



SUB-COMMITTEE ON BULK LIQUIDS
AND GASES
14th session
Agenda item 22

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REPORT TO THE MARITIME SAFETY COMMITTEE

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1 GENERAL

1.1 The Sub-Committee on Dangerous Goods, Solid Cargoes and Containers held its fourteenth session from 21 to 25 September 2009 under the chairmanship of Mrs. Olga. P. Lefèvre (France). The Vice-Chairman, Mr. Arsenio A. Domínguez (Panama), was also present.

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

ANTIGUA AND BARBUDA	LATVIA
ARGENTINA	LIBERIA
AUSTRALIA	MALAYSIA
BAHAMAS	MALTA
BELGIUM	MARSHALL ISLANDS
BOLIVIA	MEXICO
BRAZIL	NETHERLANDS
CANADA	NIGERIA
CHILE	NORWAY
CHINA	PANAMA
COLOMBIA	PERU
COOK ISLANDS	PHILIPPINES
CÔTE D'IVOIRE	POLAND
CUBA	REPUBLIC OF KOREA
CYPRUS	RUSSIAN FEDERATION
DEMOCRATIC PEOPLE'S REPUBLIC OF KOREA	SOUTH AFRICA
DENMARK	SPAIN
ECUADOR	SWEDEN
EGYPT	SWITZERLAND
ESTONIA	SYRIAN ARAB REPUBLIC
FINLAND	THAILAND
FRANCE	TRINIDAD AND TOBAGO
GERMANY	TURKEY
GREECE	TUVALU
INDONESIA	UKRAINE
IRAN (ISLAMIC REPUBLIC OF)	UNITED KINGDOM
ISRAEL	UNITED STATES
ITALY	URUGUAY
JAPAN	VANUATU
KENYA	VENEZUELA

and the following Associate Member of IMO:

HONG KONG, CHINA

1.3 The session was also attended by a representative from the following United Nations specialized agencies:

INTERNATIONAL ATOMIC ENERGY AGENCY (IAEA)
INTERNATIONAL LABOUR ORGANIZATION (ILO)

observers from the following intergovernmental organizations:

EUROPEAN COMMISSION (EC)
MARINE ACCIDENT INVESTIGATORS' INTERNATIONAL FORUM (MAIIF)

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

INTERNATIONAL CHAMBER OF SHIPPING (ICS)
INTERNATIONAL ORGANIZATION FOR STANDARDIZATION (ISO)
INTERNATIONAL UNION OF MARINE INSURANCE (IUMI)
INTERNATIONAL TRANSPORT WORKERS' FEDERATION (ITF)
BIMCO
INTERNATIONAL ASSOCIATION OF CLASSIFICATION SOCIETIES (IACS)
ICHCA INTERNATIONAL (ICHCA)
EUROPEAN CHEMICAL INDUSTRY COUNCIL (CEFIC)
OIL COMPAINES INTERNATIONAL MARINE FORUM (OCIMF)
INSTITUTE OF INTERNATIONAL CONTAINER LESSORS (IICL)
INTERNATIONAL FEDERATION OF SHIPMASTERS' ASSOCIATIONS (IFSMA)
INTERNATIONAL ASSOCIATION OF INDEPENDENT TANKER OWNERS
(INTERTANKO)
DANGEROUS GOODS ADVISORY COUNCIL (DGAC)
INTERNATIONAL ASSOCIATION OF DRY CARGO SHIPOWNERS
(INTERCARGO)
THE INTERNATIONAL MARINE CONTRACTORS ASSOCIATION (IMCA)
WORLD NUCLEAR TRANSPORT INSTITUTE (WNTI)
INTERNATIONAL BULK TERMINALS ASSOCIATION (IBTA)
HOT BRIQUETTED IRON ASSOCIATION (HBIA)
VESSEL OPERATORS HAZARDOUS MATERIALS ASSOCIATION, INC.
(VOHMA)
THE NAUTICAL INSTITUTE

Opening address

1.4 On behalf of the Secretary-General, the Director, Maritime Safety Division, welcomed the participants and delivered the opening address, the full text of which is reproduced in document DSC 14/INF.11.

Chairman's remarks

1.5 The Chairman, in thanking the Director, Maritime Safety Division, stated that the Secretary-General's words of encouragement as well as his advice and requests would be given every consideration in the deliberation of the Sub-Committee.

Adoption of the agenda

1.6 The Sub-Committee adopted the agenda (DSC 14/1/Rev.1) and agreed to be guided in its work, in general, by the annotations to the provisional agenda (DSC 14/1/1 and DSC 14/1/1/Add.1). The agenda, as adopted, with a list of documents considered under each agenda item, is set out in document DSC 14/INF.12.

1.7 The Sub-Committee's decisions on the establishment of working and drafting groups are reflected under sections of this report covering corresponding agenda items.

2 DECISIONS OF OTHER IMO BODIES

2.1 The Sub-Committee noted the decisions and comments pertaining to its work made by MSC 85, FAL 35, COMSAR 13, FP 53, MSC 86, C 102, MEPC 59 and NAV 55, as reported in documents DSC 14/2 and DSC 14/2/1.

3 AMENDMENTS TO THE IMDG CODE AND SUPPLEMENTS, INCLUDING HARMONIZATION OF THE IMDG CODE WITH THE UN RECOMMENDATIONS ON THE TRANSPORT OF DANGEROUS GOODS

3.1 The Sub-Committee noted that subitems .1 and .2 of this agenda item concerning, respectively, the harmonization of the IMDG Code with the UN Recommendations on the Transport of Dangerous Goods and amendments to the IMDG Code and supplements, were closely associated with each other and decided to consider the submissions related to these two subitems together.

REPORT OF THE EDITORIAL AND TECHNICAL GROUP

3.2 The Sub-Committee approved, in general, the report of the Editorial and Technical Group on its thirteenth session, which was held from 8 to 12 June 2009, and took decisions on actions requested of the Sub-Committee (DSC 14/3, paragraph 7) as indicated in the following paragraphs.

Harmonization of future versions of the IMDG Code

3.3 The Sub-Committee noted that the E&T Group, during its last meeting, had spotted minor discrepancies between the texts of the published version of the IMDG Code and its electronic version as well as the text contained in document DSC 13/INF.3 (and its addenda) were identified by the group.

3.4 In this context the Secretariat proposed to establish a feedback mechanism on a dedicated website, where users could report cases of disparities when noticed (DSC 14/3/14, paragraph 4). This option would help the Secretariat to avoid discrepancies and to ensure that versions of the IMDG Code are fully harmonized in the future.

3.5 The Sub-Committee agreed to request the Secretariat on taking further steps to ensure that future versions of the IMDG Code, that is, the texts in IMO document, publication, CD-ROM and internet versions are fully harmonized.

Consolidated text of the IMDG Code

3.6 Having noted that the text of the IMDG Code adopted by resolution MSC.122(75) had been amended on a number of occasions, the Sub-Committee agreed that amendment (36-12) should be a consolidated text of the IMDG Code replacing the IMDG Code adopted by resolution MSC.122(75), amended by resolutions MSC.157(78), MSC.205(81) and MSC.262(84).

3.7 The Sub-Committee also approved the E&T Group's view that amendments to the IMDG Code should be a consolidated replacement text of the IMDG Code every four years,

replacing the earlier version of the Code incorporating amendments prepared on the basis of proposals from Member States, other UN agencies, organizations with consultative status and amendments to the UN Recommendations on the transport of dangerous goods. Such an exercise, *inter alia*, would also harmonize the texts of the Code in different versions and different languages noting that the Code is translated into languages other than English, French and Spanish, thereby contributing to an improved international understanding of and thus compliance with the provisions of the Code.

Errata and corrigenda to the IMDG Code (amendment 34-08)

3.8 The Sub-Committee noted that the group finalized draft errata and corrigenda to the IMDG Code (amendment 34-08) (DSC 14/3, annex 2).

3.9 In this context the Sub-Committee considered and agreed in principle to the proposal by DGAC (document DSC 14/3/4) on revising the Special Provision 188 in order to except lithium button cell batteries contained in equipment from considerations to mark the outside package, consistent with the decision taken by UNSCOE 36.

3.10 In addition, the Sub-Committee agreed to incorporate the proposal of the United States, as detailed in document DSC 13/20, paragraph 6.5, regarding prohibition of underdeck stowage of UN 1913, UN 1951, UN 1963, UN 1970, UN 2087, UN 2201 and UN 2591, in the errata and corrigenda to amendment (34-08) to the IMDG Code.

3.11 The Sub-Committee requested the E&T Group to finalize the errata and corrigenda in English, taking into account the decisions of the Sub-Committee, and requested the Secretariat to publish the final document as soon as possible and before the end of the year, as amendment (34-10) becomes mandatory on 1 January 2010.

3.12 The Sub-Committee agreed with the proposal of Panama that the Committee should be invited to look into the procedure of introducing editorial corrections and urgent safety-related amendments to the IMDG Code by existing means of issuing errata and corrigenda to the Code as this means of effecting changes was not strictly in line with the procedures prevalent in the Organization. The Sub-Committee was of the opinion that the aforementioned changes could be effected by means of a *note verbale* issued by the Secretary-General before the mandatory entry into force of the amendment to the Code and requested the Committee to endorse its view.

Errata and corrigenda to the French version of the IMDG Code amendment (34-08)

3.13 The Sub-Committee considered document DSC 14/3/7 (Secretariat) containing additional errata and corrigenda relevant to the French versions of the IMDG Code (incorporating amendment (34-08)) which was prepared on the basis of the errata and corrigenda to the UN Recommendations. The Sub-Committee agreed to the additional draft errata and corrigenda in French and requested the Secretariat to finalize it with interested delegations and to publish it before the end of the year.

Classification of solutions and mixtures

3.14 The Sub-Committee agreed on the insertion of new paragraphs 2.0.2.10 and 3.1.3.4 in amendment (35-10) and concurred with those modifications made to confirm that those provisions only apply to solutions and mixtures which meet the classification criteria of the Code and requested the Secretariat to inform the UNSCOE accordingly (DSC 14/3, paragraph 3.1.2).

Amendment to MARPOL Annex III

3.15 The Sub-Committee endorsed the course of action taken by the group in the context of extension of the scope of the work programme item on Amendment to MARPOL Annex III considering the sequence of events which could lead to the incorporation of the GHS criteria and the revision of the documentation on provisions in the draft amendment (36-12) (DSC 14/3, paragraphs 3.1.3, 3.1.4, 3.1.5 and 5.2, annex 3 and annex 4) and noted that MEPC 59 had already agreed to expand the scope of this agenda item.

Special Provision 900

3.16 The Sub-Committee noted the group's view concerning the relevant provisions in SP 900 that the use of the term "transport of substances is prohibited" conveyed the intent adequately and appropriately in the IMDG Code and concurred with the group on inviting the UNSCOE to consider aligning the relevant text with the existing text of SP 900 (DSC 14/3, paragraph 3.1.11). The Sub-Committee requested the Secretariat to inform the UNSCOE accordingly.

Placarding of cargo transport units

3.17 The Sub-Committee concurred with the decision of the group on including a provision in the Code for the placarding of cargo transport units containing dangerous goods in limited quantities, using the new limited quantity mark in its enlarged form as a mark for such cargo transport units, and requested the Secretariat to inform the UNSCOE (DSC 14/3, paragraph 3.1.13).

3.18 The Sub-Committee authorized the Secretariat to inform the relevant UN bodies on technical matters as requested by the E&T Group.

UN proposed amendments associated with UN 1838

3.19 The Sub-Committee concurred with the group's decision for including in the Code the UN proposed amendments associated with UN 1838, titanium tetrachloride, and noted that provisions of amendment (35-10) may be applied on a voluntary basis from 1 January 2011 pending their official entry into force on 1 January 2012.

Language used in provisions concerning orientation arrows

3.20 The Sub-Committee endorsed the views of the group that the language used in provisions concerning orientation arrows in 5.2.1.7.1(a) and (e) could benefit from improvement, and requested the Secretariat to provide the text, as agreed by the E&T Group, to the UNSCOE for appropriate action (DSC 14/3, paragraph 3.1.15).

Amendment to the new TP 37

3.21 The Sub-Committee endorsed the request of the group to inform the UNSCOE on the amendment to the new TP 37, with the view to facilitate its understanding (DSC 14/3, paragraph 3.1.16) and requested the Secretariat to inform the UNSCOE accordingly.

Amendments to provision 5.4.1.1.2 on the use of paper documents

3.22 The Sub-Committee noted that the existing provisions of the Code assign a particular action, but the responsibility for carrying out the action is not specifically assigned to

any particular person, and should the E&T Group decide to prepare amendments regarding the assigning of responsibilities, then the existing definitions of “shipper/consignor” needs to be improved and an explanation of the term “initial carrier” in the context of sea transport needs to be provided. In view of the aforementioned, the Sub-Committee decided to delete 5.4.1.1.2 in document DSC 14/3, annex 6.

Documentation required on board

3.23 The Sub-Committee noted that the provisions in 5.4.3 and 5.4.4 concerning documentation required on board and other required information and documentation could benefit from improvement as those provisions are difficult to comply with for certain dangerous goods, such as excepted packages of class 7 and fumigated cargo transport units, as the information provided to the carrier will not enable him to comply with 5.4.3.

3.24 In this context, the Sub-Committee agreed that a review of provisions in 5.4.3 and 5.4.4 concerning documentation required on board and other required information and documentation is needed (DSC 14/3, paragraph 3.1.19) and instructed the E&T Group to consider the matter and to advise DSC 15.

Recommendations on the safe use of pesticides in ships applicable to the fumigation of cargo transport units

3.25 The Sub-Committee noted that the inclusion of the provisions relating to fumigated cargo transport units into the new chapter 5.5 (Special Provisions), and that the revision of MSC.1/Circ.1265 had been considered under agenda item 8.

Proper shipping name (PSN) characters on cargo transport units

3.26 The Sub-Committee recalled that DSC 13 had requested the group to consider a minimum height requirement for the proper shipping name (PSN) characters on cargo transport units (DSC 13/3/7). In this context, the Sub-Committee concurred with the view of the group that it is not necessary to specify the width of characters of PSN as it is not required for the UN number (DSC 14/3, paragraph 3.2.2).

SP 106 of the UN Recommendations

3.27 The Sub-Committee agreed with the view of the group on the need for revision by the UNSCOE of SP 106 of the UN Recommendations as a result of UN 3166 and 3171 being regulated by sea transport (DSC 14/3, paragraph 3.2.3). In this context, the Sub-Committee requested the Secretariat to inform the UNSCOE that, following the decision of DSC 13 to regulate the carriage of UN 3166 and 3171, there is a need to review SP 106 of the UN Recommendations.

Amendment to chapter II-2 of SOLAS

3.28 The Sub-Committee concurred with the group’s decision for not amending chapter II-2 of SOLAS with regard to the establishment of minimum safety requirements for design, installation and use of security devices, beacons or other tracking and monitoring equipment that may have an active power source when installed on cargo transport units for use in the transport of dangerous goods, as it is not for the Administration to approve design type; instead, the responsibility rests with the manufacturer of such equipment (DSC 14/3, paragraph 3.2.4).

Placarding of semi-trailers and full-trailers

3.29 The Sub-Committee noted the request of the group for inviting interested delegations to submit proposals on differences in the requirements for placarding of semi-trailers and full-trailers as stated in 5.3.1.1.4.1 in order to facilitate the consideration of the discrepancy (DSC 14/3, paragraphs 3.3.4 and 3.3.5 and annex 5) at its next session and noted that this issue had been considered under agenda item 13.

Amendments to the IMO/ILO/UNECE Guidelines for packing of cargo transport units

3.30 The Sub-Committee endorsed the view of the group that a separate item on the work programme of the Sub-Committee regarding amendments to the IMO/ILO/UNECE Guidelines for packing of cargo transport units is not necessary, since that work could be considered under the existing work programme item 3.2 on amendment (35-10) to the IMDG Code and supplements (DSC 14/3, paragraph 4.1).

3.31 The Sub-Committee noted that, due to time constraints, the group deferred the amendments to the IMO/ILO/UNECE Guidelines for packing of cargo transport units for consideration at E&T 14 (see also agenda item 13).

