decided to further consider the draft Performance standards and the associated draft new SOLAS regulation III/17-1 at DE 56, using documents DE 55/WP.7 and DE 55/4/1 (paragraph 6) as the basis for further consideration. In this regard, the Sub-Committee agreed that the matter should be concluded at DE 56 for referral to MSC 90, so that the Committee's target year of 2012 for completion could be met.

### Extension of the target completion year

4.7 Taking into account the progress made at the session, the Sub-Committee invited the Committee to extend the target completion year for the output to 2012.

## 5 SAFETY PROVISIONS APPLICABLE TO TENDERS OPERATING FROM PASSENGER SHIPS

5.1 The Sub-Committee recalled that DE 54, having considered the outcomes of COMSAR 14, FP 54 and NAV 56 (DE 54/8) and having noted that the FP, SLF and STW Sub-Committees had not yet considered the draft Guidelines, had decided to postpone further consideration of the draft Guidelines for passenger ship tenders (DE 53/WP.3) to this session, when the contributions of SLF 53 and STW 42 would be available.

5.2 The Sub-Committee had for its consideration the following documents:

- .1 DE 55/5 (Ireland), providing comments on the draft Guidelines in relation to, *inter alia*, the adequacy of the lifeboat standard for the carriage of up to 150 persons from passenger ships to shore, since Ireland was of the opinion that the requirements contained in the draft Guidelines were inadequate and were not equivalent to passenger ships of like size and service; that the use of tenders complying with lifeboat requirements needs to be reconsidered; that proper guidelines should be developed for tenders that also comply with the lifeboat standards; and that modern passenger ship tenders were constructed to a higher standard than the lifeboat standard;
- .2 DE 55/5/1 (CLIA), commenting on the report of SLF 53, and, *inter alia*, recognizing that tendering vessels are not intended for full ocean service, inviting the Sub-Committee to consider alternative wording relating to paragraphs 2.2 and 3.2 of the draft Guidelines such as: "If not certified as a

lifeboat, tender vessels should have a SOLAS Passenger Vessel Certificate specifying the authorized service, route and conditions of operation and listing any restrictions such as the maximum number of passengers to be carried, crew requirements and any route restrictions such as maximum distance of operation from shore and maximum distance of operation from the cruise ship", since CLIA was of the view that the above wording was in keeping with the practices of Member States in issuing SOLAS certificates to small passenger vessels such as existing tender vessels, offshore support crew vessels and the like; and

- .3 DE 55/5/2 (Secretariat), providing the input of SLF 53 and STW 42 to the draft Guidelines.

5.3 The Sub-Committee did not support the proposals in document DE 55/5 that guidelines should be developed for tenders that also comply with the lifeboat standards, noting that the issues raised in the above document had already been discussed in detail, taking into account that the guidelines under development are meant to encompass international best practices and not impose national rules on international shipping.

5.4 The delegation of Ireland, referring to their document DE 55/5, pointed out that they had raised these issues at DE 53 and the FP, SLF, NAV and STW Sub-Committees' meetings, and had anticipated that the stability issue would be referred to the working group at SLF 53; however, this was not the case and the issue was discussed in plenary. The delegation reiterated their view that the fundamental principle of accepting the lifeboat standard for tendering up to 150 people, other than in an emergency situation, was not correct and needed to be reconsidered.

5.5 Having considered documents DE 55/5/1 and DE 55/5/2, the Sub-Committee agreed to the modifications proposed by SLF 53 and STW 42 and, with regard to the options concerning the distance of tenders which have single means of propulsion from passenger ship to embarkation point on shore (paragraph 3.2.3 of the draft Guidelines), agreed to use the text "less than 2.5 nm".

5.6 Subsequently, the Sub-Committee agreed to the draft MSC circular on Guidelines for passenger ship tenders, as set out in annex 2, for submission to MSC 90 for approval, and requested FP 55 to consider the parts under their purview, in particular paragraph 3.3 of the draft Guidelines, and advise MSC 90 accordingly.

5.7 The delegation of Ireland reserved their position with regard to the draft Guidelines for passenger ship tenders.

### **Completion of the work on this output**

5.8 The Sub-Committee invited the Committee to note that the work on this output had been completed.

## **6 GUIDELINES FOR A VISIBLE ELEMENT TO GENERAL ALARM SYSTEMS ON PASSENGER SHIPS**

6.1 The Sub-Committee recalled that DE 54 had considered document DE 54/9 (United States), providing draft Guidelines for the design and installation of a visible element to the general emergency alarm on passenger ships to accommodate passengers who are deaf or hard of hearing, which had been developed taking into account documents DE 53/20 (United States) and DE 53/20/1 (CLIA), and that the proposed draft Guidelines were supported in principle.

6.2 The Sub-Committee also recalled that DE 54, taking into account that several delegations had expressed concern regarding the language used in parts of the draft Guidelines which seemed to imply that some provisions went beyond existing requirements in IMO instruments, had decided to further consider the draft Guidelines at this session, with a view towards completion, so that they could then be referred to FP 55 for input and subsequent submission to MSC 90 for approval.

6.3 Having considered the draft Guidelines (DE 54/9) and having noted concerns that section 5 was too prescriptive, the Sub-Committee, nevertheless, agreed to the draft MSC circular on Guidelines for the design and installation of a visible element to the general emergency alarm on passenger ships, as set out in annex 3, for submission to MSC 90 for approval, and requested FP 55 to consider the parts under their purview and advise MSC 90 accordingly.

### **Completion of the work on this output**

6.4 The Sub-Committee invited the Committee to note that work on this output had been completed.

## **7 MAKING THE PROVISIONS OF MSC.1/CIRC.1206/REV.1 MANDATORY**

### **General**

7.1 The Sub-Committee recalled that MSC 88, acknowledging the general concern with regard to the evaluation and replacement of lifeboat release and retrieval systems, had decided to defer the adoption of the proposed new SOLAS regulation III/1.5 and the associated amendments to the LSA Code, as well as the approval of the draft Guidelines for evaluation and replacement of lifeboat release and retrieval systems, to MSC 89 and instructed DE 55 to urgently reconsider the matter. To facilitate the discussion at DE 55, MSC 88 agreed to convene a meeting of the *Ad hoc* Intersessional Working Group on Lifeboat Release Hooks (ISWG), to be held from 16 to 18 March 2011, immediately prior to DE 55.

7.2 The Sub-Committee also recalled that MSC 88 had instructed it to consider an inconsistency between SOLAS regulations III/19.3.3.4 and III/20.11.2 concerning the testing of free-fall lifeboat release systems, raised by IACS, with a view to developing relevant amendments to SOLAS chapter III.

7.3 The Sub-Committee further recalled that DE 53, with regard to the issue of making the Measures to prevent accidents with lifeboats (MSC.1/Circ.1206/Rev.1) mandatory, in conjunction with the Interim Recommendation on conditions for authorization of service providers for lifeboats, launching appliances and on-load release gear (MSC.1/Circ.1277), had invited Member Governments and international organizations to provide information on LSA service providers and their experience gained in the implementation of the guidance set out in the above circulars.

### **Evaluation and replacement of lifeboat release and retrieval systems**

7.4 With regard to the outcome of MSC 88 (DE 55/7) relating to the issue of evaluation and replacement of lifeboat release and retrieval systems, the Sub-Committee recalled that MSC 88 had agreed that the implementation date of the new SOLAS requirements should be 1 July 2014, and, subsequently, instructed DE 55 to urgently resolve the following matters with the highest priority:

- .1 finalization of the draft Guidelines for evaluation and replacement of lifeboat release and retrieval systems;

- 
- .2 finalization of the associated draft amendments to SOLAS regulation III/1;
  - .3 finalization of the associated draft amendments to chapter IV of the LSA Code;
  - .4 preparation of associated draft amendments to the Revised recommendation on testing of life-saving appliances, with a view towards finalization;
  - .5 preparation of a procedure for reporting the results of the evaluation of each type of existing lifeboat release and retrieval system to the Organization; and
  - .6 further consideration of matters related to the use of Fall Prevention Devices (FPDs).

7.5 In this regard, the Sub-Committee was informed that FSI 19 had requested the Secretariat to call the attention of the ISWG, DE 55 and STW 43 to the findings substantiated in documents FSI 19/INF.7 (Paris MoU) and FSI 19/INF.9 (Tokyo MoU), on the results of the 2009 Paris MoU and Tokyo MoU Concentrated Inspection Campaigns (CIC) on lifeboat launching arrangements, taking into account the particular seriousness of the matter in terms of accident occurrences. The Sub-Committee decided to take the aforementioned information into account in its discussions on the issue, as appropriate.

#### **Progress report of the intersessional working group**

7.6 The Sub-Committee noted a brief progress report by the Chairman of the ISWG, Mr. S. Ota (Japan), on the work of the group concerning the evaluation and replacement of lifeboat release and retrieval systems, in particular that the ISWG had considered the following documents submitted to this session:

- .1 DE 55/7/2 (BIMCO, CLIA, ICS, IFSMA, ITF, IPTA, the Nautical Institute and OCIMF), proposing that the use of FPDs be made mandatory and implemented immediately as an interim measure until on-load release hooks and the associated mechanisms have been proven safe in accordance with the latest standards;
- .2 DE 55/7/4 (Norway), proposing amendments to the draft Guidelines for the evaluation and replacement of lifeboat release and retrieval systems (hereinafter called "the draft Guidelines") (annex 1), suggesting that a definition of "a stable hook" and additional requirements regarding operation systems are important and that a clearer connection between design review, degradation, stability and function test and the one-time special physical examination, should be established; followed by proposed amendments to paragraphs 4.4.7.6.2 to 4.4.7.6.5 and 4.4.7.6.7 of the LSA Code (annex 3) and consequential modifications to the draft new SOLAS regulation III/1.5 (annex 2);
- .3 DE 55/7/5 (United Kingdom), proposing modifications to the draft amendments to the Revised recommendations on testing life-saving appliances (resolution MSC.81(70)), relating to the developments with regard to the draft Guidelines, in order to achieve consistency for new and existing lifeboat release mechanisms when testing to demonstrate compliance with paragraph 4.4.7.6.3 of the LSA Code;

- .4 DE 55/7/6 (IACS), proposing amendments to the draft Guidelines to facilitate timely, global and consistent implementation of the evaluation and replacement process;
- .5 DE 55/7/7 (ICS, BIMCO, IFSMA, INTERCARGO, INTERTANKO, IPTA, ITF, the Nautical Institute and OCIMF), proposing amendments to the draft Guidelines (annex 1) and amendments to paragraphs 4.4.7.6 of the LSA Code (annex 2), applying a goal-based functional approach, together with consequential amendments to the draft new SOLAS regulation III/1.5 (annex 3), believing that the core elements for a safe release mechanism are based on sound and competent design and that the means to assess these aspects namely, design review and hook testing, should be sufficiently addressed;
- .6 DE 55/7/8 (Germany), proposing a format for reporting the results of the evaluation for each type of existing lifeboat release and retrieval system, for inclusion in the draft Guidelines, with a view to submitting the results of the evaluation to the Organization for collection of data and publication in GISIS;
- .7 DE 55/7/9 (ILAMA), proposing amendments to the draft Guidelines to introduce clarifications; and
- .8 DE 55/7/12 (ILAMA), providing comments and proposals to document DE 55/7/7 regarding the draft Guidelines, the draft amendments to the LSA Code and the draft new SOLAS regulation III/1.5.

7.7 Having considered the progress report of the Chairman of the ISWG, the Sub-Committee noted, additionally, a view that vibration is potentially a serious aspect of the safety of hooks, and agreed that this matter may further be considered in the future (see paragraph 7.25).

#### **Inconsistency in SOLAS requirements concerning the testing of free-fall lifeboat release systems**

7.8 With regard to the testing of free-fall lifeboat release systems, the Sub-Committee, having considered document DE 55/7/10 (IACS), proposing to revise SOLAS regulation III/20.11.2, as amended by resolution MSC.216(82), and document DE 55/WP.8, containing draft amendments to SOLAS regulation III/20.11.2, which was prepared based on document DE 55/7/10, agreed to draft amendments to SOLAS regulation III/20.11.2, as set out in annex 4, for submission to MSC 89 as an urgent matter for approval, with a view to subsequent adoption. In this context, the Sub-Committee agreed to the view that the early implementation of these amendments should be advocated.

7.9 Concerning the related issue of perceived problems with the 110% load test of free-fall lifeboats, which it had been asked to consider by MSC 88, the Sub-Committee was of the view that the relevant requirements were satisfactory in this regard and invited MSC 90 to note this outcome of its considerations on this matter.

#### **Making MSC.1/Circ.1206/Rev.1 mandatory**

7.10 With regard to the matter of making the Measures to prevent accident with lifeboats (MSC.1/Circ.1206/Rev.1) mandatory, the Sub-Committee had for its consideration the following documents:

- .1 DE 55/7/1 (Panama, ICS, IFSMA and ITF), requesting ILAMA to provide details of the global service provisions for relevant LSA, including by non-ILAMA members, and proposing that, once a sufficient and appropriately validated service provision is achieved, the Committee may then find it appropriate to reconsider whether or not a need exists for mandating the provisions of MSC.1/Circ.1206/Rev.1;
- .2 DE 55/7/3 (ILAMA), suggesting that the engine, steering and propulsion systems of lifeboats should be subjected to thorough inspection required by the Guidelines, taking into account that a faulty lifeboat engine or propulsion system may place the crew in extreme danger following the launch of the lifeboat; and
- .3 DE 55/7/11 (ILAMA), expressing the view that MSC.1/Circ.1206/Rev.1 and the supporting guidelines contained in MSC.1/Circ.1277 could now be made mandatory since their website lists all known manufacturers of life-saving appliances, in reply to document DE 55/7/1 on the establishment of a global service network by the service providers as a prerequisite for mandating MSC.1/Circ.1206/Rev.1.

7.11 Having considered the above documents and following a lengthy discussion, the Sub-Committee, while principally supporting to make the provisions of MSC.1/Circ.1206/Rev.1 and MSC.1/Circ.1277 mandatory, recognized the need for more information on the global coverage by independent LSA service providers, criteria for such providers, and for clarifications regarding vague expressions, such as "adequate coverage" and "inadequate maintenance", and agreed to further consider the issue at DE 56, in particular how to make the provisions mandatory and whether the two above circulars should be merged into one instrument. Consequently, the Sub-Committee invited the Committee to extend the target completion date for the agenda item to 2013.

7.12 With respect to the proposal by ILAMA to introduce provisions for the inspection of engine, steering and propulsion systems of lifeboats by manufacturers (DE 55/7/3), this was not supported by the Sub-Committee, since such servicing was normally carried out by the ship's crew and no problems had been encountered in this regard.

### **Establishment of a working group**

7.13 Having considered the above matters, the Sub-Committee established the Working Group on Lifeboat Release Hooks and instruct it, taking into account the outcome of the ISWG and the comments made and decisions taken in plenary, as well as documents DE 55/7, DE 55/7/2, DE 55/7/4, DE 55/7/5, DE 55/7/6, DE 55/7/7, DE 55/7/8, DE 55/7/9 and DE 55/7/12, to:

- .1 finalize the draft Guidelines for evaluation and replacement of lifeboat release and retrieval systems, including matters related to the use of FPDs;
- .2 finalize the draft amendments to SOLAS regulation III/1;
- .3 finalize the draft amendments to chapter IV of the LSA Code;
- .4 finalize the draft amendments to the Revised recommendation on testing of life-saving appliances (resolution MSC.81(70)); and
- .5 finalize a procedure for reporting the results of each type of existing lifeboat release and retrieval systems evaluation to the Organization.

## **Report of the working group**

7.14 Having received the report of the working group (DE 55/WP.3), the Sub-Committee approved it in general and took action as described in the following paragraphs.

### ***General statements***

7.15 The observer from ICS, supported by the delegation of Tuvalu and observers from IFSMA, INTERTANKO, IMCA, ITF and the Nautical Institute, stated, on the issue of vibration tests and secondary safety systems, that ICS, together with other industry associations and interested Administrations, intended to develop a best practice guideline to assist ship owners and operators in their selection of replacement hooks, including the recommendation that replacement hooks selected should be of a model or type to which a permanent secondary safety system is fitted to ensure the real and perceived safety of future lifeboat release systems. They also stated their concern, shared by the delegation of the United States in the working group, regarding the difficulty of setting an accurate replacement date for an unknown number of replacement hooks since it was not known when compliant hooks would be available, and that the Sub-Committee should seriously consider this concern and make arrangements to review the replacement date set when more information was available, in order to ensure that this very important measure could be practically implemented.

7.16 The delegation of the Marshall Islands, supported by the delegations of the Bahamas, Liberia, Tuvalu and Vanuatu and observers from IMCA, ITF and the Nautical Institute, stated that, whilst considering that FPDs or a secondary safety system is not a substitute for a stable lifeboat release and retrieval system, it believed that a secondary safety system properly designed into new lifeboat release and retrieval systems would reduce the probability of accidents during drills, which would further restore confidence in seafarers to perform drills on a routine basis.

7.17 The delegation of Panama, supporting the above statements, further stated that the FSI Sub-Committee should consider the way forward in cases where the evaluation of lifeboat release and retrieval systems carried out by the flag State Administration conflicted with the evaluation carried out by the port State Administration.

### ***Guidelines for evaluation and replacement of lifeboat release and retrieval system***

7.18 In considering matters related to the draft Guidelines for evaluation and replacement of lifeboat release and retrieval systems, the Sub-Committee agreed to the procedure for reporting the results of each type of existing lifeboat release and retrieval system evaluation, for incorporation in the draft Guidelines as a new appendix 3.

7.19 The delegation of China expressed the view that confusion in the shipping industry may be caused by the draft reporting procedure, in particular, where different Administrations arrived at different evaluation results on the same type of hooks. Therefore, there is a need for coordination before uploading the information on evaluation to GISIS and, consequently, the delegation did not agree with the conclusion of the working group.

7.20 Subsequently, the Sub-Committee agreed to the draft MSC circular on Guidelines for evaluation and replacement of lifeboat release and retrieval systems, set out in annex 5, for submission to MSC 89 for approval.

7.21 The delegation of Germany reserved its position regarding the deletion of the extended life cycle test in the test requirements set out in appendix 1 to the draft Guidelines as originally agreed by the previous Intersessional *Ad Hoc* Working Group established by

MSC 87. Noting that the proposed test was lacking statistical relevance, the delegation of Germany was of the view that continuation of the test until failure, or at least 5 life cycle times, would be a suitable means to gain valuable information on possible wear effects critical for the function of the on board release hook under consideration.

#### ***Draft amendments to SOLAS regulation III/1***

7.22 Having considered the need for a time limit for the replacement of lifeboat on-load release mechanisms not complying with paragraphs 4.4.7.6.4 to 4.4.7.6.6 of the LSA Code, the Sub-Committee agreed to a date of 1 July 2019, based on a five-year inspection period after 1 July 2014. Referring to the five-year inspection period, the Sub-Committee noted that the first scheduled dry-docking is the first scheduled out of water survey of the ship's outer bottom.

7.23 Subsequently, the Sub-Committee agreed to the draft amendments to SOLAS regulation III/1, as set out in annex 6, which were prepared on the basis of the report of the previous intersessional working group (MSC 88/3/4, annex 2), for submission to MSC 89 for adoption.

7.24 In considering the urgency of evaluating lifeboat release and retrieval systems and their replacements, and in order to encourage the early implementation of the new SOLAS regulation III/1.5, pending its entry into force, the Sub-Committee agreed to a draft MSC circular on Early application of new SOLAS regulation III/1.5, as set out in annex 7, for submission to MSC 89 for approval in conjunction with the adoption of the draft amendments to SOLAS regulation III/1.

#### ***Draft amendments to chapter IV of the LSA Code***

7.25 In considering matters related to the draft amendments to chapter IV of the LSA Code, the Sub-Committee noted that the group had agreed that it would be beneficial to develop a vibration test, in order to enable objective evaluation of compliance with the requirements in the aforementioned draft amendments. Notwithstanding the above, the Sub-Committee noted that it was difficult to develop such test procedure at this stage, due to lack of records of accidents caused by failure resulting from vibration, and invited Member Governments and international organizations to submit information on this matter for future consideration (see paragraph 7.7).

#### ***Date of entry into force and application date of the draft amendments to the LSA Code***

7.26 The Sub-Committee invited the Committee to decide on the application date of the draft amendments to the LSA Code, taking into account the time necessary for the development and approval of a new lifeboat release and retrieval systems.

7.27 Subsequently, the Sub-Committee agreed to the draft amendments to chapter IV of the International Life-Saving Appliance (LSA) Code, as set out in annex 8, for submission to MSC 89 for adoption.

#### ***Draft amendments to the Revised recommendation on testing of life-saving appliances***

7.28 Having noted that vibration test provisions could not be included in the draft amendments to the Revised recommendation (see also paragraph 7.25), the Sub-Committee agreed to draft amendments to the Revised recommendation on testing of life-saving appliances and an associated draft MSC resolution on, as set out in annex 9, for submission to MSC 89 for adoption.

## **8 GUIDELINES FOR THE STANDARDIZATION OF LIFEBOAT CONTROL ARRANGEMENTS**

8.1 The Sub-Committee recalled that DE 53, due to time constraints, could not finalize the draft Guidelines for the standardization of lifeboat control arrangements (DE 53/3, annex 1) and had agreed to consider them at this session.

8.2 Following consideration of the draft Guidelines and having noted concerns with regard to the use of mandatory language in the draft text, the Sub-Committee authorized the Secretariat to editorially modify the draft Guidelines, as appropriate, and agreed to the draft MSC circular on Guidelines for the standardization of lifeboat control arrangements, as set out in annex 10, for approval by MSC 90.

### **Completion of the work on this output**

8.3 The Sub-Committee invited the Committee to note that work on the output had been completed.

## **9 DEVELOPMENT OF A NEW FRAMEWORK OF REQUIREMENTS FOR LIFE-SAVING APPLIANCES**

9.1 The Sub-Committee recalled that DE 54, having fully supported the proposals contained in documents DE 54/10 and DE 54/10/1 (Japan) and having noted that a number of issues still needed clarification, had agreed to establish a working group at this session to further develop the draft framework of requirements for LSA and invited Member Governments and international organizations to submit relevant proposals.

9.2 Noting that no documents had been submitted to this session under this agenda item, the Sub-Committee, after a short discussion, acknowledging that further in-depth consideration of the matter was necessary, agreed to establish a working group at DE 56 to further develop the draft framework of requirements for life-saving appliances.

9.3 Consequently, the Sub-Committee invited Member Governments and international organizations to submit comments and proposals to DE 56, based on the above-mentioned documents and taking into account other relevant documents, such as the Code of practice for the evaluation, testing and acceptance of prototype novel life-saving appliances and arrangements (resolution A.520(13)) and the Guidelines for evaluation and replacement of lifeboat release and retrieval systems (see paragraph 7.20), in particular the proposals by the industry lifeboat group (ISWG LRH/2/3).

## **10 AMENDMENTS TO RESOLUTION A.744(18)**

### **General**

10.1 The Sub-Committee recalled that DE 54, having agreed that a new Assembly resolution should be prepared to supersede resolution A.744(18) and taking into account that SOLAS regulation XI-1/2 would need to be amended to refer to the new resolution, had requested the Secretariat, in consultation with the Chairman, to prepare a covering draft Assembly resolution for the adoption of the revised ESP Guidelines as a new Code and associated draft amendments to SOLAS regulation XI-1/2, for submission to this session for consideration.

10.2 The Sub-Committee also recalled that DE 54, having agreed to the draft revised ESP Guidelines (DE 54/23, annex 5), had requested the Secretariat to make any editorial corrections to ensure consistency when preparing the final draft text.

10.3 In this connection, the Sub-Committee recalled that DE 54, with regard to paragraph 1.4 of Annex A, Part A, of the ESP Guidelines, had agreed to include the following new second sentence in square brackets, for further consideration at this session:

"On bulk carriers of 100,000 tons deadweight and above, the intermediate survey between 10 and 15 years of age should be performed by two surveyors."

10.4 Having considered the sentence, the Sub-Committee agreed that it should be included in paragraph 1.4 of Annex A, Part A, of the ESP Guidelines, and requested the Secretariat to take the necessary action.

10.5 The Sub-Committee had for its consideration document DE 55/10 (Secretariat), providing the draft Assembly resolution for the adoption of the new ESP Code (annex 1) and the associated draft amendments to SOLAS regulation XI-1/2 (annex 2), bearing in mind the agreement at DE 54 that the mandatory nature of the instrument should be reflected in its title. Subsequently, the Secretariat considered that, in the draft ESP Guidelines (DE 54/23, annex 5), the words "Guidelines" and "A.744(18)" should be replaced by "Code" and the new Assembly resolution number, respectively, when the new Code is adopted. In this regard, the Sub-Committee noted that other IMO instruments refer to resolution A.744(18), and those instruments, in particular mandatory instruments (i.e. the Condition Assessment Scheme (CAS) (resolution MEPC.94(46)) and the performance standards for protective coatings (resolutions MSC.215(82) and MSC.244(83)) should be amended accordingly after the new Code is adopted by A 27.

#### **Assembly resolution for the adoption of the new ESP Code**

10.6 The Sub-Committee, having considered the draft Assembly resolution prepared by the Secretariat (DE 55/10, annex 1), agreed to the draft Assembly resolution on Adoption of the International Code on the enhanced programme of inspections during surveys of bulk carriers and oil tankers[, 2011] ([2011] ESP Code), as set out in annex 11, for submission to MSC 89 for approval, with a view to submission to A 27 for adoption. The Sub-Committee invited the Committee to endorse its decision to replace, in the text of the draft revised ESP Guidelines set out in document DE 54/23, annex 5, the word "Guidelines" with the word "Code", as a consequence of the change of title of the Guidelines to "Code".

#### **Draft amendments to SOLAS regulation XI-1/2**

10.7 The Sub-Committee, having considered the associated draft SOLAS amendments to make the new ESP Code mandatory (DE 55/10, annex 2), agreed to the draft amendments to SOLAS regulation XI-1/2, as set out in annex 12, for submission to MSC 89 for approval, with a view to subsequent adoption at MSC 90.

#### **Other consequential matters**

10.8 With respect to consequential amendments to other mandatory instruments (see paragraph 10.5), the Sub-Committee, bearing in mind the agreement at MSC 71 that sub-committees, in the course of the preparation of amendments to IMO instruments, should also check relevant references in the provisions of other instruments concerned which may not be within their purview, requested the Secretariat to prepare the text for consequential amendments to relevant instruments emanating from the adoption of the new ESP Code, for submission to the next session, and to report this course of action to MSC 89 and MEPC 62 for endorsement.

## **Change of title of output**

10.9 The Sub-Committee, having recalled that DE 54 had invited the Committee to rename the output as "Consideration of IACS unified interpretations and amendments to the ESP Guidelines", for consideration by MSC 89 when preparing its proposals for the new High-level Action Plan for the 2012-2013 biennium, and bearing in mind that the name of the ESP Guidelines would be changed to ESP Code (see paragraph 10.3), invited the Committee to change the title of this output to "Consideration of IACS unified interpretations and amendments to the ESP Code".

## **11 SUPPORTING GUIDELINES FOR CARGO OIL TANK COATING AND CORROSION PROTECTION**

### **General**

11.1 The Sub-Committee recalled that DE 53 had established a correspondence group and instructed it to develop draft guidelines on procedures for in-service maintenance and repair of coating systems for cargo oil tanks of crude oil tankers and draft guidelines on exemptions for crude oil tankers solely engaged in the carriage of cargoes and cargo handling operations not causing corrosion.

### **Report of the correspondence group**

11.2 The Sub-Committee had for its consideration the report of the correspondence group (DE 55/11), containing draft Guidelines on procedures for in-service maintenance and repair of coating systems for cargo oil tanks of crude oil tankers (annex 1), based on the Guidelines for maintenance and repair of protective coatings (MSC.1/Circ.1330), and draft Guidelines on exemptions for crude oil tankers solely engaged in the carriage of cargoes and cargo handling operations not causing corrosion (annex 2).

11.3 Following a general discussion, the Sub-Committee, noting the concerns of some delegations with regard to the finalization of the draft Guidelines at this session due to the fact that many substantive issues still needed to be resolved, considered the actions requested by the correspondence group (DE 55/11, paragraph 44) and, after thorough consideration, took decisions as outlined in the following paragraphs.