Amendments to Revised Emergency Response Procedures for Ships Carrying Dangerous Goods

3.32 The Sub-Committee noted that, in light of new UN entries in the dangerous goods list, the group prepared modifications to column 15 of the dangerous goods list concerning EmS.

3.33 The Sub-Committee noted that, at the request of the group, the Secretariat had prepared a draft revised MSC circular on Revised Emergency Response Procedures for Ships Carrying Dangerous Goods (DSC 14/WP.3), agreed to it in principle and instructed the E&T Group to finalize it for submission to MSC 87 for approval (DSC 14/3, paragraph 4.2).

Requirements for the carriage of antidotes

3.34 The Sub-Committee noted the view of the group and considered the matter regarding the reduction in the requirements for the carriage of antidotes as per the last revision of the guide in 1998 and its impact on crew on board certain ships (DSC 14/3/3, paragraph 4.3).

3.35 In this context, the Sub-Committee considered document DSC 14/3/3 (INTERTANKO) containing a proposal in order to review the requirements for the carriage of Amyl Nitrate and, as part of the forthcoming revisions to the Medical First Aid Guide (MFAG), to include the carriage of Amyl Nitrate ampoules on board. The Sub-Committee invited INTERTANKO and interested delegations to prepare draft amendments to MSC/Circ.857, agreed that further information is needed before a firm decision could be taken on the proposal and invited interested Member States and organizations to submit more information for consideration at DSC 15.

Amendments to SOLAS regulation VII/4

3.36 The Sub-Committee recalled that this issue had been considered under agenda item 14.

Highlighting amendments between versions of the IMDG Code

3.37 The Sub-Committee considered the comments of the group on options for highlighting amendments between versions of the IMDG Code and the request for exploring the most user-friendly and cost-effective way to provide such amendments to the users of the Code (DSC 14/3, paragraphs 6.1 and 6.2).

3.38 The Sub-Committee also considered the recommendation of the group with regard to the possibility of laying out suitable text of the Code in two columns, considering that such layout would not facilitate users when searching the information within the online version of the Code (DSC 14/3, paragraph 6.3).

3.39 The Sub-Committee further considered document DSC 14/3/14 (Secretariat) on the options for highlighting amendments to the IMDG Code and possible layouts of this publication.

3.40 The Sub-Committee agreed with the proposal of the Secretariat in paragraphs 2 and 3.1 of document DSC 14/3/14 on highlighting amendments to the IMDG Code and to make the amendments available to users. However, the Sub-Committee did not support the proposal to publish the Code in a two-column format on the basis of experience gained with similar publications.

UN 2687 assigned to desensitized explosive N.O.S.

3.41 The Sub-Committee endorsed the decision of the group for deleting the entry for UN 2687 assigned to desensitized explosive N.O.S.

Generic or not otherwise specified (N.O.S.) entries

3.42 The Sub-Committee agreed with the view of the group on the need to insert “or 318” in the first sentence of 3.1.2.8.1 after “special provision 274”.

Assignment of PP 31 in the context of combination packing

3.43 The Sub-Committee endorsed the view of the group on the interpretation of the provision regarding the assignment of PP 31 in the context of combination packing, meaning that the inner packaging shall be hermetically sealed (DSC 14/3, paragraph 6.5).

Substances subject to SP 900

3.44 The Sub-Committee considered the matter regarding substances subject to SP 900 which are prohibited for transport by sea mode and as contained in chapter 3.3 of the IMDG Code, incorporating amendment (34-08) and noted that it might be necessary to improve clarity and user-friendliness of provisions which prohibit transport of certain substances by sea (DSC 14/3, paragraph 6.7 and annex 8) and decided to refer the matter to E&T 14 for consideration of the list of substances subject to SP 900 (annex 8) and preparation of draft amendments accordingly at DSC 15.

Transport of explosives chapters 7.1, 7.2 and 7.4 of the IMDG Code

3.45 The Sub-Committee concurred with the group’s observations regarding the consultation with explosive experts and the observations on the provisions for the transport of explosives

contained in chapters 7.1, 7.2 and 7.4 of the IMDG Code (DSC 14/3, paragraph 6.9 and annex 9), and invited Member Governments and organizations to send experts to take part in the discussions on Class 1 in the context of the revision of chapters 7.1, 7.2 and 7.4 undertaken by the correspondence group.

Report of the correspondence group

3.46 The Sub-Committee recalled that DSC 13 had established a correspondence group on the revision of chapters 7.1, 7.2 and 7.4 and considered document DSC 14/3/10 (United Kingdom) on the progress made on the matter.

Establishment of the correspondence group

3.47 The Sub-Committee re-established the correspondence group under the coordination of the United Kingdom* and instructed the group, taking into account the relevant decisions taken and comments made in plenary, to:

- .1 using document DSC 13/INF.4 as a base and taking into account the general principles outlined in document DSC 13/3/6, paragraph 7, and the advice of class 1 and class 7 experts regarding the specific stowage and segregation requirements of those classes, develop a draft revised text of the stowage and segregation provisions of chapters 7.1 and 7.2 of the IMDG Code;
- .2 prepare consequential changes to the IMDG Code (amendment 35-10), as appropriate; and
- .3 submit a written report to DSC 15.

3.48 The Sub-Committee invited interested delegations to actively participate in the work of the group taking into account the recommendations of the E&T Group and problems identified in annex 9 to document DSC 14/3.

CONSIDERATION OF ISSUES ASSOCIATED WITH AMENDMENT (35-10) TO IMDG CODE

Sub-Committee of experts on the transport of dangerous goods

3.49 The Sub-Committee considered document DSC 14/3/1 (Secretariat) which provided information on the outcome of the thirty-fifth session of the ECOSOC Sub-Committee of experts on the transport of dangerous goods, which met from 22 to 26 June 2009.

*

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3.50 In the context of transport of coolant/condition units the Sub-Committee was invited to note the ongoing discussions and invited the interested delegations to make comments to Germany.

3.51 The Sub-Committee agreed with the proposal that the names and addresses of the consignor and that of the consignee shall be included in the documentation related to excepted packages of radioactive material and that this provision shall be included in amendment (35-10).

3.52 With regard to the matter on temperature control criteria for organic peroxides following the proposal submitted by the Islamic Republic of Iran regarding an alternative system in relation to the fire-fighting system in freight containers carrying dangerous goods, the Sub-Committee noted the information provided and also invited delegations interested in the results to contact CEFIC (DSC 14/3/1, paragraph 11).

Transport of substances of UN 2211 and UN 3314

3.53 The Sub-Committee considered a proposal by Germany (DSC 14/3/2) on assigning special provision SP 932 to UN Numbers 2211 and 3314, which requires a certificate from the maker or shipper, stating that the shipment was stored under cover, but in the open air, in the size in which it was packaged, for not less than three days prior to shipment. The Sub-Committee agreed that there was merit in the proposal; however, if needed more information before the proposal could be supported and invited interested Member States and organizations to contact Germany and to submit a revised proposal for consideration at DSC 15.

Lithium Ion Battery Watt–Hour Marking Requirement

3.54 The Sub-Committee considered a proposal by DGAC (DSC 14/3/5) on amending subparagraph .2 of the SP 188 in order to replace the reference of the date “31 December 2010” with “except those manufactured before 1 January 2009”.

3.55 In this context, the Sub-Committee considered the information in paragraph 6 of document DSC 14/3/1 (Secretariat), containing the decision of the ECOSOC Sub-Committee of experts on the transport of dangerous goods on this issue.

Transport of Nickel Metal Hydride Batteries

3.56 The Sub-Committee considered a proposal by France, Germany and VOHMA (DSC 14/3/6) on the transport of Nickel Metal Hydride Batteries and, taking into account that results of the discussions on this matter by the ECOSOC Sub-Committee of experts on the transport of dangerous goods are also contained in the document DSC 14/3/1, agreed with the proposal, for inclusion in amendment (35-10), as follows:

- 1 Add the entry UN 3496 to the dangerous goods list and the index;
- .2 assign Special Provision 117 in column 6, “0” in column 7a and “E0” in column 7b of the dangerous goods list;
- .3 assign stowage category A and a stowage requirement “away from all sources of heat” (column 16) and develop appropriate text for column 17; and

- .4 assign a new special provision reflecting the requirements of SP 304 as included in the 16th revised edition of the UN Model regulations and specifying the documentation requirement as follows: The SP should contain the following requirements:

This entry applies to nickel metal hydride batteries, except button cells or when packed with or contained in equipment. They shall be securely packed and protected against short circuit. They are not subject to other provisions of this code with the exception of 5.4.1, 5.4.3 and the stowage provisions; these provisions do not apply if less than 100 kg gross mass of nickel metal hydride batteries are transported in a CTU.

Statement by China

3.57 In this context, the Sub-Committee noted a statement made by the delegation of China, set out in annex 17.

Construction of freight containers used as bulk containers

3.58 The Sub-Committee considered a proposal by ICS (DSC 14/3/8) on amending provision 6.9.3.1.2 in order to allow the carriage of dangerous goods in 20' units without additional strengthening, whilst also ensuring it for those units that do not possess the same integral strength.

3.59 The Sub-Committee was of the view that approval of such a proposal could lower the safety level of the transport of dangerous goods in bulk containers as the onus would be on the shipper to ensure that the containers are of adequate strength and no associated guidance was available at this time. As such, the Sub-Committee was not able to support the proposal.

Stowage of goods of class 5.2

3.60 The Sub-Committee considered a proposal by CEFIC (DSC 14/3/9) on amending provision 7.1.12.5 in order to allow the “flooding of the container with water” as a possible emergency action recommended from industry to carriers and agreed, in principle, with the proposal.

Exceptions on the transport of substances UN Nos. 1499, 1486 and 1498

3.61 The Sub-Committee considered the proposals by Chile (DSC 14/3/11, DSC 14/3/12 and DSC 14/3/13) on exemptions for the transport of substances assigned UN numbers 1499, 1486 and 1498 when in specific form of shapes (e.g., beads).

3.62 After an extensive discussion on the proposal, the Sub-Committee agreed to assign SP 9XX to UN 1499, UN 1486 and UN 1489, as proposed in the documents referred to in 3.61 above and, furthermore, agreed that the exemption shall be limited to the shape and size of the products tested. Also, the Sub-Committee requested the Secretariat to forward the information provided by Chile to the UNSCOE for action, as appropriate, and to advise the Organization of the outcome of UNSCOE accordingly.

Placarding requirements for fumigated containers

3.63 The Sub-Committee considered a proposal by ICS (DSC 14/3/15) to modify the new chapter 5.5 of the IMDG Code on Placarding requirements for fumigated containers and noted that the proposal had a multimodal dimension.

3.64 The Sub-Committee acknowledged the dangers associated with the transport of fumigated units and expressed the view that the assignment of class 9 to such units would lead to confusion as that would imply that the units are loaded with dangerous goods belonging to class 9. Recognizing the significance of the issue, the Sub-Committee invited interested Member States and organizations to submit proposals for consideration at DSC 15.

DRAFT AMENDMENT (35-10) TO THE IMDG CODE

3.65 On the basis of document DSC 14/3, annex 6, the Sub-Committee agreed to amendment (35-10) to the IMDG Code and authorized the E&T Group to finalize all agreed texts and prepare a final text of draft amendment (35-10) to the IMDG Code taking into account the agreed in principle proposals, relevant decisions of the MSC and the MEPC and comments made during plenary. The Sub-Committee requested the Secretary-General to circulate them in accordance with SOLAS article VIII, for consideration and subsequent adoption by MSC 87.

4 AMENDMENTS TO THE IMSBC CODE, INCLUDING EVALUATION OF PROPERTIES OF SOLID BULK CARGOES

GENERAL

4.1 The Sub-Committee recalled that MSC 85 had adopted the IMSBC Code by resolution MSC.268(85) and had also adopted the related amendments to the SOLAS Convention by resolution MSC.269(85).

4.2 The Sub-Committee also recalled that, at its eighty-sixth session, the Committee had approved the procedure for adoption of the future amendments to the IMSBC Code as proposed by the Sub-Committee (MSC 86/26, paragraph 7.2). The Sub-Committee noted that, in accordance with this procedure, the next amendment to the IMSBC Code should be finalized at DSC 15 and submitted to the May 2011 session of the Committee with a view to adoption. The new amendment should come into force on 1 January 2012 on a voluntary basis, and from 1 January 2013 on a mandatory basis.

4.3 The Sub-Committee having further considered the documents submitted, noted that there are, primarily, five issues to be considered, namely:

- .1 amendments to the IMSBC Code;
- .2 report on data, information and experiences on high moisture content (up to 12%) DRI fines;
- .3 interpretations of requirements for stowage material and the applicable separation of coal and brown coal briquettes;
- .4 review of lists of solid bulk cargoes for which a fixed gas fire-extinguishing system may be exempted or for which a fixed gas fire-extinguishing system is ineffective (MSC/Circ.1146); and

- .5 survey and certification provisions in the IMSBC Code.

AMENDMENTS TO THE IMSBC CODE

4.4 The Sub-Committee considered documents DSC 14/4/1 (Russian Federation) on the inaccuracies in the IMSBC Code, DSC 14/4/2 (Sweden) on the transport of wood pellets, DSC 14/4/3 (Finland) on the transport of ferrous sulphate monohydrated granules in bulk, DSC 14/4/4 (Sweden) on wood pellets, DSC 14/4/5 (United States and Brazil) on citron pulp pellets, DSC 14/4/7 (CEFIC) on Ammonium Nitrate fertilizer (UN No.2071), DSC 14/4/8 (CEFIC) on Ammonium Nitrate fertilizer (UN No.2067), DSC 14/4/9 (CEFIC) on Ammonium Nitrate fertilizer (non-dangerous), DSC 14/4/10 (CEFIC) on Ammonium Nitrate (UN No.1942) and took decisions as detailed in the following paragraphs.

Inaccuracies in the IMSBC Code

4.5 The Sub-Committee, having considered document DSC 14/4/1 (Russian Federation) on the inaccuracies in the IMSBC Code, noted that the concerns raised by the delegation of the Russian Federation have already been addressed in the authentic text of the IMSBC Code.

Transport of pulp wood and timber

4.6 The Sub-Committee considered a proposal from Sweden (DSC 14/4/2), proposing to add pulp wood and timber as a new schedule to the IMSBC Code as they are liable to cause oxygen depletion and increasing of carbon dioxide in cargo spaces. In this context, the Sub-Committee, having recalled that DSC 13 had examined relevant documents DSC 13/4/3, DSC 13/INF.6 and DSC 13/INF.7, concerning the problems caused by wood pellets and other wood products, and that it had concluded that the proposal by Sweden had merit and it should be revisited in order to revise the recommendations concerning access to enclosed spaces aboard ships, agreed that the proposal needed to be considered in the light of the definition of solid bulk cargoes in SOLAS chapter VI, and instructed the working group to further deliberate on the issue and to advise the Sub-Committee accordingly.

4.7 While considering the above proposal, the Sub-Committee recalled an earlier proposal by the United States (DSC 11/4/7) on criteria for the classification of materials hazardous only in bulk and, having noted the importance of the issue, urged interested delegations to submit proposals for consideration at a future session of the Sub-Committee.

Transport of Granular Ferrous Sulphate Monohydrate in bulk

4.8 The Sub-Committee, having considered a proposal from Finland (DSC 14/4/3) to include a new entry for granular ferrous sulphate monohydrate in Group C of the IMSBC Code, agreed with the proposal in principle and instructed the working group to finalize the associated schedule, paying particular attention to environmental hazards posed by such cargoes and to their acute toxicity for incorporation in the next amendment (01-11) to the IMSBC Code.

Wood pulp pellets

4.9 The Sub-Committee, having considered a proposal from Sweden (DSC 14/4/4) to delete the schedule for wood pulp pellets in the IMSBC Code, as wood pulp pellets do not exist in practice and the schedule for wood pulp pellets could easily be mistaken for the schedule for wood pellets, agreed to delete the schedule and instructed the working group to prepare a corresponding amendment for incorporation in amendment (01-11) to the IMSBC Code. Having agreed to the aforementioned proposal, the Sub-Committee agreed that should, in the future, a product be identified which needs to be governed by the provisions in the existing schedule relating to wood pulp pellets, then a schedule associated with that product shall be reintroduced as per the provisions of 1.3.2 of the Code. In the context, the Sub-Committee emphasized that, when carrying solid bulk cargoes which are not listed in appendix 1 to the IMSBC Code, the provisions of 1.3 of the IMSBC Code have to be applied.

Citrus pulp pellets

4.10 The Sub-Committee recalled that DSC 13 had considered a proposal by the United States (DSC 13/4/6) and had agreed, in principle, that citrus pulp pellets could be exempt from the IMSBC Code schedules for seedcake (b) UN 1326 and seedcake UN 2217, provided that additional tests are conducted and additional information is provided to the Sub-Committee. Having considered the revised proposal from the United States and Brazil (DSC 14/4/5) providing additional information on the carriage of citrus pulp pellets in bulk, the Sub-Committee endorsed the proposed revised text, in principle, and instructed the working group to prepare corresponding amendments for incorporation in amendment (01-11) to the IMSBC Code. The Sub-Committee, furthermore, instructed the working group that, when preparing the associated schedule, to take into consideration, amongst others, issues relevant to the levels specified for oil and moisture content and the presence of flammable solvent.

Ammonium Nitrate based fertilizer

4.11 The Sub-Committee, having considered proposals from CEFIC (DSC 14/4/7, DSC 14/4/8, DSC 14/4/9 and DSC 14/4/10) for updating and improving the text relating the different forms of ammonium nitrate fertilizers (UN Nos. 2071, 2067 and non-dangerous) and for ammonium nitrate (UN No.1942), noted that the proposals could benefit from improvements, particularly in the context of provisions concerning “A-60” class standard and the need for the competent authority to approve equivalent arrangement, agreed with the proposals in principle and instructed the working group to prepare corresponding amendments for incorporation into amendment (01-11) to the IMSBC Code.

REPORT ON DATA, INFORMATION AND EXPERIENCES ON HIGH MOISTURE CONTENT (UP TO 12%) DRI FINES

4.12 The Sub-Committee recalled that, at MSC 85, the delegation of the Bolivarian Republic of Venezuela had drawn the Committee’s attention to issues surrounding the carriage of DRI fines with high moisture content that may reach 12%. Furthermore, the working group established at DSC 13, noting that no information had been provided on how this highly-moisturized cargo would behave under inerting conditions, had agreed to the following:

- .1 the Bolivarian Republic of Venezuela would study the effects of carriage of iron fines obtained by direct reduction (C) with high moisture content and under inerting conditions and that a DSC circular indicating the specific (particular)

conditions required to ensure safe mechanical ventilation would be useful to the parties concerned; and

- .2 the Bolivarian Republic of Venezuela and Trinidad and Tobago would coordinate the information and experimental data through a correspondence group composed of volunteers with a view to submitting to DSC 14 a document containing a draft DSC circular based on document DSC 12/4/1 submitted by the Bolivarian Republic of Venezuela and in accordance with section 15 of the IMSBC Code.

4.13 The Sub-Committee, noting that the proposals in documents DSC 14/4 (Bolivarian Republic of Venezuela and Trinidad and Tobago), DSC 14/INF.3 (Bolivarian Republic of Venezuela) and DSC 14/INF.6 (Trinidad and Tobago) related to DRI fines which had high levels of moisture, up to 12%, relating to DRI fines in the IMSBC Code, invited the delegations of the Bolivarian Republic of Venezuela and Trinidad and Tobago, along with other interested delegations, to consider submitting a new proposal, which may be in the form of a draft schedule and/or a circular, concerning the carriage of DRI fines with high-moisture content above 0.3% and up to 12% for consideration by the Sub-Committee.

MSC CIRCULAR ON THE INTERPRETATION OF STOWAGE AND SEGREGATION REQUIREMENTS FOR BROWN COAL BRIQUETTES AND COAL RELATED TO “HOT AREAS” IN THE CONTEXT OF THE IMSBC CODE

4.14 The Sub-Committee recalled that, at DSC 13, the Working Group on Amendments to the IMSBC Code was not able to consider documents or aspects related to clarifications and/or definition of “hot areas and limits of temperature” due to time constraints; therefore, the working group had proposed its consideration by a correspondence group.

4.15 The Sub-Committee further recalled that when considering the report of the working group at DSC 13, it had noted the need to clarify the definition of “hot areas” in the schedule on coal and temperature limits in the context of the IMSBC Code and had invited interested delegations to submit their proposals to DSC 14.

4.16 The Sub-Committee, having considered proposals from Japan (DSC 14/4/6, DSC 14/INF.7 and DSC 14/INF.8) on the preparation of an MSC circular to provide interpretation of stowage and segregation requirements for brown coal briquettes and coal related to “hot areas” in the context of IMSBC Code, agreed with the proposal, in principle, and instructed the working group to prepare a corresponding draft MSC circular for consideration by the Sub-Committee with a view to approval by MSC 87 taking into account, amongst others, the need to clarify the meaning of the term “time average of temperature” in the draft MSC circular (DSC 14/4/6, annex, paragraph 2).

4.17 While considering document DSC 14/4/6, the delegation of Japan clarified that the reference to document DSC 14/INF.8 in paragraph 12 should read DSC 14/INF.7.

REVIEW OF THE LISTS OF SOLID BULK CARGOES FOR WHICH A FIXED GAS FIRE-EXTINGUISHING SYSTEM MAY BE EXEMPTED OR FOR WHICH A FIXED GAS FIRE-EXTINGUISHING SYSTEM IS INEFFECTIVE (MSC/CIRC.1146)

4.18 The Sub-Committee recalled that DSC 13 had invited the Committee to agree to the need to review the lists of solid bulk cargoes for which a fixed gas fire-extinguishing device can be

exempted or for which such a device is ineffective (MSC/Circ.1146) as a consequence of the IMSBC Code becoming mandatory.

4.19 MSC 86, having recalled that MSC 64 had agreed that there was a need to provide Administrations with guidelines regarding the provisions of SOLAS regulation II-2/10 concerning exemptions from the requirements for fire-extinguishing systems and had subsequently approved MSC/Circ.671 providing the lists of solid bulk cargoes for which a fixed gas fire-extinguishing system may be exempted or for which a fixed gas fire-extinguishing system is ineffective, which was later superseded by MSC/Circ.1146, the Committee, noting the envisaged mandatory status of the IMSBC Code, agreed that the lists could benefit from improvements and instructed the Sub-Committee to review and, where necessary, amend MSC/Circ.1146 accordingly.

4.20 In pursuance of the above decision of MSC 86 and noting that there might be a need to align certain names in the circular with those in the recent version of the IMDG Code, the Sub-Committee requested the Secretariat to consider MSC/Circ.1146 and to prepare amendments, as appropriate, for consideration at DSC 15, and invited interested delegations to submit proposals to the Secretariat for consolidation purposes.

SURVEY AND CERTIFICATION PROVISIONS IN THE IMSBC CODE

4.21 The Sub-Committee recalled that DSC 13, having noted that the draft IMSBC Code did not contain survey and certification provisions, had agreed that the issue was a serious one which should be considered expediently and invited interested delegations to submit appropriate proposals.

4.22 In this context, the Sub-Committee, having noted the comments provided by IACS (DSC 14/4/11) for establishing a common survey and certification regime and on the preparation of a draft MSC circular, instructed the working group to consider the proposal by IACS in detail, paying particular attention to the need to have harmonization with the provisions in SOLAS chapter II/2 and to the need to identify the equipment governed by the proposed regime.

ESTABLISHMENT OF THE WORKING GROUP

4.23 The Sub-Committee established the Working Group on Amendments to the IMSBC Code, under the chairmanship of Captain J.-D. Troyat (France), and instructed the group, taking into account the relevant decisions taken and comments made in plenary, to:

- .1 prepare draft amendments to the IMSBC Code taking into account the proposals in documents DSC 14/4/3, DSC 14/4/4, DSC 14/4/5, DSC 14/4/7, DSC 14/4/8, DSC 14/4/9 and DSC 14/4/10;
- .2 study the issues concerning the inclusion of logs in the IMSBC Code taking into account document DSC 14/4/2 and in the context of definition of solid bulk cargoes;
- .3 prepare a draft MSC circular on the interpretation of stowage and segregation requirements for brown coal briquettes and coal related to “hot areas” in the IMSBC Code, taking into account the proposal under documents DSC 14/4/6, DSC 14/INF.7 and DSC 14/INF.8;

- .4 consider measures to establish a common survey and certification regime to demonstrate compliance with the IMSBC Code taking into account document DSC 14/4/11 and make recommendations to the Sub-Committee;
- .5 submit a written report on .3 above to plenary on Friday, 25 September 2009; and
- .6 submit an oral report on remaining items to plenary on Friday, 25 September 2009.

REPORT OF THE WORKING GROUP

4.24 Having considered the report of the working group (DSC 14/WP.9), which as per the instruction of the Sub-Committee, 4.23.3 above, provided a draft MSC circular on the Interpretation of stowage and segregation requirements for brown coal briquettes and coal related to “hot areas” in the IMSBC Code, the Sub-Committee agreed to it, as set out in annex 1, and invited MSC 87 to consider it with the view to approval.

4.25 The report of the working group on the consideration of the remaining instructions of the Sub-Committee, 4.23.1, 4.23.2 and 4.23.4, is available as document DSC 15/4 and will be considered at DSC 15.

5 AMENDMENTS TO THE CSS CODE AND ASSOCIATED RECOMMENDATIONS

5.1 The Sub-Committee recalled that DSC 13, having noted that finalization of the draft amendments to the CSS Code was dependent on the finalization of the work on “Guidance on providing safe working conditions for securing of containers” which was dealt with under agenda item 8, established a working group to deal with the Amendments to the CSS Code together with agenda items 8 (Guidance on providing safe working conditions for securing of containers) and 12 (Form and procedure for approval of the Cargo Securing Manual).

5.2 The Sub-Committee also recalled that DSC 13, having considered the report of the working group and following consideration of issues regarding dimensions for lashing position design, including the need for an appropriate formal safety assessment, application of some parts of the Guidelines to the new and existing ships, the need for a definition of “new ship”, etc., had agreed to consider the aforementioned and associated issues, at DSC 14, under the agenda item on “Amendments to the CSS Code and associated recommendations”, and to extend the target completion date of the amended work programme item to 2009.

5.3 The Sub-Committee further recalled that MSC 86 had noted the aforementioned progress and had agreed to extend the target completion date of the amended work programme item to 2009.

5.4 The Sub-Committee, having noted that there were two issues for consideration under this agenda item, namely Unified instructions on safe packing of cargo transport units and securing of containers, and Guidance on providing safe working conditions for securing of containers to the CSS Code, addressed them as detailed in the following paragraphs.

Unified instructions on safe packing of cargo transport units

5.5 The Sub-Committee considered a proposal by Sweden (DSC 14/5) regarding insertion of references to IMO/ILO/UNECE Guidelines for packing of cargo transport units, and to

IMO Model Course 3.18 in the Code of safe practice for cargo stowage and securing in paragraph 2.8.4 as well as in SOLAS regulation VI/5.2 and, having noted that footnotes in the Convention do not form part of the Convention but are inserted for ease of reference, agreed to make references to the aforementioned instruments in the published version of SOLAS regulation VI/5.2.

5.6 During the course of the discussion, the Sub-Committee noted the observation of the delegation of Germany that, with regard to the risk of cargo shifting in a cargo transport unit, the master of the ship has no involvement in the loading of cargoes in the cargo transport unit and that, in paragraph 2.8.4 of resolution A.714(17), it is inappropriately stated that the “master ensure, prior to loading of any cargo, cargo transport unit or vehicle that cargo in or on cargo transport units and vehicle is, to the extent practicable, properly stowed and secured on to the unit or vehicle”. Having considered the observation of Germany, the majority of the delegations who spoke on the issue, could not support the proposal to amend the aforementioned resolution at this stage.

Securing of containers and lashing position in the context of draft new annex on Guidance on providing safe working conditions for securing of containers to the CSS Code

5.7 The Sub-Committee recalled that, at DSC 13, it had considered the report of the Working Group on Amendments to the CSS Code (DSC 13/WP.2), and that decisions on actions requested of the Sub-Committee in paragraphs 22.2 to 22.9 remained outstanding. The Sub-Committee considered the proposals by:

- .1 ILO (DSC 14/5/1) providing comments on access ways and working spaces for placing and removing lashing equipment on containerships and on dimensions specified in paragraph 7.8.2.3 of the ILO Safety and Health in Ports Code;
- .2 United States (DSC 14/5/2) suggesting an alternative solution for specifying minimum dimensions for lashing positions and permanent lashing bridges;
- .3 ICHCA (DSC 14/5/3) providing detailed comments on actions 22.2 to 22.9 in document DSC 13/WP.2;
- .4 ICHCA (DSC 14/INF.10) providing a research report on studies of risks during the lashing of freight containers on the decks of containerships,

and took decisions as detailed in the following paragraphs using DSC 13/WP.2 as base document.

Dimensions of lashing position design

5.8 The Sub-Committee had mixed views on the issue of providing lashing position and permanent lashing bridges widths as specified in paragraphs 6.2.2.2 and 6.2.2.3 of annex 1 to document DSC 13/WP.2. Some delegations who spoke on the subject were of the view that it is not prudent, because of exorbitant retrofitting costs, to apply these provisions to existing ships, more so under the prevailing global economic and financial climate, while others were of the view that increased widths of lashing positions and permanent lashing bridges would provide safer working conditions to those securing containers on board containerships. In the ensuing debate, the Sub-Committee confirmed that existing ships would not be subject to compliance with those provisions in annexes 1, 2 and 3 of document DSC 13/WP.2 which are associated with

introducing structural retrofitting of containerships, and agreed that any standard to be adopted in relation to the width of accessways and working spaces for placing and removing lashing equipment on containerships should not be inferior to the corresponding ILO standards as specified in paragraph 7.8.2.3 of the ILO Code of Practice. In light of the aforementioned decisions, the Sub-Committee agreed to the modifications to the text of paragraphs 6.2.2.2 and 6.2.2.3 of the draft new annex 14 of the CSS Code as follows:

“6.2.2.2 The width of the lashing positions should preferably be 1,000 mm, but not less than 750 mm.

6.2.2.3 The width of permanent lashing bridges should be:

.1 750 mm between top rails of fencing; and”

5.9 The Sub-Committee noted the views of the delegation of IACS that, although it was not the intention of IACS to comment on any specific container spacing dimensions, in view of the fact that IACS members, as recognized organizations, will have involvement at design stage or may be expected to check for compliance, it was of the opinion that globally consistent implementation of IMO provisions is important and therefore, it would be helpful if further clarification could be provided regarding the term “lashing position” and more precisely from where the dimensions are to be measured.

Application of the draft new annex 14 to new containerships

5.10 The Sub-Committee, recognizing the need for a period of grace before structural changes could be applied, agreed to invite Member Governments to bring the provisions in the new annex 14 to the CSS Code to the attention of shipowners, ship operators, shipmasters and crews and all other parties concerned and, in particular, encourage shipowners and terminal operators to apply the provisions in their entirety for containerships, the keels of which are laid or which are at a similar stage of construction on or after 1 January 2015.

Application of the draft new annex 14 to existing containerships

5.11 The Sub-Committee, having noted the view of the DSC 13 Working Group on the application of the new annex 14 to existing containerships and, in particular, the group’s recommendation to encourage shipowners and terminal operators to apply the guidance contained in section 6 (design) and 7.2 (operational procedures) of the draft new annex 14 of the Code to existing ships as far as practicable, agreed to the application of the amendments as detailed in the revised paragraphs 2.2 and 2.3 of the draft MSC circular on the Amendments to the Code of safe practice for cargo stowage and securing (CSS Code).

Amendments to the CSS Code, and the associated draft MSC circular

5.12 The Sub-Committee agreed to the draft amendments to the Code of Safe Practice for Cargo Stowage and Securing (CSS Code), and the associated draft MSC circular, as set out in annex 2, with the view to approval by MSC 87.

Guidelines for the preparation of the Cargo Securing Manual, and associated draft MSC circular

5.13 The Sub-Committee, having considered the working group's recommendation (DSC 13/WP.2, paragraph 19) to have a period of grace of one year after the date of approval of the draft Revised Guidelines for the preparation of the Cargo Securing Manual for the implementation of these Guidelines, and taking into account the decisions taken on the application of the amendments to the CSS Code to new and existing vessels, agreed to the revised paragraph 4 on the draft MSC resolution on the Revised Guidelines to reflect the date of application of new annex 14 to new and existing containerships.