11.4 With regard to the draft Guidelines on procedures for in-service maintenance and repair of coating systems for cargo oil tanks of crude oil tankers (DE 55/11, annex 1), the Sub-Committee:

- .1 agreed to include references to industry guidelines (e.g., ISGOTT) in the draft Guidelines, as appropriate;
- .2 regarding proposed changes to the ISM Code, taking into account that the Code generally stipulates the policy and procedures to be established by the Company and that this matter was not referred to the Sub-Committee, agreed not to propose amendments to the ISM Code;
- .3 concerning whether slop tanks should be specifically included in the draft Guidelines, having recognized that new SOLAS regulation II-1/3-11 refers to "cargo oil tanks" but not "slop tanks", agreed that the draft Guidelines were sufficiently clear in this regard and no changes were necessary;
- .4 endorsed the group's view that coating requirements are applicable only to cargo tanks that are intended for carriage of crude oils;

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- .5 notwithstanding subparagraph .3 above, confirmed that, in the context of the implementation of resolutions MSC.288(87), MSC.289(87) and MSC.291(87), slop tanks on crude oil tankers should be considered as cargo oil tanks, if those slop tanks are intended to carry crude oil;
  - .6 agreed to include provisions related to blistering in the draft Guidelines and, recognizing that blistering is not included in the maintenance guidelines for ballast tank coatings (MSC.1/Circ.1330), requested the drafting group to consider how the relevant provisions could be harmonized;
  - .7 regarding the definitions of "Good", "Fair" and "Poor" in table 1 of the draft Guidelines, recognizing the difference between ballast tanks and cargo oil tanks, agreed to suggested changes to the definitions used in MSC.1/Circ.1330 and requested the drafting group to include, in its report, a description of those changes, for further consideration by the Sub-Committee, as appropriate;
  - .8 agreed on some deviations from the provisions in MSC.1/Circ.1330 in terms of "Good", "Fair" and "Poor" condition and requested the drafting group to include, in its report, a brief discussion of those deviations;
  - .9 concerning in-service condition monitoring (section 4.3), generally agreed to delete the section, for more flexibility, and instructed the group to consider retaining some parts of the section, if found necessary;
  - .10 regarding coating maintenance and coating repair, generally agreed to use flexible wording, as appropriate;
  - .11 concerning salt contamination (paragraph 6.1.10), agreed to modify the paragraph to allow for more flexibility;
  - .12 regarding stripe coating (paragraph 6.1.19), agreed to align the provisions with the requirements in MSC.1/Circ.1330;
  - .13 concerning Administrations' involvement in a repair, agreed to delete the square bracketed text in paragraph 6.2.2;
  - .14 regarding surface preparation for repair (section 6), decided to modify the section to allow for more flexibility;
  - .15 concerning the insertion on the repair of pits, agreed to delete repair of pitting and insert relevant footnotes that may refer to classification rules in table 2 of section 5.3;
  - .16 regarding the introduction of reduced Dry Film Thickness (DFT) (Tables 1 and 2), agreed to use the lower figures of the options presented by the correspondence group;
  - .17 concerning total soluble salts (section 6), decided to use the lower limits (i.e. 80 mg/m<sup>2</sup> for short and medium term repair, and 50 mg/m<sup>2</sup> for long term repair), noting the view of the delegation of China that, according to resolution MSC.288(87), the relevant requirement for new ships is 50 mg/m<sup>2</sup> of sodium chloride;

- .18 with respect to comments raised in the group on the status of the maintenance requirement, i.e. that maintenance is not explicitly required by SOLAS regulation II-1/3-11, noting that there are differences between SOLAS regulation II-1/3-2 and new SOLAS regulation II-1/3-11, and also noting that regulation II-1/3-11 does not explicitly require maintenance of the protective coating system, recognized that the Performance standard for protective coatings for cargo oil tanks of crude oil tankers (resolution MSC.288(87)), in particular paragraph 3.4.2.7 on procedures for in-service maintenance and repair of coating systems, refers to guidelines to be developed by the Organization in a footnote, which is the basis for the present draft Guidelines;
- .19 regarding the inclusion of ISGOTT in section 8 (References), agreed to include the reference, as may be modified, and also agreed to delete paragraph 4.2.1.3 regarding the frequency of surveys, such as those addressed in resolution A.744(18); and
- .20 concerning the cover page of the draft MSC circular, agreed to modify the proposed paragraph 2, using the text "Member Governments are invited to bring the annexed Guidelines to the attention of shipowners, shipbuilders and other parties concerned, for survey, assessment and repair of protective coatings in cargo oil tanks of crude oil tankers".

11.5 With regard to the draft Guidelines on exemptions for crude oil tankers solely engaged in the carriage of cargoes and cargo handling operations not causing corrosion (DE 55/11, annex 2), the Sub-Committee:

- .1 concerning the inclusion of inert gas, agreed to delete the relevant paragraph 4.1 of the draft Guidelines referring to inert gas;
- .2 regarding possible different criteria for top side (underdeck) parts and bottom parts of cargo oil tanks, having recognized that, since the Performance standard addresses both elements using two different test criteria, the draft exemption guidelines take a similar approach, generally agreed to the differentiation but not to the use of different criteria and instructed the drafting group to revise the text accordingly; and
- .3 relating to the inclusion of text regarding verification (section 5), having recognized the complexity of the issue (e.g., a variety of crude oil trading patterns), requested the drafting group to prepare a text that would provide the basis for exemptions to be granted, for further consideration by the Sub-Committee.

11.6 The Sub-Committee noted that the changes made to the draft guidelines, as compared to the Guidelines for maintenance and repair of protective coatings (MSC.1/Circ.1330), were not only matters specific to the different environment of cargo oil tanks of crude oil tankers and might necessitate a revision of the provisions in MSC.1/Circ.1330 in the future.

### **Establishment of a drafting group**

11.7 Having taken the above decisions, the Sub-Committee established the Drafting Group on Supporting Guidelines for Cargo Oil Tank Coating and Corrosion Protection and instructed it, taking into account the comments and decisions made in plenary, to:

- .1 finalize the draft Guidelines on procedures for in-service maintenance and repair of coating systems for cargo oil tanks of crude oil tankers, based on the correspondence group's report (DE 55/11, annex 1); and
- .2 prepare the text of the draft Guidelines on exemptions for crude oil tankers solely engaged in the carriage of cargoes and cargo handling operations not causing corrosion, based on the correspondence group's report (DE 55/11, annex 2).

### **Report of the drafting group**

11.8 Having received the report of the drafting group (DE 55/WP.6), the Sub-Committee approved it in general and took action as described in the following paragraphs.

#### ***Guidelines on procedures for in-service maintenance and repair of coating systems for cargo oil tanks of crude oil tankers***

11.9 The delegation of the Bahamas, supported by many delegations, stated that slop tanks on crude oil tankers should be considered as cargo oil tanks (see also paragraph 11.4.5).

11.10 The observer from IACS made a proposal regarding the involvement of Administrations in the survey of the protective coatings in section 1 and the Sub-Committee agreed to replace the words "involved in the survey" by "relating to monitoring" in paragraph 1.1; and that the second sentence of paragraph 1.3 should read "The effectiveness of the protective coating system should be monitored during the life of a ship."

11.11 The Sub-Committee, following further modifications, agreed to the draft MSC circular on Guidelines on procedures for in-service maintenance and repair of coating systems for cargo oil tanks of crude oil tankers, as set out in annex 13, for submission to MSC 89 for approval.

#### ***Guidelines for crude oil tankers solely engaged in the carriage of cargoes and cargo handling operations not causing corrosion***

11.12 With regard to the footnote associated with paragraph 3.1.1 of the draft Guidelines, related to test methods for Hydrogen Sulphide content, the Sub-Committee agreed to delete the footnote and insert square brackets around the words "i.e. it does not contain this vapour type as emanating into the vapour phase of the cargo tank" for further consideration and decision by MSC 90.

11.13 The delegation of the Bahamas proposed to delete the word "inspection" in paragraph 5.2 and the Sub-Committee agreed to keep the word in square brackets for final decision by MSC 90.

11.14 The Sub-Committee agreed to the draft MSC circular on Guidelines on exemptions for crude oil tankers solely engaged in the carriage of cargoes and cargo handling operations not causing corrosion, as set out in annex 14, for submission to MSC 90 for approval; and requested FSI 20 to consider section 5 (Exemption and verification procedure) and advise MSC 90 accordingly.

### **Completion of the work on this output**

11.15 The Sub-Committee invited the Committee to note that the work on this output had been completed.

## **12 DEVELOPMENT OF A MANDATORY CODE FOR SHIPS OPERATING IN POLAR WATERS**

### **General**

12.1 The Sub-Committee recalled that DE 54, following consideration of the report of the Polar Code Working Group (DE 54/WP.3) and recognizing that the work on the mandatory Polar Code was at a preliminary stage and that no agreement had yet been reached on the text for a draft Code (DE 54/WP.3, annex 3), had invited Member Governments and interested stakeholders to submit documents on the matter to this session, with a view to progress the work on the development of the Code.

12.2 The Sub-Committee also recalled that DE 54 had re-established the Correspondence Group on Development of a Mandatory Polar Code and instructed it to review the information in the hazard matrix developed at that session, identify any gaps, provide additional information to address the gaps identified, on the basis of annex 1 to document DE 54/WP.3, and submit a report to this session.

12.3 Before consideration of the submitted documents, the Chairman, referring to the legal technicalities concerning making environmental requirements for the polar regions mandatory (e.g., under the annexes to the MARPOL Convention and/or other relevant environmental conventions), informed the Sub-Committee that the Secretariat would submit a pertinent document to MEPC 62, exploring the options for making the Polar Code mandatory and, therefore, the Sub-Committee should continue with the development of the draft text of the Code, including environmental aspects, pending further instructions from the Committees regarding the aforementioned legal issues.

### **Report of the correspondence group**

12.4 The Sub-Committee considered the report of the correspondence group established at DE 54 (DE 55/12/1) and noted the hazard identification table for the draft Polar Code (annex 1) and the group's request for guidance on how "additional hazards" should be understood in the context of the Code to be developed, on the condition that the consequences of any hazard must be further explored to determine potential gaps in current conventions and codes and the need for additional measures. In addition, the Sub-Committee had the following documents commenting on the group's report:

- .1 DE 55/12/2 (Germany), providing a graphical representation of polar operation related hazards in order to organize the hazards identified by the correspondence group, taking into account that the hazard matrix contains some inconsistencies between the initiating circumstances (hazardous sources) and hazards, and showing the relation between hazardous sources, hazards, consequences and potential risk control; and
- .2 DE 55/12/15 (Denmark), drawing attention to the issue on how to establish sufficient rescue capacity for a passenger ship carrying a large number of passengers and crew in the remote polar areas in emergency situations like fire on board, groundings or collisions, where there is an urgent need to abandon ship, suggesting to use MSC.1/Circ.1184 (Enhanced contingency planning guidance for passenger ships operating in areas remote from SAR facilities) as a basis and that a redundant rescue capacity could be established by the pairing of passenger ships in remote areas.

12.5 Having noted the general support for the correspondence group's report, the Sub-Committee noted views regarding the proposals contained in documents DE 55/12/2 and DE 55/12/15, expressing that a cautious approach was needed, also bearing in mind relevant provisions of the Antarctic Treaty, and that the pairing of passenger ships may not always be practicable. In relation to any further consideration and development of the hazard matrix, the Sub-Committee recognized that the methodology included in the FSA Guidelines (MSC/Circ.1023 – MEPC/Circ.392) may be used in developing the Polar Code, but that a new FSA study on the development of the Polar Code was not considered necessary.

## **General aspects of the draft Polar Code**

### ***Framework and structure***

12.6 The Sub-Committee had for its consideration the following documents relating to the framework and structure of the draft Polar Code:

- .1 DE 55/12 (Chairman of the Working Group at DE 54), containing a summary of discussions that took place in the Polar Code Working Group at DE 54 after the group had finalized their report (DE 54/WP.3), regarding how to mandate the Code, application, operational limitations/boundary conditions, definitions, and structure of the Code;
- .2 DE 55/12/6 (Germany), providing a revised draft of the Polar Code using a goal-based standards (GBS) orientated structure, based on goals and functional requirements;
- .3 DE 55/12/7 (Canada), containing proposals on how the provisions included in the Polar Code could be applied to all ships (e.g., new and existing ships; SOLAS and non-SOLAS ships) operating in polar waters, in order to achieve a consistent and acceptable level of risk, in relation to applicability of mandatory requirements for construction, equipment, operational arrangement and environmental protection;
- .4 DE 55/INF.4 (Canada), providing a complete framework for a draft Polar Code, based on the structure of the 2008 IS Code and the existing Guidelines for ships operating in polar waters (resolution A.1024(26));
- .5 DE 55/INF.3 (Canada), identifying the origin of the provisions included in the annex to document DE 55/INF.4; and
- .6 DE 55/12/23 (Russian Federation), proposing to include in the Preamble of the Code text concerning navigation rules and regulations for certain routes and waterways under national jurisdiction, referring to UNCLOS article 234 concerning ice-covered areas.

12.7 Having considered the above documents, the Sub-Committee agreed, in principle, that:

- .1 with regard to the development of the draft Polar Code, a two step approach should be taken, i.e. the Code should initially apply to SOLAS passenger and cargo ships, taking into account the urgent need for relevant mandatory requirements, and later requirements for non-SOLAS ships, such as fishing vessels, may be developed, after consideration by the Organization;

- .2 concerning the proposed risk-based structure of the draft Code, a combination of GBS orientated and prescriptive requirements should be pursued at this stage; and
- .3 the Code should not conflict with Antarctic Treaty and UNCLOS provisions.

With regard to documents DE 55/12/7 (paragraphs 7 and 15) and DE 55/12/23 (paragraphs 4 and 5), the delegation of the United States expressed concern regarding the scope and meaning of the provisions included in these documents, reminding the Sub-Committee of ongoing concerns over the legal basis and practical safety aspects of Canada's mandatory ship reporting and vessel traffic service system and the Russian Federation's regulations and requirements for ships navigating along the Northern Sea Route in their claimed Arctic waters, and urged submission of such national regulatory systems for adoption in order to address those defects. The United States, supported by several delegations, also expressed doubts regarding the application of UNCLOS article 234 by Canada and the Russian Federation, or that the Polar Code in itself would provide the international legal basis for these systems.

### ***Ice class, polar class and ice certificates***

12.8 The Sub-Committee had for its consideration the following documents relating to ice class, polar class and ice certificates:

- .1 DE 55/12/4 (Denmark, Finland and Sweden), containing proposals on how all ships suitable for operation in polar waters could be included in the Polar Code and how the ice class of a ship could be addressed in the Code, annexing suggested text for definitions of ice class, polar class, ice certificate and polar ship;
- .2 DE 55/12/10 (IACS), proposing to include polar class descriptions (i.e. PC 1 to PC 7) in the draft Polar Code;
- .3 DE 55/12/11 (IACS), proposing the inclusion of the concept of an ice certificate (i.e. an operations manual that provides safe speeds and distances in particular ice conditions) in the recommendation section of the draft Polar Code;
- .4 DE 55/12/14 (Canada), providing comments on document DE 55/12/11 regarding polar class descriptions and ice certification, and on DE 55/12/12 concerning engine power requirements; and
- .5 DE 55/12/22 (Russian Federation), providing information on the current practice adopted in the Russian Federation on the issuance and use of Ice Certificates (i.e. document establishing the ship's speed values while navigating in ice), together with recommendations on the ice safety of a ship when operating under ice conditions.

12.9 The Sub-Committee generally supported the above documents relating to ice class, polar class and ice certificates, and referred them to the working group for further consideration.

### **Safety aspects of the draft Polar Code**

12.10 The Sub-Committee had for its consideration the following documents relating to other concrete requirements of the Code:

- .1 DE 55/12/12 (IACS), proposing the introduction of engine power recommendations in the draft Polar Code or the IACS Polar Ship Rules where the minimum engine power should be based on the design scenario to minimize stopping in ice; and
- .2 DE 55/12/24 (Denmark), informing on functional requirements for life-saving appliances for ships operating in polar waters to provide means for escape, evacuation, survival and rescue, derived from a risk-based approach, taking into account the relevant winterization requirements of existing rules.

12.11 The Sub-Committee generally supported the above documents, and, with respect to the minimum engine power, noting that the Energy Efficiency Design Index (EEDI) for ships currently under consideration by the MEPC contains limits for maximum engine power for cargo ships with correction coefficients for ice classes, agreed that this matter should be brought to the attention of the MEPC, but also referred the issue to the working group for further discussion.

### **Environmental aspects of the draft Polar Code**

12.12 The Sub-Committee had for its consideration the following documents relating to environmental aspects of the draft Polar Code:

- .1 DE 55/12/3 (New Zealand), raising environmental concerns that may be applicable to the Polar Code, and attempting to identify the risks posed by shipping in the polar regions, and the Antarctic in particular, while referring to various related instruments (e.g., MARPOL);
- .2 DE 55/12/5 (Norway), containing a draft proposal for an environmental protection chapter for inclusion in the draft Polar Code, covering various environmental areas;
- .3 DE 55/12/13 (France), in relation to the preparation of a chapter on environmental protection for the draft Polar Code, proposing the inclusion of provisions concerning the onboard presence of standardized equipment to facilitate recovery of oil or liquid pollutants contained in tanks;
- .4 DE 55/12/8 and DE 55/12/17 (FOEI, IFAW, WWF and Pacific Environment), proposing further consideration of the definitions of Arctic and Antarctic waters, based on the physical and ecological characteristics of these environments, and the adoption of an ecosystem-based approach to the management of shipping in polar waters;
- .5 DE 55/12/9 (FOEI, IFAW, WWF and Pacific Environment), providing information on recent developments and existing initiatives on monitoring and tracking of vessels, with a view to enhancing safety, minimizing marine pollution, and aiding compliance and enforcement, and also proposing to include provisions which would require the development of polar vessel traffic monitoring and information systems;
- .6 DE 55/12/16 (FOEI, IFAW, WWF and Pacific Environment), commenting on documents DE 55/12/3 and DE 55/12/5, and providing information regarding the increased threat to the Arctic marine environment from the loss of harmful substances in packaged form (HSPF) and containers;

- .7 DE 55/12/18 (FOEI, CSC, IFAW, WWF and Pacific Environment), summarizing recent submissions that refer to black carbon (BC) emissions from ships and presenting existing, cost-effective methods to reduce them in polar waters;
- .8 DE 55/12/19 (FOEI, IFAW, WWF and Pacific Environment), commenting on document DE 55/12/5, and proposing the inclusion of the definition of "harmful substance" which includes substances currently regulated by MARPOL, but not restricted to only such substances, and the replacement of the term "pollutant" with "oil and other harmful substances";
- .9 DE 55/12/20 (FOEI, IFAW, WWF and Pacific Environment), commenting on documents DE 55/12/3 and DE 55/12/5, and requesting that a functional requirement and prescriptive requirements leading to heightened protection and standards for discharges of sewage, grey water and sewage sludge are included; and
- .10 DE 55/12/21 (FOEI, IFAW, WWF and Pacific Environment), commenting on document DE 55/12/5, and recommending that certain Polar Code provisions regarding vessel voyage planning and operations in order to avoid interactions, especially collisions, with cetaceans and other marine mammals be established, based on the Guidance document for minimizing the risk of ship strikes with cetaceans (MEPC.1/Circ.674); further providing information on ongoing work by a number of bodies, including the International Whaling Commission (IWC), aiming at a better understanding of collision risk; and requesting the Organization to work cooperatively with relevant IWC bodies on these matters.

12.13 Following extensive discussion of the above documents, the Sub-Committee reiterated that an environmental protection chapter would be included in the draft Polar Code and, in particular:

- .1 decided not to further consider the geographical boundaries of Arctic and Antarctic waters proposed in documents DE 55/12/8 and DE 55/12/17, since this would conflict with the provisions in other IMO instruments;
- .2 agreed to further consider document DE 55/12/9 regarding polar vessel traffic monitoring and information systems from the safety perspective only, pending further input from the NAV Sub-Committee;
- .3 decided not to further consider document DE 55/12/16 concerning the loss of HSPF and containers, bearing in mind that a relevant proposal for a new output for the DSC Sub-Committee regarding measures to prevent the loss of containers (MSC 89/22/11) would be considered at MSC 89;
- .4 decided not to further consider documents DE 55/12/18 and DE 55/12/20, concerning BC emissions from ships and standards for discharges of sewage, grey water and sewage sludge, noting that these matters were under discussion in the MEPC; and
- .5 decided not to further consider document DE 55/12/21 regarding vessel voyage planning and operations, since this matter should first be considered by the NAV Sub-Committee,

and requested the Secretariat to forward the above outcome to the Committees and relevant bodies for further consideration and/or instruction and input, as appropriate.

### **Establishment of a working group**

12.14 Subsequently, the Sub-Committee established the Working Group on Development of a Mandatory Polar Code and instructed it, taking into account comments and decisions made in plenary, to:

- .1 further develop hazard identification for the draft Polar Code, on the basis of the report of the correspondence group (DE 55/12/1), taking into account documents DE 55/12/2 and DE 55/12/15;
- .2 further develop the draft International Code of safety for ships operating in polar waters (Polar Code), on the basis of the report of the working group at DE 54 (DE 54/WP.3, annex 3), taking into account documents DE 55/12, DE 55/12/4, DE 55/12/6, DE 55/12/7, DE 55/12/9 (safety aspect only), DE 55/12/10, DE 55/12/11, DE 55/12/12, DE 55/12/14, DE 55/12/22, DE 55/12/23, DE 55/12/24 and DE 55/INF.3 and DE 55/INF.4;
- .3 further consider environmental issues relating to the draft Polar Code, on the basis of document DE 55/12/5, taking into account documents DE 55/12/3, DE 55/12/13, DE 55/12/19 and DE 55/12/24, and develop relevant requirements for inclusion in the Code;
- .4 consider whether it is necessary to re-establish the correspondence group and, if so, prepare terms of reference for consideration by the Sub-Committee; and
- .5 submit part 1 of the report by Thursday, 24 March 2011, continue working through the week and submit part 2 of the report as a session document to DE 56, as soon as possible after this session, so that it can be taken into account by the correspondence group (see paragraph 12.23).

### **Report of the working group**

12.15 Having received part 1 of the report of the working group (DE 55/WP.4), the Sub-Committee approved it in general and took action as described in the following paragraphs.

#### ***Preamble***

12.16 The Sub-Committee noted the group's decision not to discuss the preamble of the draft Code at this stage but rather to embark on the following work on the technical parts of the draft Code.

#### ***Definitions***

12.17 The Sub-Committee noted the group's discussions regarding the possible need for additional definitions to be included in the Polar Code and further noted the decision of the group to use, where applicable, the WMO sea-ice nomenclature.

#### ***Ice certificate concept***

12.18 Having endorsed, in principle, the group's decision to include in the Code an ice certificate concept in the form of a "[Polar/Ice] operational manual", the Sub-Committee noted that further deliberations are needed in order to agree on the content of such a manual.

***Structural integrity, ice-strengthening and subdivision and damage stability***

12.19 The Sub-Committee noted the group's recommendation to establish categories of ships operating in polar waters (A, B and C), as contained in the table of paragraph 12 of document DE 55/WP.4.

12.20 The Sub-Committee, having noted the group's deliberations and concerns regarding structural integrity and ice-strengthening, endorsed the group's view that it is premature to forward any request to the SLF Sub-Committee or other bodies at this stage regarding matters related to subdivision and damage stability, taking into account that the SLF Sub-Committee could be involved at a later stage, if required. The Sub-Committee also noted that there was a general consensus that the correspondence group (see paragraph 12.23) should formulate accurate questions to the SLF Sub-Committee and any other IMO bodies to assist them in their deliberations.

12.21 The Sub-Committee further noted the discussions related to a risk-based approach when taking into account the intended operation of a ship.

***Engine power requirements***

12.22 The Sub-Committee noted the group's views regarding engine power requirements and the group's observation that there may be a possible problem for ships where additional engine power is required for safe navigation to meet the EEDI requirements and that the issue is currently under discussion at the MEPC.

***Environmental issues***

12.23 The Sub-Committee noted the group's discussions and deliberations regarding environmental issues and invited MEPC 62 to consider how environmental issues in the draft Code should be dealt with (see also paragraph 12.3).

**Re-establishment of a correspondence group and terms of reference**

12.24 The Sub-Committee, taking into account the progress made at this session and the remaining work still pending, re-established the Correspondence Group on Development of a Mandatory Polar Code, under the coordination of Norway\*, and instructed it to:

- .1 further develop the draft International Code of safety for ships operating in polar waters, based on the report of the working group established at DE 55 (DE 55/WP.4, parts 1 and 2), taking into consideration the risk matrix contained in document DE 55/12/1, the hazard representation in document DE 55/12/2, the documents listed in paragraph 3 of document DE 55/WP.4, as well as relevant documents submitted to DE 54;

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- .2 consider, as appropriate, the outcome of MEPC 62, NAV 57 and DSC 16 when considering documents DE 55/12/9, DE 55/12/16, DE 55/12/18, DE 55/12/20 and DE 55/12/21; and
  - .3 submit a report to DE 56.

12.25 The delegation of the Russian Federation stated, with regard to icebreaker escorts, that, in their view, insufficient consideration had been given to document DE 54/13/10 (Russian Federation) and that their experience showed that safety of navigation in the Arctic regions adjoining the Russian Federation could not be guaranteed without the aid of icebreakers, except for one or two months of the year, and that icebreaker support would make it possible not only to enhance safe navigation for merchant shipping in ice and to reduce the risks associated with voyages made by isolated ships in polar regions, but also to extend navigational limits significantly, in terms of both season and range.

### **13 REVISION OF RESOLUTION A.760(18)**

13.1 The Sub-Committee recalled that DE 53 had noted that the ISO 24409 series "Design, location and use of shipboard signs for fire protection, life-saving appliances, and means of escape", which was to be taken into account in the revision of resolution A.760(18) on Symbols related to life-saving appliances and arrangements, had, at that time, not been completed. Consequently, DE 53 agreed to postpone further consideration of the item to this session, when the results of ISO's work on the ISO 24409 series were expected to be available, and invited Member Governments and international organizations to submit relevant proposals.

13.2 The Sub-Committee considered document DE 55/13 (ISO), providing the status of the work on the ISO 24409 series, comprising three parts: "Design Principles", "Catalogue" and "Code of Practice", which could serve as the basis for a comprehensive update of resolution A.760(18), and noted that, while Part 1 of ISO 24409 was published on 16 November 2010, Part 2 had completed balloting at the Committee Draft stage and Part 3 was expected to ballot as a Draft International Standard in 2011.

13.3 Having considered the above information, the Sub-Committee, noting the views of several delegations that a comprehensive review of resolution A.760(18) should be undertaken after the full ISO 24409 series is published, decided that, at this stage, there was no compelling need for a review of the symbols related to life-saving appliances and arrangements set out in resolution A.760(18).

13.4 In light of the above decision, the Sub-Committee invited the Committee to delete this output from its biennial agenda and invited Member Governments and international organizations interested in pursuing such work to submit proposals for a new output to the Committee, in accordance with the Committee's Guidelines (MSC-MEPC.1/Circ.2).

### **14 PROTECTION AGAINST NOISE ON BOARD SHIPS**

#### **Draft amendments to the Code on Noise Levels on Board Ships**

14.1 The Sub-Committee recalled that DE 54 had established a correspondence group to finalize the draft amendments to the Code on Noise Levels on Board Ships (resolution A.468(XII)) and to consider how the Code could be made mandatory for new ships.

14.2 The Sub-Committee had for its consideration the following documents:

- .1 DE 55/14 (Denmark), containing the report of the correspondence group on protection against noise on board ships, annexing proposals for draft amendments to the Code and proposals for draft SOLAS amendments to make the Code mandatory for new ships;
- .2 DE 55/14/1 (Vanuatu), providing their assessment of the impact of certain proposals, e.g., the term "extra-aural noise impact", dynamically positioned (DP) vessels, application of the Code and concept of noise recovery areas, in the correspondence group's report; and
- .3 DE 55/14/2 (China), proposing, *inter alia*, to set 80,000 dwt (or its equivalent gross tonnage) as the tonnage threshold for noise level limits, taking into account the current technology level and practicality.

14.3 Having considered the above documents, the Sub-Committee noted the general support for the proposals in the report of the correspondence group and agreed, in principle, to finalize the draft amendments to the Code, with a view to:

- .1 maintaining the basic structure and the current scope of application of the Code (i.e. ships of 1,600 gross tonnage and above);
- .2 not including provisions on extra-aural noise impact;
- .3 further considering special requirements for HSC and dynamically positioned (DP) vessels; and
- .4 further considering the SOLAS amendments to make the Code mandatory.

#### **Noise from commercial shipping and its adverse impacts on marine life**

14.4 The Sub-Committee recalled that MEPC 61, when considering its agenda item "Noise from commercial shipping and its adverse impacts on marine life" and the report of a correspondence group (MEPC 61/19), having noted that the propeller was the main source of ship-generated underwater noise and that issues such as "propulsion", "hull design", "onboard machinery" and "operational modifications" relate to ship design and equipment, referred these technical matters to DE 54, for advice.

14.5 The Sub-Committee also recalled that DE 54 had agreed to consider the matter further at this session so that any relevant comments could be forwarded to MEPC 62 and, having noted that the majority of the delegations supported the development of separate technical guidelines to reduce noise from ships, agreed to invite MEPC 62 to give guidance to the Sub-Committee on how to proceed with the matter and to establish a relevant new output on the Sub-Committee's biennial agenda, as appropriate.

14.6 The observer from ISO invited the Sub-Committee to note that ISO/TC8/SC2 (Ship and marine technology – marine environment protection) was currently developing ISO 16554 "Measurement and reporting of underwater sound radiated from merchant ships", following a request from the MEPC which wished to have an international standard for the measurement of underwater noise from ships. The standard was currently at the committee draft stage (CD), aiming at publishing in 2012, and ISO would report to MEPC 62 on the status of the development.

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### Establishment of a working group

14.7 Following discussion, the Sub-Committee established a Working Group on Protection Against Noise on Board Ships and instructed it, taking into account comments made and decisions taken in plenary, to:

- .1 finalize the draft amendments to the Code on Noise Levels on Board Ships (resolution A.468(XII)), taking into account documents DE 55/14, DE 55/14/1 and DE 55/14/2; and
- .2 consider the proposals in annex 2 to document DE 55/14 on how the Code could be made mandatory for new ships and develop relevant draft SOLAS amendments, with a view to finalization.

### Report of the working group

14.8 Having received the report of the working group (DE 55/WP.5), the Sub-Committee approved it in general and, having noted the progress made by the group with regard to finalizing the draft amendments to the Code, as set out in the annex to document DE 55/WP.5, endorsed the view of the group that it was premature to propose specific text to make the Code mandatory under the SOLAS Convention at this stage.

14.9 With respect to the application of the Code (section 1.3), the Sub-Committee confirmed its previous decision that the Code should apply to ships of 1,600 gross tonnage and above (see paragraph 14.3).

14.10 In this regard, the delegation of Australia, referring to paragraph 1.3.4 (DE 55/WP.5) where HSC was in square brackets, stated that, since paragraph 4.10 in chapter 4 of the 2000 HSC Code covers the noise issues of HSC, it would be appropriate to deal with HSC noise issues in the HSC Code and, if deemed necessary, a revision of the Code may be proposed. They further suggested that the text and the square brackets in paragraph 1.3.4 should be deleted from the revised Code on noise levels on board ships.