5.14 The Sub-Committee agreed to the draft Revised Guidelines for the preparation of the Cargo Securing Manual, and associated draft MSC circular, as set out in annex 3, with the view to approval by MSC 87.

Amendments to the Elements to be taken into account when considering the safe stowage and securing of cargo units and vehicles in ships (resolution A.533(13)) and the associated draft MSC circular

5.15 The Sub-Committee agreed to draft amendments to the Elements to be taken into account when considering the safe stowage and securing of cargo units and vehicles in ships (resolution A.533(13)), including the new text of paragraph 3 of the draft MSC circular on implementation of the amendments, set out in annex 4, with the view to approval by MSC 87.

Amendments to the Guidelines for securing arrangements for the transport of road vehicles on ro-ro ships (resolution A.581(14)), as amended by MSC/Circ.812, and the associated draft MSC circular

5.16 The Sub-Committee agreed to the draft amendments to the Guidelines for securing arrangements for the transport of road vehicles on ro-ro ships (resolution A.581(14)), as amended by MSC/Circ.812, and the associated draft MSC circular, as set out in annex 5, with the view to approval by MSC 87.

6 CASUALTY AND INCIDENT REPORTS AND ANALYSIS

GENERAL

6.1 The Sub-Committee noted that there were, primarily, three issues to consider, namely:

- .1 casualty and incident reports;
- .2 inspection programmes for Cargo Transport Units (CTUs) carrying dangerous goods;
- .3 results of IMO survey on inspections of containers/vehicles carrying packaged dangerous goods; and
- .4 safe transport of containers by sea, Guidelines on Industry Best Practice.

Casualty and incident reports

6.2 The Sub-Committee recalled that document DSC 14/INF.2 (Secretariat) was considered under agenda item 3.

Inspection programmes for cargo transport units (CTUs) carrying dangerous goods

6.3 The Sub-Committee noted the results of container inspection programmes as submitted by means of documents DSC 14/6 (Finland), DSC 14/6/2 (Belgium), DSC 14/6/3 (Canada), DSC 14/6/4 (Netherlands), DSC 14/6/5 (Sweden), DSC 14/6/6 (Islamic Republic of Iran), DSC 14/6/7 (Germany), DSC 14/6/8 (United States), DSC 14/6/9 (Republic of Korea), DSC 14/6/10 (Italy), DSC 13/6/11 (Chile) and DSC 14/6/12 (Secretariat).

6.4 The Sub-Committee recalled that, according to the 2008 consolidated report on container inspection programmes (DSC 13/6/16), a total of 50,212 cargo transport units were inspected and 8,951 cargo transport units were found with deficiencies, that is, about 18 per cent of the cargo transport units inspected had deficiencies. A total of 10,800 deficiencies were found, that is a rate of 21.5 per cent.

6.5 The Sub-Committee considered the results of the 2009 consolidated report on container inspection programmes (DSC 14/6/12, Secretariat), which was prepared on the basis of the reports referred to in paragraph 6.3 above, whereby a total of 62,869 cargo transport units were inspected and 10,920 cargo transport units were found with deficiencies, that is, about 17 per cent of the cargo transport units inspected had deficiencies. A total of 14,915 deficiencies were found, that is a deficiency rate of 23.7 per cent.

6.6 The Sub-Committee expressed its appreciation to those Member Governments that had submitted results of container inspection programmes and its concern about the high rate of deficiencies and on the lack of adherence to the provisions of the IMDG Code, especially in the areas of placarding and marking, which above is 30 per cent, followed by stowage/securing of cargoes inside units, which is 23 per cent.

6.7 The Sub-Committee thanked Member Governments which had submitted the reports, requested them to continue to submit such reports, and urged Member Governments which had not yet carried out container inspection programmes, to do so and to submit the relevant information to the Sub-Committee in accordance with MSC.1/Circ.1202.

6.8 The Sub-Committee also noted that this agenda item, having a link with agenda item 17 on Consideration for the efficacy of the container inspection programme, agreed to discuss the relevant issues considering item 17, with reference to the decision of MSC 84.

Results of IMO survey on inspections of containers/vehicles carrying packaged dangerous goods

6.9 The Sub-Committee recalled that MSC 79, on the basis of relevant decisions of DSC 9, approved MSC/Circ.1147 (Questionnaire on inspections of containers/vehicles carrying packaged dangerous goods), and requested Member Governments to provide the information requested in the questionnaire set out in the annex to that circular and to forward completed questionnaires to the Secretariat.

6.10 The Sub-Committee, having noted that at DSC 13 no proposals relevant to the completed questionnaire had been submitted to the Sub-Committee, invited Member Governments and international organizations wishing to study the results received so far, to do so and submit the outcome of the study to DSC 14.

6.11 The Sub-Committee, having further noted that at DSC 14 no proposals relevant to the completed questionnaire had been submitted to the Sub-Committee, invited Member Governments and international organizations wishing to study the results received so far, to do so and submit the outcome of the study to DSC 15.

Safe Transport of Containers by Sea, Guidelines on Industry Best Practice

6.12 The Sub-Committee considered document DSC 14/6/1 (Secretariat), informing of the outcome of the consideration of document MSC 85/10/3 by MSC 85, and noted that the International Chamber of Shipping (ICS), in conjunction with the World Shipping Council (WSC), had submitted document MSC 85/10/3 on Safe transport of containers by sea, guidelines on industry best practice* to MSC 85, containing best practice guidance for the maritime container industry, with a view to minimizing the dangers to containerships, their crews and all personnel involved with the transportation of containers.

6.13 The Sub-Committee, having noted that MSC 85, having noted that FSI 16 had recognized that container weight was a contributory factor in the MSC Napoli accident but was just one of many container-related issues identified in recent containership accidents and had raised concerns on misdeclared IMDG cargo and false or incomplete declaration of contents which, in turn, led to inappropriate stowage, agreed to refer the above-mentioned concerns and the ICS/WSC Guidelines to DSC 14 for detailed consideration. The Sub-Committee recognized the value of the information and agreed that the publication should be available on board all ships carrying containers and invited MSC 87 to endorse this recommendation of the Sub-Committee.

7 REVIEW OF THE BLU CODE

GENERAL

7.1 The Sub-Committee recalled that DSC 11, recognizing the importance of the form for cargo information, appendix 5 of the BLU Code, and the part it plays in the safety of cargo loadings (DSC 11/12, paragraph 4), had decided to consider the matter further when the mandatory IMSBC Code had been finalized.

7.2 The Sub-Committee also recalled that it had considered a proposal for consequential amendments to the BLU Code in the light of the 2004 BC Code (resolution MSC.193(79)) (DSC 11/12, paragraph 5), and had decided that it would be prudent to prepare the consequential amendments to the BLU Code once the mandatory IMSBC Code had been finalized.

7.3 The Sub-Committee recalled further that no documents had been submitted addressing the outstanding issue mentioned in paragraph 7.2 above, to DSC 12 and DSC 13. However, noting that document MSC 84/INF.8 was of relevance to the issues considered under this agenda item, DSC 13 had agreed to request the Committee to amend the title of the work programme item to read "Review of the BLU Code" and to extend the target completion date of the amended

* The ICS/WSC publication was made available during DSC 14 on the basis of one copy per delegation.

work programme item to 2009. Accordingly, DSC 13 decided to establish a Correspondence Group on the Review of the BLU Code under the coordination of the United States and had invited the coordinator of the group to submit a written report to DSC 14.

REPORT OF THE CORRESPONDENCE GROUP

7.4 Having considered the report of the correspondence group (DSC 14/7), the Sub-Committee approved the report in general and identified four issues which needed further consideration and deliberated upon them as detailed in the following paragraphs.

Amendments to the BLU Code

7.5 The Sub-Committee considered the proposed amendments to the BLU Code contained in paragraph 3 of the report of the correspondence group, in view of the envisaged mandatory IMSBC Code, and, having requested the Secretariat to prepare an associated draft MSC resolution, agreed to the draft amendments, as set out in annex 6, for submission to MSC 87 for adoption.

Amendments to the Manual on loading and unloading of solid bulk cargoes for terminal representatives

7.6 The Sub-Committee considered the proposed amendments to the Manual on loading and unloading of solid bulk cargoes for terminal representatives, contained in paragraph 4 of the report of the correspondence group, and, having requested the Secretariat to prepare an associated draft MSC circular, agreed to the draft amendments, as set out in annex 7, for submission to MSC 87 for approval.

Footnotes in SOLAS chapter VI, and amendments to the Form for Cargo Information MSC/Circ.663

7.7 Having considered the proposals of the correspondence group in paragraphs 5, 6 and 7 of its report, the Sub-Committee agreed to:

- .1 delete the footnotes associated with SOLAS regulation VI/2 which make reference to MSC/Circ.663; and
- .2 amend the footnotes associated with SOLAS chapter VI which make reference to resolution A.862(20) to reflect the fact that the resolution has been amended by resolution MSC.238(82) and will likely be amended again in light of the proposed amendments contained in the report,

and requested the Secretariat to effect the above-mentioned changes in the next publication of the consolidated edition of SOLAS.

7.8 The Sub-Committee agreed that there is a need to amend MSC/Circ.663, taking into account the fact that the form for cargo information has already been incorporated in the IMSBC Code with some modifications. In this context, the Sub-Committee noted that while some of the information in the circular had been superseded, other information relevant to general cargoes is needed.

Consideration of document MSC 84/INF.8

7.9 The Sub-Committee, having noted that as mentioned in document DSC 14/7, paragraph 8, the correspondence group had prepared a draft MSC circular as annexed to the document, in order to disseminate additional guidance and information on risk reduction measures for loading and unloading bulk carriers, agreed that the provisions in the draft circular had merit and would add value to the existing provisions on handling, loading and unloading of solid bulk cargoes. While deliberating the provisions of paragraph 12 of the annex to the draft circular, the Sub-Committee, having emphasized that the provisions in the circular are recommendatory in nature and should be used for guidance purposes, agreed to the draft MSC circular on Additional considerations for the safe loading of bulk carriers, as set out in annex 8, for submission to MSC 87 for approval.

DELETION OF THE ITEM

7.10 Having noted that work on the agenda item had concluded, the Sub-Committee invited the Committee to delete the item from the work programme of the Sub-Committee. Interested Member Governments and international organizations were invited to submit proposals on amending MSC/Circ.663 for consideration under the agenda item on “Any other business” at DSC 15.

8 REVIEW OF THE RECOMMENDATION ON THE SAFE USE OF PESTICIDES IN SHIPS

8.1 The Sub-Committee recalled that, following the Committee’s approval of circulars MSC.1/Circ.1264 and MSC.1/Circ.1265 at MSC 84, the provisions of MSC/Circ.612, as amended by MSC/Circ.689 and MSC/Circ.746, are superseded with regard to the fumigation of cargo holds and cargo transport units.

8.2 The Sub-Committee also recalled that there remained one issue outstanding under this agenda item, namely the control of rodent pests on board all kinds of ships. Noting that no documents had been submitted to DSC 13 and also noting that MSC/Circ.1265 on Recommendations on the safe use of pesticides in ships applicable to the fumigation of cargo transport units would require updating in the light of amendments to the IMDG Code, the Sub-Committee had invited interested delegations to submit suitable proposals to DSC 14 for consideration and had invited the Committee to extend the target completion date of the item to 2009.

8.3 The Sub-Committee, having considered the proposal by Germany (DSC 14/8), noted that two outstanding issues need to be resolved. The first one related to the revision of MSC/Circ.612, as amended, and the second one on the revision of MSC.1/Circ.1265.

8.4 The Sub-Committee agreed in principle with the draft amendments to MSC/Circ.612, as amended, proposed by Germany in the annex to document DSC 14/8, and forwarded it to the drafting group for finalization. Furthermore, the Sub-Committee instructed the drafting group to prepare a revised draft MSC circular updating MSC.1/Circ.1265, taking into account draft amendment (35-10) to the IMDG Code.

Establishment of the drafting group

8.5 The Sub-Committee established the Drafting Group on Review of the Recommendations on the safe use of pesticides in ships, under the chairmanship of Mr. U. Kraft (Germany), and

instructed the group, taking into account the relevant decisions taken and comments made in plenary, to:

- .1 finalize the draft revised MSC circular amending MSC/Circ.612, taking into account document DSC 14/8, annex;
- .2 prepare a draft revised MSC circular amending MSC.1/Circ.1265, taking into account the draft amendment (35-10) to the IMDG Code, as contained in document DSC 14/3; and
- .3 submit a written report to plenary on Thursday, 24 September 2009.

Report of the drafting group

8.6 Having considered the report of the drafting group (DSC 14/WP.6), the Sub-Committee:

- .1 agreed to the draft revised MSC circular on Recommendations on the safe use of pesticides in ships, as set out in annex 9, for submission to MSC 87 for approval (DSC 14/WP.6, paragraph 4);
- .2 endorsed the view of the group that other types of fumigants than those actually listed might be used and invited delegations to provide information on such fumigants if appropriate, e.g., the possible use of sulphuryl difluoride (DSC 14/WP.6, paragraph 6);
- .3 endorsed the group's recommendation that the draft revised MSC circular amending MSC/Circ.612 on Recommendations on safe use of pesticides in ships, after its approval by the Committee, should supplement the mandatory IMDG Code, IMSBC Code and the Grain Code, as appropriate (DSC 14/WP.6, paragraph 8);
- .4 agreed to the draft revised MSC circular on the Recommendations on the safe use of pesticides in ships applicable to the fumigation of cargo transport units for submission to MSC 87 for approval after being finalized by the Editorial and Technical Group (DSC 14/WP.6, paragraph 9 and annex 2);
- .5 concurred with the group that the application date of the revised Recommendation on the safe use of pesticides in ships applicable to the fumigation of cargo transport units should be from 1 January 2011, subject to decision of MSC 87 (DSC 14/WP.6, paragraph 10);
- .6 concurred with the view of the group that in the draft amendment (35-10) to the IMDG Code in column 17 of the dangerous goods list for UN 3359, the reference to special provision 910 should be deleted (DSC 14/WP.6, paragraph 11);
- .7 endorsed the group's recommendation that the draft revised MSC circular amending MSC.1/Circ.1265, after its approval by the Committee, should update the supplement of the IMDG Code, as appropriate (DSC 14/WP.6, paragraph 13);
- .8 endorsed the group's recommendation that references to the Recommendations on the safe use of pesticides in ships and Recommendations on the safe use of pesticides in ships applicable to the fumigation of cargo transport units in the

footnote to SOLAS chapter VI, the IMDG Code and the IMSBC Code should be amended and requested the Secretariat to act accordingly (paragraph 14); and

.9 approved the report in general.

9 GUIDANCE ON PROTECTIVE CLOTHING

9.1 The Sub-Committee recalled that, in considering the proposed draft amendment to paragraph 7.17.3.6.1 of the 2000 HSC Code prepared by FP 49, DSC 10 had noted that this new provision would require that the chemical protective clothing carried on board be selected “taking into account the danger of the chemicals according to the class and liquid or gaseous”. In this regard, DSC 10 had also noted a lack of corresponding requirement in SOLAS chapter II-2 and, if approved, the HSC Code would provide a higher level of safety than SOLAS ships even though such ships face a similar hazard.

9.2 The Sub-Committee also recalled that, notwithstanding the above points, DSC 10 had endorsed the proposed amendment to paragraph 7.17.3.6.1 of the 2000 HSC Code prepared by FP 49, as modified, from an operational safety standpoint, and expressed the view that, if the relevant amendments to SOLAS and the HSC Code were approved by the Committee, the Sub-Committee’s work programme should include an item on the development of the associated guidance concerning protective clothing.

9.3 The Sub-Committee noted that MSC 81, endorsing proposals by DSC 10, decided to include, in the Sub-Committee’s work programme and the provisional agenda for DSC 11, a high-priority item on “Guidance on protective clothing”, with two sessions needed to complete the item and that DSC 12, noting that no documents had been submitted for consideration at DSC 12, had invited interested delegations to submit proposals for consideration at DSC 13.

9.4 DSC 13, having considered document DSC 13/10 (Sweden), agreed to forward the document to the drafting group for detailed consideration. Having considered the report of the drafting group (DSC 13/WP.6), in part relating to the item, the Sub-Committee noted the views of the group regarding the development of an IMO standard on guidance on protective clothing (DSC 13/WP.6, paragraphs 11 and 12) and, having agreed that further deliberation was required on the issue, in co-operation with ISO, as appropriate, invited interested delegations to submit proposals for consideration at DSC 14 to progress the matter, and had invited the Committee to extend the target completion date of the item to 2009.

9.5 The Sub-Committee noted that MSC 82 had adopted resolution MSC.222(82), which refers to “standards developed by the Organization” and that MSC 85 had also adopted, by resolution MSC.269(85), an amendment to SOLAS regulation II-2/19.3.6.1, which refers to those standards.

9.6 The Sub-Committee considered a proposal by Sweden (DSC 14/9), on the establishment of a correspondence group, in co-operation with ISO, to develop a corresponding IMO standard, taking into account provisions in SOLAS regulation II-2/19.3.6.1, for guidance on protective clothing, on the basis of EN 943-2, EU Directive 96/98, annexes 1 and 2, ISO/FDIS 16602, ACGIH 0460, taking into account comments and outcomes of DSC 13 and DSC 14.

Extension of the target completion date of the work programme item

9.7 The Sub-Committee, having considered the above proposal by Sweden, and in light of the comments made by some other delegations to continue further work through a correspondence group and for the development of an ISO standard, agreed to request the Committee to extend the target completion date of the work programme item to 2010 and subject to the Committee's agreement for the extension, invited Sweden and other interested delegations to work with ISO and submit proposals to DSC 15.

10 REVISION OF THE CODE OF SAFE PRACTICE FOR SHIPS CARRYING TIMBER DECK CARGOES

10.1 The Sub-Committee recalled that, following consideration of document MSC 82/21/14 (Sweden), proposing to revise the Code on Safe Practice for Ships Carrying Timber Deck Cargoes (resolution A.715(17)), to replace outdated methods for securing timber deck cargoes with new methods for safe, rational and efficient securing of such cargoes, MSC 82 agreed to include, in the Sub-Committee's work programme and in the provisional agenda for DSC 12, a high-priority item on Revision of the Code of Safe Practice for Ships Carrying Timber Deck Cargoes, with a target completion date of 2010.

10.2 The Sub-Committee also recalled that DSC 12, having considered document DSC 12/14 (Sweden), which provided a framework and a schedule for the revision of resolution A.715(17) on the Code of Safe Practice for Ships Carrying Timber Deck Cargoes, agreed that this was an important topic and that Sweden had provided a useful way forward; and established a correspondence group to further consider the matter under the coordination of Sweden.

10.3 The Sub-Committee recalled further that DSC 13, having considered the report of the correspondence group, had established a working group to consider, in detail, issues which were raised in the report of the correspondence group (DSC 13/11, paragraph 6). Having considered the report of the working group, DSC 13 decided to establish a correspondence group to further consider the matter and submit a report to DSC 14.

Report of the correspondence group

10.4 The Sub-Committee considered the report of the correspondence group in document DSC 14/10 (Sweden) and the following associated documents:

- .1 DSC 14/10/1 (Canada) which proposed that the provisions of the new Code should not be applicable to ships of large dimensions which follow the provisions of the existing Code and that the FSI Sub-Committee should be consulted regarding incorporating enforcement provisions of the existing Code in port State control procedures;
- .2 DSC 14/10/2 (United States) which proposed to review the proposed new Code to ensure that larger ships with large deck stows are not required to secure deck cargo to a standard in excess of that currently required and provided comments on web lashings, cargo dislocation and uprights;
- .3 DSC 14/INF.4 (Sweden) which provided a report on practical tests with timber deck cargoes that could be of valuable help when specifying the basic design parameters for securing arrangements for timber deck cargoes; and

- .4 DSC 14/INF.5 (Finland) which provided, amongst others, results of a study on the task of determining formulas for the required strengths of stanchions holding timber deck cargoes,

and took action as detailed in the following paragraphs.

10.5 The Sub-Committee thanked the coordinator of the correspondence group for the hard work and agreed with the report in general. Furthermore, the Sub-Committee agreed with the proposals of Canada and the United States that the provisions of the new Code should ensure that larger ships with large deck stows are not required to secure deck cargo to a standard in excess of that currently required and that the application of the provisions in the draft revised Code needed further deliberation accordingly.

10.6 Furthermore, the Sub-Committee did not find merit in the proposal to consult the FSI Sub-Committee regarding incorporating enforcement provisions of the existing Code in port State control procedures and recalled its decision taken at DSC 13, whereby it had agreed that compliance with the Code is the master's responsibility and that the Code should not advise that an officer from the Administration (or someone appointed by them) should visit the ship after completion of lashing to ensure that the ship is seaworthy.

10.7 The Sub-Committee noted the comprehensive information provided by Sweden and Finland in the documents referred to in paragraphs 10.4.3 and 10.4.4 and instructed the working group to take them into account when finalizing the revised Code.

10.8 The Sub-Committee recalled that the key users of the revised Code are identified in document DSC 13/20, paragraph 11.3.1 and agreed that the working group should take those decisions into account when defining the roles of key users of the Code.

Establishment of a working group

10.9 The Sub-Committee established the Working Group on the Revision of the Code of Safe Practice for Ships Carrying Timber Deck Cargoes, under the Chairmanship of Mr. Brad Groves (Australia) and instructed it, taking into account documents DSC 14/10, DSC 14/10/1, DSC 14/10/2, DSC 14/INF.4 and DSC 14/INF.5 and the relevant decisions taken and comments made in plenary, to:

- .1 progress the revision of the Code of Safe Practice for Ships Carrying Timber Deck Cargoes;
- .2 advise on the need to re-establish the correspondence group and prepare draft terms of reference for the group; and
- .3 submit a written report to plenary on Thursday, 24 September 2009.

Report of the working group

10.10 Having received the report of the working group (DSC 14/WP.5), the Sub-Committee:

- .1 endorsed the group's consideration related to the structure of the revised Code (DSC 14/WP.5, paragraphs 4 to 7);

- .2 endorsed the group's consideration related to the scope of the proposed sections 1 and 2 of part B of the revised Code (DSC 14/WP.5, paragraphs 8 and 9);
- .3 noted the progress made in the development of the revised Code (DSC 14/WP.5, paragraphs 10 to 13);
- .4 approved, in principle, the group's modifications to the draft revised Code (DSC 14/WP.5, paragraph 14 and the annex);
- .5 established a correspondence group under the coordination of Sweden* to:
 - .1 further review the draft revised Code of Safe Practice for Ships Carrying Timber Deck Cargoes, based on documents DSC 14/WP.5 (annex) and DSC 14/10 (annex), in particular, bearing in mind issues raised in the working group (paragraph 15);
 - .2 prepare a draft revised Code for consideration at DSC 15; and
 - .3 submit a written report to DSC 15; and
- .6 approved the report in general.

11 STOWAGE OF WATER-REACTIVE MATERIALS

11.1 The Sub-Committee recalled that, following consideration of document MSC 83/25/6 (Germany), proposing to review the cargo stowage, segregation and packing requirements for certain substances covered by the IMDG Code with a view to developing specific requirements for the stowage of water-reactive materials, the Committee had agreed to include in the Sub-Committee's work programme and the provisional agenda for DSC 13, a high-priority item on "Stowage of water-reactive materials", with a target completion date of 2009, in co-operation with the FP Sub-Committee, as necessary and when requested by the Sub-Committee.

11.2 The Sub-Committee recalled also that DSC 13, having noted that no documents were submitted to this session, considered document MSC 83/25/6 (Germany), which observed that there are some water-reactive substances that could react with carbon dioxide in hot atmospheres which would render the use of conventional fire-fighting mediums worthless and in some cases dangerous, and recalled that the risks connected to the stowage of such cargoes in cargo spaces protected by water-based fire-extinguishing systems were identified in 2000 but the issue was not resolved.

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11.3 In this context, the Sub-Committee noted that there are related ship safety matters and, therefore, revisions of the EmS Guide alone would not be sufficient, and that there is an urgent need to review the stowage, segregation and/or packing of substances covered by EmS Fire Schedule Golf.

11.4 The Sub-Committee recalled further that it had invited the delegation of Germany to continue its research and had urged other interested delegations to also be involved and to submit proposals to DSC 14.

11.5 The Sub-Committee, having noted that no document has been submitted to DSC 14 under this agenda item and that the research by Germany is in process, requested the Committee to extend the target completion date of the agenda item to 2010 and invited proposals to DSC 15 from Germany and other interested delegations.

12 AMENDMENTS TO THE INTERNATIONAL CONVENTION FOR SAFE CONTAINERS, 1972 AND ASSOCIATED CIRCULARS

12.1 The Sub-Committee recalled that DSC 12, having considered a proposal by the Russian Federation (DSC 12/18/1) to standardize the scope and principles of continuous examination programmes and a proposal by Canada (DSC 12/6/5) to review the requirements of the periodic and continuous examination programmes in light of a recent incident, agreed that the proposals had merit and prepared a justification for a new work programme item in accordance with the Guidelines on the organization and method of work.

12.2 The Sub-Committee also recalled that the Committee, at its eighty-fourth session, placed a high-priority item on “Amendments to the International Convention for Safe Containers, 1972” on the Sub-Committee’s agenda, with a target completion date of 2009.

12.3 The Sub-Committee further recalled that DSC 13 had agreed to amend the title of the work programme item to “Amendments to the International Convention for Safe Containers, 1972, and associated circulars” and that MSC 85 had agreed to the revised work programme of the Sub-Committee and provisional agenda of DSC 14 incorporating the amended title.

Report of the correspondence group

12.4 The Sub-Committee considered the report of the correspondence group in document DSC 14/12 (ISO), and the following associated documents: DSC 14/12/1 (Germany) and DSC 14/12/2 (ICS), which provided comments on the report of the correspondence group on the draft consolidated circular on interpretations of the CSC and amendments to the CSC, 1972, and took action as detailed in the following paragraphs.

12.5 The Sub-Committee thanked the coordinator of the correspondence group for the hard work and agreed with the report in general. Furthermore, the Sub-Committee, having considered the proposals by Germany and ICS and having found merit in those proposals, instructed the working group to take them into account when finalizing the draft CSC circular on Recommendations on harmonized interpretation and implementation of the International Convention for Safe Containers, 1972, as amended, and draft amendments to the annexes to the CSC, 1972.

12.6 In addition, the Sub-Committee agreed that there was a need to further deliberate the text of the draft CSC circular and the draft amendments to the annexes to the Convention in the working group, in particular, provisions of new annex 3 to the Convention and issues relevant to containers built with reduced stacking or racking strength in the context of maritime transport.

12.7 The Sub-Committee noted that currently only nine countries had accepted the Amendments to the International Convention for Safe Containers (CSC), 1972 (resolution A.737(18)), and that 52 acceptances are needed by Contracting Parties before the amendments could enter into force and, therefore, invited the Committee to urge Contracting Parties which had not accepted them to consider doing so.

Establishment of the working group

12.8 The Sub-Committee established a Working Group on Amendments to the CSC, 1972, and associated circulars, under the chairmanship of Mr. Kenneth Smith (United States), and instructed the group, taking into account documents DSC 14/12, DSC 14/12/1 and DSC 14/12/2 and the relevant decisions taken and comments made in plenary, to:

- .1 finalize the draft consolidated circular on Recommendations on harmonized interpretation and implementation of the International Convention for Safe Containers, 1972, as amended, taking document DSC 14/12 (annex 1) as a base document;
- .2 finalize amendments to the CSC Convention taking document DSC 14/12 (annex 2) as a base document; and
- .3 submit a written report to plenary on Thursday, 24 September 2009.

Report of the working group

12.9 The Sub-Committee, having considered the report of the working group (DSC 14/WP.7):

- .1 agreed that the necessary information on the stacking and racking capacity for containers with limited stacking capacity may be brought to the attention of the ship masters so safe stowage and securing of such containers can be arranged (DSC 14/WP.7, paragraph 11.1) and further consideration of this issue is needed;
- .2 endorsed the group's recommendation and invited to develop and include within the appropriate standard specific marking criteria to denote containers with limited racking and stacking capacities and inform the Sub-Committee on its outcome (DSC 14/WP.7, paragraph 11.2);
- .3 decided to delete the text in square brackets on the communication of a list of approved Continuous Examination Programmes on the new section 9 (Acceptance of approvals) of the draft Revised Recommendations (DSC 14/WP.7, paragraph 12 and annex 1);
- .4 agreed to the draft Revised Recommendations on harmonized interpretation and implementation of the International Convention for Safe Containers, 1972, as amended, and the associated draft MSC circular, for submission to MSC 87 for approval (DSC 14/WP.7, paragraphs 4 to 14 and annex 1), set out in annex 10;

- .5 agreed to the draft amendments to the annexes to the International Convention for Safe Containers, 1972, as amended, for submission to MSC 87 for approval, with a view to subsequent adoption (DSC 14/WP.7, paragraphs 15 to 18 and annex 2), set out in annex 11;
- .6 endorsed the group's recommendation to invite the Committee to urge Contracting Parties to the Convention to deposit a document of acceptance of the amendments to the 1972 CSC Convention (resolution A.737(18)), in order to have the 1993 amendments to the Convention entering into force (DSC 14/WP.7, paragraph 19);
- .7 endorsed the group's recommendation to invite the Committee to extend the target completion date of this work programme item to 2010 (DSC 14/WP.7, paragraph 20);
- .8 did not endorse the group's recommendation to re-establish the Correspondence Group on Amendments to the International Convention for Safe Containers, 1972, and Associated Circulars with the terms of reference prepared by the group (DSC 14/WP.7, paragraphs 6 to 10 and 21); and
- .9 approved the report in general.

13 REVIEW OF THE GUIDELINES FOR PACKING OF CARGO TRANSPORT UNITS

13.1 The Sub-Committee recalled that MSC 76 had approved MSC/Circ.787 on IMO/ILO/UNECE Guidelines for Packing of Cargo Transport Units, which were prepared in co-operation with the UNECE Working Party on Combined Transport (WP.24), and that these Guidelines were subsequently endorsed by the Inland Transport Committee of the UNECE in January 1997 and by the Governing Body of the ILO in March 1997.

13.2 The Sub-Committee also recalled that DSC 12, having considered document DSC 12/3/6 (Germany), and noted that although the IMDG Code is updated every two years the Guidelines on Packing of Cargo Transport Units have not been amended since the adoption of amendment (31-02) of the IMDG Code and that the Guidelines may benefit from improvements, had agreed that the proposal of Germany had merit and had prepared a justification for a new work programme item on the review of the aforementioned resolution for consideration by the Committee.

13.3 The Sub-Committee further recalled that DSC 13, having considered document DSC 13/15 (Germany), which observed that when the Guidelines were reproduced in the 2006 Edition of the Supplement to the IMDG Code, they were not updated to reflect the changes to annex 2 on Labels, placards, marks and signs, had proposed making the appropriate amendments to the Guidelines and had further instructed the Editorial and Technical Group to identify amendments in future as they become necessary and to report them to the Sub-Committee for approval.

13.4 DSC 13, having further noted that there may be a need to consider developing an ongoing procedure to update instruments, which may be affected by revisions to the IMDG Code, and that this may be a large body of work, was of the view that it might not be possible to always have the Editorial and Technical Group to undertake such an exercise.

13.5 In view of this position and having deliberated on the item, the Sub-Committee established the Drafting Group on review of the Guidelines for packing of cargo transport units, forwarded document DSC 13/15 to the drafting group for further consideration and to prepare draft amendments to the Guidelines for packing of cargo transport units (MSC/Circ.787), to harmonize the Guidelines with amendment (34-08) to the IMDG Code.

13.6 DSC 13, having approved the report (DSC 13/WP.7), in general, took decisions as follows:

- .1 having noted that different countries have different requirements for the packing of CTUs, agreed that a reference to the IMO model course on packing and securing of CTUs should be included in the Guidelines and further agreed to forward the draft amendments to the E&T Group for further consideration;
- .2 having considered the proposal on how to deal with future amendments to the Guidelines, noted that one option was to request the Committee to place a standing item on review of the Guidelines on the future work programme of the Sub-Committee and, noting that there was insufficient time at DSC 13 to prepare a justification for a new work programme item on the issue, agreed to forward it to the E&T Group for further consideration;
- .3 noted the group's observation regarding the difference in the requirements for placarding of semi-trailers and full-trailers and forwarded it to the E&T Group for further consideration; and
- .4 considered whether the revision of the Guidelines should be completed with the amendment set out in the annex to document DSC 13/WP.7 or whether other parts of the Guidelines should be revised as well, taking into account the group's opinion, and forwarded it to the E&T Group for further consideration.