### Re-establishment of the correspondence group

14.11 The Sub-Committee, taking into account the progress made at the session, re-established the Correspondence Group on the Review of the Code on Noise Levels on Board Ships, under the coordination of Denmark\*, and instructed it, using the annex of document DE 55/WP.5 as a basis, to:

- .1 finalize the draft amendments to the Code on noise levels on board ships, based on the report of the working group (DE 55/WP.5);

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- .2 consider re-structuring the Code into a mandatory and a non-mandatory parts and prepare relevant recommendations for the consideration of the Sub-Committee; and
- .3 submit a report to DE 56.

### **Extension of the target completion year**

14.12 Taking into account the progress made on this output, the Sub-Committee invited the Committee to extend the target completion year for the output to 2012.

## **15 CLASSIFICATION OF OFFSHORE INDUSTRY VESSELS AND CONSIDERATION OF THE NEED FOR A CODE FOR OFFSHORE CONSTRUCTION SUPPORT VESSELS**

### **General**

15.1 The Sub-Committee recalled that DE 53, having considered the issues raised in document DE 53/15 (IMCA), had agreed that there was no need to develop a new code covering offshore construction vessels and that the issues raised by IMCA could be resolved by means of guidelines or interpretations, in particular concerning the application of the provisions of the 2008 SPS Code to offshore construction vessels, since the transport of industrial personnel is excluded from the application of the Code.

15.2 The Sub-Committee also recalled that DE 53 had welcomed and accepted the offer from the observer of IACS to develop relevant unified interpretations of the 2008 SPS Code, in particular, concerning the certified/constructed date, near coastal voyages, safe return to port, explosives stowage, scope of LSA to be fitted, and applicable SOLAS chapter V requirements, for consideration at DE 55.

### **Unified interpretations of the 2008 SPS Code**

15.3 The Sub-Committee considered document DE 55/15 (IACS), proposing draft unified interpretations of the 2008 SPS Code to facilitate the global and consistent implementation of the provisions of chapters 1, 2, 6, 7 and 10 of the Code, as discussed at DE 53, and took action as follows:

- .1 with regard to the proposed interpretation to paragraph 1.2.1 of the Code (DE 55/15, paragraph 4) concerning the expression "certified on or after 13 May 2008", noting that some delegations supported the proposal, but taking into account that the Code is not mandatory, agreed that such decision should be left to the Administration;
- .2 agreed to the proposed interpretation of section 1.2 of the Code (DE 55/15, paragraph 5) concerning near coastal voyages;
- .3 agreed to the proposed interpretation of paragraph 2.5 of the Code (DE 55/15, paragraph 6) in relation to determining the bilge pump numeral in accordance with SOLAS regulation II-1/35-1;
- .4 agreed to the proposed interpretation of paragraphs 6.1 and 6.2 of the Code (DE 55/15, paragraph 7) on general SOLAS requirements relating to passenger ships;

- .5 with regard to the proposed interpretation of paragraphs 6.1 and 6.2 of the Code (DE 55/15, paragraph 11) on the provisions of SOLAS regulations II-2/21 and 22 relating to safe return to port, having noted concerns raised that the proposal presented an amendment rather than an interpretation, agreed after lengthy discussion to the following modified text:

"Notwithstanding the provisions of paragraphs 6.1 and 6.2 of the Code, the provisions of SOLAS regulations II-2/21 and 22 should only be applied on vessels which carry more than 240 persons."

The delegation of Norway reserved its position with regard to the above interpretation;

- .6 with regard to the proposed interpretation of paragraphs 7.5 and 7.6 of the Code (DE 55/15, paragraph 12), noting that the Code does not require FSA studies according to the FSA Guidelines (MSC/Circ.1023 – MEPC/Circ.392) to be conducted, agreed to the following interpretation:

"In applying the provisions of paragraphs 7.5 and 7.6 of the Code, "formal safety assessment" means a documented risk assessment, but not a full FSA study in accordance with the FSA Guidelines (MSC/Circ.1023 – MEPC/Circ.392)."; and

- .7 agreed to the proposed interpretation of chapter 10 of the Code concerning the application of SOLAS chapter V (DE 55/15, paragraph 13), while noting that some delegations expressed concerns to use 240 persons as a threshold.

15.4 Subsequently, the Sub-Committee agreed to the draft MSC circular on Unified interpretations of the Code of Safety for Special Purpose Ships, 2008 (2008 SPS Code), as set out in annex 15, for submission to MSC 90 for approval.

#### **Amendments to the 2008 SPS Code**

15.5 Concerning the amendments to chapters 1 and 8 of the Code proposed by IACS (DE 55/15, paragraphs 14 to 17), the Sub-Committee, while generally supporting the proposed draft amendments related to the definition of "persons" and the application of paragraph 8.4 of the Code, considered that further instruction from the Committee was needed to proceed with the consideration of amendments to the 2008 SPS Code under the current output. In this connection, the Sub-Committee noted the view of IACS that the definition of "persons" might also necessitate corresponding amendments to section 1.2 and the Record of Equipment.

15.6 Consequently, the Sub-Committee invited MSC 89, as an urgent matter, to authorize it to proceed with the development of amendments to the 2008 SPS Code under this output, and to extend the target completion year to 2013.

15.7 The Sub-Committee invited Member Governments and international organizations to submit comments and proposals to DE 56, pending the decision of MSC 89 regarding the further work under this output.

## **16 MEASURES TO PROMOTE INTEGRATED BILGE WATER TREATMENT SYSTEMS**

### **General**

16.1 The Sub-Committee recalled that DE 54, having considered document DE 54/17 (Japan), proposing amendments to the 2008 Revised guidelines for systems for handling oily wastes in machinery spaces of ships incorporating guidance notes for an integrated bilge water treatment system (IBTS) (MEPC.1/Circ.642, as amended by MEPC.1/Circ.676), and noting that the working group (DE 54/WP.2) could not finalize the draft amendments to the 2008 Revised Guidelines due to time constraints, had invited interested delegations to submit relevant proposals to this session, with a view to finalization of the matter.

### **Development of amendments to MEPC.1/Circ.642**

16.2 The Sub-Committee considered document DE 55/16 (Japan and IACS), proposing a draft MEPC circular on format of statement of fact on installation of IBTS to assist the promotion of IBTS through uniform implementation of MEPC.1/Circ.642, as amended by MEPC.1/Circ.676, together with document DE 55/16/1 (Japan), providing an overview of the concept, the functions and the advantages of IBTS.

16.3 In the ensuing discussion, a large number of delegations expressed their support for the proposal contained in document DE 55/16, concurring with the usefulness of the concept of IBTS in minimizing the generation of the oily bilge water and reducing the operations and maintenance of bilge separators, and that the issuance of the proposed Statement of Fact would be helpful during port State control inspections to resolve any concerns over how oily bilge water is being handled on a ship adopting IBTS.

16.4 Following suggestions by the delegation of United States and the observer from ICS, the Sub-Committee agreed to add a new section 12 (Statement of Fact) to the 2008 Revised Guidelines and to incorporate the Format of statement of fact on installation of an Integrated Bilge Water Treatment System (IBTS) proposed in document DE 55/16 as a new appendix 2. Consequently, the Sub-Committee agreed to a draft MEPC circular on Amendments to the 2008 Revised Guidelines for systems for handling oily wastes in machinery spaces of ships incorporating guidance notes for IBTS (MEPC.1/Circ.642, as amended by MEPC.1/Circ.676), as set out in annex 16, for submission to MEPC 62 for approval.

16.5 In this regard, the delegation of Sweden indicated that an oil content meter should be in place for ships adopting IBTS to monitor the discharge of the clean drains into the sea and a close circuit for vaporized water should be applied if heating arrangements to vaporize water are made for oil residue (sludge) service tanks.

16.6 The delegation of France reiterated that the annex to the 2008 Revised Guidelines (paragraph 8), dealing with the size of oily bilge water tanks, indicated that, for ships adopting IBTS, the capacity of oily bilge water holding tanks may be reduced but did not specify the percentage. In their view, in order to avoid problems, particularly in the context of port State control, the percentage should be specified and this would also be useful for ship designers. The Sub-Committee noted the proposal by the delegation of France that, given the data presented by Japan on the use of the IBTS to DE 54 and DE 55, such data should be used to clearly define the reduced capacity of the bilge water holding tank.

### **Completion of the work on this output**

16.7 The Sub-Committee invited the Committees to note that the work on this output had been completed.

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## 17 REVISION OF RESOLUTION MEPC.159(55)

17.1 The Sub-Committee noted that MEPC 61 had approved draft amendments to MARPOL Annex IV, designating the Baltic Sea as a Special Area and prohibiting the discharge of sewage effluent from passenger ships in Special Areas, unless there is a sewage treatment plant in operation that is type approved by the Administration in accordance with standards and test methods to be developed by the Organization, implementing additional effluent standards to those applicable to other ships.

17.2 The Sub-Committee also noted that MEPC 61 had recognized that the Revised Guidelines on implementation of effluent standards and performance tests for sewage treatment plants (resolution MEPC.159(55)) would need updating in view of the new MARPOL Annex IV requirements and, therefore, included a new output in the Sub-Committee's biennial agenda and provisional agenda for DE 55 on "Revision of resolution MEPC.159(55)", with a target completion year of 2012.

17.3 The Sub-Committee had the following documents for consideration:

- .1 DE 55/17 (Denmark, Estonia, Finland, Germany, Latvia, Lithuania, Poland, the Russian Federation and Sweden), providing relevant information and proposals to assist the Sub-Committee in its work on the revision of resolution MEPC.159(55);
- .2 DE 55/17/1 (IACS), highlighting an omission and resulting ambiguity in the biochemical oxygen demand test standard for sewage treatment plant effluent in resolution MEPC.159(55); and
- .3 DE 55/17/2 (Bahamas, Liberia, Marshall Islands and CLIA), providing a response to the information and proposals that had been provided by the Baltic Sea States (DE 55/17) on nutrient reduction technology and nutrient removal standards for sewage treatment plants.

17.4 Although the Baltic Sea States (DE 55/17) proposed that a separate set of guidelines should be developed for the implementation of standards for the discharge of effluent from passenger ships operating in Special Areas under MARPOL Annex IV, they recognized the benefits of having a single set of guidelines and agreed to amend resolution MEPC.159(55) to incorporate the additional requirements for passenger ships, as requested by MEPC 61.

17.5 The Sub-Committee noted the view of the delegation of the United States that the introduction of Special Areas in MARPOL Annex IV would necessitate an amendment to resolution A.927(22) on Guidelines for the designation of Special Areas under MARPOL 73/78 (annex 1) and Guidelines for the identification and designation of Particularly Sensitive Sea Areas.

17.6 The Sub-Committee agreed that, although the issue raised in document DE 55/17/1 had not arisen from the specific proposals by the Baltic Sea States, it nevertheless needed to be addressed as part of this work in order to clarify the biochemical oxygen demand test standard for sewage treatment plants.

17.7 In considering documents DE 55/17 and DE 55/17/2, the Sub-Committee, having noted the divergent views on the matter, recognized that there was a need to be pragmatic when introducing new requirements, but that, at the same time, there was also a need to be ambitious in introducing regulations that would lead to improvements in the performance of the industry.

17.8 The delegation of China stated that they had detailed technical comments on the revision of resolution MEPC.159(55) and informed the Sub-Committee that, if a correspondence group was established, it would submit these comments directly to the group. The Sub-Committee noted the above intention stated by China.

#### **Establishment of a correspondence group**

17.9 The Sub-Committee agreed to establish a Correspondence Group on Revision of resolution MEPC.159(55), under the coordination of Germany\*, and instructed it, taking into account comments and decisions made in plenary, to:

- .1 finalize amendments to the Revised guidelines on implementation of effluent standards and performance tests for sewage treatment plants (resolution MEPC.159(55)), taking into account documents DE 55/17, DE 55/17/1 and DE 55/17/2; and
- .2 submit a report to DE 56.

### **18 REVISION OF TESTING REQUIREMENTS FOR LIFEJACKET RTDS**

18.1 The Sub-Committee was advised that MSC 88, having considered a proposal by DE 54, suggesting to review the amendments to the Revised recommendation on testing of life-saving appliances (resolution MSC.81(70)) concerning the introduction of a reference test device (RTD) for lifejackets, as adopted by resolution MSC.200(80), had agreed to include, in the biennial agenda of the DE Sub-Committee and the provisional agenda for this session, an output on "Revision of testing requirements for lifejacket RTDs", with a target completion year of 2012.

18.2 The Sub-Committee had for its consideration the following documents:

- .1 DE 55/18 (Norway), providing information on results of the testing of lifejackets in accordance with resolutions MSC.81(70) and MSC.200(80), and proposing to restructure paragraph 2.8 of the Revised recommendation on testing of LSA;
- .2 DE 55/18/1 (United States, Canada and Dominica), providing information in support of the RTD test methodology, while recognizing the need for refinements based on lessons learned in its initial implementation, and proposing to establish a correspondence group to consider refinements to the RTD methodology based on sound data, recommending that the Sub-Committee invites ISO to support this effort; and

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Website: [www.dienststelle-schiffssicherheit.de](http://www.dienststelle-schiffssicherheit.de)

- .3 DE 55/18/2 (United Kingdom), providing test results, in support of the comments made by the United Kingdom in document DE 54/15/1, with respect to the variances in results recorded when using a reference test device.

18.3 In considering the above documents, the Sub-Committee, having noted the general support for the submissions and in particular for the proposals made in document DE 55/18/1, acknowledged the urgent need to resolve the matter with high priority.

18.4 Subsequently, the Sub-Committee invited Member Governments and international organizations to submit concrete proposals on the revision of testing requirements for lifejacket RTDs to DE 56.

18.5 The delegation of France stated that the discussions at this session showed the difficulty of the revision of testing requirements for lifejackets RTDs, which would deserve a correspondence group, and that they would submit a document on this matter to DE 56. They invited other interested parties to contact them\*, for preparation of a joint submission to the next session.

## 19 BIENNIAL AGENDA AND PROVISIONAL AGENDA FOR DE 56

### General

19.1 The Sub-Committee recalled that MSC 88 approved the biennial agenda of the Sub-Committee as set out in the annex to document DE 55/2.

### Outcome of MEPC 61 and MSC 88

19.2 The Sub-Committee recalled that the Assembly had requested the Committees to review and revise, during the current biennium, their respective Guidelines for the organization and method of their work, with a view to bringing them in line with the new Council Guidelines on the application of the Strategic Plan and the High-level Action Plan, as adopted by resolution A.1013(26).

19.3 The Sub-Committee noted that, taking into account the provisions of the Migration Plan prepared by the Council, MSC 88, having agreed to additional revisions to the Committees' Guidelines prepared by MSC 87, which were endorsed by MEPC 61, requested the Secretariat to prepare a consolidated version of the draft revised Guidelines, for consideration by MSC 89 with a view to approval.

19.4 The Sub-Committee also recalled that, to facilitate the transition to the new system, the Committee instructed the subsidiary bodies to prepare their respective biennial agendas for the next biennium at their forthcoming sessions, in accordance with the draft revised Guidelines, taking into account that:

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- .1 outputs selected for the biennial agenda should be phrased in SMART (Specific, Measurable, Achievable, Realistic and Time-bound) terms; and
- .2 where the target completion year for a specific output goes beyond the 2012-2013 biennium, an interim output should be placed in the biennial agenda with a target completion year of 2012 or 2013, as appropriate, and a related output should be placed in the Committee's post-biennial agenda with the anticipated completion year,

and requested the Secretariat, in consultation with the Chairman, to prepare the initial proposals for consideration by the sub-committees accordingly.

### **Proposals for the biennial agenda for 2012-2013 and provisional agenda for DE 56**

19.5 Taking into account the progress made during this session and the decisions of MSC 88, the Sub-Committee prepared its draft biennial agenda for the 2012-2013 biennium in SMART terms, including outputs under the purview of the Sub-Committee to be placed on the Committee's post-biennial agenda, and the provisional agenda for DE 56 (DE 55/WP.2, annexes 1 and 2), based on the biennial agenda approved by MSC 88 (DE 55/2, annex), as set out in annexes 17 and 18, respectively, for consideration by MSC 89.

### **Arrangements for the next session**

19.6 The Sub-Committee agreed to establish at DE 56 working and drafting groups on subjects selected from the following:

- .1 Development of a new framework of requirements for life-saving appliances; and Development of safety objectives and functional requirements of the Guidelines on alternative design and arrangements for SOLAS chapter III;
- .2 Development of a mandatory Polar Code for ships operating in polar waters;
- .3 Amendments to SOLAS regulation II-1/40.2 concerning general requirements on electrical installation; and Development of safety objectives and functional requirements of the Guidelines on alternative design and arrangements for SOLAS chapter II-1;
- .4 Protection against noise on board ships;
- .5 Revision of the Revised guidelines on implementation of effluent standards and performance tests for sewage treatment plants (resolution MEPC.159(55));
- .6 Making the provisions of MSC.1/Circ.1206/Rev.1 mandatory;
- .7 Development of guidelines for wing-in-ground craft; and
- .8 Revision of testing requirements for lifejacket RTDs,

whereby the Chairman, taking into account the submissions received on the respective subjects, would advise the Sub-Committee well in time before DE 56 on the final selection of such groups.

19.7 The Sub-Committee established correspondence groups on the following subjects, due to report to DE 56:

- .1 Development of a mandatory Polar Code for ships operating in polar waters;
- .2 Revision of the Revised guidelines on implementation of effluent standards and performance tests for sewage treatment plants (resolution MEPC.159(55)); and
- .3 Protection against noise on board ships.

### **Status of planned outputs**

19.8 The Sub-Committee prepared the report on the status of planned outputs of the High-level Action Plan of the Organization and priorities for the 2010-2011 biennium relevant to the Sub-Committee, as set out in annex 19, and invited the Committee to note the status.

### **Date of the next session**

19.9 The Sub-Committee noted that its fifty-sixth session has been tentatively scheduled to take place from 13 to 17 February 2012.

### **Urgent matters to be considered by MSC 90**

19.10 The Sub-Committee, having noted the close proximity between DE 56 and MSC 90, invited the Committee to agree that MSC 90 would consider only the following urgent matters emanating from DE 56, with the remainder being considered by MSC 91:

- .1 Performance standards for recovery systems for all types of ships;
- .2 Making the provisions of MSC.1/Circ.1206/Rev.1 mandatory;
- .3 Development of a mandatory Code for ships operating in polar waters;
- .4 Protection against noise on board ships; and
- .5 Classification of offshore industry vessels and consideration of the need for a Code for offshore construction support vessels.

## **20 ELECTION OF CHAIRMAN AND VICE-CHAIRMAN FOR 2012**

20.1 In accordance with the Rules of Procedure of the Maritime Safety Committee, the Sub-Committee unanimously re-elected Mrs. Anneliese Jost (Germany) as Chairman and Dr. Susumu Ota (Japan) as Vice-Chairman, both for 2012.

## **21 ANY OTHER BUSINESS**

### **Improved safety of pilot transfer arrangements**

21.1 The Sub-Committee noted document DE 55/21 (IMPA), covering the campaign/survey results regarding the improved safety of pilot transfer arrangements, in particular pilot ladders, carried out by IMPA, in response to a request from NAV 55, which had invited IMPA to also provide this information to DE 55.

**Clarification of SOLAS application regarding requirements for steering gears trials**

21.2 The Sub-Committee considered document DE 55/21/1 (Germany), raising a practical difficulty in the implementation of SOLAS regulations II-1/29.3.2 and 29.4.2, concerning main and auxiliary steering gear in sea trials, for certain ship types.

21.3 Following discussion, the Sub-Committee agreed that a clarification of the issue was needed and invited Member Governments and international organizations to submit proposals for a relevant new output to the Committee, in accordance with the Committees' Guidelines (MSC-MEPC.1/Circ.2).

**Corrigendum to the Code on Alerts and Indicators, 2009**

21.4 The Sub-Committee considered document DE 55/21/2 (Germany), proposing a corrigendum to paragraph 8.4.1 of the Code on Alerts and Indicators, 2009 (resolution A.1021(26)), concerning the operation of the general emergency alarm system.

21.5 The Sub-Committee, noting that a proposal has been submitted to MSC 89 (MSC 89/22/10) for inclusion of a new planned output on "Amendments to the Code on Alerts and Indicators, 2009" in its biennial agenda for the 2012-2013 biennium, agreed that the proposed corrigendum should be considered under the new output, if approved by MSC 89, bearing in mind that relevant definitions in the Code on Alerts and Indicators and the LSA Code should be harmonized.

**Counterfeit life-saving appliances**

21.6 The Sub-Committee recalled that DE 54 had agreed that awareness of the issue of counterfeit LSA should be raised through either a circular or a resolution and instructed the Secretariat, in consultation with interested parties, to prepare relevant draft text for consideration at this session. The Sub-Committee had for its consideration document DE 55/21/3 (Secretariat), providing two options for a draft MSC circular regarding counterfeit life-saving appliances.

21.7 Having considered the two options, as set out in annexes 1 and 2 to document DE 55/21/3, the Sub-Committee, noting that the majority of delegations that spoke supported annex 1, agreed to use the text of annex 2 as the basis, while incorporating some parts of annex 1, without referring to brand names. Subsequently, the Sub-Committee agreed to the draft MSC circular on Awareness of counterfeit and sub-standard life-saving appliances, as set out in annex 20, for submission to MSC 90 for approval.

21.8 The observer from ILAMA stated that, in annex 1 to their document DE 55/21/3, they had attempted to outline the gravity of this growing problem and, although being aware of the concerns of some flag States, particularly with the reporting of counterfeit LSA, they believed that these counterfeit products were still expected to save lives at sea and, therefore, must come under the direct remit of this Organization; and that, since even annex 1 did not go far enough to inform interested parties of the proliferation of these sub-standard products that passenger and crews would face in the event of a major incident at sea, ILAMA could not support annex 2, which did not contain sufficient information to alert all interested parties.

21.9 The delegation of China stated that, in their view, annex 1 to document DE 55/21/3 was not appropriate, because approving an MSC circular containing the brand/type of specific products would imply that IMO confirms whether or not certain types of products were counterfeit or copied, which was an issue of intellectual property right and was clearly beyond the purview of IMO; and that it was inappropriate for an IMO circular to list certain brands of marine products, which could be of commercial interests, and, therefore, such a circular was not in line with the practice of IMO.

## Development of guidelines for wing-in-ground craft

21.10 The Sub-Committee considered document DE 55/21/4 (Republic of Korea), providing information on the development of guidelines for wing-in-ground craft, which had been included by MSC 88 as a new output in the post-biennial agenda of the Committee, and, having noted support for a thorough review of the existing Interim Guidelines for wing-in-ground (WIG) craft (MSC/Circ.1054), agreed to include an agenda item on "Development of guidelines for wing-in-ground craft" in the provisional agenda for DE 56. The Sub-Committee noted the intention of the Republic of Korea to collect comments on the matter for submission to DE 56\*.

## Onboard use and application of programmable electronic systems

21.11 The Sub-Committee, having considered document DE 55/INF.2 (IACS), providing information on recent work undertaken by IACS regarding the onboard use and application of programmable electronic systems – in particular the use of wireless data communication links, noted the usefulness of the document, in particular regarding fire protection, and requested the Secretariat to refer it to the FP Sub-Committee for further consideration.

## Expressions of appreciation

21.12 The Sub-Committee expressed appreciation to the following delegates:

- Mr. Jean-François Fauduet (France);
- Mr. George M. Arku (Liberia);
- Mr. Hakan Lindley (Sweden);
- Mr. Paul Fonseca (United Kingdom); and
- Mr. Denis Compton (United States),

who had recently relinquished their duties, retired or were transferred to other duties, for their invaluable contribution to its work and wished them a long and happy retirement or, as the case may be, every success in their new duties.

## 22 REPORT TO THE COMMITTEES

22.1 The Maritime Safety Committee, at its eighty-ninth session, is invited to:

- .1 note that the Sub-Committee will further consider the draft performance standards for recovery systems and the associated draft new SOLAS regulation III/17-1 at DE 56, with a view to finalization (paragraph 4.6);
- .2 with regard to the testing of free-fall lifeboat release systems, approve the draft amendments to SOLAS regulation III/20.11.2 and note that the Sub-Committee agreed the need for the early implementation of the draft amendments (paragraph 7.8 and annex 4);

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- .3 approve the draft MSC circular on Guidelines for evaluation and replacement of lifeboat release and retrieval systems (paragraph 7.20 and annex 5);
- .4 with regard to the proposed new paragraph 5 of SOLAS regulation III/1 (MSC 88/3, annex 1), adopt the modified amendments to SOLAS regulation III/1 (paragraph 7.23 and annex 6);
- .5 approve the draft MSC circular on Early application of new SOLAS regulation III/1.5, in conjunction with the above-mentioned adoption of the draft amendments to SOLAS regulation III/1 (paragraph 7.24 and annex 7);
- .6 with regard to the proposed amendments to the International Life-Saving Appliance (LSA) Code (MSC 88/3, annex 3), adopt the modified amendments to the LSA Code and decide on their application date, taking into account the time necessary for the development and approval of a new lifeboat release and retrieval systems (paragraphs 7.26 and 7.27 and annex 8);
- .7 adopt the amendments to the Revised recommendation on testing of life-saving appliances (resolution MSC.81(70), as amended) and the associated MSC resolution (paragraph 7.28 and annex 9);
- .8 approve the draft Assembly resolution on Adoption of the International Code on the enhanced programme of inspections during surveys of bulk carriers and oil tankers[,2011] ([2011] ESP Code), with a view to submission to A 27 for adoption; and concur with consequential changes to the text of the draft ESP Code as proposed by the Sub-Committee (paragraph 10.6 and annex 11);
- .9 approve the draft amendments to SOLAS regulation XI-1/2 (paragraph 10.7 and annex 12);
- .10 with respect to consequential amendments to related mandatory instruments emanating from the adoption of the new ESP Code, endorse the Sub-Committee's decision to prepare draft text for such amendments (paragraph 10.8);
- .11 approve the draft MSC circular on Guidelines on procedures for in-service maintenance and repair of coating systems for cargo oil tanks of crude oil tankers (paragraph 11.11 and annex 13);
- .12 note the progress made in the development of the draft mandatory Polar Code (paragraphs 12.3 to 12.25);
- .13 in the context of the work on classification of offshore industry vessels and consideration of the need for a code for offshore construction support vessels, endorse the Sub-Committee's decision to proceed with the development of amendments to the 2008 SPS Code under the current output (paragraphs 15.5 and 15.6);

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- .14 approve the biennial agenda of the Sub-Committee for the 2012-2013 biennium and the outputs to be placed on the Committee's post-biennial agenda which are under the purview of the Sub-Committee (paragraph 19.5 and annex 17);
  - .15 approve the provisional agenda for DE 56 (paragraph 19.5 and annex 18);
  - .16 note the report on the status of the Sub-Committee's planned outputs in the High-level Action Plan for the current biennium (paragraph 19.8 and annex 19); and
  - .17 agree on the urgent matters emanating from DE 56 to be reported to MSC 90 (paragraph 19.10).

22.2 The Maritime Safety Committee, at its ninetieth session, is invited to:

- .1 approve the draft MSC circular on Unified interpretation of SOLAS regulations II-1/28 and II-1/29 (paragraph 3.3 and annex 1);
- .2 approve the draft MSC circular on Guidelines for passenger ship tenders (paragraph 5.6 and annex 2);
- .3 approve the draft MSC circular on Guidelines for the design and installation of a visible element to the general emergency alarm on passenger ships (paragraph 6.3 and annex 3);
- .4 note that the Sub-Committee was of the view that there was no concerning issues regarding the relevant requirements for the 110% load test of free-fall life boats as stipulated in the Revised recommendation on testing of life-saving appliances (resolution MSC.81(70)) (paragraph 7.9);
- .5 approve the draft MSC circular on Guidelines for the standardization of lifeboat control arrangements (paragraph 8.2 and annex 10);
- .6 approve the draft MSC circular on Guidelines on exemptions for crude oil tankers solely engaged in the carriage of cargoes and cargo handling operations not causing corrosion, together with the possible input from FSI 20 on the draft Guidelines (paragraph 11.14 and annex 14);
- .7 approve the draft MSC circular on Unified interpretations of the Code of Safety for Special Purpose Ships, 2008 (2008 SPS Code) (paragraph 15.4 and annex 15);
- .8 approve the draft MSC circular on Awareness of counterfeit and sub-standard life-saving appliances (paragraph 21.7 and annex 20); and
- .9 approve the report in general.

22.3 The Marine Environment Protection Committee, at its sixty-second session, is invited to:

- .1 note the decision of the Sub-Committee to develop an environmental protection chapter in the draft Polar Code, and consider the decisions taken by the Sub-Committee with regard to various environmental aspects of the Code (paragraphs 12.10 to 12.13);
- .2 consider the options for making the Polar Code mandatory under environment-related IMO instruments (paragraphs 12.3 and 12.14 to 12.25);
- .3 consider establishing a new output on the Sub-Committee's biennial agenda to develop technical guidelines to address the issue of noise from commercial shipping and its adverse impacts on marine life (paragraphs 14.4 to 14.6);
- .4 approve the draft amendments to the 2008 Revised Guidelines for systems for handling oily wastes in machinery spaces of ships incorporating guidance notes for IBTS (MEPC.1/Circ.642, as amended by MEPC.1/Circ.676) and the associated draft MEPC circular (paragraph 16.4 and annex 16); and
- .5 note the progress made on the revision of the Revised Guidelines on implementation of effluent standards and performance tests for sewage treatment plants (resolution MEPC.159(55)) (paragraphs 17.3 to 17.9).

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**ANNEX 1**

**DRAFT MSC CIRCULAR**

**UNIFIED INTERPRETATION OF SOLAS REGULATIONS II-1/28 AND II-1/29**

1 The Maritime Safety Committee, at its [ninetieth session (...)], with a view to ensuring a uniform approach towards the application of the provisions of SOLAS regulations II-1/28 and II-1/29, and following a recommendation made by the Sub-Committee on Ship Design and Equipment at its fifty-fifth session, approved the annexed unified interpretations concerning the arrangements for steering capability and function on ships fitted with propulsion and steering systems other than traditional arrangements for a ship's directional control.