13.7 The Sub-Committee, having considered the report of the E&T Group (DSC 14/3) noted that, due to time constraints, the group had briefly considered document E&T 13/4 (Secretariat) and had deferred the matter for consideration at E&T 14.

13.8 The Sub-Committee also noted that, during the course of the discussion, the group was of the view that a separate item on the work programme of the Sub-Committee regarding amendments to the IMO/ILO/UNECE Guidelines for packing of cargo transport units is not necessary as such amendments could be considered under the existing work programme item 3.2 on amendment (35-10) to the IMDG Code and supplements. The Sub-Committee confirmed the aforementioned understanding of the group.

13.9 The Sub-Committee noted further that the group had considered the differences in the requirements for placarding of semi-trailers and full-trailers as stated in 5.3.1.1.4.1 (DSC 14/3, annex 5) and, due to time constraints, the group was unable to finalize the issue and postponed further consideration of the matter at its next session and invited interested delegations to submit proposals to facilitate the consideration of the discrepancy.

13.10 The Sub-Committee, having considered the report of the group relevant to the issue, requested E&T 14 to prepare draft guidelines for consideration at DSC 15, in order to align them with amendment (35-10) to the IMDG Code.

13.11 The Sub-Committee requested the Secretariat to continue to cooperate with the UNECE WP.24 and the ILO in the exercise of the review of the guidelines.

14 REVIEW OF DOCUMENTATION REQUIREMENTS FOR DANGEROUS GOODS IN PACKAGED FORM

14.1 The Sub-Committee recalled that, following the consideration of document MSC 84/22/11 (United States), proposing to review documentation requirements for dangerous goods in packaged form and, if necessary, to prepare amendments to SOLAS regulation VII/4 and to the provisions of the IMDG Code pertaining to documentation, in order to remove ambiguities and inconsistencies in documentation aiming at the facilitation of the safe and efficient carriage of dangerous goods in packaged form by sea, the Committee had decided to include in the work programme of the Sub-Committee and provisional agenda for DSC 13, a low-priority item on “Review of documentation requirements for dangerous goods in packaged form”, with a target completion date of 2009.

14.2 The Sub-Committee recalled also that, having considered document MSC 84/22/11 and having noted that documentation requirements were also contained in MARPOL Annex III, DSC 13 forwarded the proposal to the E&T Group for finalization.

14.3 The Sub-Committee recalled further that during the meeting in June 2009, the E&T Group had considered this issue and prepared a draft amendment to regulation VII/4 of SOLAS, as contained in annex 7 of document DSC 14/3.

14.4 The Sub-Committee considered the draft amendments set out in document DSC 14/3, annex 7 and, having made modifications to it, agreed to the draft amendments to SOLAS regulation VII/4, as set out in annex 12, for submission to MSC 87 for approval with the view to adoption at MSC 88, with the envisaged entry-into-force date of 1 January 2014, in order to align the entry-into-force date of these amendments with amendment (36-12) to the IMDG Code.

Deletion of the item

14.5 Having noted that work on the agenda item had been concluded, the Sub-Committee invited the Committee to delete the item from the work programme of the Sub-Committee.

15 AMENDMENTS TO MARPOL ANNEX III

15.1 The Sub-Committee recalled that DSC 13 had considered the outcome of the Editorial and Technical Group’s discussion and the related document DSC 13/3/10 (Netherlands) concerning the issue of marking requirements on tank transport units containing dangerous goods identified as marine pollutants. In this regard, it was also recalled that, whilst regulation 3 of MARPOL Annex III requires packages (including tanks) containing marine pollutants to be durably marked with the correct technical name of the product, the IMDG Code only specifies that the proper shipping name should be displayed for the transport of dangerous goods in tanks. Since the IMDG Code should not contain regulations that deviate from MARPOL as this can lead to complications in the transportation of dangerous goods, the Sub-Committee, having considered the issue, had concluded that, for marine pollutants in tanks, the correct technical name need not be shown on the tank as a supplement to the proper shipping name specified by the IMDG Code.

15.2 Having considered the above decision, the Sub-Committee recognized that an amendment to MARPOL Annex III would be necessary and, as such, prepared a justification for a new work programme item and requested MEPC 59 to consider the justification for inclusion of a new item on “Amendments to MARPOL Annex III”.

15.3 The Sub-Committee also recalled that, in June 2009, the E&T Group, when preparing draft amendments to the IMDG Code and SOLAS chapter VII, had identified two associated issues. The first related to an amendment to the criteria defining marine pollutants in MARPOL Annex III which is needed to bring those criteria in line with the recently revised Globally Harmonized System (GHS) criteria, and the second concerned the need to revise documentation provisions in MARPOL Annex III in order to align them with the proposed amendments to SOLAS regulation VII/4 (see item 14).

15.4 The Sub-Committee recalled further that the chairman of the Sub-Committee had advised MEPC 59, when considering the justification for a new work programme item on Amendments to MARPOL Annex III, of the need to also revise documentation provisions and the criteria defining marine pollutants as explained in paragraph 15.3 above, and MEPC 59 had approved this approach and had agreed to include the expanded item in the work programme of the Sub-Committee (MEPC 59/24, paragraph 10.4).

15.5 The Sub-Committee, having noted that the following three issues needed consideration:

- .1 marking and labelling;
- .2 criteria to identify marine pollutants; and
- .3 documentation,

took decisions as detailed in the following paragraphs.

Marking and labelling

15.6 The Sub-Committee considered the proposal of the Netherlands (DSC 14/15) suggesting an amendment to the text of regulation 3 of MARPOL Annex III, whereby detailed provisions on marking and labelling shall be in accordance with the IMDG Code, and having agreed to the proposal in principle, instructed the drafting group to finalize it on the basis of comments made in plenary.

Criteria to identify marine pollutants

15.7 The Sub-Committee, having considered the draft amendments to the GHS criteria, as set out in annex 3 to document DSC 14/3, agreed, in principle, to amend the associated criteria in the appendix to MARPOL Annex III, and instructed the drafting group to prepare corresponding amendments for consideration by the Sub-Committee. In the ensuing discussion, the Sub-Committee noted that the GHS criteria to identify marine pollutants may be subject to frequent amendments and, as such, it might be difficult to align the relevant MARPOL Annex III with the GHS criteria because of the amendment procedure to MARPOL, and invited the MEPC to consider this issue and decide accordingly. Furthermore, the Sub-Committee instructed the E&T Group to prepare an associated text for incorporation into chapter 2.9 of the IMDG Code in the context of amendment (36-12) to the Code.

Documentation

15.8 The Sub-Committee agreed, in principle, to align the documentation provisions in MARPOL Annex III with those agreed to in paragraph 14.4 and instructed the drafting group to prepare relevant draft amendments to MARPOL Annex III.

Establishment of the drafting group

15.9 The Sub-Committee established the drafting group on Amendments to MARPOL Annex III, under the chairmanship of Mrs. H. Lindeijer (Netherlands) and instructed it, taking into account documents DSC 14/3 and DSC 14/15, and comments made and decisions taken in plenary, to:

- .1 consider the incorporation of the new Globally Harmonized System of Classification and Labelling of Chemicals (GHS) criteria to Annex III of MARPOL;
- .2 revise documentation requirements in order to align MARPOL Annex III with the agreed amendments to SOLAS regulation VII/4 under agenda item 14;
- .3 review marking and labelling provisions of harmful substances in packaged form;
- .4 prepare a draft MEPC resolution incorporating consequential draft amendments to MARPOL Annex III; and
- .5 submit a written report to plenary on Thursday, 24 September.

Report of the drafting group

15.10 The Sub-Committee, having considered the report of the drafting group (DSC 14/WP.8):

- .1 agreed to the text of the revised MARPOL Annex III for approval by MEPC 60 with the view to subsequent adoption by MEPC 61, as set out in annex 13, with the envisaged entry-into-force date of 1 January 2014, in order to align the entry-into-force date of these amendments with amendment (36-12) of the IMDG Code;
- .2 noted that with the revision of MARPOL Annex III, there will be a need for consequential amendments to the IMDG Code to be introduced; and
- .3 approved the report in general.

16 REVISION OF THE RECOMMENDATIONS FOR ENTERING ENCLOSED SPACES ABOARD SHIPS

16.1 The Sub-Committee recalled that DSC 13, having considered documents DSC 13/4/3 (Sweden), concerning the transport of wood pellets and other wood products, DSC 13/INF.6 (Sweden), reporting on a fatal accident in an oxygen deficient atmosphere on a bulk carrier discharging wood pellets, and document DSC 13/INF.7 (Sweden), presenting a study on “Hazardous off-gassing of carbon monoxide and oxygen depletion during ocean transportation of

wood pellets”, conducted as a result of the above fatal accident and another one in May 2007 involving a further two people, agreed that the proposal by Sweden to review the Recommendations for entering enclosed spaces aboard ships had merit and, as such, prepared a justification for a new work programme item on the review of the aforementioned Recommendations, for consideration by MSC 85 (DSC 13/20, paragraphs 4.13 and 20.1.3).

16.2 The Sub-Committee also recalled that MSC 85 had considered the proposal of DSC 13, suggesting to review and revise, as necessary, the specific provisions of the Recommendations for entering enclosed spaces aboard ships (resolution A.864(20)) and, following a discussion on the need to expand the scope of the work to cover other ship types, agreed to include, in the work programmes of the BLG, DSC, FP and STW Sub-Committees and the provisional agenda for DSC 14, a high-priority item on “Revision of the Recommendations for entering enclosed spaces aboard ships”, with a target completion date of 2010, assigning the DSC Sub-Committee as a coordinator.

16.3 The Sub-Committee noted that there are three issues to consider, namely:

- .1 Entry into enclosed spaces;
- .2 Proposal for Amendments to resolution A.864(20) – Recommendations for entering enclosed spaces aboard ships; and
- .3 Proposal for amendment to SOLAS regulation III/19 to mandate enclosed space entry and rescue procedure drills,

and took decisions as detailed in the following paragraphs.

Entry into enclosed spaces

16.4 The Sub-Committee noted that MAIIF had identified the following areas of concern in the reports including, *inter alia*:

- .1 lack of knowledge, training and understanding of the dangers of entering enclosed spaces;
- .2 Personal Protective Equipment (PPE) or rescue equipment not being used, not available, of inappropriate type, improperly used, or in disrepair;
- .3 inadequate or non-existent signage;
- .4 inadequate or non-existent identification of enclosed spaces on board;
- .5 inadequacies in Safety Management Systems; and
- .6 poor management commitment and oversight.

16.5 The Sub-Committee also noted that MAIIF had expressed the view that the investigations show that, from many of the casualties investigated, it is evident that training was inadequate, and that the necessary drills were not carried out in the procedures for safe entry and safe rescue

from enclosed spaces. Training may remain ineffective if not backed up by a positive management level commitment to managing safety, assessing competence and training needs on board, and developing a safety culture from the company head-office to the master, the officers and the ratings.

16.6 The Sub-Committee, having acknowledged the importance of the information provided by MAIF in their document DSC 14/INF.9, noted them and agreed to take them into account while amending resolution A.864(20). Furthermore, the Sub-Committee requested the Secretariat to issue document DSC 14/INF.9 as a DSC 15 document, available in the three working languages, and ensure its timely availability for consideration at BLG 15, FP 54 and STW 41.

Proposal for Amendments to resolution A.864(20) – Recommendations for entering enclosed spaces aboard ships

16.7 The Sub-Committee considered a proposal from Sweden (document DSC 14/16), to update specific provisions of the Recommendations for entering enclosed spaces aboard ships, resolution A.864(20), due to the risks associated with transporting oxygen-depleting cargoes and materials, referring to:

- .1 the concern that the risks associated with the transportation of seemingly harmless cargo, such as wood pellets and other wood products, are neither well-known nor understood, and have been presented in documents DSC 13/INF.6 and DSC 13/INF.7;
- .2 the Swedish study in document DSC 13/INF.7 concluded that measurement of both carbon monoxide and oxygen is essential prior to entry into cargo holds and adjacent spaces with air communication with a cargo of wood pellets. However, the study shows that, if the minimum oxygen level is specified for cargoes of wood chips and pulp wood, a sufficient level of safety is reached;
- .3 Sweden expressed the view that, with the use of the existing Recommendations for entering enclosed spaces aboard ships, personnel involved in such activities are being subjected to an increased risk of serious health incidents;
- .4 Sweden suggested the following needs for amendments to resolution A.864(20):
 - .1 resolution A.864(20) should reflect that “cargo space stairways” are included in the definition in section 2;
 - .2 although that information on ventilation procedures is in each schedule in the IMSBC Code, it should also be reflected in the general text. Sweden proposes to amend section 3.1 in resolution A.864(20) to reflect this matter;
 - .3 furthermore, resolution A.864(20) focuses very much in detail on how to proceed when entering enclosed spaces aboard ships but does not reflect any preventive procedures. Sweden therefore proposes to add a new section 5.2; and
 - .4 “Wood pellets” should be included in paragraph 9.4.4 of resolution A.864(20).

16.8 The Sub-Committee agreed with the proposal of Sweden (DSC 14/16), in principle, and took action as detailed in the following paragraphs.

Proposed amendment to section 2.1, Definitions

16.9 The Sub-Committee recognized the value of the proposed amendment to section 2.1 and, having expressed concerns on the implication of such a proposal on the use of cargo spaces and paint lockers for storing ship's stores, instructed the correspondence group to further consider the amendment and advise the Sub-Committee accordingly.

Proposed amendment to section 3.1, Assessment of risk

16.10 The Sub-Committee agreed in principle with the proposal.

Proposed amendment to section 5, General precautions, new section 5.2

16.11 The Sub-Committee, having considered the proposed amendment to section 5, General Precautions, new section 5.2, and having expressed concerns with regard to the securing/locking of enclosed spaces at all times, instructed the correspondence group to further consider the amendment and advise the Sub-Committee accordingly.

Proposed amendment to section 9.4, Oxygen-depleting cargoes and materials

16.12 The Sub-Committee agreed in principle with the proposal.

Proposed amendment to SOLAS regulation III/19 to mandate enclosed space entry and rescue procedure drills

16.13 The Sub-Committee considered a proposal from the Bahamas on amendments to SOLAS regulation III/19 for mandatory training for enclosed space entry and rescue procedures, in particular amendment to regulation III/19, paragraph 3.2, and to insert a new paragraph 3.5 under regulation III/19, supported the proposal and, having noted that in order to progress the matter, a corresponding item need to be placed on the work programme of the Sub-Committee, noted the intention of the delegation of the Bahamas to submit an associated work programme justification to MSC 87.

Establishment of the Correspondence Group

16.14 The Sub-Committee agreed to establish a Correspondence Group on Revision of the recommendations for entering enclosed spaces aboard ships under the coordination of the Bahamas*, and instructed it, taking into account the relevant comments made and decisions taken in plenary, to:

*

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- .1 prepare draft amendments to resolution A.864(20), taking into account the relevant information and proposals contained in documents DSC 14/16, DSC 14/INF.9, DSC 13/4/3, DSC 13/INF.6 and DSC 13/INF.7;
- .2 make progress on the issues, further taking into account the outcome of BLG, FP and STW Sub-Committees; and
- .3 submit a written report to DSC 15.

17 CONSIDERATION FOR THE EFFICACY OF CONTAINER INSPECTION PROGRAMME

17.1 The Sub-Committee recalled that MSC 84 had considered document MSC 84/22/15 (Republic of Korea), proposing to consider the efficacy of the Container Inspection Programme (CIP) in order to encourage Member Governments to submit CIP reports and to develop strategies on how best to utilize the information submitted in accordance with MSC/Circ.1202 on Container Inspection Programmes (CIP) to reduce marine incidents with dangerous goods. The Committee agreed to include, in the work programme of the DSC Sub-Committee, a low-priority item on “Consideration for the efficacy of Container Inspection Programme”, with two sessions needed to complete the item (MSC 84/24, paragraph 22.10).

17.2 The Sub-Committee also recalled that DSC 13 had decided to start the consideration of the aforementioned issue at this session with a target completion date of 2010.

17.3 The Sub-Committee noted the issues under the heading lessons learned from the results of Container Inspection Programme implemented in the Republic of Korea, document DSC 14/17 (Republic of Korea), and on a proposal for a new MSC circular for improvement of implementation status of Container Inspection Programme, DSC 14/17/1 (Republic of Korea).

17.4 The Sub-Committee, having noted that:

- .1 the Republic of Korea expressed its view that, according to MSC.1/Circ.1202, Governments are invited to submit the results of the CIP to the Sub-Committee and after a period of ten years, only a few Member Governments have reported the CIP results to the Organization. Such a small number of reports are not sufficient for the Organization to evaluate the status of general compliance with relative IMO standards.
- .2 Based on its observation, the Republic of Korea concluded that:
 - .1 CIP has encouraged the Member States, especially those which have not implemented the inspection programme, to comply with relevant IMO instruments;
 - .2 the stable implementation of CIP will enhance the safety of life at sea and maritime environmental protection,

and noting the discussions held, agreed that the container inspection programme could be of assistance for complying with relevant IMO instruments and there is merit to conduct further work on this issue in a working/drafting group during the next session. Accordingly, the Sub-Committee, invited the Republic of Korea and other interested delegations to submit proposals to DSC 15.

18 INSTALLATION OF EQUIPMENT FOR DETECTION OF RADIOACTIVE CONTAMINATED OBJECTS IN PORT

18.1 The Sub-Committee recalled that DSC 13, having considered a document by the Islamic Republic of Iran (DSC 13/18/1), which observed that a great amount of cargo is imported via seaports and that some of these cargoes are associated with radioactive contamination, naturally occurring or otherwise, and proposed, in light of this and for the safety of port workers, other persons and the environment, the installation of fixed or portable radiation detection equipment and the proper training in radiation protection of workers engaged in the transport of radioactive materials, supported the proposal in principle; noted the intention of the Islamic Republic of Iran to submit a justification for a new work programme item on the subject to MSC 86; and further noted that any work done by the Sub-Committee would be done in close co-operation with IAEA.

18.2 MSC 86, having considered document MSC 86/23/8 (the Islamic Republic of Iran), proposing to develop provisions for the installation of equipment for detection of radioactive sources and radioactive contaminated objects in ports, agreed to include, in the Sub-Committee's work programme and the provisional agenda for DSC 14, a high-priority item on "Installation of equipment for detection of radioactive sources or radioactive contaminated objects in ports", with a target completion date of 2011 (MSC 86/26, paragraph 23.6).

18.3 The Sub-Committee, having considered the proposal by the Islamic Republic of Iran (DSC 14/18), concerning principles and guidelines relating to the installation of radiation detection devices to identify radioactive and contaminated materials in ports, and noting the interventions made by the representative of the IAEA, as well as the discussion held, agreed that rather than developing parallel IMO guidance, it would wish that IMO work in close cooperation with the IAEA, for the development of appropriate IAEA standards and other relevant guidance documents, which could be endorsed by reference in an MSC circular, and invited IAEA to report back on its work on this issue when appropriate to DSC.

19 WORK PROGRAMME AND AGENDA FOR DSC 15

19.1 Taking into account the progress made at this session and the provisions of the agenda management procedure contained in paragraphs 3.14 to 3.27 of the Guidelines on the organization and method of work (MSC-MEPC.1/Circ.2), the Sub-Committee revised its work programme (DSC 14/WP.2) based on that approved by MSC 86, taking into account relevant decisions of MEPC 59, and prepared the revised Sub-Committee's work programme and provisional agenda for DSC 15 as set out in annex 14. While reviewing the work programme, the Sub-Committee agreed to invite the MSC, and the MEPC as far as environment-related items are concerned, to:

- .1 delete the following work programme items:
 - .1.1 item H.2 - Amendments to the CSS Code and associated recommendations;
 - .1.2 item H.3 - Review of the BLU Code;
 - .1.3 item H.4 - Review of the Recommendations on the safe use of pesticides in ships
 - .1.4 Item H.10 - Amendments to MARPOL Annex III
 - .1.5 Item L.1 - Review of the documentation requirements for dangerous goods in packaged form

- .2 extend the target completion date of the following work programme items:
- .2.1 item H.1 - Amendments (36-12) to the IMDG Code and Supplements 2011;
 - .2.2 item H.4 Stowage of water reactive materials 2010
 - .2.3 item H.5 - Review of the Guidelines for packing of cargo transport 2010;
 - .2.4 item H.6 - Guidance on protective clothing 2010;
 - .2.5 item H.8 - Amendments to the International Convention for Safe Containers, 1972 and associated circulars 2010;

19.2 The Sub-Committee invited the Committee to approve the proposed revised work programme of the Sub-Committee and provisional agenda for DSC 15, as set out in annex 15.

High-level Action Plan of the Organization and priorities for the 2008-2009 biennium

19.3 The Sub-Committee agreed to the status of the planned outputs of the High-level Action Plan of the Organization and priorities for the 2008-2009 biennium relating to the Sub-Committee's work, as set out in annex 15.

Arrangements for the next session

19.4 The Sub-Committee agreed to establish, at DSC 15, working and drafting groups on the following subjects:

- 1 Revision of the Recommendations for entering enclosed spaces aboard ships;
- .2 Revision of the Code of safe practice for ships carrying timber deck cargoes;
- .3 Amendments to the IMSBC Code, including evaluation of properties of solid bulk cargoes; and
- .4 Consideration for the efficacy of Container Inspection Programme.

and also agreed that the Chairman, in consultation with the Secretariat, should undertake the final selection, taking into account the documentation submitted on the above subjects, and should inform the Sub-Committee accordingly in good time for the next meeting.

19.5 The Sub-Committee established correspondence groups on the following subjects, due to report to DSC 15:

- .1 Review of the stowage and segregation provisions of chapters 7.1 and 7.2 of the IMDG Code;
- .2 Revision of the Recommendations for entering enclosed spaces aboard ships; and
- .3 Revision of the Code of safe practice for ships carrying timber deck cargoes.

Future sessions of the Editorial and Technical (E&T) Group

19.6 The Sub-Committee agreed that no meetings of the E&T Group will take place in 2010; however, noting that as has been the standard practice, two meetings of the group should take place in 2011, with the first meeting in May/June 2011 and the second back-to-back with DSC 16, the Sub-Committee invited the Committee to approve the holding of two meetings of the group in 2011.

Date of the next session

19.7 The Sub-Committee noted that the date of the fifteenth session is tentatively scheduled to take place from 13 to 17 September 2010.

20 ELECTION OF CHAIRMAN AND VICE-CHAIRMAN FOR 2010

20.1 In accordance with the Rules of Procedure of the Maritime Safety Committee, the Sub-Committee unanimously re-elected Mrs. Olga P. Lefèvre (France) as Chairman and elected Mr. Arsenio A. Dominguez (Panama) as Vice-Chairman, both for the year 2010.

21 ANY OTHER BUSINESS

21.1 The Sub-Committee noted that under this agenda item there are, primarily, three issues which needed consideration and took action in the order detailed in the following paragraphs.

Spectrum requirements for identification and security of cargo containers entering and leaving international ports and ships

21.2 The Sub-Committee recalled that COMSAR 12, having considered a proposal by the United States (COMSAR 12/4/4), had requested the ISO TC 104 and TC 8 to comment on radio spectrum requirements for radio frequency identification devices used on cargo containers for this purpose and to inform IMO, as appropriate (COMSAR 12/15, paragraphs 4.33 to 4.35 and annex 5). The fourth meeting of the Joint IMO/ITU Experts Group on Maritime radiocommunication matters, 10 to 12 June 2008, had discussed WRC-11, agenda item 1.10, prepared a preliminary draft IMO position and identified further actions to be taken in preparation of the IMO position on this issue (COMSAR 13/4, paragraphs 31 to 35 and annex 5).

21.3 The Sub-Committee further recalled that COMSAR 13 had noted that with the large and increasing numbers of cargo containers entering and leaving international ports, there is a growing need to identify and maintain the security of these containers from port of origin to port of destination. ISO TC 104 was developing standards for Radio Frequency Identification Devices (RFID) used on cargo containers for this purpose, but other spectrum-dependent technology, such as mesh networks, was also being developed, which might help meet this need. ISO (COMSAR 13/4/3) believed that one of the reasons that freight container tracking had been slow to adopt RFID technologies was the lack of a common frequency band that could be used economically on a worldwide basis. The allocation of spectrum in ports necessary for the identification and security of cargo containers might improve the effectiveness and international interoperability of such systems, without causing interference to other uses of that spectrum outside of ports. Additional studies might be required to assess the current and future RFID technology for cargo container systems.

21.4 The Sub-Committee also recalled that COMSAR 13 had further noted the views of the delegation of China, that more information and data were still needed to demonstrate the necessity and compelling need for the allocation of additional spectrum.

21.5 In view of the aforementioned, COMSAR 13 agreed to seek guidance from the Sub-Committee on the issue of tracking and identification of cargo containers and invited the Committee to instruct the Sub-Committee to consider the issue of tracking and identification of cargo containers and advise COMSAR 14 accordingly. Member Governments were also invited to submit relevant proposals on the issue to the proposed next meeting of the Joint IMO/ITU Experts Group in June 2009 and COMSAR 14 (COMSAR 13/14, paragraphs 4.57 to 4.59).

21.6 The Sub-Committee noted that there was one issue to consider, namely, Spectrum requirements for identification and security of cargo containers entering and leaving international ports and ships.

21.7 The Sub-Committee, having considered document DSC 14/21, decided that in the near future RFID devices might be required on cargo containers to enhance ship and cargo identification, tracking and surveillance for ship and port security purposes and that it would be of importance for IMO to support initiatives to obtain a common frequency band that could be used economically on a worldwide basis for this purpose.

21.8 The Sub-Committee noted that the support for the allocation of a common frequency band for the harmonized use of RFID devices would not prejudice implementation of such a system in the framework of IMO. In this context the Sub-Committee endorsed the views of Germany that standards developed for RF automatic identification devices should also take into consideration that such devices, when equipped with electric power supply, need to be of a certified safe type, as containers equipped with such devices may be carried in cargo holds, together with other containers containing dangerous goods and where, according to SOLAS regulation II-2/19, no sources of ignition should be in the hold, and that further study in this regard would be needed.

21.9 The Sub-Committee, having considered the discussion, agreed to give a positive signal to the COMSAR Sub-Committee, ITU and other interested bodies, that there was a need to support initiatives to obtain a common frequency band for the use of RFID devices on cargo containers to enhance safety and security and for a future efficient and economically effective use of these devices, bearing in mind that more technical work needed to be done in the context of paragraph 21.8.

Means of dissemination of information on local regulations

21.10 The Sub-Committee recalled that DSC 13, having noted that DSC 12 had agreed that there are three possible options for means of dissemination of information on local regulations, namely:

- .1 by means of an SLS circular;
- .2 by means of a DSC circular on Information on national rules, which would collect information from Administrations, and be kept and updated on a regular basis by the Secretariat; or

- .3 request the Secretariat to collect, maintain and update all information submitted by Administrations on this matter on the Global Integrated Shipping Information System (GISIS) for public access,

agreed with the outcome of the Secretariat's consideration that the best way to disseminate information on local regulations is to maintain this information in GISIS and to issue an MSC circular informing entities of the availability of such information in GISIS.

21.11 The Sub-Committee further recalled that MSC 86 had endorsed the decision of the Sub-Committee that an appropriate way to disseminate information on local regulations is to maintain this information in GISIS and to issue an MSC circular informing entities of the availability of such information in GISIS. Having endorsed the aforementioned decision, the Committee instructed the Sub-Committee to prepare the corresponding draft MSC circular for approval and requested the Secretariat to develop an appropriate GISIS module for dissemination of the information.

21.12 The Sub-Committee, having considered document DSC 14/WP.4, agreed with the draft MSC circular on Information on local regulations, set out in annex 16, with the view to approval by MSC 87.

Codes, recommendations, guidelines and other non-mandatory instruments

21.13 The Sub-Committee recalled that MSC 83, when considering the list of codes, recommendations, guidelines and other safety- and security-related non-mandatory instruments relating to the work of the Committee (MSC 82/18/1 and MSC 82/INF.12, which were deferred from MSC 82 to MSC 83), referred the detailed consideration of the list to the relevant sub-committees for the identification of those instruments which might be relevant in the context of the collection of information on their implementation.

21.14 DSC 13 having noted that the list containing 47 non-mandatory instruments, and the information received regarding the further development of GISIS, supported in general the development of a GISIS module on non-mandatory requirements and recommendations to be kept updated by the Secretariat and, having noted a view that some circulars did not fall under the purview of the Sub-Committee, requested the Secretariat to review the list in order to reflect the Sub-Committee's position accurately.

21.15 The Sub-Committee noted that the Secretariat is working on this issue and will report on this matter in due course.

22 ACTION REQUESTED OF THE COMMITTEES

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

- .1 agree to request the Secretariat to ensure that future versions of the IMDG Code, that is, the texts in IMO document, publication, CD-ROM and internet versions are fully harmonized (paragraph 3.5);
- .2 approve to the draft MSC circular on Interpretation of stowage and segregation requirements for BROWN COAL BRIQUETTES and COAL related to "hot areas" in the IMSBC Code (paragraph 4.37 and annex 1);

- .3 approve the draft amendments to the Code of Safe Practice for Cargo Stowage and Securing (CSS Code), and the associated draft MSC circular (paragraph 5.12 and annex 2);
- .4 approve the draft Revised Guidelines for the preparation of the Cargo Securing Manual, and associated draft MSC circular (paragraph 5.14 and annex 3);
- .5 approve the draft amendments to the Elements to be taken into account when considering the safe stowage and securing of cargo units and vehicles in ships (resolution A.533(13)) and the associated draft MSC circular (paragraph 5.15 and annex 4);
- .6 approve the draft amendments to the Guidelines for securing arrangements for the transport of road vehicles on ro-ro ships (resolution A.581(14)), as amended by MSC/Circ.812, and the associated draft MSC circular (paragraph 5.16 and annex 5).
- .7 approve the proposed amendments to the BLU Code and the associated MSC resolution (paragraph 7.5 and annex 6);
- .8 approve the proposed amendments to the Manual on loading and unloading of solid bulk cargoes for terminal representatives and the associated MSC circular (paragraph 7.6 and annex 7);
- .9 approve to the draft MSC circular on Additional considerations for the safe loading of bulk carriers (paragraph 7.9 and annex 8);
- .10 approve the draft revised MSC circular on Recommendations on the safe use of pesticides in ships (paragraph 8.6.1 and annex 9);
- .11 endorse the Sub-Committee's recommendation that references to the Recommendations on the safe use of pesticides in ships and Recommendations on the safe use of pesticides in ships applicable to the fumigation of cargo transport units in the footnote to SOLAS chapter VI, the IMDG Code and the IMSBC Code should be amended and request the Secretariat to act accordingly (paragraph 8.6.8);
- .12 approve the draft revised Recommendations on harmonized interpretation and implementation of the International Convention for Safe Containers, 1972, as amended, and the associated draft MSC circular (paragraphs 12.9.4 to 14 and annex 10);
- .13 approve the draft amendments to the annexes to the International Convention for Safe Containers, 1972, as amended, with a view to subsequent adoption (paragraph 12.9.5 and annex 11);
- .14 urge Contracting Parties to the Convention to deposit a document of acceptance of the amendments to the 1972 CSC Convention (resolution A.737(18)), in order to have the 1993 amendments to the Convention entering into force (paragraph 12.9.6);

- .15 approve the draft amendments to SOLAS regulation VII/4, with the view to adoption at MSC 88, with the envisaged entry-into-force date of 1 January 2014, in order to align the entry-into-force date of these amendments with amendment (36-12) to the IMDG Code (paragraph 14.4 and annex 12);
 - .16 approve the proposed revised work programme of the Sub-Committee and provisional agenda for DSC 15 (paragraph 19.1 and annex 14);
 - .17 endorse the status of planned outputs in the High-level Action Plan for the 2008-2009 and 2010-2011 biennia relating to the Sub-Committee's work (paragraph 19.3 and annex 15);
 - .18 agree to the Sub-Committee's action in giving a positive signal to the COMSAR Sub-Committee, ITU and other interested bodies that there was a need to support initiatives to obtain a common frequency band for the use of RFID devices on cargo containers to enhance safety and security and for a future efficient and economically effective use of these devices, bearing in mind that more technical work needed to be done (paragraph 21.9);
 - .19 approve the draft MSC circular on Information on local regulations (paragraph 21.12 and annex 16); and
 - .20 approve the report in general.
- 22.2 The Marine Environment Protection Committee, at its sixtieth session, is invited to:
- .1 approve the draft amendments to MARPOL Annex III, with the view to adoption at MEPC 61 (paragraph 15.10.1 and annex 13).