2 Member Governments are invited to use the annexed interpretations from [date of approval] when applying the relevant provisions of SOLAS regulations II-1/28 and 29 and to bring them to the attention of all parties concerned.

## ANNEX

### **UNIFIED INTERPRETATIONS CONCERNING THE ARRANGEMENTS FOR STEERING CAPABILITY AND FUNCTION ON SHIPS FITTED WITH PROPULSION AND STEERING SYSTEMS OTHER THAN TRADITIONAL ARRANGEMENTS FOR A SHIP'S DIRECTIONAL CONTROL**

#### **INTRODUCTION**

The SOLAS requirements for steering gears have been established for ships having a traditional propulsion system and one rudder. For ships fitted with alternative propulsion and steering arrangements, such as but not limited to, azimuthing propulsors or water jet propulsion systems, SOLAS regulations II-1/28.2, 28.3, 29.1, 29.2.1, 29.3, 29.4, 29.6.1 and 29.14 should be interpreted as follows, except 29.14, which is limited to the steering systems having a certain steering capability due to vessel speed also in case propulsion power has failed.

#### **REGULATION 28 – MEANS OF GOING ASTERN**

##### **Paragraph 2**

The ability of the machinery to reverse the direction of thrust in sufficient time, and so to bring the ship to rest within a reasonable distance from maximum ahead service speed, should be demonstrated and recorded.

##### **Paragraph 3**

The stopping times, ship headings and distances recorded on trials, together with the results of trials to determine the ability of ships having multiple propulsion/steering arrangements to navigate and manoeuvre with one or more of these devices inoperative, should be available on board for the use of the master or designated personnel.

#### **REGULATION 29 – STEERING GEAR**

##### **Paragraph 1**

For a ship fitted with multiple steering systems, such as but not limited to azimuthing propulsors or water jet propulsion systems, the requirement in SOLAS regulation II-1/29.1 is considered satisfied if each of the steering systems is equipped with its own dedicated steering gear.

##### **Paragraph 2.1**

All components used in steering arrangements for ship directional control should be of sound reliable construction to the satisfaction of the classification society. Special consideration should be given to the suitability of any essential component which is not duplicated. Any such essential component should, where appropriate, utilize anti-friction bearings such as ball bearings, roller bearings or sleeve bearings which should be permanently lubricated or provided with lubrication fittings.

### Paragraph 3

The main steering arrangements for ship directional control should be:

- .1 of adequate strength and capable of steering the ship at maximum ahead service speed which should be demonstrated;
- .2 capable of changing direction of the ship's directional control system from one side to the other at declared steering angle limits at an average rotational speed of not less than  $2.3^{\circ}/s$  with the ship running ahead at maximum ahead service speed;
- .3 for all ships, operated by power; and
- .4 so designed that they will not be damaged at maximum astern speed.

**Definition:** *Declared steering angle limits* are the operational limits in terms of maximum steering angle, or equivalent, according to manufacturers guidelines for safe operation, also taking into account the vessels speed or propeller torque/speed or other limitation; the "declared steering angle limits" are to be declared by the directional control system manufacturer for each ship specific non-traditional steering mean; ship's manoeuvrability tests, such as resolution MSC.137(76) should be carried out with steering angles not exceeding the declared steering angle limits.

### Paragraph 4

The auxiliary steering arrangements for ship directional control should be:

- .1 of adequate strength and capable of steering the ship at navigable speed and of being brought speedily into action in an emergency;
- .2 capable of changing direction of the ship's directional control system from one side to the other at declared steering angle limits at an average rotational speed, of not less than  $0.5^{\circ}/s$ ; with the ship running ahead at one half of the maximum ahead service speed or 7 knots, whichever is the greater; and
- .3 for all ships, operated by power where necessary to meet the requirements of 29.4.2 and in any ship having power of more than 2,500 kW propulsion power per thruster unit.

**Definition:** *Declared steering angle limits* are the operational limits in terms of maximum steering angle, or equivalent, according to manufacturers guidelines for safe operation, also taking into account the vessels speed or propeller torque/speed or other limitation; the "declared steering angle limits" should be declared by the directional control system manufacturer for each ship specific non-traditional steering mean; ship's manoeuvrability tests, such as resolution MSC.137(76) should be carried out with steering angles not exceeding the declared steering angle limits.

## Paragraph 6.1

**Definition:** *Steering gear power unit* – For the purposes of alternative steering arrangements, the steering gear power unit should be considered as defined in SOLAS regulation II-1/3. For electric steering gears, refer SOLAS regulation II-1/3, electric steering motor should be considered as part of power unit and actuator.

In a ship fitted with multiple steering systems, such as but not limited to azimuthing propulsors or water jet propulsion systems, an auxiliary steering gear need not be fitted, provided that:

- .1 in a passenger ship, each of the steering systems is fitted with two or more identical power units, capable of satisfying the requirements in regulation 29.3.2 while any one of the power units is out of operation;
- .2 in a cargo ship, each of the steering systems is fitted with one or more identical power units, capable of satisfying the requirements in regulation 29.3.2 while operating with all power units;
- .3 each of the steering systems is arranged so that after a single failure in its piping or in one of the power units, ship steering capability (but not individual steering system operation) can be maintained or speedily regained (e.g., by the possibility of positioning the failed steering system in a neutral position in an emergency, if needed).

## Paragraph 14

This interpretation is valid to the steering systems having a certain proven steering capability due to vessel speed also in case propulsion power has failed.

Where the propulsion power exceeds 2,500 kW per thruster unit, an alternative power supply, sufficient at least to supply the steering arrangements which complies with the requirements of paragraph 4.2 and also its associated control system and the steering system response indicator, should be provided automatically, within 45 s, either from the emergency source of electrical power or from an independent source of power located in the steering gear compartment. This independent source of power should be used only for this purpose. In every ship of 10,000 gross tonnage and upwards, the alternative power supply should have a capacity for at least 30 min of continuous operation and in any other ship for at least 10 min.

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**ANNEX 2**

**DRAFT MSC CIRCULAR**

**GUIDELINES FOR PASSENGER SHIP TENDERS**

1 The Maritime Safety Committee, at its [ninetieth session (...)], with a view to providing guidance for tenders used for transferring more than 12 passengers from a stationary passenger ship to shore and back, and following a recommendation made by the Sub-Committee on Ship Design and Equipment at its fifty-fifth session [and the Sub-Committee on Fire Protection at its fifty-fifth session], approved the annexed Guidelines for passenger ship tenders.

2 Member Governments are invited to use the annexed Guidelines from [date of approval] when applying the relevant SOLAS regulations for passenger ship tenders and to bring them to the attention of all parties concerned.

## ANNEX

### **GUIDELINES FOR PASSENGER SHIP TENDERS**

#### **APPLICATION**

These Guidelines are intended for ship-carried tenders used for transferring more than 12 passengers from a stationary passenger ship to shore and back. Other types of voyages, for example coastal sightseeing excursions, are not considered appropriate for such tenders and should be undertaken by ships that meet the requirements for passenger ships of the coastal State. Additionally, these Guidelines are not intended for inflatable boats or rigid hull inflatable boats (RHIB).

These Guidelines are not intended to replace any requirements for domestic passenger shipping of the coastal State where such voyages are undertaken.

#### **CONSTRUCTION AND EQUIPMENT GUIDANCE**

##### **1 Structure and arrangements**

1.1 If certified as a lifeboat, lifeboat standards of the LSA Code, chapter IV, should apply.

1.2 If not certified as a lifeboat, the structure and arrangements of the tender should take into account the LSA Code (chapter IV) for requirements of the flag Administration for passenger ships of like size and service to the tender.

1.3 Battery storage:

- .1 batteries should be securely stored in a naturally ventilated space; and
- .2 batteries should have appropriate spill containment.

##### **2 Freeboard and stability**

2.1 If certified as a lifeboat, lifeboat standards of the LSA Code, chapter IV, should apply.

2.2 If not certified as a lifeboat, freeboard and stability should be of the standard of SOLAS chapter II-1, Parts B1 to B4, as may be amended, for passenger ships of like size and passenger capacity.

##### **3 Propulsion and manoeuvrability**

3.1 At least two independent means of propulsion and steering systems should be provided.

3.2 Exceptionally, tenders having single means of propulsion may be permitted to operate providing the following factors are taken into consideration:

- .1 size of tender having a beam of less than 3.5 m;
- .2 number of passengers on tender being less than 40;

- .3 distance of tender from passenger ship to embarkation point on shore of less than 2.5 nm;
- .4 weather and other environmental conditions;
- .5 location and availability of other tenders to assist; and
- .6 tender having a bow thruster.

3.3 Fuel with a flash point of [43°C or 60°C or less] should not be used.

3.4 Tenders should be powered by compression ignition engines. Outboard type engines should not be used, given risks associated with higher horsepower and other performance characteristics.

3.5 Instructions for switching to emergency steering should be provided on the tender.

#### **4 Fire detection and extinction**

4.1 The boundaries of the engine space or spaces should be fire retardant and capable of being closed down so that smoke, flames and fire-extinguishing medium cannot escape, with particular attention being paid to closing of ventilation openings.

4.2 Engine compartment smoke or fire detectors should have visible and audible alarm at the control station.

4.3 The engine compartment fire-extinguishing system should:

- .1 be manually activated with clear operating instructions;
- .2 have acceptable extinguishing medium;
- .3 be properly sized in accordance with guidelines or standards acceptable to the Administration; and
- .4 have ventilation dampers that may be easily accessed and closed by crew from outside the engine compartment.

4.4 At least two portable fire extinguishers of a type and size acceptable to the Administration should be provided. Storage of fire extinguishers should be at easily accessible locations within the tender.

#### **5 Life-saving appliances**

5.1 The following items should be provided on the tender:

- .1 liferafts with sufficient capacity for all persons the boat is certified to carry when operating as a tender, except where a tender meets the structural, stability and buoyancy requirements for lifeboats;
- .2 a sufficient number of approved lifejackets for all persons the boat is certified to carry when operating as a tender, including an allowance for carriage of children and infants on board. Storage of lifejackets should be conveniently located so as to be retrievable in an emergency situation;

- .3 at least one first aid kit, three thermal protective aids and an appropriate quantity of drinking water;
- .4 one lifebuoy with light; and
- .5 one lifebuoy with line.

5.2 An efficient means of retrieving a person from the water.

## **6 Visual signals**

6.1 Pyrotechnic signals should be provided as required by the LSA Code, section 4.4.8.

6.2 When a tender is also a lifeboat, extra pyrotechnic signals should be carried, either as a tender operations kit or as spares available on board the ship, so that any of these signals used during service as a tender can be replaced immediately so as to remain in compliance with lifeboat standards.

## **7 Navigational equipment**

The tender should be provided with the following navigational equipment:

- .1 compass;
- .2 required navigation lights and shapes;
- .3 radar reflector;
- .4 echo sounder;
- .5 search light; and
- .6 electric or manual whistle or equivalent sound signal.

## **8 Communications equipment**

The following communications equipment should be provided:

- .1 fixed VHF radio;
- .2 secondary independent VHF radio communications, such as a handheld radio; and
- .3 internal amplified communications system.

## **9 Additional Equipment**

The following additional equipment should be provided:

- .1 anchor and rope;
- .2 two boat hooks;
- .3 painters or mooring lines;

- .4 fenders;
- .5 bailing pump; and
- .6 paddles or oars for tenders having single means of propulsion.

## **OPERATIONAL GUIDANCE**

### **10 Preparation**

10.1 Appropriate arrangements should be made prior to arrival at a port where tenders will be operated.

10.2 Local chartlets produced from the ship's relevant navigational chart or by alternative means, such as a drawing, should be prepared, if the local chart has insufficient detail.

10.3 Local instructions and notices, such as from harbour masters, should be obtained, including local rules for avoiding collision (Rules of the road), if applicable.

10.4 Maximum operating range and limiting weather conditions should be established and documented.

10.5 Tender operation briefing prior to commencing operations should be conducted, covering, in particular, the following items:

- .1 voyage planning and operational restrictions:
  - 1.1 local rules for avoiding collision (Rules of the road) as applicable;
  - 1.2 currents and tides;
  - 1.3 sea conditions, both current and expected;
  - 1.4 weather forecast; and
  - 1.5 local ships' routing systems and areas to be avoided;
- .2 communications plan; and
- .3 landing areas and landing areas security arrangements in accordance with the ISPS Code.

10.6 Operations should be planned so that at any time during tender operations there is at least one other tender or vessel of sufficient capacity immediately available to provide emergency assistance.

### **11 Log-book and record keeping**

The ship from which the tender is operating should maintain a log of the tender operations with information such as:

- .1 arrival/departure time at both ends;

- .2 passenger count; and
- .3 details of any other significant event.

## **12 Stowage location and embarkation arrangements**

- 12.1 Tenders should not be embarked by passengers before being afloat.
- 12.2 Tenders should be disembarked of passengers before being recovered.
- 12.3 Access arrangements between embarkation and tender should provide for:
  - .1 safety to minimize the risk of slips, trips and falls;
  - .2 space for crew members to assist passengers, count passenger number and supervise safety;
  - .3 near-level access;
  - .4 accessibility for persons with reduced mobility, where reasonably practicable;
  - .5 suitable means of securing the tender alongside to allow for at least two ropes to be used at any time;
  - .6 lifebuoy and line;
  - .7 an efficient means of retrieving a person from the water; and
  - .8 a hand-held light if at night.
- 12.4 Tendering operations should not be carried out with the parent passenger ship making way through the water.
- 12.5 In the case of tenders that are lifeboats, the tender should be returned to its full operational mode as a lifeboat, including refuelling, before the ship proceeds on its voyage, in accordance with SOLAS.

## **13 Refuelling and pollution prevention**

- 13.1 Procedures for refuelling the tender from the passenger ship should be established and documented in the ship's Safety Management System.
- 13.2 Oily bilge water and garbage should be retained on board for return to the passenger ship.

## **14 Manning, supervision and training**

- 14.1 The number and training of crew members should be satisfactory to the flag Administration of the ship as appropriate to the operation.
- 14.2 When tenders are in the water, they should at all times be monitored and under the direction of a certificated officer on the navigation bridge of the parent passenger ship.

## **15 Training for Tender Boat Operators**

Every tender boat operator should:

- .1 provide documentary evidence of having achieved the required standard of competence to undertake the tasks, duties and responsibilities listed in column 1 of the STCW Code tables A-VI/1-1, A-VI/1-2, A-VI/1-3 and A-VI/1-4;
- .2 be the holder of a certificate of proficiency in survival craft and rescue boats other than fast rescue boats;
- .3 meet the recommended standards of training as a tender boat operator set out in the appendix to these Guidelines; and
- .4 meet the STCW requirements of medical fitness, particularly regarding eyesight and hearing.

## APPENDIX

### RECOMMENDED STANDARDS OF TRAINING AS A TENDER BOAT OPERATOR

1 Every tender boat operator should be required to demonstrate competence to undertake the tasks, duties and responsibilities listed in column 1 of the table below.

2 The level of knowledge of the subjects listed in column 2 of the table below should be sufficient to enable the candidate to take charge of a tender boat used for tender operations.

3 Every tender boat operator should provide evidence of having achieved the recommended standards of training as a tender boat operator through:

- .1 demonstration of competence to undertake the tasks, duties and responsibilities listed in column 1 of the table below, in accordance with the methods for demonstrating competence and the criteria for evaluating competence tabulated in columns 3 and 4 of that table; and
- .2 examination or continuous assessment as part of an appropriate training programme covering the material set out in column 2 of the table below.

4 Seafarers qualified in accordance with these Guidelines as tender boat operators should be required, every five years, to provide evidence of having maintained the recommended standards of competence to undertake the tasks, duties and responsibilities listed in column 1 of the table below through:

- .1 demonstration of competence to undertake the tasks, duties and responsibilities listed in column 1 of the table below, in accordance with the methods for demonstrating competence and the criteria for evaluating competence tabulated in columns 3 and 4 of that table;
- .2 examination or continuous assessment as part of an appropriate training programme covering the material set out in column 2 of the table below; and
- .3 onboard training and experience (such as participation in drills) may also be accepted for maintaining the required standard of competence set out in the table.

**Table**

**Recommended standards of training as a Tender Boat Operator**

<b>Column 1</b>	<b>Column 2</b>	<b>Column 3</b>	<b>Column 4</b>
<b>Competence</b>	<b>Knowledge, understanding and proficiency</b>	<b>Methods for demonstrating competence</b>	<b>Criteria for evaluating competence</b>
Take charge of a tender boat during and after launch	<p>Construction and outfit of tender boats and individual items of their equipment</p> <p>Particular characteristics and facilities of tender boats</p> <p>Various types of devices used for launching tender boats</p> <p>Embarkation arrangements</p> <p>Methods of recovering tender boats</p> <p>Knowledge of maintenance procedures</p>	<p>Assessment of evidence obtained from practical demonstration of ability to:</p> <p>.1 interpret the markings on tender boats as to the number of persons they are intended to carry</p> <p>.2 conduct a visual inspection of the tender boat structure and equipment</p> <p>.3 give correct commands for launching and recovering tender boat</p> <p>.4 prepare and safely launch tender boat and clear the ship's side and operate off-load and on-load release devices</p> <p>.5 safely recover tender boats including the proper resetting of both off-load and on-load release devices using tender boat with inboard engine or approved simulator training, where appropriate</p>	<p>Preparation, launching and recovery of tender boat are within equipment limitations and enable tender boat to operate safely</p> <p>Visual inspection of tender boat effectively identifies significant deficiencies</p> <p>Lifting appliances are operated in accordance with manufacturers' instructions for release and resetting</p>
Operate a tender boat engine(s)	<p>Methods of starting and operating a tender boat engine(s) and its/their accessories</p> <p>Tender boat instrumentation, including engine start/stop, throttle,</p>	<p>Assessment of evidence obtained from practical demonstration of ability to:</p> <p>.1 conduct a visual inspection of the engine</p> <p>.2 locate and operate batteries</p>	<p>Propulsion is available and maintained as required for manoeuvring</p> <p>Visual inspection of the engine effectively identifies significant deficiencies</p>

Column 1	Column 2	Column 3	Column 4
Competence	Knowledge, understanding and proficiency	Methods for demonstrating competence	Criteria for evaluating competence
	RPM indicator(s), bilge pump(s) and smoke or fire alarm	.3 start and operate an inboard engine or engines in a tender boat  .4 understand all information displayed by instrumentation	Response to engine alarms is adequate and minimizes the risk of incidents
Manage passengers during normal tender operations	Embarkation, disembarkation and transit operations  Effective communications with passengers  Handling of passengers with special needs	Assessment of evidence obtained from practical demonstration of ability to:  .1 assist passengers during embarkation, disembarkation and transit operations  .2 assign passengers to seating positions to achieve optimal weight distribution  .3 give clear and correct safety instructions to passengers to be followed during embarkation, disembarkation and transit	Passenger management is appropriate to prevailing circumstances and conditions  Embarkation and disembarkation operations of tender boat are within equipment limitations and minimize the risk of injuries
Use communication and navigational equipment	Methods of communication and use of navigational equipment carried on tender boat, including fixed and portable radios, compass, local navigational charts, navigation lights and shapes, radar reflector, echo sounder, search light and whistle	Assessment of evidence obtained from practical demonstration of ability to:  .1 use fixed and portable radio equipment for tender boat  .2 use navigational equipment, including local navigational charts	Use and choice of communication and navigational equipment is appropriate to prevailing circumstances, conditions and area of operation  Use fixed and portable radio equipment in compliance with applicable radio regulations  Effective radio communication is established and maintained

Column 1	Column 2	Column 3	Column 4
Competence	Knowledge, understanding and proficiency	Methods for demonstrating competence	Criteria for evaluating competence
Operate and manoeuvre tender boat	<p>Methods of handling a tender boat in prevailing and adverse weather and sea conditions</p> <p>Use of anchor, boat hooks, mooring lines, fenders and paddles or oars</p> <p>Operating procedures for arrival, departure and transit to/from ship or shore</p> <p>Effects of wind and current on steering and manoeuvring</p> <p>Tender boat operation with restricted visibility</p> <p>Emergency steering and propulsion failure</p>	<p>Assessment of evidence obtained from practical demonstration of ability to:</p> <p>.1 handle tender boat in prevailing and adverse weather and sea conditions</p> <p>.2 basic understanding of rules for avoiding collisions, current and tides, sea conditions, weather forecast, route to be followed, areas to be avoided and pollution prevention</p> <p>.3 conduct safe mooring and transit operations</p> <p>.4 identify and avoid navigational hazards</p> <p>.5 steer tender boat by compass</p> <p>.6 switch from normal to emergency steering</p> <p>.7 handle tender boat with one propulsion engine</p>	<p>Boat handling and use and choice of equipment are appropriate to prevailing circumstances, conditions and area of operations (e.g., Polar Waters) as applicable</p> <p>Manoeuvring operations are conducted as to minimize risk of injuries and damage</p>

Column 1	Column 2	Column 3	Column 4
Competence	Knowledge, understanding and proficiency	Methods for demonstrating competence	Criteria for evaluating competence
Manage emergencies	<p>Recognize and react to types of emergencies that could occur on tender boats, including grounding, water ingress, fire and man overboard</p> <p>Knowledge of number, type and location of all safety equipment carried in tender boat, including fire extinguishers, life-saving appliances and visual signals</p> <p>Knowledge of engine compartment fire-extinguishing system and ventilation</p> <p>Knowledge of emergency response procedures</p>	<p>Assessment of evidence obtained from practical demonstration of ability to:</p> <p>.1 use safety equipment carried on tender boat</p> <p>.2 distribute lifejackets to all passengers on board</p> <p>.3 stop or minimize water ingress in the tender boat</p> <p>.4 extinguish a fire, including an engine fire</p> <p>.5 rescue a person from the water</p> <p>.6 transfer passengers to another assisting vessel</p> <p>.7 use available means of communication to manage emergencies between tender boat and an assisting ship</p> <p>.8 lead and direct others in an emergency</p> <p>.9 motivate passengers and other personnel</p> <p>.10 understand the effects of stress</p>	<p>Emergency responses are adequate and effectively minimize risk of injuries, loss of life and damage</p>

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## **ANNEX 3**

### **DRAFT MSC CIRCULAR**

#### **GUIDELINES FOR THE DESIGN AND INSTALLATION OF A VISIBLE ELEMENT TO THE GENERAL EMERGENCY ALARM ON PASSENGER SHIPS**

1 The Maritime Safety Committee, at its [ninetieth session (...)], with a view to providing guidance on the addition of a visual element to the general emergency alarm system on passenger ships, as required by SOLAS regulation III/6.4.2, and following a recommendation made by the Sub-Committee on Ship Design and Equipment at its fifty-fifth session [and the Sub-Committee on Fire Protection at its fifty-fifth session], approved the annexed Guidelines for the design and installation of a visible element to the general emergency alarm on passenger ships.

2 Member Governments are invited to use the annexed Guidelines from [date of approval] when applying the relevant provisions of SOLAS regulation III/6.4.2 and to bring them to the attention of all parties concerned.

## ANNEX

### DRAFT GUIDELINES FOR A VISUAL ELEMENT TO THE GENERAL EMERGENCY ALARM SYSTEM ON PASSENGER SHIPS

#### 1 General

This document provides guidance on the addition of a visual element to the general emergency alarm system on passenger ships, as required by SOLAS regulation III/6.4.2, for the purpose of alerting persons who are deaf or hard of hearing while minimizing the possibility of triggering seizures in persons who have photosensitive epilepsy.

#### 2 Definitions

2.1 *Effective intensity* is a measure of the brightness of a flashing light equivalent to the brightness of a steady-burning light as seen by a human observer. It is determined using specialized photometric equipment and reported in candela (cd).

2.2 *Field of view* is the line of sight over any 135 degree sector from any location.

2.3 *Flash rate* is the number of flashes per unit of time reported in Hertz (Hz).

2.4 *Illumination* is the amount of light incident on a surface measured in lumens per square metre.

2.5 *Photosensitive epilepsy* is a chronic neurological disorder characterized by recurrent seizures triggered by visual stimuli that form patterns in time or space, such as flashing lights, bold, regular patterns, or regular moving patterns.

2.6 *Polar diagram* is a graph employing polar coordinates to show the variation in effective intensity as a function of direction from the visual signal device.

2.7 *Public accommodation spaces* are those accommodation spaces for public use by passengers, such as public spaces, dining rooms, lounges, showrooms, public restrooms, corridors, lobbies, stairways, cinemas, gymnasiums, atriums, shops, and other similar spaces. It excludes cabins and associated balconies.

2.8 *Pulse duration* is the time interval between initial and final points of 10 per cent of maximum intensity of the flash.

2.9 *Synchronized* is appearing to occur at the same time as seen by a human observer.

2.10 *Visual signal* is the element of the general emergency alarm conveyed by regular repeated flashes of light.

#### 3 Principal characteristics

3.1 The general emergency alarm system in all interior public accommodation spaces should have both a visual signal and an audible signal.

3.2 The visual signal should be integrated into the general emergency alarm system such that activation of the general emergency alarm results in the concurrent activation of both audible and visual signals without further action.

3.3 The device for producing the visual signal should have the same reliability and suitability for marine service as the other components of the general emergency alarm.

3.4 The visual signal should not interfere with the ability of the crew to safely navigate the ship at night.

3.5 The visual signal should be effective for alerting persons who are deaf or hard of hearing while minimizing the possibility of triggering seizures in passengers and crew who have photosensitive epilepsy. Visual signals with the following characteristics have been found to be acceptable.\*

- .1 The lamp should be a xenon strobe type or equivalent.
- .2 The colour should be clear or nominal white.
- .3 The effective intensity should not exceed 1,000 cd.
- .4 The flash rate should not exceed two flashes per second (2 Hz) nor be less than one flash every second (1 Hz) throughout the design voltage range of the device.
- .5 The maximum pulse duration should be 0.2 second with a maximum duty cycle of 40 per cent.

3.6 To be effective, the visual signal device should comply with Table 1. This can be verified from a polar diagram of intensity and angles determined in accordance with an international or a national standard acceptable to the Administration.\*\*

3.7 All visual signal devices within a field of view should be synchronized. This includes strobes operated by separate systems. The field of view includes viewing from an adjacent space. However, it is not necessary to synchronize visual signal devices and other strobes located in an adjacent main vertical zone (MVZ) due to a field of view extending through a doorway or other opening in the MVZ boundary, provided that the combined flash rate of all devices and strobes in such field of view does not exceed 4 Hz.

3.8 For spaces equipped with the means of subdividing into smaller spaces (e.g., with movable bulkheads), the visual signal should be effective in each of the smaller spaces when so subdivided.

<b>Table 1 – Minimum distribution of effective intensity</b>					
Ceiling-mounted device		Bulkhead-mounted device			
Off-angle axis (degrees)	Minimum percentage of rated effective intensity	Vertical distribution (degrees)	Minimum percentage of rated effective intensity	Horizontal distribution (degrees)	Minimum percentage of rated effective intensity
0	100%	0	100%	0	100%
45	75%	30	90%	45	75%
90	25%	90	12%	90	25%

\* These characteristics are the same as found in chapter 18 of NFPA 72-2010, *National Fire Alarm and Signaling Code*. Devices with similar characteristics are found in many commercial and public buildings in the United States.

\*\* An example of such a standard is ANSI/UL 1971, *Standard for Signaling Devices for the Hearing Impaired*.

3.9 The visual signal should be designed and installed in such a manner to be quickly noticed by an alert person anywhere within the space. Either of the approaches in 4.1 or 4.2 or an equivalent standard acceptable to the Administration is suitable.

## 4 System design and arrangement

### 4.1 Performance approach

A suitable performance requirement is complete coverage of a space with a minimum illumination of 0.4036 lumens/m<sup>2</sup> as calculated at any point in the covered area, based on the use of the polar diagrams of the devices used.

### 4.2 Prescriptive approach

4.2.1 Visual signal devices should be located to provide complete coverage of the protected space.

4.2.1.1 The area of coverage of a bulkhead-mounted visual signal device is a rectangle with the device mounted halfway along one edge of the rectangle as shown in Figure 1. The maximum horizontal dimension (X) of the area of coverage for varying effective intensities is found in Table 2.

4.2.1.2 The area of coverage of a ceiling-mounted visual signal device is a square with the device located in the centre of the square as shown in Figure 1. The maximum horizontal dimension (X) of the area of coverage for varying effective intensities and lens heights is found in Table 3.

4.2.1.3 When the visual signal device is not mounted per 4.2.1.1 or 4.2.1.2, the maximum horizontal dimension (X) should be determined by doubling the distance from the device to the farthest edge of the area of coverage. The pertinent edge for a bulkhead-mounted device is the side edge, not the edge opposite the device.

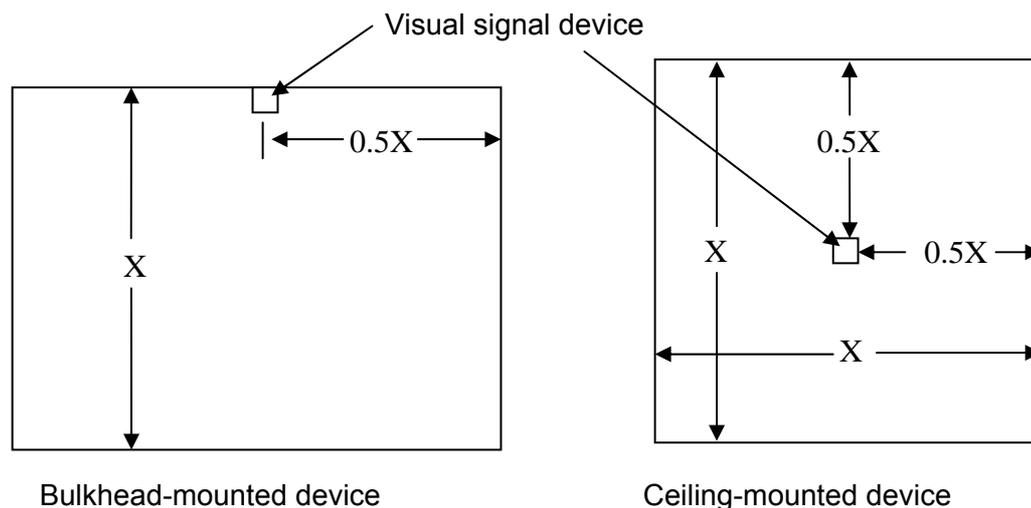


Figure 1 – Area of coverage

<b>Table 2 – Maximum dimension versus effective intensity</b>	
Maximum horizontal dimension (m)	Minimum effective intensity (cd)
6	15
8.5	30
9	33
10	41
11	50
12	59
13	69
14	80
15	92
16	104
17	118
18	132
19	147
20	162
21	179
22	197

		Lens height (m)															
		2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0	6.5	7.0	7.5	8.0	8.5	9.0	9.5	10
Maximum horizontal dimension (m)	5	15	15	15	15	15	15	17	20	22	25	29	32	36	40	44	48
	6	16	15	16	15	16	19	21	22	24	27	30	33	37	41	45	50
	7	21	21	20	21	20	21	23	27	28	30	31	35	39	42	47	51
	8	27	28	27	27	27	26	26	29	32	35	37	38	40	44	48	53
	9	35	35	34	33	35	34	33	33	34	38	42	45	47	49	51	55
	10	45	43	43	42	41	42	41	41	41	40	44	49	53	56	58	60
	11	55	51	53	51	50	51	50	49	49	49	47	51	56	61	66	68
	12	67	61	62	62	60	59	61	60	59	58	58	56	59	64	69	74
	13	80	73	72	73	72	70	70	71	70	69	68	68	66	67	72	77
	14	94	86	83	85	84	83	81	83	82	80	79	79	79	77	76	81
	15	109	100	95	97	96	96	94	93	95	93	92	91	91	91	88	86
	16	126	115	108	109	111	108	109	107	107	108	106	104	104	103	103	100
	17	142	132	124	123	125	122	123	122	120	122	121	119	118	117	117	116
	18	159	150	142	137	139	140	136	139	136	134	137	134	133	132	131	131
	19	177	169	159	154	154	157	152	153	153	151	151	152	149	147	147	146
	20	196	189	177	173	170	172	171	166	171	169	167	169	167	165	163	163
	21	216	211	198	194	186	189	192	184	185	189	186	183	186	183	181	180
22	237	233	219	212	208	206	209	205	200	205	206	203	203	203	200	198	
23	259	257	242	231	230	225	228	228	220	221	226	224	221	223	221	218	
24	281	282	266	252	253	246	247	250	243	237	242	246	243	240	243	240	
26	330	331	318	302	294	296	287	291	292	283	278	283	289	286	283	285	

<sup>\*\*\*</sup> The effective intensities are based on providing at least 0.405 lumens/m<sup>2</sup> at the middle of the bottom edge of the coverage area, 0.246 lumens/m<sup>2</sup> at the bottom of the corners, and 0.243 lumens/m<sup>2</sup> at a height of 1.5 m in the corners by a visual alarm device with the minimum distribution of effective intensities of ANSI/UL 1971, *Standard for Signaling Devices for the Hearing Impaired*.

4.2.2 Bulkhead-mounted visual signal devices should be mounted on the bulkhead such that the entire lens is not less than 2,030 mm and not greater than 2,440 mm above the deck surface. For spaces with multiple levels, the mounting height should be determined above the nearest deck surface.

4.2.2.1 If the bulkhead-mounted visual signal devices cannot be mounted at least 2,030 mm above the deck due to low ceiling height, the devices should be mounted within 150 mm of the ceiling. The maximum horizontal dimension (X) should be reduced by twice the difference between the actual mounting height and 2,030 mm.

4.2.3 Ceiling-mounted visual signal devices may be mounted on or suspended from the ceiling. If ceiling heights exceed 10 m, ceiling-mounted visual signal devices should be suspended at or below 10 m.

4.2.4 For corridors less than 6 m in width, the following specification may be used instead of 4.2.1.

4.2.4.1 The minimum effective intensity of the visual signal device should be 15 cd.

4.2.4.2 Visual signal devices should be located not more than 4 m from the end of the corridor with a separation not greater than 30.5 m between devices.

4.2.4.3 If there is an interruption of the concentrated viewing path, such as a fire door, an elevation change, or any other obstruction, the area should be treated as a separate corridor.

## **5 Testing requirements**

5.1 After initial installation or modification, the system should be checked to verify proper operation including the following items:

- .1 that all visual signal devices operate upon activation of the general emergency alarm system; and
- .2 that all visual signal devices are synchronized as specified in 3.7.

5.2 The periodic testing of visual signal devices as part of the general emergency alarm system should be included in the maintenance plan required by SOLAS regulation II-2/14.2.2.

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**ANNEX 4**

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

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

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

1 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\* .

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

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**ANNEX 5**

**DRAFT MSC CIRCULAR**

**GUIDELINES FOR EVALUATION AND REPLACEMENT OF  
LIFEBOAT RELEASE AND RETRIEVAL SYSTEMS**

1 The Maritime Safety Committee, at its [eighty-ninth session (11 to 20 May 2011)], approved the Guidelines for evaluation and replacement of lifeboat release and retrieval systems, set out in the annex, in accordance with SOLAS regulation III/1.5, following the recommendations made by the Sub-Committee on Ship Design and Equipment, at its fifty-fifth session.

2 Member Governments are invited to use the annexed Guidelines when applying SOLAS regulation III/1.5, as adopted by resolution MSC...(89), and to bring them to the attention of all parties concerned.

3 Member Governments, shipowners and manufacturers of lifeboat release and retrieval systems are also strongly urged, pending the entry into force of SOLAS regulation III/1.5, to use the annexed Guidelines to evaluate existing lifeboat release and retrieval systems at the earliest available opportunity.

4 Member Governments are strongly urged to ensure that all ships fitted with on-load release systems for lifeboats are equipped with fall preventer devices as per paragraph 6 of these Guidelines from the earliest available opportunity.

5 Member Governments are encouraged to consider the results of the evaluation of types of existing lifeboat release and retrieval systems reported to the Organization by other Member Governments.

## ANNEX

### **GUIDELINES FOR EVALUATION AND REPLACEMENT OF LIFEBOAT RELEASE AND RETRIEVAL SYSTEMS**

#### **General**

1 New SOLAS regulation III/1.5, which is expected to enter into force on [date], requires that for all ships, on-load release mechanisms\* not complying with paragraphs 4.4.7.6.4 to 4.4.7.6.6 of the LSA Code, as amended by resolution MSC...(89) (hereinafter called the "LSA Code"), be replaced or modified not later than the next scheduled dry-docking after [1 July 2014], but not later than [1 July 2019].

2 Considering that paragraphs 4.4.7.6.4 to 4.4.7.6.6 of the LSA Code represent important safety improvements, manufacturers should carry out a self assessment of their types of existing lifeboat release and retrieval systems in accordance with these Guidelines at the earliest available opportunity.

3 An Administration, or a recognized organization acting on its behalf, should carry out a design review to check that the type of existing lifeboat release and retrieval systems comply with paragraphs 4.4.7.6.4 to 4.4.7.6.6 of the LSA Code and should witness the performance test to check that it is performed in accordance with appendix 1 of these Guidelines. This evaluation should be completed, not later than 1 July 2013, and the report should be submitted in accordance with paragraph 14 below.

4 Administrations, or recognized organizations acting on their behalf, should, when applying SOLAS regulation III/1.5, ensure that an evaluation is undertaken of the type of existing lifeboat release and retrieval system for compliance with paragraphs 4.4.7.6.4 to 4.4.7.6.6 of the LSA Code, in accordance with these Guidelines.

5 For a flowchart of the lifeboat release and retrieval system evaluation process, refer to appendix 2.

6 On each ship, fall preventer devices in accordance with the Guidelines for the fitting and use of fall preventer devices (FPDs) (MSC.1/Circ.1327) should be employed for each existing lifeboat release and retrieval system until the system is:

- .1 found compliant with the LSA Code; or
- .2 modified and found compliant with the LSA Code; or
- .3 found compliant with paragraphs 4.4.7.6.4 to 4.4.7.6.6 of the LSA Code and paragraphs 16 and 17 (overhaul examination) of these Guidelines; or
- .4 modified and found compliant with paragraphs 4.4.7.6.4 to 4.4.7.6.6 of the LSA Code and paragraphs 16 and 17 (overhaul examination) of these Guidelines; or
- .5 replaced by a new lifeboat release and retrieval system.

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\*

For the purpose of these Guidelines, the expression "on-load release mechanism" has been replaced by "lifeboat release and retrieval system" (see paragraph 9.1).

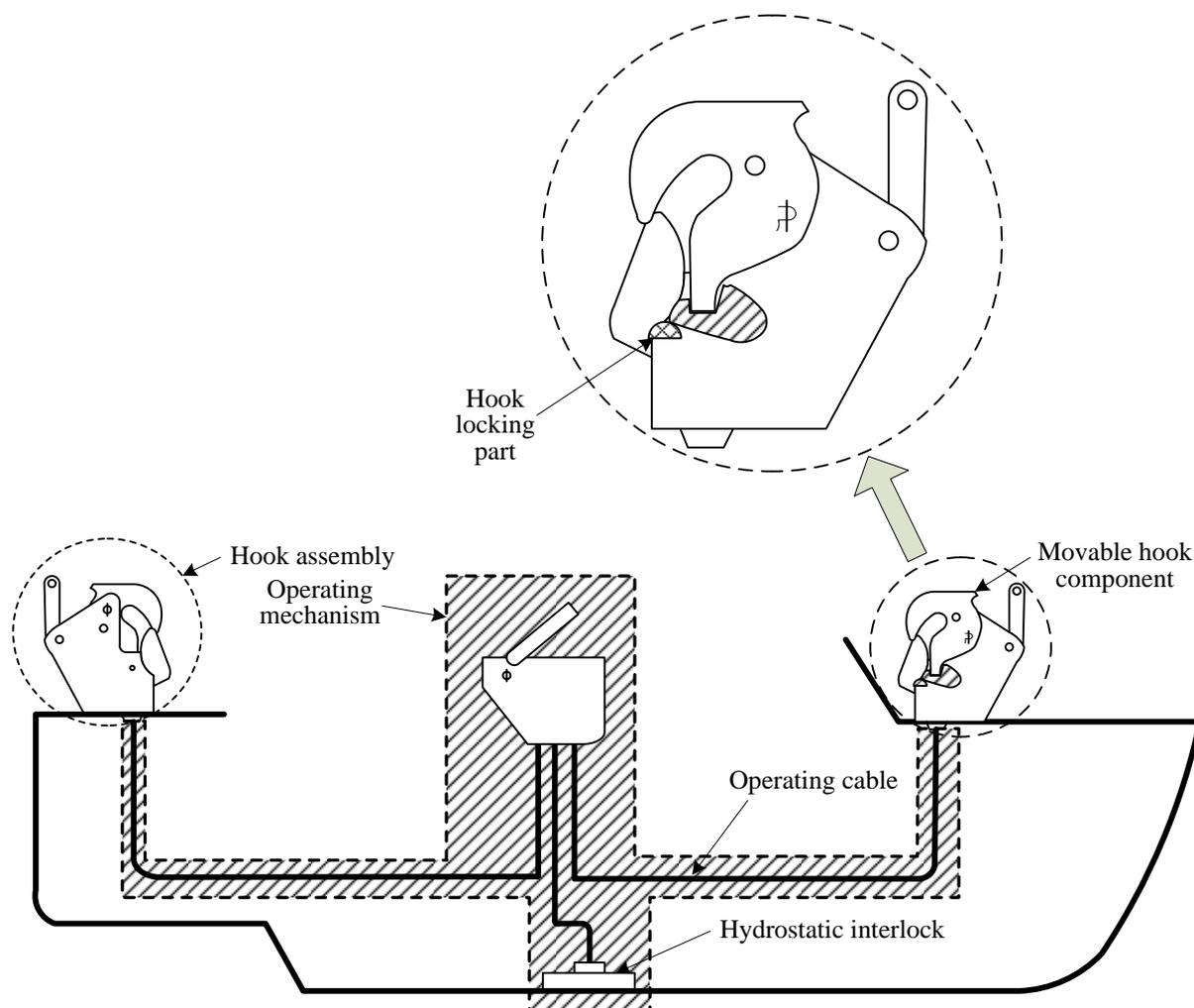
## Modifications

7 A lifeboat release and retrieval system that had been determined to be non-compliant in accordance with these Guidelines may be modified to comply with the requirements of the revised paragraphs 4.4.7.6.4 to 4.4.7.6.6 of the LSA Code and the requirements of the existing applicable Code, provided that the modified release and retrieval system is evaluated in accordance with these Guidelines.

8 A type of lifeboat release and retrieval system that, after modification, complies with the requirements of the revised paragraphs 4.4.7.6.4 to 4.4.7.6.6 of the LSA Code and the requirements of the existing applicable Code should be identified as a system compliant after modification and reported as such. The report should include both the identification of the original type and the modified type.

## Definitions

9 For the purpose of these Guidelines, the definitions given hereunder should apply, in conjunction with the following figure.



**Lifeboat release and retrieval system**

9.1 *Lifeboat release and retrieval system* is the means by which the lifeboat is connected to, and released from, the lifeboat falls for lowering, launch and retrieval. It comprises the hook assembly and operating mechanism.

9.2 *Hook assembly* is the mechanism, attached to the lifeboat, which connects the lifeboat to the lifeboat falls.

9.3 *Movable hook component* is that part of the hook assembly in direct contact with the connection with the lifeboat falls which moves to enable release from the falls.

9.4 *Hook locking part* is the component(s) within a hook assembly which holds the movable hook component in the closed position until activated by the operating mechanism to release the hook. This activation may be performed through other components within the hook assembly.

9.5 *Operating mechanism* is the means by which the operator activates the opening, or release, of the movable hook component. It includes the operating handle, linkages/cables and hydrostatic interlock, if fitted.

9.6 *Type*, in relation to the design of a lifeboat release and retrieval system, means an identical lifeboat release and retrieval system of given safe working load, make and model (thus any change to the materials of construction, design arrangement or dimensions constitutes a change of type).

9.7 *On-load release* is the action of opening the lifeboat release and retrieval system whilst there is load on the hook assemblies.

9.8 *Evaluation* is a design review and a performance test of a type of lifeboat release and retrieval system.

9.9 *Manufacturer*, with respect to existing lifeboat release and retrieval systems, is:

- .1 the original equipment manufacturer; or
- .2 a manufacturer of lifeboat release and retrieval systems who has taken on the responsibility for a range or type of lifeboat release and retrieval system; or
- .3 any other person or entity which has taken responsibility for a range or type of lifeboat release and retrieval system when the original manufacturer no longer exists or supports the equipment.

9.10 *Modifications* are changes to the design of an approved lifeboat release and retrieval system which may affect compliance with the original approval requirements or the prescribed conditions for the use of the product.

9.11 *New lifeboat release and retrieval system* is a lifeboat release and retrieval system that has been approved in accordance with paragraph 4.4.7.6 of chapter IV of the LSA Code, as amended by resolution MSC...(89).

9.12 *Existing lifeboat release and retrieval system* is a lifeboat release and retrieval system that has not been approved in accordance with paragraph 4.4.7.6 of chapter IV of the LSA Code, as amended by resolution MSC...(89).

9.13 *Company* means company as defined in SOLAS regulation IX/1.2.

## **Design review**

10 Documentation and information for each type of lifeboat release and retrieval system should be submitted to the Administration, or recognized organization acting on its behalf, in order that an assessment can be carried out to determine compliance with paragraphs 4.4.7.6.4 to 4.4.7.6.6 of the LSA Code. The manufacturer should submit the approval certificate, along with all associated supporting design calculations, plans and testing documentation to the Administration or recognized organization acting on its behalf. The design information should include the specification and the installation instructions for the complete operating system as well as all safety instructions regarding the operating system and any interlocks provided. Any submission for testing of a lifeboat release and retrieval system that cannot be supported with the above-mentioned information should not be eligible for testing against the requirements of the LSA Code.

11 If the outcome of the design review is non-compliance with the applicable paragraphs of the LSA Code, the lifeboat release and retrieval system should be replaced or modified to be made compliant.

## **Performance test**

12 After a successful completion of the design review, a performance test should be conducted by the manufacturer for each type of lifeboat release and retrieval systems for compliance with paragraphs 4.4.7.6.4 to 4.4.7.6.6 of the LSA Code, using the test specified in appendix 1 to these Guidelines. The performance test should be witnessed by the Administration or a recognized organization acting on its behalf.

13 Should any part of the lifeboat release and retrieval system fail at any stage during the test specified in paragraphs 1 to 4 of appendix 1, this type of lifeboat release and retrieval system should be deemed to be non-compliant and reported as such.

## **Reporting of the results of evaluation of existing lifeboat release and retrieval system**

14 The Administration should report the results of each type of existing lifeboat release and retrieval system evaluation carried out in accordance with these Guidelines to the Organization, based on the reporting procedure, as set out in appendix 3.

15 Depending on the outcome of the evaluation, every lifeboat release and retrieval system should be categorized as being either compliant, compliant after modification or non-compliant. Thereafter:

- .1 systems categorized as being compliant, or compliant after modification, may remain in service; and
- .2 every system categorized as being non-compliant should be replaced with a new system or modified to be made compliant.

## **One-time follow-up overhaul examination**

16 Not later than the first scheduled dry-docking after [1 July 2014], every lifeboat release and retrieval system of a type found to be compliant in respect of the existing lifeboat release and retrieval system evaluation should be subject to an overhaul examination according to annex 1 to the Measures to prevent accidents with lifeboats (MSC.1/Circ.1206/Rev.1) by the manufacturer or by one of their representatives.

The examination also includes verification that the system examined is of the same type as the system that passed the evaluation and is suitable for the ship.

17 The scope of the overhaul examination should also include a detailed assessment of the condition of the components of the lifeboat release and retrieval system to observe the extent of wear, corrosion, erosion and other types of material degradation that may have occurred. Upon satisfactory completion of the overhaul examination, the manufacturer or one of their representatives should issue a factual statement to confirm this, for retention on board.

#### **Procedure for replacement of non-compliant lifeboat release and retrieval systems**

18 The procedure outlined below should be followed in all cases where a lifeboat is to be fitted with replacement lifeboat release and retrieval systems with on-load release capability. It is noted that every lifeboat, complete with lifeboat release and retrieval system, is type-approved at manufacture and it is important to recognize that a lifeboat which is retro-fitted with a replacement lifeboat release and retrieval system to the satisfaction of the Administration should be regarded as offering a level of safety which is higher than that of the original installation.

19 Companies should, where possible, select replacement equipment acceptable to the lifeboat manufacturer. However, in cases where the lifeboat manufacturer is unable to offer a suitable replacement lifeboat release and retrieval system, the Company may select an alternative lifeboat release and retrieval system, with the agreement, if possible, of the lifeboat manufacturer.

20 The replacement equipment should be approved by the Administration or a recognized organization acting on its behalf, under the provisions of the LSA Code. Prior to the installation commencing, the Company should submit to the Administration, or a recognized organization acting on its behalf, for review and approval, as a minimum the following information:

- .1 the proposed replacement equipment including approval certification;
- .2 the engineering analysis of the replacement installation including:
  - .1 drawings of the original lifeboat release and retrieval system arrangement;
  - .2 detailed drawings showing clearly the proposed changes (e.g., position of suspension, lifeboat release and retrieval system, fixed structural connections of the release mechanism, link plates, including materials used for nuts and bolts with regard to strength and corrosion resistance); and
  - .3 if the drawings show that forces and/or force couples will change and/or the lifeboat release and retrieval system fixed structural connections of the release mechanism will change, calculation of static forces including a safety factor of 6, according to the LSA Code, from lifeboat release and retrieval system into lifeboat structure, including tension and shear forces in bolts, link plates, welds and keel shoe(s);
- .3 considering that a lifeboat release and retrieval system does not consist just of the hook assemblies themselves, but also of release handles, cabling, etc., in the lifeboat, the evaluation of a replacement hook assembly other than that originally provided in the lifeboat should include such factors

as loadings of the release handle on the console, efficiency of any hydrostatic interlock in light and loaded conditions, whether the size/configuration of the replacement equipment would affect the stability or seating space of the lifeboat, and its compatibility with its launching appliance;

- .4 amended operating and training manuals; and
- .5 identification of the person(s) responsible for design appraisal, installation work and post-installation testing and evidence of their competence.

21 The Administration, or a recognized organization acting on its behalf, may allow that hook fixed structural connections of the release mechanism and supporting structure which are not made of material corrosion resistant in the marine environment, as required by paragraph 4.4.7.6.9 of the LSA Code, need not be replaced if they are in a good condition and installed in a sheltered position inside the lifeboat.

22 A copy of the engineering drawing(s) approved by the Administration, or by the recognized organization acting on its behalf, should be used during installation and testing and retained on board.

23 The installation should be carried out by the manufacturer or by one of their representatives. All work carried out should be witnessed by the Administration, or by a recognized organization acting on its behalf. Valid operating and safety instructions should be posted at the operating position and adjacent to the lifeboat release and retrieval system(s).

24 Post-installation testing should be carried out by the manufacturer or by one of their representatives and comprise the following:

- .1 1.1 x load and simultaneous release test according to the Revised recommendation on testing of life-saving appliances (resolution MSC.81(70)), part 2, paragraph 5.3.1, or an equivalent method acceptable to the Administration;
- .2 load test according to the Revised recommendation on testing of life-saving appliances (resolution MSC.81(70)), part 2, paragraph 5.3.4, as amended by resolution MSC.226(82), if the fixed structural connections of the release mechanism of the lifeboat is modified; and
- .3 if the lifeboat is also a rescue boat and/or is installed on a cargo ship of 20,000 gross tonnage or above, the 5 knots installation test should be carried out, in accordance with the Revised recommendation on testing of life-saving appliances (resolution MSC.81(70)), part 2, paragraph 5.4.

25 All tests should be witnessed by the Administration, or by a recognized organization acting on its behalf, which should also verify that the installation complies in all respects with the documentation submitted by the Company and approved by the Administration, or a recognized organization acting on its behalf.

26 Following completion of installation testing, the Administration, or a recognized organization acting on its behalf, should issue a Statement of Acceptance, using the template set out in appendix 4, to the Company, for retention on board.

## APPENDIX 1

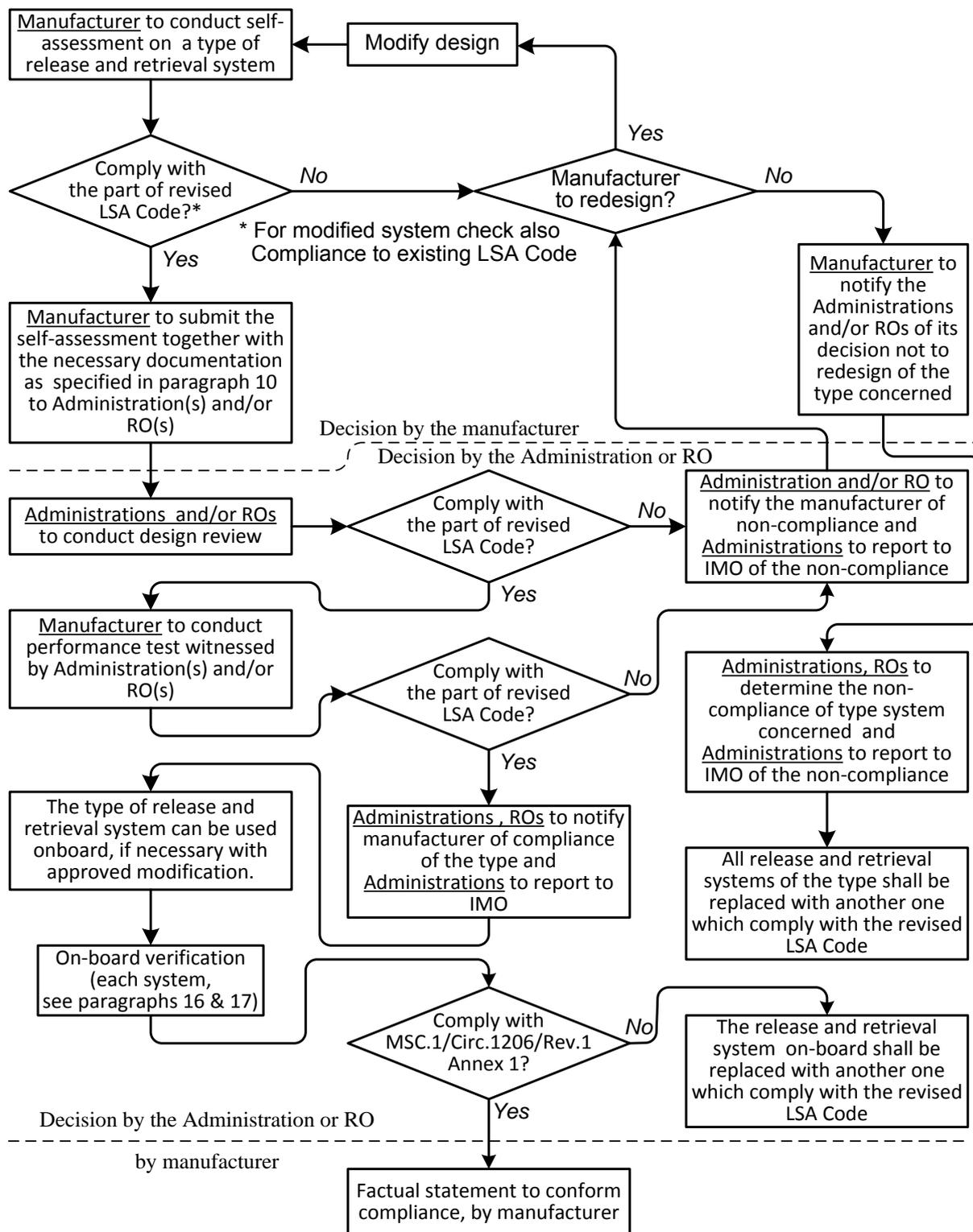
### TEST REQUIREMENTS FOR THE EVALUATION OF LIFEBOAT RELEASE AND RETRIEVAL SYSTEMS

A release and retrieval system should be conditioned and tested as follows:

- .1 the lifeboat release and retrieval system and the longest used connection cable/linkage associated with the system should be mounted and adjusted according to instructions from the original equipment manufacturer and then loaded to 100% of its safe working load and released. Load and release should be repeated 50 times. During the 50 releases, the lifeboat release and retrieval system should be released simultaneously from each fall to which it is connected without any binding or damage to any part of the lifeboat release and retrieval system. The system should be considered as "failed" if any failure during the conditioning or unintended release occurs when load is applied but the system has not yet been operated;
- .2 the lifeboat release and retrieval system should then be disassembled, the parts examined and wear recorded. The release and retrieval system should then be reassembled;
- .3 the hook assembly, whilst disconnected from the operating mechanism, should then be tested 10 times with cyclic loading from zero load to 1.1 times the safe working load, at a nominal 10 seconds per cycle; unless the release and retrieval system has been specifically designed to operate as an off-load hook with on-load capability using the weight of the boat to close the hook, in this case the cyclic load should be from no more than 1% to 1.1 times the SWL; and
- .4 the cable and operating mechanism should then be reconnected to the hook assembly; and the lifeboat release and retrieval system should then be demonstrated to operate satisfactorily under its safe working load. The actuation force should be no less than 100 N and no more than 300 N, if a cable is used it should be the maximum length specified by the manufacturer, and secured in the same manner it would be secured in the lifeboat. The demonstration should verify that any interlocks, including hydrostatic interlocks, where fitted, indicators and handles are still functioning and are correctly positioned in accordance with the operation and safety instruction from the original equipment manufacturer. The release and retrieval system is deemed to have passed the testing under this appendix when the tests have been conducted successfully. The system should be considered as "failed" if any failure during this test or any unintended release or opening occurs.

APPENDIX 2

**EXISTING LIFEBOAT RELEASE AND RETRIEVAL SYSTEM  
EVALUATION PROCESS FLOW CHART**



APPENDIX 3

**INFORMATION ON THE EVALUATION OF EXISTING  
LIFEBOAT RELEASE AND RETRIEVAL SYSTEMS TO BE REPORTED**

The following information should be provided for each lifeboat release and retrieval system:

Manufacturer's Details	<b>Name</b>
	<b>Address</b>
	<b>E-mail address</b>
Lifeboat release and retrieval system	<b>Type (see paragraph 9.6) and identification</b>
In case of modification	<b>Original type and identification</b>
	<b>Details of modification</b>
Specification of type (e.g., Maximum Safe Working Load (SWL))	
Details of the Administration, or recognized organization acting on its behalf, undertaking the evaluation of the lifeboat release and retrieval system	<b>Name</b>
	<b>Address</b>
	<b>E-mail address</b>
Evaluation report details	<b>No.</b>
	<b>Date</b>
Evaluation result	<b>Compliant / Non-compliant / Compliant after modification</b>
Report information	<b>Link to the relevant report (url)</b>
Reported by	<b>Name of the Administration</b>

APPENDIX 4

**STATEMENT OF ACCEPTANCE OF THE INSTALLATION OF REPLACEMENT RELEASE AND RETRIEVAL SYSTEM TO AN EXISTING LIFEBOAT**

*Issued in accordance with the provisions of regulation I/5 of the International Convention for the Safety of Life at Sea (SOLAS), 1974, as amended, under the authority of [Administration]*

Name of ship:  
Port of registry:  
IMO Number:

Lifeboat details:

Replacement release and retrieval system details:

Lifeboat identity	Lifeboat serial number	Release and retrieval system serial number (fwd)	Release and retrieval system serial number (aft)
No.1 (Stbd)			
No.2 (Port)			

The above release and retrieval system has been installed and tested under the supervision of the [Administration, or a recognized organization authorized to act on its behalf]\*, as documented in Survey report no...; certificate no.... dated ... and [installation] drawing(s) no(s) ... dated ... .

This statement is to confirm that:

- .1 The replacement release and retrieval system meets the relevant requirements of the LSA Code, chapter IV, section 4.4.7.6.
- .2 The replacement release and retrieval system construction and the equipment of the above-mentioned ship was found to comply with the provisions of SOLAS regulation III/4 when tested in accordance with the Revised recommendation on testing of life-saving appliances (resolution MSC.81(70)), part 2, section 5.3.1. [The test required by paragraph 5.3.4 is waived as impracticable for this replacement procedure.]\*
- .3 The validity of the relevant Safety Certificate is not affected by the installation of the replacement release and retrieval system.
- .4 The installation of the replacement release and retrieval system offers a level of safety which is at least as effective as the original manufacturer's equipment.

The [Administration, or a recognized organization authorized to act on its behalf]\* certifies that this Statement of Acceptance augments and supersedes the affected sections of the original lifeboat approval certification. The statement must be kept on board the ship with all other relevant documentation at all times.

.....  
(Date)

..... (Stamp)

\*\*\*

\* Insert as appropriate.



## ANNEX 6

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

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

##### Regulation 1 – Application

The following new paragraph 5 is added after the existing paragraph 4:

"5 Notwithstanding paragraph 4.2, for all ships, not later than the first scheduled dry-docking after [1 July 2014], but not later than [1 July 2019], lifeboat on-load release mechanisms not complying with paragraphs 4.4.7.6.4 to 4.4.7.6.6 of the Code shall be replaced with equipment that complies with the Code.\*

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\* Refer to the Guidelines for evaluation and replacement of lifeboat release and retrieval systems (MSC.1/Circ...)."

\*\*\*



**ANNEX 7**

**DRAFT MSC CIRCULAR**

**EARLY APPLICATION OF NEW SOLAS REGULATION III/1.5**

1 The Maritime Safety Committee, at its [eighty-ninth session (11 to 20 May 2011)], adopted, by resolution MSC...(89), new SOLAS regulation III/1.5 and, by resolution MSC...(89), amendments to chapter IV of the LSA Code, which are expected to enter into force on [...]. The Committee also approved the associated Guidelines for evaluation and replacement of lifeboat release and retrieval systems (MSC.1/Circ....).

2 In adopting the aforementioned amendments, the Committee agreed to the recommendation by the Sub-Committee on Ship Design and Equipment, at its fifty-fifth session (21 to 25 March 2011), that parties concerned should be encouraged to take necessary action to evaluate existing lifeboat release and retrieval systems, based on the aforementioned Guidelines, at the earliest available opportunity, pending the entry into force of new SOLAS regulation III/1.5.

3 Member Governments and shipowners are invited to take account of this circular and bring it to the attention of all parties concerned. In particular, manufacturers are urged to evaluate existing lifeboat release and retrieval systems at the earliest available opportunity, in accordance with the aforementioned Guidelines.

\*\*\*



## ANNEX 8

### DRAFT AMENDMENTS TO THE INTERNATIONAL LIFE-SAVING APPLIANCES (LSA) CODE

#### CHAPTER IV SURVIVAL CRAFT

1 In paragraph 4.4.7.6, the following new subparagraphs .2 to .6 are inserted after the existing subparagraph .1:

- "2 notwithstanding paragraph 7.2 the mechanism shall only open when the release mechanism is operated with the boat fully waterborne or, if the boat is not waterborne, by multiple, deliberate and sustained action which shall include the removal or bypassing of safety interlocks designed to prevent premature or inadvertent release;
  - .2.1 the mechanism shall not be able to open due to wear, misalignment and unintended force within the hook assembly or operating mechanism, control rods or cables as may be connected to, or form part of the hook assembly and with trim of up to 10° and a list of up to 20° either way; and
  - .2.2 the functional criteria of 4.4.7.6.2 and 4.4.7.6.2.1 apply for the range of loads, representing 0% to 100% of the safe working load of the lifeboat release and retrieval system for which it may be approved;
- .3 unless a release mechanism is of the load over centre type, which is held fully closed by the weight of the lifeboat, the hook assembly shall be designed so that the moveable hook component is kept fully closed by the hook locking parts capable of holding its safe working load under any operational conditions until the hook locking part is deliberately caused to open by means of the operating mechanism. For designs utilizing the tail of the movable hook component and cam either directly or indirectly securing the tail of the movable hook component, the hook assembly shall continue to be closed and hold its safe working load through rotation of the cam of up to 45 degrees in either direction, or 45 degrees in one direction if restricted by design, from its locked position;
- .4 to provide hook stability, the release mechanism shall be designed so that, when it is fully reset in the closed position, the weight of the lifeboat does not cause any force to be transmitted to the operating mechanism;
- .5 locking devices shall be designed so that they can not turn to open due to forces from the hook load;
- .6 if a hydrostatic interlock is provided, it shall automatically reset upon lifting the boat from the water;"

- 2 In paragraph 4.4.7.6, the existing subparagraph .2 is replaced by the following:
- "7 the mechanism shall have two release capabilities: normal (off-load) release capability and on-load release capability:
- .7.1 normal (off-load) release capability shall release the lifeboat when it is waterborne or when there is no load on the hooks, and not require manual separation of the lifting ring or shackle from the jaw of the hook; and
- .7.2 on-load release capability shall release the lifeboat with a load on the hooks. This release mechanism shall be provided with a hydrostatic interlock unless other means are provided to ensure that the boat is waterborne before the release mechanism can be activated. In case of failure or when the boat is not waterborne, there shall be a means to override the hydrostatic interlock or similar device to allow emergency release. This interlock override capability shall be adequately protected against accidental or premature use. Adequate protection shall include special mechanical protection not normally required for off-load release, in addition to a danger sign. The protection shall be deliberately destroyed by applying a suitable minimum force, for instance by breaking a protection glass or translucent cover. A label or thin wire seal is not considered sufficiently robust. To prevent a premature on-load release, on-load operation of the release mechanism shall require multiple, deliberate and sustained action or actions by the operator;"
- 3 In paragraph 4.4.7.6, the existing subparagraph .3 is renumbered as subparagraph .8 and the words "without excessive force" are replaced by the words ", and any indicators shall not indicate the release mechanism is reset".
- 4 In paragraph 4.4.7.6, the following new subparagraph .9 is inserted after the renumbered subparagraph 8:
- "9 all components of the hook unit, release handle unit, control cables or mechanical operating links and the fixed structural connections in a lifeboat shall be of material corrosion resistant in the marine environment without the need for coatings or galvanizing. Design and manufacturing tolerances shall be such that anticipated wear throughout the service life of the mechanism shall not adversely affect its proper functioning. Mechanical operating links such as control cables shall be waterproof and shall have no exposed or unprotected areas;"
- 5 In paragraph 4.4.7.6, the existing subparagraphs .4 to .8 are renumbered as subparagraphs .10 to .14, respectively.
- 6 In paragraph 4.4.7.6, in the renumbered subparagraph .10, the word "clearly" is replaced by the word "unambiguously".
- 7 In paragraph 4.4.7.6, in the renumbered subparagraph .14, the words "the load-bearing components of the release mechanism and" are added at the beginning and the words "of the release mechanism" are deleted.

8 In paragraph 4.4.7.6, the following new subparagraphs .15 and .16 are inserted after the renumbered subparagraph .14:

".15 a hydrostatic interlock shall be designed for a factor of safety of not less than 6 times maximum operating force based on the ultimate strength of the materials used;

.16 the operating cables shall be designed for a factor of safety of not less than 2.5 times maximum operating force based on the ultimate strength of the materials used; and".

9 In paragraph 4.4.7.6, the existing subparagraph .9 is renumbered as subparagraph .17 and in the renumbered subparagraph .17, the references to paragraphs "4.4.7.6.2.2 and 4.4.7.6.3" are replaced by the references to paragraphs "4.4.7.6.7, 4.4.7.6.8 and 4.4.7.6.15".

10 In paragraph 4.4.7.6, the referenced subparagraph .9 is replaced by .17.

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**ANNEX 9**

**DRAFT RESOLUTION MSC.[...(89)]  
(adopted on [... May 2011])**

**AMENDMENTS TO THE REVISED RECOMMENDATION ON TESTING OF  
LIFE-SAVING APPLIANCES (RESOLUTION MSC.81(70)), 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 ALSO resolution A.689(17) entitled "Testing of life-saving appliances", by which the Assembly, at its seventeenth session, adopted the Recommendation on testing of life-saving appliances,

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

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

RECOGNIZING the need to appropriately align the relevant provisions of the Revised recommendation on testing of life-saving appliances with the associated amendments to the LSA Code adopted by resolution MSC....(89),

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

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

ANNEX

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

**PART 1  
PROTOTYPE TESTS FOR LIFE-SAVING APPLIANCES**

- 1 The existing paragraphs 6.9.3 and 6.9.4 are replaced by the following:

"6.9.3 With the operating mechanism disconnected it should be demonstrated when the lifeboat is loaded with its full complement of persons and equipment and towed at speeds of 5 knots that the moveable hook component stays closed. Furthermore, with the operating mechanism connected it should be demonstrated that the lifeboat when loaded with its full complement of persons and equipment when towed at speeds of 5 knots can be released. Both of the above should be demonstrated as follows as follows:

- .1 a force equal to 25% of the safe working load of the hook should be applied to the hook in the lengthwise direction of the boat at an angle of 45° to the vertical. This test should be conducted in the aftward as well as the forward direction;
- .2 a force equal to the safe working load of the hook should be applied to the hook in an athwartships direction at an angle of 20° to the vertical. This test should be conducted on both sides; and
- .3 a force equal to the safe working load of the hook should be applied to the hook in a direction halfway between the positions of tests 1 and 2 (i.e. 45° to the longitudinal axis of the boat in plan view) at an angle of 33° to the vertical. This test should be conducted in four positions.

There should be no damage as a result of these tests.

- 6.9.4 A release mechanism should be conditioned and tested as follows:

- .1 the lifeboat release and retrieval system and the longest used connection cable/linkage associated with the system should be mounted and adjusted according to instructions from the original equipment manufacturer and then loaded to 100% of its safe working load and released. Load and release should be repeated 50 times. During the 50 releases, the lifeboat release and retrieval system should be released simultaneously from each fall to which it is connected without any binding or damage to any part of the lifeboat release and retrieval system. The system should be considered as "failed" if any failure during the conditioning or unintended release occurs when load is applied but the system has not yet been operated;
- .2 the lifeboat release and retrieval system should then be disassembled, the parts examined and wear recorded. The release and retrieval system should then be reassembled;

- .3 the hook assembly, whilst disconnected from the operating mechanism, should then be tested 10 times with cyclic loading from zero load to 1.1 times the safe working load, at a nominal 10 seconds per cycle; unless the release mechanism has been specifically designed to operate as an off-load hook with on-load capability using the weight of the boat to close the hook, in this case the cyclic load should be from no more than 1% to 1.1 times the SWL. For cam-type designs, the test should be carried out at an initial cam rotation of 0° (fully reset position), and repeated at 45° in either direction, or 45° in one direction if restricted by design. The specimen should remain closed during the test. The system should be considered as "failed" if any failure during this test or any unintended release or opening occurs; and
- .4 the cable and operating mechanism should then be reconnected to the hook assembly; and the lifeboat release and retrieval system should then be demonstrated to operate satisfactorily under its safe working load. The actuation force should be no less than 100 N and no more than 300 N, if a cable is used it should be the maximum length specified by the manufacturer, and secures in the same manner it would be secured in the lifeboat. The demonstration should verify that any interlocks, indicators and handles are still functioning and are correctly positioned in accordance with the operation and safety instruction from the original equipment manufacturer. The release mechanism is deemed to have passed the testing under paragraph 6.9.4 when the tests have been conducted successfully. The system should be considered as "failed" if any failure during this test or any unintended release or opening occurs.

6.9.5 A second release mechanism should be tested as follows:

- .1 the actuation force of the release mechanism should be measured loaded with 100% of its safe working load. The actuation force should be no less than 100 N and no more than 300 N. If a cable is used, it should be of the maximum length specified by the manufacturer, and secured in the same manner it would be secured in a lifeboat. The demonstration should verify that any interlocks, indicators and handles are still functioning and are correctly positioned in accordance with the operation and safety instruction from the original equipment manufacturer; and
- .2 the release mechanism should be mounted on a tensile strength testing device. The load should be increased to at least six times the working load of the release mechanism without failure of the release mechanism."

2 The existing paragraphs 6.9.5 and 6.9.6 are renumbered as 6.9.6 and 6.9.7, respectively.

3 In paragraph 6.11.3, the referenced paragraph number "6.9.4" is replaced with "6.9.3".

4 In paragraphs 7.1.1 and 7.4.1, the referenced paragraph numbers "6.9.5" and "6.9.6" are replaced by "6.9.6" and "6.9.7", respectively.

5 In paragraphs 7.2.1, 7.3.1, 7.5 and 7.6, the referenced paragraph numbers "6.9.1 to 6.9.4" are replaced by "6.9.1 to 6.9.5".

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**ANNEX 10**

**DRAFT MSC CIRCULAR**

**GUIDELINES FOR THE STANDARDIZATION OF  
LIFEBOAT CONTROL ARRANGEMENTS**

1 The Maritime Safety Committee, at its [ninetieth session (...)], with a view to standardizing lifeboat control arrangements concerning the application of the provisions of paragraph 4.4.7.6 of the LSA Code, following a recommendation made by the Sub-Committee on Ship Design and Equipment at its fifty-fifth session, approved the annexed Guidelines for the standardization of lifeboat control arrangements.

2 Member Governments are invited to use the annexed Guidelines from [date of approval] when applying the relevant provisions of paragraph 4.4.7.6 of the LSA Code, as amended, and to bring them to the attention of all parties concerned.

ANNEX

**GUIDELINES FOR THE STANDARDIZATION OF  
LIFEBOAT CONTROL ARRANGEMENTS**

- 1 The release indicator, if fitted, should show red until the boat is waterborne, at which point the indicator turns green (in accordance with resolution MSC.218(82)).
- 2 A safety pin, which must be pulled prior to operation of the release control/lever/handle (herein referred to as release control), should be incorporated in the release control. This safety pin is in addition to any additional mechanical protection (interlock) provided to protect against accidental or premature on-load release.
- 3 The release control should be located on the right hand side of the helmsman.
- 4 The release control should be red in colour, and the area immediately surrounding the control should be a sharply contrasting light colour. No other control, handle or lever should be red.
- 5 The release control is pulled, pushed, or rotated, etc., to open the hook. The control should operate in a logical manner and be prominently marked with an arrow to show direction of movement of the control which will cause the hook to open.
- 6 The release control and its components should be clearly labelled to aid understanding and operation.
- 7 The release control should have a shape, location, and operation so that it cannot be easily confused with any other control.
- 8 The engine control lever should be located on the left hand side of the helmsman.
- 9 The control and steering station should be designed and laid out so that controls and displays are unambiguous, accessible, and easy to reach and use from the operator's normal seated position (recommended reference: Standard ASTM F 1166-07 Sections 9 and 10).
- 10 To avoid confusion, for release mechanisms where on-load release is accomplished by means of a release control at the helmsman station, only a single release control should be provided for both off-load and on-load release.
- 11 These Guidelines are based on general design principles to allow for flexibility to accommodate a range of designs, and to foster innovation. In addition to the proposed marking requirements, it may be beneficial to develop a standard symbol as required labelling for the release control.

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**ANNEX 11**

**DRAFT ASSEMBLY RESOLUTION**

**ADOPTION OF THE INTERNATIONAL CODE ON THE ENHANCED  
PROGRAMME OF INSPECTIONS DURING SURVEYS OF BULK CARRIERS  
AND OIL TANKERS[, 2011] ([2011] ESP CODE)**

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 and the prevention and control of marine pollution from ships,

RECALLING ALSO resolution A.744(18) by which the Assembly adopted the Guidelines on the enhanced programme of inspections during surveys of bulk carriers and oil tankers (hereinafter referred to as "the Guidelines"),

NOTING the 1994 Conference of Contracting Governments to the Convention for the Safety of Life at Sea (SOLAS), 1974 (hereinafter referred to as "the Convention") by which it adopted regulation XI-1/2 of the Convention to make the provisions of the Guidelines mandatory under the Convention,

RECALLING FURTHER resolutions MSC.49(66), MSC.105(73), MSC.125(75), MSC.144(77), MSC.197(80), MSC.261(84) and resolution 2 of the 1997 Conference of Contracting Governments to the Convention, by which amendments to the Guidelines were adopted by the Maritime Safety Committee and the Conference of Contracting Governments to the Convention, in accordance with article VIII(b) and regulation XI-1/2 of the Convention,

RECOGNIZING that the numerous amendments made to the Guidelines necessitate a comprehensive revision in order to ensure effective implementation of their provisions and to maintain the highest practical level of safety,

HAVING CONSIDERED the recommendations made by the Maritime Safety Committee at its [eighty-ninth] session,

1. ADOPTS the International Code on the Enhanced Programme of Inspections during Surveys of Bulk Carriers and Oil Tankers[, 2011] ([2011] ESP Code), the text of which is set out in the Annex to the present resolution;
2. INVITES Contracting Governments to the Convention to note that the [2011] ESP Code will take effect upon entry into force of the associated amendments to chapter XI-1 of the Convention;
3. REQUESTS the Secretary-General of the Organization to transmit certified copies of the present resolution and the text of the [2011] ESP Code, contained in the Annex, to all Contracting Governments to the Convention after the aforementioned amendments to chapter XI-1 of the Convention have been adopted;
4. ALSO REQUESTS the Secretary-General of the Organization to transmit copies of the present resolution and the text of the Code contained in the Annex to all Members of the Organization which are not Contracting Governments to the SOLAS Convention after the aforementioned amendments to chapter XI-1 of the Convention have been adopted;

5. FURTHER REQUESTS the Maritime Safety Committee to keep the Code under review and update it as necessary, in the light of experience gained in its application.

ANNEX

(see annex 5 to the report of DE 54, as set out in document DE 54/23/Add.1)

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**ANNEX 12**

**DRAFT RESOLUTION MSC.[...(90)]  
(adopted on [... 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,

NOTING the adoption, by the twenty-seventh Assembly of the Organization, of the International Code on the Enhanced Programme of Inspections during Surveys of Bulk Carriers and Oil Tankers[, 2011] ([2011] ESP Code), by resolution A.[...(27)],

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 [...], 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% 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 [...] 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;

[6. RESOLVES that SOLAS Contracting Governments may apply, in advance, the amended SOLAS regulation XI-1/2 adopted by this resolution together with 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.[...(27)] to ships flying their flag from [...].]

ANNEX

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

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

**Regulation 2 – Enhanced surveys**

1 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.[...(27)]".

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**ANNEX 13**

**DRAFT MSC CIRCULAR**

**GUIDELINES ON PROCEDURES FOR IN-SERVICE MAINTENANCE AND REPAIR OF  
COATING SYSTEMS FOR CARGO OIL TANKS OF CRUDE OIL TANKERS**

1 The Committee, at its [eighty-ninth session (11 to 20 May 2011)], having recognized the need for guidelines for maintenance and repair of protective coatings for cargo oil tanks of crude oil tankers, taking into account the amendments to SOLAS regulation II-1/3-11 and the performance standard for protective coatings for cargo oil tanks of crude oil tankers, adopted by resolutions MSC.291(87) and MSC.288(87), respectively, considered a proposal by the Sub-Committee on Ship Design and Equipment, at its fifty-fifth session, and approved Guidelines on procedures for in-service maintenance and repair of coating systems for cargo oil tanks of crude oil tankers, set out in the annex.

2 Member Governments are urged to bring the annexed Guidelines to the attention of shipowners, ship builders and other parties concerned for consideration during survey, assessment and repair of protective coatings in cargo oil tanks of crude oil tankers.

ANNEX

**GUIDELINES FOR MAINTENANCE AND REPAIR OF PROTECTIVE COATINGS FOR  
CARGO OIL TANKS OF CRUDE OIL TANKERS**

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## 1 GENERAL

1.1 The purpose of these Guidelines is to assist surveyors, shipowners, ship managers, shipyards, flag Administrations and other interested parties in relation to monitoring, assessment, maintenance and repair of protective coatings in crude oil cargo tanks.

1.2 The ability of the coating system to reach its target useful life depends on the type of coating system, surface preparation, the design of the structures, paint application and coating inspection and maintenance. All these aspects contribute to the good performance of the coating system. These Guidelines focus on maintenance and repair procedures for crude oil cargo tank coatings.

1.3 Maintenance and repair of the protective coating system should be included in the ship's overall maintenance and repair scheme and shall be recorded in the Coating Technical File as per resolution MSC.288(87). The effectiveness of the protective coating system should be monitored during the life of a ship by the Administration or an organization recognized by the Administration.

## 2 APPLICATION AND DEFINITIONS

2.1 These Guidelines apply to ships as specified in SOLAS regulation II-1/3-11 and focus on maintenance and repair procedures for coatings in cargo tanks of all crude oil tankers, hereinafter referred to as "crude oil cargo tanks" or "cargo tanks that are intended to carry crude oil". They only cover the maintenance and repair of coatings. Corrosion prevention systems other than coating are not covered by these Guidelines.

2.2 For the purpose of these Guidelines, the following definitions apply:

- .1 *Maintenance* means minor coating restoration work regularly performed by a ship's crew using normal shipboard means and tools to maintain "GOOD" or "FAIR" coating conditions. Maintenance delays or slows down the coating deterioration and effects short term steel protection.
- .2 *Repair* means coating restoration work of a longer term nature, usually performed during ship's dry-docking or scheduled repair period (ship idle) to restore the "FAIR" or "POOR" coating condition to "GOOD" condition. This will usually require specialized preparation, manpower and equipment such as blasting equipment, operators and dehumidifiers together with good surface preparation procedures.

2.3 These Guidelines have been developed using the best information currently available and taking into consideration that maintenance may take place when the ship is at sea, while repair usually takes place in dry dock or during scheduled repair periods (afloat at yard).

## 3 SURVEY RECOMMENDATIONS

### 3.1 Cargo tank entry

In order to undertake a survey, entry into cargo oil tanks is required. Crude oil cargo tanks must be considered an "enclosed space" and therefore all the recommendations contained in ISGOTT (International Safety Guide for Oil Tankers and Terminals)<sup>1</sup> regarding enclosed

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<sup>1</sup> Refer to section on entry into enclosed spaces of the current version.

space entry and gas freeing should be strictly followed. For gas freeing and venting, reference is made to ISGOTT for procedures and equipment for this purpose. Due attention should also be paid to the Recommendations for entering enclosed spaces aboard ships (resolution A.864(20), as amended).

### 3.2 Survey application

3.2.1 The coating system in cargo tanks should be examined in connection with:

- .1 intermediate surveys for all crude oil tankers of 5,000 tonnes deadweight or above exceeding ten years of age;
- .2 renewal surveys for all crude oil tankers of 5,000 tonnes deadweight or above; and
- .3 incidents during service of the ship indicate damage to the coating of cargo oil tanks or areas coated.

3.2.2 The condition of the coating in crude oil cargo tanks should be assigned and categorized as GOOD, FAIR or POOR based on visual inspection and estimated percentage of areas with coating failure and rusty surfaces (see table 1) and recorded<sup>2</sup>. In the case of widespread blistering<sup>3</sup> which has not been perforated a further evaluation of blistering percent and coating efficiency could be carried out by in order to decide categorization of coating<sup>2</sup>.

## 4 COATING ASSESSMENT METHODS

### 4.1 "GOOD", "FAIR", "POOR"

4.1.1 The condition of the coating in crude oil cargo tanks is assigned and categorized as "GOOD", "FAIR" or "POOR", based on visual inspection and estimated percentage of areas with coating failure and rusty or blistered surfaces.

4.1.2 The definitions of coating conditions "GOOD", "FAIR" and "POOR" in the Guidelines on the enhanced programme of inspections during surveys of oil tankers (resolution A.744(18)) are as follows:

**GOOD:** Condition with only minor spot rusting.

**FAIR:** Condition with local breakdown of coating at edges of stiffeners and weld connections or light rusting over 20% or more of areas under consideration, but less than as defined for POOR condition.

**POOR:** Condition with general breakdown of coating over 20% or more of areas or hard scale at 10% or more of areas under consideration.

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<sup>2</sup> Refer to appendix 10 to IACS Recommendation 87 – Guidelines for Coating Maintenance and Repairs for Ballast Tanks and Combined Cargo/Ballast Tanks on Oil Tankers, revision 1, 2006 – published by Witherby.

<sup>3</sup> Blisters are a symptom of coating deterioration and should be noted when observed although the affected area does not require immediate repair. ISO 4628-2, 2003 describes how to assess blisters and rust, etc. IACS Recommendation 47, paragraph 4.3.2 may also provide guidelines for assessing areas.

4.1.3 These Guidelines clarify the above definitions in order to achieve unified assessment of cargo tank coating conditions as follows, see also table 1 below:

- GOOD:** Condition with spot breakdown on less than 5% of the area under consideration without visible failure of the coating, or non perforated blistering. Breakdown at edges or welds should be less than 20% of edges or weld lines in the area under consideration.
- FAIR:** Condition with breakdown of coating or penetration on less than 20% of the area under consideration. Total paint failure should be less than 10% of the area under consideration. Breakdown at edges or welds should be less than 50% of edges or weld lines in the area under consideration.
- POOR:** Condition with breakdown of coating or penetration on more than 20% or on total paint failure more than 10% of the area under consideration or local breakdown concentrated at edges or welds on more than 50% of edges or weld lines in the area under consideration.

**Table 1 – "GOOD", "FAIR" and "POOR" coating conditions**

	<b>GOOD</b> <sup>(3)</sup>	<b>FAIR</b>	<b>POOR</b>
Breakdown of coating (spot breakdown) <sup>(1)(3)</sup>	< 5%	5 – 20%	> 20%
Area of complete breakdown <sup>(1)</sup>	-	< 10%	≥ 10%
Local breakdown of coating on edges or weld lines <sup>(2)</sup>	< 20%	20 – 50%	> 50%
<i>Notes:</i>			
1	% is the percentage calculated on basis of the area under consideration or of the "critical structural area".		
2	% is the percentage calculated on basis of edges or weld lines in the area under consideration or of the "critical structural area".		
3	Spot breakdown, i.e. rusting in spots without visible failure of coating.		

## 4.2 Areas under consideration

### 4.2.1 General

4.2.1.1 Recognizing that different areas in the tank experience different coating breakdown and corrosion patterns or erosion, the intent of this section is to subdivide the planar boundaries of the tank for evaluation of coating into areas small enough to be readily examined and evaluated by the surveyor. However, the areas subdivided should not be so small as to be structurally insignificant or too numerous to practically report on. Coating condition in each area should be reported using current practice and terminology (frame numbers, longitudinal numbers and/or strakes numbers, etc.). Each area is then rated "GOOD", "FAIR" or "POOR" and the tank rating should not be higher than the rating of its "area under consideration" having the lowest rating<sup>4</sup>.

<sup>4</sup> Examples of how to report coating conditions with respect to areas under consideration are given in appendix 10 of IACS Recommendation 87 – published by Witherby.

4.2.1.2 Special attention should be given to coating in critical structural areas which are defined<sup>5</sup> as "locations which have been identified from calculations to require monitoring as indicated in the Coating Technical File (CTF) from new building stage or from the service history of the subject ship or from similar or sister ships (if available) to be sensitive to cracking, buckling corrosion or erosion which would impair the structural integrity of the ship". Each critical structural area is rated "GOOD", "FAIR" or "POOR", applying table 1 and the rating of each "area under consideration" should then not be higher than the rating of its critical structural area (if present) having the lowest rating.

4.2.1.3 The ship specific guidelines should include, as an appendix, the actual details of the coated areas in each tank together with other details as specified in paragraph 7.2.2 of these Guidelines.

#### **4.2.2 Coated areas of crude oil cargo tanks in oil tankers**

##### 4.2.2.1 Deck head with upper transverses and longitudinal bulkheads

Areas of under deck and bulkhead plating with attached structure (one area to consider for deck head and one area to consider for each bulkhead upper part with any structure and access platforms or stringers).

##### 4.2.2.2 Bottom plating with transverse and longitudinal lower bulkheads

Areas of tank bottom, side and longitudinal bulkheads (hoppers) with attached structure (if any), in the lower coated areas.

##### 4.2.2.3 Swash bulkheads

The upper and lower parts of all swash bulkheads located in cargo tanks together with any frames, brackets, and access outfitings in way.

##### 4.2.2.4 Stringers

Stringers located outside the prescribed upper and lower coating areas are not required to be coated. However, in the case that shipowners have voluntarily coated the upper surfaces of such stringers then these coated surfaces should be included in reports solely for shipowner's benefit and choice of any action.

##### 4.2.2.5 Transverse bulkheads (forward and aft)

Areas of transverse bulkheads and attached stiffeners and access outfitings in upper forward and aft transverse bulkheads.

#### **4.3 In-service condition monitoring**

In cases where tank entry is made and coating condition monitoring is carried out and a report provided, it should be in a format as set out in the appendix.

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<sup>5</sup> Refer to appendix 5 of IACS Recommendation 87 – published by Witherby.

## 5 COATING MAINTENANCE

### 5.1 Process considerations when coating maintenance may be performed

5.1.1 The following considerations should be taken into account when coating maintenance is undertaken:

- .1 safety, including tank entry requirements;
- .2 tank surface cleaning;
- .3 salt contamination;
- .4 rust scale;
- .5 pitting corrosion;
- .6 temperature;
- .7 condensation;
- .8 ventilation; and
- .9 compatibility of coating systems.

5.1.2 **Safety.** Refer to the Recommendations for entering enclosed spaces aboard ships (resolution A.864(20)), as amended, and ISGOTT<sup>6</sup>. It is an absolute requirement that all of the ship's safety and tank entry procedures and policies are adhered to. All risks for the entry into tanks should be taken into account. In addition, it is strongly recommended that all travel coating squad members are trained in safe usage of all the equipment and tools to be used for the project on board, before being sent to the ship.

5.1.3 **Tank and surface cleaning.** Inadequate tank and surface cleaning, may leave a few microns of oil film thickness on the surface which will seriously affect any coating attachment and will shorten the effective life of the maintenance undertaken – see paragraph 6.1.3.

5.1.4 **Salt contamination** will cause accelerated deterioration of the maintenance coating if not removed prior to coating application. A recommended procedure to reduce salt contamination is to remove corrosion products including rust and black scale before washing the steel surface with fresh water. This should be the starting point in any surface preparation process in cargo tanks on board ships.

5.1.5 **Rust scale** that is not removed prior to coating application will cause early failure. Loose top-scale is easy to remove, however the inner (black) hard scale is much more adherent. When over-coated it will soon detach between the steel and the scale and come off, typically with the coating adhering very well to the outside of it. If the hard scale is not removed, the service life expectancy of the treatment is maximum 1 to 2 years regardless of the coating used.

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<sup>6</sup> Refer to section on entry into enclosed spaces of the current version.

5.1.6 **Pitting corrosion** is a common problem in unprotected areas of cargo tanks that have been exposed to crude oil for some time. If it has been accepted that the pits need not be welded up, in order to prevent further accelerated damage, a coating should be applied. Soluble salts will be present within the pits and it is essential that these are removed otherwise corrosion will soon start inside over-coated pits, affecting the service life. As salt contamination is concentrated in pits the use of ISO 8502-6 and ISO 8502-9 may result in misleading results. Various methods of salt removal from pits have been proposed for long term repair, however, for shipboard maintenance purpose, high pressure fresh water washing is recommended.

5.1.7 **Temperature** is a critical parameter to consider. When trading in cold water, the risk of condensation is increased and the curing of two-component paints such as epoxy paints is retarded. Plan, if possible, the maintenance operation for periods, or locations, of warmer water. Otherwise lowering ballast water in side and double-bottom tanks to avoid contact with the back side of plating to be treated is recommended.

5.1.8 **Condensation** is always a risk on board ships. It is advisable that the crew have a good understanding about relative humidity and its relation to substrate temperature and dew point. A coating applied over a surface that is at or below the dew point, or that will be at or below the dew point while the coating is still curing, will not perform. Ideally the temperature should be at least 3°C above the dew point.

5.1.9 **Ventilation** is a vital factor for safety and quality of the coating application and must be carried out continuously during surface preparation, paint application, drying and curing. Ventilation arrangements must provide maximum efficiency, e.g., by arranging the ventilation so it extracts from the lowest and furthest corners to ensure the fast and efficient removal of solvents. The use of solvent free coating systems eliminates solvent release from the paint, but ventilation is still required during surface preparation and curing.

5.1.10 **Compatibility of coating systems** is of utmost importance for a good end result. To ensure compatibility of coating systems, using the same coating system as was originally employed is recommended. If this is not possible, the coating manufacturer recommendations should be followed. When applying touch up, the intact coat next to the damaged area should be feathered for good adhesion.

## 5.2 Principles for maintenance

Maintenance process:

- .1 tank washing and oil film/mud removal and venting;
- .2 fresh water rinsing;
- .3 drying;
- .4 surface preparation, de-scaling/degreasing.

### 5.3 Recommended maintenance

Table 2 describes the recommended maintenance to maintain "GOOD" or "FAIR" coating conditions.

**Table 2 – Recommended maintenance**

Purpose	Preparation <sup>7</sup>	Coating system	Dry Film Thickness (DFT)
<b>Maintenance of affected area</b> <ul style="list-style-type: none"> <li>• GOOD to GOOD</li> <li>• FAIR to FAIR</li> </ul>	<ul style="list-style-type: none"> <li>• Removal of cargo residues, mud, oil, grease, etc., by suitable tank cleaning</li> <li>• Drying</li> <li>• St 3<sup>8</sup> or equivalent according to manufacturer's recommendation</li> <li>• Check ambient conditions</li> </ul>	<ul style="list-style-type: none"> <li>• Epoxy-based system</li> <li>• The same coating system as was originally employed or according to manufacturer's recommendation</li> </ul>	<ul style="list-style-type: none"> <li>• According to manufacturer's recommendation</li> </ul>

## 6 COATING REPAIRS

### 6.1 Process considerations when coating repairs may be performed

6.1.1 The following considerations should be taken into account when coating repairs are undertaken:

- .1 safety, including tank entry requirements;
- .2 tank cleaning;
- .3 staging;
- .4 salt contamination;
- .5 rust scale;
- .6 pitting corrosion;
- .7 temperature;
- .8 condensation;
- .9 ventilation;
- .10 dehumidification;

<sup>7</sup> Repair of pitted areas within the limits imposed by the Classification Society may require special treatments such as application of fillers before application of epoxy coatings.

<sup>8</sup> Refer to standard: ISO 8501-1:1988/Suppl:1994. Preparation of steel substrate before application of paints and related products – Visual assessment of surface cleanliness.

- .11 compatibility of coating systems; and
- .12 stripe coating/design/surface area.

6.1.2 **Safety.** Refer to the Recommendations for entering enclosed spaces aboard ships (resolution A.864(20)), as amended, and ISGOTT<sup>9</sup>. It is an absolute requirement that all of the ship's safety and tank entry procedures and policies are adhered to. When a ship is out of service, in a ship yard repair, local regulations apply regarding safety. The ship yard is responsible for their implementation.

6.1.3 **Tank cleaning.** Successful tank cleaning requires longer termed planning ahead, even for previous voyages to ensure concentrated Crude Oil Washing (COW) is carried out at the port(s) of discharge for the relevant cargo tanks. Especial attention should be given to tanks and areas to be cleaned and treated.

6.1.4 Subsequent to COW of the relevant tanks, water washing, that may include the use of suitable tank cleaning detergent, and the use of fresh water, will be required. If deadweight and draft limitations of preceding voyage allow collecting substantial quantities of fresh water from rivers or other sources, this will make for a much more successful water washing as it will limit the salt contamination of tank surfaces and facilitate hand washing during surface preparations. The aim of the tank cleaning is to provide surfaces without oil residues on areas to be repaired.

6.1.5 The shipowner's office must be contacted to confirm availability and reserve capacity for oily tank washings disposal ashore at subsequent ports. Similar good communication and co-operation will also be required even for programmed coating repairs.

6.1.6 Special care must be taken during the use of solvents and detergents which are essential to ensure oil free surfaces for good adhesion of future coats. Due consideration should be paid to the disposal of these solvents and detergents from the view points of protection and environment. The gases released to the tank atmosphere by these solvents are explosive and toxic or poisonous and should be removed as fast as possible from the tank atmosphere. Thus venting and gas freeing equipment and procedures as recommended in ISGOTT should be established.

6.1.7 When possible, control of the relative humidity during actual application of coating would increase the longevity of the coating and its adherence to the structure. Dehumidification is usually only an option during repairs alongside at an organized repair facility.

6.1.8 **Staging** must be arranged to allow good access to all surfaces. Staging must be arranged according to prevailing safety regulations. Staging poles and working platforms should be placed in a distance from the surface to provide suitable work space for all subsequent operations, special care should be taken secure access to corrugated bulkheads.

6.1.9 **Salt contamination** will cause accelerated deterioration of the coating if not removed prior to coating application. A recommended procedure to reduce salt contamination is to remove loose rust scale followed by thorough fresh water rinsing, preferably at elevated temperatures and high pressure. Test the salt content after washing

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<sup>9</sup> Refer to section on entry into enclosed spaces of the current version.

and before coating using standard ISO 8502-9 or other equivalent method<sup>10</sup> and re-wash if necessary. Observe, that salt contamination is concentrated in pits on pitted surfaces and the use of ISO 8502-6 and ISO 8502-9 may result in misleading results. This should be the starting point in any surface preparation process in cargo oil tanks on board ships after having thoroughly removed any oil contamination. In case of major repair or full recoating, any deviation should be agreed between the parties concerned and noted in the CTF.

**6.1.10 Rust scale** that is not removed prior to coating application will cause early failure. Loose top-scale is easy to remove, however the inner (black) hard scale is much more adherent. When over-coated it will soon detach between the steel and the scale and come off, typically with the coating adhering very well to the outside of it. If the hard scale cannot be removed, the service life expectancy of the treatment is 1 to 2 years regardless of the coating used.

**6.1.11 Pitting corrosion** is a major problem on board ships on area that have been exposed to seawater for some time. If it has been accepted that the pits need not be welded up in order to prevent further accelerated damage, a coating should be applied. Soluble salts will be present within the pits and it is essential that these are removed otherwise corrosion will soon start inside over-coated pits, affecting the service life. Various methods of salt removal from pits have been proposed. For example, water jetting followed by blast cleaning or possibly exposure to high humidity and repeated water jetting. Whichever method is chosen, any residues from the washing processes should be removed otherwise the soluble salt will precipitate out of the water on drying.

**6.1.12 Temperature** is a critical parameter to consider. When repairs are carried out in a shipyard, proper surface temperature control can more readily be achieved in the areas requiring coating.

**6.1.13 Condensation** is always a risk. It is an absolute necessity that the contractors have a good understanding about relative humidity and its relation to substrate temperature and dew point.

**6.1.14** Applying coating on the surface that is at or below the dew point, or that will be at or below the dew point while the coating is wet, will not perform. Ideally the temperature should be at least 3°C above the dew point.

**6.1.15 Ventilation** is a vital factor for safety and quality of the coating application and must be carried out continuously during surface preparation, paint application, drying and curing. Ventilation arrangements must provide maximum efficiency, e.g., by arranging the ventilation so it extracts from the lowest and furthest corners to ensure the fast and efficient removal of solvents. The use of solvent free coating systems eliminates solvent release from the paint, but ventilation is still required during surface preparation and curing.

**6.1.16 Dehumidification** of the tank or space to be coated effectively prevents rerusting of the steel after surface preparation and allows paint application on a dry steel substrate. This will not only ensure that the paint is applied under proper conditions, but it will also reduce delays and thus improves productivity. There are two different types of dehumidification, i.e. desiccant and refrigeration. Both work well, the desiccant type being ideal in moderate and cold climates, and the refrigeration type in warmer climates. Dehumidification to 40% to 50% relative humidity is recommended.

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<sup>10</sup> Refer to MSC.1/Circ.1381 on Modifications to footnotes in the coating performance standards adopted by resolutions MSC.215(82) and MSC.288(87).

6.1.17 **Compatibility of coating systems** is of utmost importance for a good end result. Unless the original coating system is totally removed, a coating system compatible to the original system should be used in accordance with the paint manufacturer recommendations. The coating system requires a Statement of Compliance or Type Approval Certificate according to the Performance standard for protective coatings for cargo oil tanks of crude oil tankers (resolution MSC.288(87)).

6.1.18 **Stripe coating/design/surface areas** should be differentiated with respect to coating application as degree of access varies. Edges, corners, weld seams and other areas that are difficult to coat need special treatment. "Stripe coating" is used to produce a satisfactory coating and to obtain specified Dry Film Thickness (DFT) on such areas. Stripe coats should be applied as a coherent film showing good film formation and no visible defects, such as pores or de-wetted areas. The application method employed should ensure that all areas which cannot be adequately coated by spray application are properly stripe coated.

6.1.19 It is recommended to apply a stripe coat before or after each main coat. This should be done using a colour that contrasts with each main coat, as this makes it easier to see that the stripe coat is satisfactory.

## **6.2 Principles for repairs**

6.2.1 Repair process:

- .1 tank cleaning, ventilation/gas-freeing and mucking-out;
- .2 de-scaling;
- .3 degreasing and oil film removal;
- .4 fresh water rinsing;
- .5 drying; and
- .6 surface preparation (surface preparation method chosen depends on the amount of failure and the service life intended – see relevant tables 3.1 to 3.3 below).

6.2.2 It is essential that, if a contractor is providing the service, he can prove that all personnel are fully qualified to carry out the required work. It is also necessary that, whilst on board, the team is fully conversant with appropriate ship operation, safety and evacuation requirements.

6.2.3 It should be realized that more control over the coating process can be achieved in dock and, hence, the overall cost effectiveness of repair must establish whether the required service life will be achievable.

## **6.3 Recommended repair**

6.3.1 Tables 3.1, 3.2 and 3.3 describe the recommended short, medium and long-term repairs.

6.3.2 Coating repair should be inspected by qualified inspectors certified to NACE Coating Inspector Level 2, FROSIO Inspector Level III or equivalent as verified by the Administration.

**Table 3.1 – Recommended SHORT term repair**

Purpose	Preparation <sup>1</sup>	Coating System		Dry film thickness (DFT)
<p><b>Repair of affected area</b></p> <ul style="list-style-type: none"> <li>• POOR to GOOD</li> <li>• FAIR to GOOD</li> </ul>	<ul style="list-style-type: none"> <li>• Removal of mud, cargo residues, grease, etc., thorough tank cleaning</li> <li>• Drying</li> <li>• St 3 to Sa 2<sup>11</sup> surface preparation</li> <li>• Intact coating next to damage area should be feathered</li> <li>• Total soluble salts, calculated as sodium chloride, according to manufacturer's recommendation but not more than 80 mg/m<sup>2</sup></li> <li>• Particular focus on pitted steel</li> <li>• Climatic control</li> </ul>	<p>(Not recommended for tankers of less than 18 years of age)</p>	<ul style="list-style-type: none"> <li>• Coating system approved according to resolution MSC.288(87)</li> <li>• The same coating system as was originally employed, or a coating system compatible with the original system, or equivalent according to manufacturer's recommendation. (Care must be taken to confirm that the coating used will have the necessary adhesion to such a surface for the target coating life)</li> </ul>	<ul style="list-style-type: none"> <li>• 250 µm DFT<sup>12</sup></li> <li>• Minimum two spray coats with two stripe coats</li> </ul>

**Note:** For partial or small spot area repairs it is well understood that these recommendations might not be possible but suitable preparation for the paint system being used should be according to paint manufacturer's recommendations.

<sup>11</sup> Refer to ISO 8501-1, 1998, Suppl.: 1994.

<sup>12</sup> Coating used approved at 320µm DFT, according to resolution MSC.288(87), is satisfactory for short-term at 250µm DFT.

**Table 3.2 – Recommended MEDIUM term repair**

Purpose	Preparation <sup>1</sup>	Coating System		Dry film thickness (DFT)
<p><b>Repair of affected area</b></p> <ul style="list-style-type: none"> <li>• POOR to GOOD</li> <li>• FAIR to GOOD</li> </ul>	<ul style="list-style-type: none"> <li>• Removal of mud, cargo residues, grease, etc., thorough tank cleaning</li> <li>• Drying</li> <li>• Minimum Sa 2 to 2½<sup>13</sup> surface preparation</li> <li>• Re-cleaning with detergent</li> <li>• Intact coating next to damage area should be feathered</li> <li>• Total soluble salts, calculated as sodium chloride, according to manufacturer's recommendation but not more than 80mg/m<sup>2</sup></li> <li>• Particular focus on pitted steel</li> <li>• Climatic and temperature control</li> </ul>	<p>(Not recommended for tankers of less than 10-12 years of age)</p>	<ul style="list-style-type: none"> <li>• Coating system approved according to resolution MSC.288(87)</li> <li>• The same coating system as was originally employed, or a coating system compatible with the original system, or equivalent according to manufacturer's recommendation. (Care must be taken to confirm that the coating used will have the necessary adhesion to such a surface for the target coating life)</li> </ul>	<ul style="list-style-type: none"> <li>• 280 µm DFT<sup>14</sup></li> <li>• Minimum two spray coats with two stripe coats</li> </ul>

**Note:** For partial or small spot area repairs it is well understood that these recommendations might not be possible but suitable preparation for the paint system being used should be according to paint manufacturer's recommendations.

<sup>13</sup> Refer to ISO 8501-1, 1998, Suppl.: 1994.

<sup>14</sup> Coating used approved at 320µm DFT, according to resolution MSC.288(87), is satisfactory for medium-term at 280µm DFT.

**Table 3.3 – Recommended LONG term repair**

Purpose	Preparation <sup>1</sup>	Coating System		Dry film thickness (DFT)
<p><b>Repair of affected area</b></p> <ul style="list-style-type: none"> <li>• POOR to GOOD</li> <li>• FAIR to GOOD</li> </ul>	<ul style="list-style-type: none"> <li>• Removal of mud, cargo residues, grease, etc., thorough tank cleaning</li> <li>• Drying</li> <li>• Minimum Sa 2½<sup>13</sup> surface preparation</li> <li>• Re-cleaning with detergent</li> <li>• Intact coating next to damage area should be feathered</li> <li>• Total soluble salts, calculated as sodium chloride, according to manufacturer's recommendation but not more than 50 mg/m<sup>2</sup></li> <li>• Particular focus on pitted steel</li> <li>• Continuous climatic and plating surface temperature control (for condensation as well as application and curing temperature limitations of the paint system)</li> </ul>	<p>(Required for tankers of less than 5 to 7 years of age)</p>	<ul style="list-style-type: none"> <li>• Coating system approved according to resolution MSC.288(87)</li> <li>• The same coating system as was originally employed, or a coating system compatible with the original system, or equivalent according to manufacturer's recommendation.</li> </ul>	<ul style="list-style-type: none"> <li>• 320 µm DFT</li> <li>• Minimum two spray coats with two stripe coats</li> </ul>

**Note:** For partial or small spot area repairs it is well understood that these recommendations might not be possible but suitable preparation for the paint system being used should be according to paint manufacturer's recommendations.

## **7 COATING TECHNICAL FILE (CTF)**

7.1 Maintenance and repair activities should be recorded in the Coating Technical File (CTF) in accordance with the relevant section of these Guidelines<sup>15</sup> and should be carried out in accordance with the procedures and recommendations provided in the CTF.

7.2 For maintenance, the following should be reported in the CTF:

- .1 copy of Technical Data Sheet, including:
  - .1.1 product name and identification mark and/or number;
  - .1.2 materials, components and composition of the coating system, colours;
  - .1.3 minimum and maximum dry film thickness;
  - .1.4 application methods, tools and/or machines;
  - .1.5 condition of surface to be coated (de-rusting grade, cleanliness, profile, etc.); and
  - .1.6 environmental limitations (temperature and humidity); and
- .2 ship maintenance records of coating application, including:
  - .2.1 applied actual space and area (in square metres) of each compartment;
  - .2.2 ambient condition during coating; and
  - .2.3 method of surface preparation.

7.3 For repairs, the CTF should contain at least the following:

- .1 copy of Statement of Compliance or Type Approval Certificate;
- .2 copy of Technical Data Sheet, including:
  - .2.1 product name and identification mark and/or number;
  - .2.2 materials, components and composition of the coating system, colours;
  - .2.3 minimum and maximum dry film thickness;
  - .2.4 application methods, tools and/or machines;
  - .2.5 condition of surface to be coated (de-rusting grade, cleanliness, profile, etc.); and
  - .2.6 environmental limitations (temperature and humidity);

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<sup>15</sup> Resolution MSC.288(87), paragraph 3.4.3.

- .3 shipyard work records of coating application, including:
  - .3.1 applied actual space and area (in square metres) of each compartment;
  - .3.2 applied coating system;
  - .3.3 time of coating, thickness, number of layers, etc.;
  - .3.4 ambient condition during coating; and
  - .3.5 method and standard of surface preparation;
- .4 coating log issued by the coating inspector, stating that the coating was applied in accordance with the specifications to the satisfaction of the coating supplier representative and specifying deviations from the specifications (example of daily log and non-conformity report (see annex 2 to resolution MSC.288(87)));
- .5 shipyard's verified inspection report, including:
  - .5.1 completion date of inspection;
  - .5.2 result of inspection;
  - .5.3 remarks (if given); and
  - .5.4 inspector signature; and
- .6 procedures for in-service maintenance and repair of coating system, if different than original coating system.

## **8 REFERENCES**

*IACS Recommendation 87 – Guidelines for Coating Maintenance and Repairs for Ballast Tanks and Combined Cargo/Ballast Tanks on Oil Tankers, revision 1, 2006.*

*ISGOTT (International Safety Guide for Oil Tankers and Terminals), 5<sup>th</sup> edition 2006.*

*Resolution A.864(20) – Recommendations for Entering Enclosed Spaces Aboard Ships, as amended.*

**Note:** The above references are for information purposes only.

\* \* \*

APPENDIX

**STANDARDIZED REPORT INFORMATION**

- .1 ship's identity, including name and IMO number;
- .2 tank number;
- .3 inspection date;
- .4 name of inspector and inspecting body;
- .5 year last coated, either delivery date or latest repair;
- .6 coating name/type, manufacturer and product identification used;
- .7 last repaired;
- .8 surface area, designation and size;
- .9 coating condition (GOOD, FAIR or POOR);
- .10 pitting corrosion – Yes/No;
- .11 blistering – YES/NO, blisters perforated – YES/NO;
- .12 amount of breakdown (in m<sup>2</sup> or % of areas under consideration);
- .13 sounding pipe condition;
- .14 vent pipe and purge pipe condition;
- .15 pipes condition;
- .16 bellmouth condition and erosion underneath;
- .17 conditions of coatings of Permanent Means of Access (PMA); and
- .18 other comments (for example structural damage, mechanical damage, location and extent).

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## ANNEX 14

### DRAFT MSC CIRCULAR

#### **GUIDELINES ON EXEMPTIONS FOR CRUDE OIL TANKERS SOLELY ENGAGED IN THE CARRIAGE OF CARGOES AND CARGO HANDLING OPERATIONS NOT CAUSING CORROSION**

1 The Maritime Safety Committee, at its eighty-seventh session, adopted amendments to the SOLAS Convention by resolution MSC.291(87).

2 The new regulation II-1/3-11.5 introduced by this amendment allows an Administration to exempt a crude oil tanker from the requirements if the ship is built to be engaged solely in the carriage of cargoes and cargo handling operations not causing corrosion.

3 The Committee, at its [ninetieth session (...)], having recognized the need for guidelines on exemptions for crude oil tankers solely engaged in the carriage of cargoes and cargo handling operations not causing corrosion, considered a proposal by the Sub-Committee on Ship Design and Equipment, at its fifty-fifth session, and approved the Guidelines on exemptions for crude oil tankers solely engaged in the carriage of cargoes and cargo handling operations not causing corrosion, set out in the annex.

4 The purpose of this circular is to provide guidance to Administrations. It should not, however, be considered as precluding Administrations from their right to grant exemptions from corrosion protection of cargo oil tanks of crude oil tankers, or to impose any conditions when granting such exemptions under the provisions of SOLAS regulation II-1/3-11.5.

## ANNEX

### **GUIDELINES ON EXEMPTIONS FOR CRUDE OIL TANKERS SOLELY ENGAGED IN THE CARRIAGE OF CARGOES AND CARGO HANDLING OPERATIONS NOT CAUSING CORROSION**

#### **1 Preamble**

1.1 The new SOLAS regulation II-1/3-11 adopted by resolution MSC.291(87) requires that all cargo oil tanks of crude oil tankers shall be coated during construction or protected by alternative means of corrosion protection or corrosion resistant material.

1.2 However, the Administration may exempt a crude oil tanker from the requirement if the ship is built to be engaged solely in the carriage of cargoes and cargo handling operations not causing corrosion.

1.3 These Guidelines are intended to be used by Administrations in granting such exemption.

#### **2 Corrosion mechanism and causations**

2.1 In general, corrosion protection, either by coating or other means, is required at top side (underdeck) part and bottom part of the cargo oil tanks of crude oil tankers. However, the corrosion mechanisms are different.

2.2 Due attention should be paid to the fact that, regardless of the nature of the cargo, the bottom side is susceptible to pitting corrosion while the upper deck side is exposed to corrosive chemical composition of inert gas, i.e. hydrogen sulphide (H<sub>2</sub>S).

2.3 Other factors, such as oil and temperature inside the tank are key factors in deciding vulnerability of these areas.

#### **3 Criteria for identifying "benign crude oil"**

The following criteria should be used when identifying "benign crude oil". A ship which is built to be engaged solely in the carriage of such oil and cargo handling operations not causing corrosion may be exempted from the requirements of SOLAS regulation II-1/3-11. 3.

- .1 The hydrogen sulphide (H<sub>2</sub>S) content of the crude oil shipment is below recognized detectable limits[, i.e. it does not contain this vapour type as transforming into the vapour phase of the cargo tank].
- .2 It is a no heat crude oil whose carriage temperature does not exceed 25°C.
- .3 The water content of the crude oil is less than 500 ppm.
- .4 The salt content of the crude oil is not more than 25 ppm.
- .5 The Acid Number of the crude oil is less than 0.05 mg KOH/g. This level of concentration is developed from a review of hundreds of crude oil assays reporting this concentration and represents a "reasonable worse case" scenario for what could be considered a benign crude oil including Alaskan North Slope Crude Oil.

#### **4 Cargo handling operations**

When blending of two or more crude oils is undertaken on board a tanker, and where at least one of the crude oil's characteristics meets the criteria of the benign crude oil definition given above, it does not constitute that the final blend, whose characteristics will not be known until the blend is created and homogenized on board the tanker, can be considered as a benign crude oil by itself for transportation on board an uncoated tanker.

#### **5 Exemption and verification procedure**

5.1 [It is recommended that an exemption should be provided ONLY to a tanker that will be carrying a crude oil meeting the above characteristics, and associated with particular and concrete long-term trade in order to ensure proper implementation and verification. The following are examples for ensuring such proper implementation and verification, that should be conducted by the flag Administration that grants the exemption:

- .1 a crude oil tanker to be built without coated cargo tanks should be approved by the Administration in each particular case;
- .2 the owner should provide the Administration with satisfactory evidence that the crude oil tanker is purpose built for the particular benign crude oil trade for the duration of the tanker's commercial life;
- .3 approval from the Administration should be obtained prior to signing the building contract with the ship builder and presented to the recognized organization;
- .4 the trading limitation should be stated on the relevant statutory and exemption certificate(s);
- .5 in case the crude oil tanker ceases trading in the approved benign crude oil trade route, a new approval needs to be obtained from the Administration for alternative benign crude oil trade routes; and
- .6 in case the crude oil tanker ceases to trade in benign crude oil, the cargo tank will need to be coated in compliance with SOLAS regulation II-1/3-11, as adopted by resolution MSC.291(87), for new buildings to be able to continue trading in non-benign crude oil transport.

5.2 During [inspection/]survey of the exempted ship's cargo tanks, the conditions have to be verified to support the continued validity of the exemption certificate.]

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**ANNEX 15**

**DRAFT MSC CIRCULAR**

**UNIFIED INTERPRETATIONS OF THE CODE OF SAFETY FOR SPECIAL  
PURPOSE SHIPS, 2008 (2008 SPS Code)**

1 The Maritime Safety Committee, at its [ninetieth session (...)], with a view to ensuring a uniform approach towards the application of the provisions of the 2008 SPS Code and, following a recommendation made by the Sub-Committee on Ship Design and Equipment at its fifty-fifth session, approved the annexed unified interpretations of the Code of Safety for Special Purpose Ships, 2008 (2008 SPS Code).

2 Member Governments are invited to use the annexed interpretations from [date of approval] when applying the relevant provisions of the 2008 SPS Code and to bring them to the attention of all parties concerned.

## ANNEX

### **UNIFIED INTERPRETATION OF THE CODE OF SAFETY FOR SPECIAL PURPOSE SHIPS, 2008 (2008 SPS CODE). (Chapters 1, 2, 6, 7 and 10)**

#### **CHAPTER 1 – GENERAL**

##### **Section 1.2 – Application**

Nothing in this Code should be taken as precluding the application of the provisions of SOLAS regulations II-1/1.4, II-2/1.4, III/2.1, IV/3.2.1 or V/3.2 as deemed appropriate by the Administration.

#### **CHAPTER 2 – STABILITY AND SUBDIVISION**

##### **Paragraph 2.5**

In applying the provisions of paragraph 2.5 of the Code in relation to determining the bilge pump numeral in accordance with SOLAS regulation II-1/35-1, the number of passengers is to be taken as the number of special personnel included in the "Record of Equipment for the Special Purpose Ship Safety Certificate" which the ship is certificated to carry.

#### **CHAPTER 6 – FIRE PROTECTION**

##### **Paragraphs 6.1 and 6.2**

In all instances where the Code refers to application of the requirements of SOLAS for passenger ships, such as in paragraphs 6.1 and 6.2, the general requirements relating to passenger ships in SOLAS, irrespective of the number of passengers, should be applied; and in addition the requirements relevant to ships carrying not more than 36 passengers or to ships carrying more than 36 passengers, should be applied as instructed by the Code.

Notwithstanding the provisions of paragraphs 6.1 and 6.2 of the Code, the provisions of SOLAS regulations II-2/21 and 22 should only be applied on ships which carry more than 240 persons.

#### **CHAPTER 7 – DANGEROUS GOODS**

##### **Paragraphs 7.5 and 7.6**

In applying the provisions of paragraphs 7.5 and 7.6 of the Code, "formal safety assessment" means a documented risk assessment, but not a full FSA study in accordance with the FSA Guidelines (MSC/Circ.1023 – MEPC/Circ.392).

#### **CHAPTER 10 – SAFETY OF NAVIGATION**

In applying the provisions of chapter 10 of the Code and thereby the requirements of SOLAS chapter V, special purpose ships carrying not more than 240 persons on board should comply with the provisions relating to cargo ships, and special purpose ships carrying more than 240 persons on board should comply with the provisions relating to passenger ships according to the gross tonnage, where so specified.

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**ANNEX 16**

**DRAFT MEPC CIRCULAR**

**AMENDMENTS TO THE 2008 REVISED GUIDELINES FOR SYSTEMS FOR HANDLING OILY WASTES IN MACHINERY SPACES OF SHIPS INCORPORATING GUIDANCE NOTES FOR AN INTEGRATED BILGE WATER TREATMENT SYSTEM (IBTS) (MEPC.1/CIRC.642, AS AMENDED BY MEPC.1/CIRC.676)**

1 The Marine Environment Protection Committee, at its fifty-eighth session (6 to 10 October 2008), approved the 2008 Revised Guidelines for systems for handling oily wastes in machinery spaces of ships incorporating Guidance notes for an integrated bilge water treatment system (IBTS) (MEPC.1/Circ.642).

2 MEPC 59 (13 to 20 July 2009), approved an amendment to MEPC.1/Circ.642 (MEPC.1/Circ.676), which is consequential to the amendment to regulation 12.2.2 of MARPOL Annex I which it adopted at the same session and which entered into force on 1 January 2011.

3 [MEPC 62 (11 to 15 July 2011)], recognizing that a positive measure to prevent pollution resulting from oily bilge water is the installation of IBTS in accordance with the 2008 revised Guidelines and that uniform implementation of those Guidelines is desired for proper promotion of IBTS, agreed to the amendments to the 2008 revised Guidelines, set out in the annex, for the inclusion of a format of Statement of Fact on installation of an IBTS.

4 Member Governments are invited to bring this circular to the attention of all parties concerned and recommend them to apply the 2008 revised Guidelines, as amended, including the use of the format of Statement of Fact on a voluntary basis for ships installed with IBTS which is in accordance with the Guidelines.

ANNEX

**AMENDMENTS TO THE 2008 REVISED GUIDELINES FOR SYSTEMS FOR HANDLING OILY WASTES IN MACHINERY SPACES OF SHIPS INCORPORATING GUIDANCE NOTES FOR AN INTEGRATED BILGE WATER TREATMENT SYSTEM (IBTS) (MEPC.1/Circ.642, AS AMENDED BY MEPC.1/Circ.676)**

1 In the annex, a new section 12 is added as follows:

"12 Statement of Fact

12.1 A Statement of Fact may be issued by the Administration, the Administration nominating surveyors or recognizing organizations, to ships flying its flag having voluntarily installed an integrated bilge water treatment systems (IBTS) under the provisions of the Guidelines contained in appendix 1. The recommended format of the Statement of Fact is contained in appendix 2."

2 The existing appendix is renumbered as appendix 1 and a new appendix 2 is added as follows:

"APPENDIX 2

FORMAT OF STATEMENT OF FACT ON INSTALLATION OF AN INTEGRATED BILGE WATER TREATMENT SYSTEM (IBTS)

**Particulars of ship:**

Name of ship .....

Distinctive number or letters .....

Port of registry .....

Gross tonnage .....

IMO Number .....

This is to confirm that the arrangement of the integrated bilge water treatment system (IBTS) installed on this ship is in accordance with the specifications contained in the Annex to the 2008 Revised Guidelines for systems for handling oily wastes in machinery spaces of ships incorporating Guidance notes for an integrated bilge water treatment system (IBTS) (MEPC.1/Circ.642 as amended by MEPC.1/Circ.676 and MEPC.1/Circ....) to the extent as recorded below ("X" indicates provided and "-" indicates not provided).

**1 Drainage system**

(1)	Drip trays or coamings with sufficient depth are provided under the equipment using oil such as diesel engines, burners, pumps, heaters, coolers, filters, fuel and oil purifiers and tanks to contain spillage of oil.	<input type="checkbox"/>
(2)	Drip trays or coamings with sufficient depth are provided under the equipment using water such as pumps, heaters, coolers, filters, tanks, condensers and boilers to contain spillage of water.	<input type="checkbox"/>

	(3)	Independent drainage arrangements for oily drains to oil residue (sludge) tanks are provided.	<input type="checkbox"/>
	(4)	Independent drainage arrangements of clean water drains from equipment in machinery spaces not normally containing oil are provided.	<input type="checkbox"/>
	(5)	An exclusive pump to transfer the oily bilge water from bilge wells or tank top to the pre treatment unit or to bilge primary tank is provided.	<input type="checkbox"/>

**2 Pre-treatment unit for oil separation**

	(1)	Bilge primary tanks or other equipment are provided for separation of oil from oily bilge water.	<input type="checkbox"/>
	(2)	Bilge primary tank.	<input type="checkbox"/>
		(a) Cascades with drainage facilities for oil on the top so as to enable primary separation of oily bilge water are provided.	<input type="checkbox"/>
		(b) Facilities to remove sediments are provided.	<input type="checkbox"/>
		(c) Heating arrangements to facilitate separation of oil in case where the primary separation by gravity is difficult are provided.	<input type="checkbox"/>
	(3)	Pre-treatment unit other than the bilge primary tank.	<input type="checkbox"/>
		(a) If the pre-treatment unit other than the bilge primary tank are provided on board the vessel, its pre-treatment ability is to be ensured as equivalent to the bilge primary tank.	<input type="checkbox"/>

**3 Storage Tanks**

	(1)	The ship is provided with clean drain tank(s) for the retention onboard of clean drain water as follows:	<input type="checkbox"/>																				
		<table border="1"> <thead> <tr> <th>Identification</th> <th>Tank Location: Frames (from)-(to)</th> <th>Tank Location Lateral position</th> <th>Volume (m<sup>3</sup>)</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>	Identification	Tank Location: Frames (from)-(to)	Tank Location Lateral position	Volume (m <sup>3</sup> )																	
Identification	Tank Location: Frames (from)-(to)	Tank Location Lateral position	Volume (m <sup>3</sup> )																				
	(2)	The ship is provided with oily bilge holding tank(s) for the retention on board of oily bilge water as shown in section 3.3 of the Form A or B.	<input type="checkbox"/>																				
	(3)	The ship is provided with oil residue (sludge) tank(s) for retention of oil residues (sludge) on board, as shown in section 3.1 of the Form A or B.	<input type="checkbox"/>																				

**4 Discharge arrangement of clean drains**

	(1)	Overboard discharge arrangements of clean drains which are independent from the system for oily bilge water are provided.	<input type="checkbox"/>
	(2)	Means are provided to monitor discharges of the clean drains into the sea, as follows: ..... .....	<input type="checkbox"/>

**5 Discharge arrangement of oily bilge water**

(1)	An exclusive pump to transfer the pre-treated bilge water from the oily bilge water holding tank to the oily water separator/filtering (15 ppm) equipment is provided so as not to mix the pre-treated bilge water with untreated oily bilge water.	<input type="checkbox"/>
(2)	The ship is provided with oil filtering equipment for the treatment of oily bilge water as shown in sections 2.2, 2.3 and 2.4 of the Form A or B.	<input type="checkbox"/>
(3)	The ship is fitted with oily bilge holding tank(s) for the total retention on board of all oily bilge water as shown in section 2.5.2 of the Form A or B.	<input type="checkbox"/>
(4)	The ship can discharge oily bilge holding tank(s) by way of a standard discharge connection as shown in section 4 of the Form A or B, with protection to avoid contamination of oil sludge into the oily bilge system. Refer to MARPOL Annex I Unified interpretation for Regulation 12.4 (17.1.3).	<input type="checkbox"/>

**6 Discharge arrangement of oil residue (sludge)**

(1)	Heating arrangements to vaporize water are provided for oil residue (sludge) service tank(s).	<input type="checkbox"/>
(2)	The ship is provided with means for the disposal of oil residues (sludge) retained in oil residue tanks as shown in section 3.2 of the Form A or B.	<input type="checkbox"/>
(3)	The ship is provided with a pipeline for the discharge of oil residues (sludge) from machinery bilges to reception facilities, fitted with a standard discharge connection in compliance with MARPOL Annex I Regulation 13, as shown in section 4 of the Form A or B.	<input type="checkbox"/>

Issued at ..... on .....

Issued by ..... of .....

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ANNEX 17

PROPOSED BIENNIAL AGENDA FOR THE 2012-2013 BIENNIUM IN SMART TERMS AND ITEMS TO BE PLACED ON THE COMMITTEE'S POST-BIENNIAL AGENDA THAT FALL UNDER THE PURVIEW OF THE SUB-COMMITTEE\*

SUB-COMMITTEE ON SHIP DESIGN AND EQUIPMENT (DE)					
PLANNED OUTPUTS 2012-2013 (resolution A....(27))		Parent organ(s)	Coordinating organ(s)	Involved organ(s)	Target completion year
Number**	Description				
1.1.2.2	<b>Consideration of IACS unified interpretations and amendments to the ESP Code</b>	MSC		DE	Ongoing
2.0.1***	<del>Revision of the provisions for helicopter facilities in SOLAS and the MODU Code</del>	MSC	DE		2013
2.0.1***	<b>Development of amendments to SOLAS regulation II-1/40.2 concerning general requirements on electrical installations</b>	MSC	DE		2013
5.1.1.1	<b>Performance standards for recovery systems for all types of ships</b>	MSC	DE		2014 2012
5.1.1.7	<del>Safety provisions applicable to tenders operating from passenger ships</del>	MSC	DE	FP, COMSAR, NAV, SLF and STW	2014
5.1.1.10	<del>Guidelines for a visible element to general alarm systems on passenger ships</del>	MSC	DE	FP	2012
5.1.2.1	<b>Making the provisions of MSC.1/Circ.1206/Rev.1 mandatory</b>	MSC	DE	FSI, NAV, STW	2014 2013
5.1.2.4	<del>Guidelines for the standardization of lifeboat control arrangements</del>	MSC	DE		2014

\* Items printed in bold have been selected for the draft provisional agenda for DE 56. Struck-out text indicates proposed deletions and shaded text indicates proposed changes. Deleted outputs will be maintained in the report on the status of planned outputs.

\*\* Numbers refer to the planned outputs for the 2010-2011 biennium.

\*\*\* Transferred from the Maritime Safety Committee's post-biennial agenda.

SUB-COMMITTEE ON SHIP DESIGN AND EQUIPMENT (DE)					
PLANNED OUTPUTS 2012-2013 (resolution A....(27))		Parent organ(s)	Coordinating organ(s)	Involved organ(s)	Target completion year
Number**	Description				
5.1.2.4	<b>Development of a new framework of requirements for life-saving appliances</b>	MSC	DE		2012
5.2.1.1/ 5.3.1.1	Amendments to resolution A.744(18)	MSG	DE		2011
5.2.1.8	Supporting guidelines for cargo oil tank coating and corrosion protection	MSC	DE		2011
5.2.1.13	<b>Development of safety objectives and functional requirements of the Guidelines on alternative design and arrangements for SOLAS chapters II-1 and III</b>	MSC	DE		2011 2013
5.2.1.14	<b>Development of amendments to the LSA Code for thermal performance of immersion suits</b>	MSC	DE		2012
5.2.1.15*	<b>Development of amendments to the LSA Code for free-fall lifeboats with float free capabilities</b>	MSC	DE		2012
5.2.1.19	<b>Development of a mandatory Code for ships operating in polar waters</b>	MSC	DE		2012
5.2.1.24	Revision of resolution A.760(18)	MSG	DE		2011
5.2.1.26	<b>Protection against noise on board ships</b>	MSC	DE		2011 2012
5.2.1.28	<b>Classification of offshore industry vessels and consideration of the need for a Code for offshore construction support vessels</b>	MSC	DE		2011 2013

\* Transferred from the Maritime Safety Committee's post-biennial agenda.

SUB-COMMITTEE ON SHIP DESIGN AND EQUIPMENT (DE)					
PLANNED OUTPUTS 2012-2013 (resolution A....(27))		Parent organ(s)	Coordinating organ(s)	Involved organ(s)	Target completion year
Number**	Description				
5.2.1.32	Development of guidelines for use of fibre reinforced plastic (FRP) within ship structures	MSC	DE	FP	2013
5.2.1	Revision of testing requirements for lifejacket RTDs in resolution MSC.81(70)	MSC	DE		2012
5.2.1*	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*	Revision of the Recommendation on conditions for the approval of servicing stations for inflatable liferafts (resolution A.761(18))	MSC	DE		2012
5.2.1*	Development of guidelines for wing-in-ground craft	MSC	DE	FP, COMSAR, NAV, SLF, STW	2013
7.1.2.28	Measures to promote integrated bilge water treatment systems	MEPC	DE		2014
7.1.2	Revision of the Revised guidelines on implementation of effluent standards and performance tests for sewage treatment plants (resolution MEPC.159(55))	MEPC	DE		2012

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\* Transferred from the Maritime Safety Committee's post-biennial agenda.



## ANNEX 18

### PROVISIONAL AGENDA FOR DE 56

- Opening of the session
- 1 Adoption of the agenda
- 2 Decisions of other IMO bodies
- 3 Consideration of IACS unified interpretations and amendments to the ESP Code
- 4 Performance standards for recovery systems for all types of ships
- 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 Protection against noise on board ships
- 13 Classification of offshore industry vessels and consideration of the need for a Code for offshore construction support vessels
- 14 Development of guidelines for use of fibre reinforced plastic (FRP) within ship structures
- 15 Revision of testing requirements for lifejacket RTDs in resolution MSC.81(70)
- 16 Amendments to SOLAS regulation II-1/11 and development of associated Guidelines to ensure the adequacy of testing arrangements for watertight compartments
- 17 Revision of the Recommendation on conditions for the approval of servicing stations for inflatable liferafts (resolution A.761(18))
- 18 Development of guidelines for wing-in-ground craft

- 19 Revision of the Revised guidelines on implementation of effluent standards and performance tests for sewage treatment plants (resolution MEPC.159(55))
- 20 Biennial agenda and provisional agenda for DE 57
- 21 Election of Chairman and Vice-Chairman for 2013
- 22 Any other business
- 23 Report to the Maritime Safety Committee

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ANNEX 19

REPORT ON THE STATUS OF PLANNED OUTPUTS [OF THE HIGH-LEVEL ACTION PLAN OF THE ORGANIZATION AND PRIORITIES]  
FOR THE 2010-2011 BIENNIUM [RELEVANT TO THE SUB-COMMITTEE]\*

SUB-COMMITTEE ON SHIP DESIGN AND EQUIPMENT								
Planned output number in the HLAP for 2010-2011	Description <sup>a</sup>	Target completion year <sup>b</sup>	Parent organ(s)	Coordinating organ(s)	Associated organ(s)	Status of output for Year 1 <sup>c</sup>	Status of output for Year 2 <sup>c</sup>	References <sup>d</sup>
1.1.2.2	Cooperation with IACS: consideration of unified interpretations	Continuous	MSC			Ongoing	Ongoing	DE 54/23, section 3; MSC 78/26, paragraph 22.12
2.0.1.6	Non-mandatory instruments: guidance to ensure a consistent policy for watertight doors to remain open during navigation	2010	MSC	DE	SLF	Completed		DE 54/23, section 4; SLF 52/19, section 7; MSC 88/26, paragraphs 7.6 to 7.12
2.0.1.29	Interpretation of application of SOLAS, MARPOL and Load Line requirements for major conversions of oil tankers	2010 (DE)	MSC MEPC	DE		Completed		DE 54/23, section 5; MSC 85/26, paragraph 23.28
2.0.1.30	Application of amendments to SOLAS chapter III and the LSA Code	2010	MSC	DE		Completed		DE 54/23, section 6; MSC 86/26, paragraphs 3.18 and 23.31
5.1.1.1	Mandatory instruments: performance standards for recovery systems for all types of ships	<del>2010</del> 2013	MSC	DE		In progress	In progress	DE 55/22, section 4; MSC 81/25, paragraph 23.49.1

\* It should be noted that some accepted outputs listed are contained in the High-level Action Plan for the 2010-2011 biennium. However, taking into account resolution A.1013(26), they have been moved to the post-biennial agenda as work on them is not envisaged to commence in this biennium.

SUB-COMMITTEE ON SHIP DESIGN AND EQUIPMENT								
Planned output number in the HLAP for 2010-2011	Description <sup>a</sup>	Target completion year <sup>b</sup>	Parent organ(s)	Coordinating organ(s)	Associated organ(s)	Status of output for Year 1 <sup>c</sup>	Status of output for Year 2 <sup>c</sup>	References <sup>d</sup>
5.1.1.7	Non-mandatory instruments: safety provisions applicable to tenders operating from passenger ships	2011	MSC	DE	FP, COMSAR, NAV, SLF, and STW	In progress	Completed	DE 55/22, section 5; MSC 84/24, paragraph 22.50
5.1.1.8	Non-mandatory instruments: guidance on alternative arrangements for the bottom inspection requirements for passenger ships other than ro-ro passenger ships	2010 (DE) 2010 (MSC)	MSC	DE		Completed Completed		DE 53/26, section 12; MSC 84/24, paragraph 22.52
5.1.1.10	Non-mandatory instruments: guidelines for a visible element to general alarm systems on passenger ships	2012	MSC	DE	FP	In progress	Completed	DE 55/22, section 6; MSC 86/26, paragraph 23.35
5.1.2.1	<del>Measures to prevent accidents with lifeboats</del> Making the provisions of MSC.1/Circ.1206/Rev.1 mandatory	<del>2010</del> 2013	MSC	DE	FSI NAV STW	In progress	In progress	DE 55/22, section 7; MSC 74/24, paragraph 21.34
5.1.2.1	<del>Measures to prevent accidents with lifeboats</del> Guidelines for standardization of lifeboat control arrangements	<del>2010</del> 2011	MSC	DE	FSI NAV STW	In progress	Completed	DE 55/22, section 8; MSC 74/24, paragraph 21.34
5.1.2.2	Guidance on compatibility of life-saving appliances	2010 (DE) 2010 (MSC)	MSC	DE		Completed Completed		DE 53/26, section 15; MSC 78/26, paragraph 24.37.1
5.1.2.4	Development of a new framework of requirements for life-saving appliances	2012	MSC	DE		In progress	In progress	DE 55/22, section 9; MSC 82/24, paragraph 21.49
5.2.1.1	Mandatory instruments: amendments to resolution A.744(18)	<del>2010</del> 2011	MSC	DE		In progress	Completed	DE 55/22, section 10

SUB-COMMITTEE ON SHIP DESIGN AND EQUIPMENT								
Planned output number in the HLAP for 2010-2011	Description <sup>a</sup>	Target completion year <sup>b</sup>	Parent organ(s)	Coordinating organ(s)	Associated organ(s)	Status of output for Year 1 <sup>c</sup>	Status of output for Year 2 <sup>c</sup>	References <sup>d</sup>
5.2.1.8	Non-mandatory instruments: supporting guidelines for cargo oil tank coating and corrosion protection	<del>2010</del> 2011	MSC	DE		In progress	Completed	DE 55/22, section 11; MSC 82/24, paragraphs 21.51 and 23.12
5.2.1.13	Mandatory instruments: development of safety objectives and functional requirements of the Guidelines on alternative design and arrangements for SOLAS chapters II-1 and III	2011	MSC	DE		Postponed	Postponed	MSC 84/24, paragraphs 3.92 and 21.52
5.2.1.14	Mandatory instruments: amendments to the LSA Code for thermal performance of immersion suits	<del>2010</del> 2012	MSC	DE		In progress	Postponed	DE 54/23, section 12; MSC 84/24, paragraph 22.48
5.2.1.15	Mandatory instruments: amendments to the LSA Code for free-fall lifeboats with float-free capabilities	1 session	MSC	DE		Postponed	Postponed	MSC 76/23, paragraphs 20.41.3 and 20.48; DE 47/25, paragraph 19.2
5.2.1.19	Mandatory instruments: development of a mandatory Code for ships operating in polar waters	2012	MSC	DE		In progress	In progress	DE 55/22, section 12; MSC 86/26, paragraph 23.32
5.2.1.24	Non-mandatory instruments: revision of resolution A.760(18)	<del>2010</del> 2011	MSC	DE		In progress	Completed	DE 55/22, section 13; DE 46/32, paragraph 31.23
5.2.1.26	Non-mandatory instruments: protection against noise on board ships	<del>2010</del> 2012	MSC	DE		In progress	In progress	DE 55/22, section 14; MSC 83/28, paragraph 25.41

SUB-COMMITTEE ON SHIP DESIGN AND EQUIPMENT								
Planned output number in the H LAP for 2010-2011	Description <sup>a</sup>	Target completion year <sup>b</sup>	Parent organ(s)	Coordinating organ(s)	Associated organ(s)	Status of output for Year 1 <sup>c</sup>	Status of output for Year 2 <sup>c</sup>	References <sup>d</sup>
5.2.1.27	Non-mandatory instruments: amendments to the Revised recommendation on testing of life-saving appliances	2010	MSC	DE		Completed		DE 54/23, section 15; MSC 84/24, paragraph 22.49
5.2.1.28	Non-mandatory instruments: classification of offshore industry vessels and consideration of the need for a code for offshore construction support vessels	<del>2010</del> 2013	MSC	DE		In progress	In progress	DE 55/22, section 15; MSC 85/26, paragraph 23.27
5.2.1.32	Non-mandatory instrument: Development of guidelines for use of Fibre Reinforced Plastic (FRP) within ship structures	2013	MSC	DE	FP	Postponed	Postponed	MSC 87/26, paragraph 24.31
5.3.1.1	Amendments to the Guidelines on the enhanced programme of inspections during surveys of bulk carriers and oil tankers (resolution A.744(18))	<del>2010</del> 2011	MSC	DE		In progress	Completed	DE 55/22, section 10
7.1.2.27	Test standards for type approval of add-on equipment	2011	MEPC	DE		Completed		DE 54/23, section 16; MEPC 59/24, paragraph 20.20
7.1.2.28	Measures to promote integrated bilge water treatment systems	2011	MEPC	DE		In progress	Completed	DE 55/22, section 16; MEPC 59/24, paragraph 20.20
7.1.2.29	Guidelines for a shipboard oil waste pollution prevention plan	2011	MEPC	DE		Completed		DE 54/23, section 18; MEPC 59/24, paragraphs 20.10 to 20.13 and 20.22

SUB-COMMITTEE ON SHIP DESIGN AND EQUIPMENT								
Planned output number in the HLAP for 2010-2011	Description <sup>a</sup>	Target completion year <sup>b</sup>	Parent organ(s)	Coordinating organ(s)	Associated organ(s)	Status of output for Year 1 <sup>c</sup>	Status of output for Year 2 <sup>c</sup>	References <sup>d</sup>
7.1.2.30	Manually operated alternatives in the event of pollution prevention equipment malfunctions	2011	MEPC	DE		Completed		DE 54/23, section 19; MEPC 59/24, paragraphs 10.29 to 10.31 and 20.21

**Notes:**

- a When individual outputs contain multiple deliverables, the format should report on each individual deliverable.
- b The target completion date should be specified as a year, or indicate that the item is continuous. This should not indicate a number of sessions.
- c The entries under the "Status of output" columns are to be classified as follows:
  - "completed" signifies that the outputs in question have been duly finalized;
  - "in progress" signifies that work on the related outputs has been progressed, often with interim outputs (for example, draft amendments or guidelines) which are expected to be approved later in the same biennium;
  - "ongoing" signifies that the outputs relate to work of the respective IMO organs that is a permanent or continuous task; and
  - "postponed" signifies that the respective IMO organ has decided to defer the production of relevant outputs to another time (for example, until the receipt of corresponding submissions).
- d If the output consists of the adoption/approval of an instrument (e.g., resolution, circular, etc.), that instrument should be clearly referenced in this column.

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**ANNEX 20**

**DRAFT MSC CIRCULAR**

**AWARENESS OF COUNTERFEIT AND SUB-STANDARD LIFE-SAVING APPLIANCES**

1 The Maritime Safety Committee, at its [ninetieth session], approved the attached information concerning awareness of counterfeit and sub-standard life-saving appliances, with the aim of raising awareness of the problem of counterfeit and sub-standard life-saving appliances among parties concerned.

2 Member Governments are invited to note the information provided herein and bring it to the attention of all parties concerned, including recognized organizations, ship repairers, and equipment suppliers, and to request them to make use of it as it may be deemed appropriate.

## ANNEX

### **AWARENESS OF COUNTERFEIT AND SUB-STANDARD LIFE-SAVING APPLIANCES**

1 It has been found that counterfeit and sub-standard life-saving appliances (LSA) are available on the market. Those goods cost less than the real and quality product, and are always inferior and, therefore, less durable, unsafe or downright dangerous because they have not undergone the rigorous testing that should be applied to make sure that they are safe.

2 It is of utmost importance that awareness is raised of the problem of counterfeit and sub-standard life-saving products and the wide range of problems they might cause for the maritime industry.

3 All interested parties, including Administrations, recognized organizations (ROs), shipyards, shipowners, etc., should take responsibility in applying rigorously the applicable requirements when LSA products are manufactured, and thoroughly check the accompanying approvals and documents of approved LSA products, particularly those with a certified service life, when they are purchased and installed on board ships. Counterfeit and substandard LSA products may include, for example, hydrostatic release units, pyrotechnic man-overboard lights, smoke signal products, lifejacket lights, lifebuoy lights and emergency water rations for use in survival craft.

4 In addition to the above, in some cases used LSA products, from scrapped ships or discarded from operational ships after expiry, are refurbished and sold, whereby the original manufacturer's label is removed, the sealed product is only cleaned externally and a replacement label is then applied, which is identical to the original, except that the dates of manufacture and expiry are falsified to extend the period of acceptability. For these products, extra vigilance by all related parties, particularly shipowners and Administrations/ROs, is recommended, and all associated documents should be thoroughly checked.

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## **ANNEX 21**

### **STATEMENT BY THE DELEGATION OF JAPAN**

As was mentioned by the Secretary-General, Japan's north-east coast was hit by a giant earthquake and tsunami that have caused catastrophic destruction and resulted in enormous number of victims. Also the subsequent situation at Fukushima nuclear power plant is still a source of serious concern, but the Japanese government is working around the clock and doing its best to address these pressing matters and we are starting to hear some positive news that indicate stabilization of the situation.

This delegation would like to take this opportunity to express its sincere appreciation to the Secretary-General, all the countries, organizations and friends who have so kindly offered their sympathy and support for Japan and Japanese people.

Japan has overcome the past disaster and devastation with the national fortitude and determination. As was just encouraged by the Secretary-General, we are convinced that our country will be able to do it again.

Madame Chairman and distinguished delegates, it's a pleasure for this delegation to be able to show its presence and contribute to the progress of this Sub-Committee even under this difficult situation.

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## ANNEX 22

### STATEMENT BY THE DELEGATION OF THE ISLAMIC REPUBLIC OF IRAN

Madam Chair, the Secretary-General, distinguished delegates of the Member States and international organizations, interpreters and the Secretary of the DE Sub-Committee, good morning. Let me first start my statement by congratulating you all the first day of spring which is today 21st of March, since last night at 11, 20 minutes and 45 seconds, the sun crossed the equator and the spring started in northern hemisphere of our fragile and beautiful earth.

The General Assembly of United Nations at its sixty-fourth session, held on 23th February 2010, recognised the 21st March as the International Day of Nowruz. 'Nowruz' consists of two Persian words, 'new' and 'day'. It is a spring festival of Persian origin, the day of vernal equinox, and has been used at the beginning of the New Year by Iran for over 2500 years. It is also celebrated by more than 300 million people worldwide and in particular; the nations of Afghanistan, Azerbaijan, some parts of East Africa, I.R. of Iran, Kazakhstan, Kyrgyzstan, Tajikistan, Turkey and Turkmenistan, and some parts of Georgia, Iraqi Kurdistan, Albania and Kosovo. The UN resolution recognising Nowruz as an International day, invited all member states, the United Nations, its specialized agencies, interested international and regional organizations such as the IMO, as well as non-governmental organizations, to participate in events organized by states where Nowruz is celebrated.

To that end, the Islamic Republic of Iran is pleased to announce that a simple event is arranged to take place today at the IMO's delegates lounge during the morning and afternoon session coffee breaks. All distinguished delegates, the Secretariat and interpreters attending at this meeting are cordially invited to attend this event and join us in celebrating this international day and the first day of spring in the northern hemisphere. Everyone will be served with coffee, tea, and Iranian sweets. A traditional table of Nowruz is also prepared and on display with special objects; each contains its own spiritual meanings for centuries. We are sure that you will be impressed by their concepts and a leaflet will be available explaining their values. Your attendance will give us an opportunity to share our happiness and enjoyment on this special day.

I would like to end my statement by quoting H.E Mr Ban Ki Moon's message for Nowruz of 2010: "The General Assembly's decision this year to recognize the International Day of Nowruz is evidence of a growing global awareness of the holiday's significance not only in the regions where it is celebrated but around the world. For millennia, when the sun crosses the Equator and the Northern Hemisphere enters spring, peoples in the Balkans, the Black Sea Basin, the Caucasus, Central Asia, the Middle East and other regions have carried out their own special traditions in celebration of Nowruz. These rituals, from repainting homes to visiting friends to preparing symbolic meals, are infused with a spirit of renewal and can inspire not only those conducting them but all people. As we commemorate this first International Day of Nowruz, I hope countries and people around the world will draw on this festival's history and customs to promote harmony with the natural world and foster global peace and goodwill."

Thank you Mrs Chairman.

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**ANNEX 23**

**STATEMENT BY THE DELEGATION OF INDONESIA**

Thank you Mrs. Chairperson,

If you allow me, this delegation would like to make a general statement related with present piracy at sea.

The Secretary-General, distinguished delegates, good morning to all.

As it has been mentioned by the Secretary-General at the opening address that this year World Maritime Day theme is: Piracy: Orchestrating the response. The delegation of Indonesia would like to inform to the Sub-Committee regarding recent activity of Piracy off coast of Somalia waters, which was attacking an Indonesian vessel.

In 16 March 2011 last week, at approximately 0730 a.m. local time, the bulk cargo carrier **MV SINAR KUDUS** was pirated approximately 320 nautical miles North East of the island of Socotra in the Somali Basin. Within 24 hours of being taken by the pirates, she was used to attack another vessel.

The **MV SINAR KUDUS**, which is Indonesian flagged and owned, was on its way to Suez (Egypt) from Singapore when it was attacked. The vessel has a crew of 20, all Indonesian. Initial reports from the crew stated that 30 to 50 pirates had boarded and taken control of the vessel.

Within 24 hours of the attack, the **MV SINAR KUDUS** was used to launch a further attack on the Liberian flagged bulk carrier **MV EMPEROR**. A skiff with 5 pirates on board was launched from the **SINAR KUDUS** and attacked the **EMPEROR** but was repelled by the armed force from the merchant vessel. Fortunately the **MV EMPEROR** was subsequently reported to be safe.

The **MV SINAR KUDUS** were registered with MSC (HOA), and were reporting to UKMTO. At the moment, the government of Indonesia, together with the vessel's owner PT Samudera Indonesia, is in effort to free the crew, and the vessel as well. All families and relatives of the crew have been informed and take action as appropriate.

I thank you Mrs. Chairperson.

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