ANNEX 1**DRAFT MSC CIRCULAR****INTERPRETATION OF STOWAGE AND SEGREGATION REQUIREMENTS
FOR BROWN COAL BRIQUETTES AND COAL RELATED TO
“HOT AREAS” IN THE IMSBC CODE**

1 The Maritime Safety Committee, [at its eighty-seventh session (12 to 21 May 2010)], noting that the provisions of the IMSBC Code may be applied from 1 January 2009 on a voluntary basis and are envisaged to become mandatory under the SOLAS Convention on 1 January 2011, recognized the need for clarification of the following stowage and segregation requirements:

- .1 “This cargo shall not be stowed adjacent to hot areas.” in paragraph 5 in the section for “STOWAGE & SEGREGATION” in the appendix to the individual schedule for BROWN COAL BRIQUETTES; and
- .2 “The master shall ensure that this cargo is not stowed adjacent to hot areas.” in paragraph 4 in the section for “Segregation and stowage requirements” in the appendix to the individual schedule for COAL.

2 The Committee agreed that the words “adjacent to hot areas” in these provisions should be interpreted as “boundary areas of the cargo hold in contact with the cargo, having a temperature consistently greater than 55°C during carriage of the cargo, such as can sometimes be experienced when heated fuel oil service tanks and fuel oil settling tanks have a common boundary with the cargo hold”.

3 The Committee recommends that, in applying the aforementioned interpretation, the following is taken into account:

“Heated fuel oil tanks adjacent to cargo spaces carrying these cargoes should not normally be considered as “hot areas” when the fuel oil temperature is controlled at less than 55°C; this temperature is not exceeded for periods greater than 12 hours in any 24-hour period; and the maximum temperature of the fuel oil reached does not exceed 65°C.”

4 Member Governments are invited to use the aforementioned interpretation as guidance when applying the provisions of the IMSBC Code and to bring it to the attention of all parties concerned.

ANNEX 2**DRAFT MSC CIRCULAR****AMENDMENTS TO THE CODE OF SAFE PRACTICE FOR CARGO STOWAGE
AND SECURING (CSS CODE)**

- 1 The Maritime Safety Committee, at its [eighty-seventh session (12 to 21 May 2010)], approved amendments to the Code of Safe Practice for Cargo Stowage and Securing (CSS Code), set out in the annex.
- 2 Member Governments are invited to bring the annexed Amendments to the CSS Code to the attention of shipowners, ship operators, shipmasters and crews and all other parties concerned and, in particular, encourage shipowners and terminal operators to:
 - .1 apply the annexed amendments in its entirety for containerships, the keels of which were laid or which are at a similar stage of construction on or after 1 January 2015;
 - .2 apply sections 4.4 (Training and familiarization), 7.1 (Introduction), 7.3 (Maintenance) and section 8 (Specialized container safety design) to existing containerships, the keels of which were laid or which are at a similar stage of construction before 1 January 2015; and
 - .3 apply the principles of this guidance contained in sections 6 (Design) and 7.2 (Operational procedures) to existing containerships as far as practical by the flag State Administration with the understanding that existing ships would not be required to be enlarged or undergo other major structural modifications as determined.

ANNEX

**AMENDMENTS TO THE CODE OF SAFE PRACTICE FOR
CARGO STOWAGE AND SECURING (CSS CODE)**

- 1 The following new annex 14 is inserted after the existing annex 13:

“ANNEX 14

**GUIDANCE ON PROVIDING SAFE WORKING CONDITIONS
FOR SECURING OF CONTAINERS ON DECK**

1 AIM

To ensure that persons engaged in carrying out container securing operations on deck have safe working conditions and, in particular safe access, appropriate securing equipment and safe places of work. These guidelines should be taken into account at the design stage when securing systems are devised. These guidelines provide shipowners, ship builders, classification societies, Administrations and ship designers with guidance on producing or authorizing a Cargo Safe Access Plan (CSAP).

2 SCOPE

Ships which are specifically designed and fitted for the purpose of carrying containers on deck.

3 DEFINITIONS

3.1 *Administration* means the Government of the State whose flag the ship is entitled to fly.

3.2 *Fencing* is a generic term for guardrails, safety rails, safety barriers and similar structures that provide protection against the falls of persons.

3.3 *Lashing positions* include positions:

- in between container stows on hatch covers;
- at the end of hatches;
- on outboard lashing stanchions/pedestals;
- outboard lashing positions on hatch covers; and
- any other position where people work with container securing.

3.4 *SATLs* are semi-automatic twistlocks.

3.5 *Securing* includes lashing and unlashings.

3.6 *Stringers* are the uprights or sides of a ladder.

3.7 *Turnbuckles and lashing rods** include similar cargo securing devices.

4 GENERAL

4.1 Introduction

4.1.1 Injuries to dockworkers on board visiting ships account for the majority of accidents that occur within container ports, with the most common activity that involves such injuries being the lashing/unlashing of deck containers. Ships' crew engaged in securing operations face similar dangers.

4.1.2 During the design and construction of containerships the provision of a safe place of work for lashing personnel is essential.

4.1.3 Container shipowners and designers are reminded of the dangers associated with container securing operations and urged to develop and use container securing systems which are safe by design. The aim should be to eliminate or at least minimize the need for:

- .1 container top work;
- .2 work in other equally hazardous locations; and
- .3 the use of heavy and difficult to handle securing equipment.

4.1.4 It should be borne in mind that providing safe working conditions for securing containers deals with matters relating to design, operation, and maintenance, and that the problems on large containerships are not the same as on smaller ones.

4.2 Revised Recommendations on safety of personnel during container securing operations (MSC.1/Circ.1263)

Shipowners, ship designers and Administrations should take into account the recommendations on safe design of securing arrangements contained in these guidelines, and in the Recommendations on safety of personnel during container securing operations (MSC.1/Circ.1263).

4.3 Cargo Safe Access Plan (CSAP)

4.3.1 The Guidelines for the preparation of the Cargo Securing Manual (MSC/Circ.745) requires ships which are specifically designed and fitted for the purpose of carrying containers to have an approved Cargo Safe Access Plan (CSAP) on board, for all areas where containers are secured.

4.3.2 Stakeholders, including, but not limited to shipowners, ship designers, ship builders, administrations, classification societies and lashing equipment manufacturers,

* Refer to standard ISO 3874, Annex D Lashing rod systems and tensioning devices.

should be involved at an early stage in the design of securing arrangements on containerhips and in the development of the CSAP.

4.3.3 The CSAP should be developed at the design stage in accordance with [chapter 5 of the annex to MSC/Circ....].

4.3.4 Designers should incorporate the recommendations of this annex into the CSAP so that safe working conditions can be maintained during all anticipated configurations of container stowage.

4.4 Training and familiarization

4.4.1 Personnel engaged in cargo securing operations should be trained in the lashing and unlashng of containers as necessary to carry out their duties in a safe manner. This should include the different types of lashing equipment that are expected to be used.

4.4.2 Personnel engaged in cargo securing operations should be trained in the identification and handling of bad order or defective securing gear in accordance with each ship's procedures to ensure damaged gear is segregated for repair and maintenance or disposal.

4.4.3 Personnel engaged in cargo securing operations should be trained to develop the knowledge and mental and physical manual handling skills that they require to do their job safely and efficiently, and to develop general safety awareness to recognize and avoid potential dangers.

4.4.4 Personnel should be trained in safe systems of work. Where personnel are involved in working at heights, they should be trained in the use of relevant equipment. Where practical, the use of fall protection equipment should take precedence over fall arrest systems.

4.4.5 Personnel who are required to handle thermal cables and/or connect and disconnect temperature control units should be given training in recognizing defective cables, receptacles and plugs.

4.4.6 Personnel engaged in containership cargo operations should be familiarized with the ship's unique characteristics and potential hazards arising from such operations necessary to carry out their duties.

5 RESPONSIBILITIES OF INVOLVED PARTIES

5.1 Administrations should ensure that:

- .1 lashing plans contained within the approved Cargo Securing Manual are compatible with the current design of the ship and the intended container securing method is both safe and physically possible;
- .2 the Cargo Securing Manual, lashing plans and the CSAP are kept up to date; and

- .3 lashing plans and the CSAP are compatible with the design of the vessel and the equipment available.

5.2 Shipowners and operators should ensure that:

- .1 portable cargo securing devices are certified and assigned with a maximum securing load (MSL). The MSL should be documented in the cargo securing manual as required by the CSS Code;
- .2 the operational recommendations of this annex are complied with;
- .3 correction, changes or amendments of the Cargo Securing Manual, lashing plans and the Cargo Safe Access Plan (CSAP) should be promptly sent to the competent authority for approval; and
- .4 only compatible and certified equipment in safe condition is used.

5.3 Designers should follow design recommendations of these guidelines.

5.4 Shipbuilders should follow design recommendations of these guidelines.

5.5 Containership terminal operators should ensure that the recommendations of relevant parts of this annex are complied with.

6 DESIGN

6.1 General design considerations

6.1.1 Risk assessment

6.1.1.1 Risk assessments should be performed at the design stage taking into account the recommendations of this annex to ensure that securing operations can be safely carried out in all anticipated container configurations. This assessment should be conducted with a view toward developing the Cargo Safe Access Plan (CSAP). Hazards to be assessed should include but not be limited to:

- .1 slips, trips and falls;
- .2 falls from height;
- .3 injuries whilst manually handling lashing gear;
- .4 being struck by falling lashing gear or other objects;
- .5 potential damage due to container operations. High-risk areas should be identified in order to develop appropriate protection or other methods of preventing significant damage;
- .6 adjacent electrical risks (temperature controlled unit cable connections, etc.);

- .7 the adequacy of the access to all areas that is necessary to safely perform container securing operations;
- .8 ergonomics (e.g., size and weight of equipment) of handling lashing equipment; and
- .9 implications of lashing 9'6" high, or higher, containers and mixed stows of 40' and 45' containers.

6.1.1.2 Shipbuilders should collaborate with designers of securing equipment in conducting risk assessments and ensure that the following basic criteria are adhered to when building containerships.

6.1.2 Ship designers should ensure that container securing operations performed in outer positions can be accomplished safely. As a minimum, a platform should be provided on which to work safely. This platform should have fencing to prevent workers falling off it.

6.1.3 The space provided between the containers stows for workers to carry out lashing operations should provide:

- .1 a firm and level working surface;
- .2 a working area, excluding lashings in place, to provide a clear sight of twist lock handles and allow for the manipulation of lashing gear;
- .3 sufficient spaces to permit the lashing gear and other equipment to be stowed without causing a tripping hazard;
- .4 sufficient spaces between the fixing points of the lashing bars on deck, or on the hatch covers, to tighten the turnbuckles;
- .5 access in the form of ladders on hatch coamings;
- .6 safe access to lashing platforms;
- .7 protective fencing on lashing platforms; and
- .8 adequate lighting in line with these guidelines.

6.1.4 Ship designers should aim to eliminate the need to access and work on the tops of deck stows.

6.1.5 Platforms should be designed to provide a clear work area, unencumbered by deck piping and other obstructions and take into consideration:

- .1 containers must be capable of being stowed within safe reach of the workers using the platform; and
- .2 the work area size and the size of the securing components used.

6.2 Provisions for safe access

6.2.1 General provisions

6.2.1.1 The minimum clearance for transit areas should be at least 2 m high and 600 mm wide.

6.2.1.2 All relevant deck surfaces used for movement about the ship and all passageways and stairs should have non-slip surfaces.

6.2.1.3 Where necessary for safety, walkways on deck should be delineated by painted lines or otherwise marked by pictorial signs.

6.2.1.4 All protrusions in accessways, such as cleats, ribs and brackets that may give rise to a trip hazard should be highlighted in a contrasting colour.

6.2.2 Lashing position design (platforms, bridges and other lashing positions)

6.2.2.1 Lashing positions should be designed to eliminate the use of three high lashing bars and be positioned in close proximity to lashing equipment stowage areas. Lashing positions should be designed to provide a clear work area which is unencumbered by deck piping and other obstructions and take into consideration:

- .1 the need for containers to be stowed within safe reach of the personnel using the lashing position so that the horizontal operating distance from the securing point to the container does not exceed 1,100 mm and not less than 220 mm for lashing bridges and 130 mm for other positions;
- .2 the size of the working area and the movement of lashing personnel; and
- .3 the length and weight of lashing gear and securing components used.

6.2.2.2 The width of the lashing positions should preferably be 1,000 mm, but not less than 750 mm.

6.2.2.3 The width of permanent lashing bridges should be:

- .1 750 mm between top rails of fencing; and
- .2 a clear minimum of 600 mm between storage racks, lashing cleats and any other obstruction.

6.2.2.4 Platforms on the end of hatches and outboard lashing stations should preferably be at the same level as the top of the hatch covers.

6.2.2.5 Toe boards (or kick plates) should be provided around the sides of elevated lashing bridges and platforms to prevent securing equipment from falling and injuring people. Toe boards should preferably be 150 mm high, however, where this is not possible they should be at least 100 mm high.

6.2.2.6 Any openings in the lashing positions through which people can fall should be possible to be closed.

6.2.2.7 Lashing positions should not contain obstructions, such as storage bins or guides to reposition hatch covers.

6.2.2.8 Lashing positions which contain removable sections should be capable of being temporarily secured.

6.2.3 *Fencing design*

6.2.3.1 Bridges and platforms, where appropriate, should be fenced. As a minimum, fencing design should take into consideration:

- .1 the strength and height of the rails should be designed to prevent workers from falling;
- .2 flexibility in positioning the fencing of gaps. A horizontal unfenced gap should not be greater than 300 mm;
- .3 provisions for locking and removal of fencing as operational situations change based on stowage anticipated for that area;
- .4 damage to fencing and how to prevent failure due to that damage; and
- .5 adequate strength of any temporary fittings. These should be capable of being safely and securely installed.

6.2.3.2 The top rail of fencing should be 1 m high from the base, with two intermediate rails. The opening below the lowest course of the guard rails should not exceed 230 mm. The other courses should be not more than 380 mm apart.

6.2.3.3 Where possible fences and handrails should be highlighted with a contrasting colour to the background.

6.2.3.4 Athwartships cargo securing walkways should be protected by adequate fencing if an unguarded edge exists when the hatch cover is removed.

6.2.4 *Ladder and manhole design*

6.2.4.1 Where a fixed ladder gives access to the outside of a lashing position, the stringers should be connected at their extremities to the guardrails of the lashing position, irrespective of whether the ladder is sloping or vertical.

6.2.4.2 Where a fixed ladder gives access to a lashing position through an opening in the platform, the opening shall be protected with either a fixed grate with a lock back mechanism, which can be closed after access, or fencing. Grabrails should be provided to ensure safe access through the opening.

6.2.4.3 Where a fixed ladder gives access to a lashing position from the outside of the platform, the stringers of the ladder should be opened above the platform level to give a clear width of 700 to 750 mm to enable a person to pass through the stringers.

6.2.4.4 A fixed ladder should not slope at an angle greater than 25° from the vertical. Where the slope of a ladder exceeds 15° from the vertical, the ladder should be provided with suitable handrails not less than 540 mm apart, measured horizontally.

6.2.4.5 A fixed vertical ladder of a height exceeding 3 m, and any fixed vertical ladder, from which a person may fall into a hold, should be fitted with guard hoops, which should be constructed in accordance with paragraphs 6.2.4.6 and 6.2.4.7.

6.2.4.6 The ladder hoops should be uniformly spaced at intervals not exceeding 900 mm and should have a clearance of 750 mm from the rung to the back of the hoop and be connected by longitudinal strips secured to the inside of the hoops, each equally spaced round the circumference of the hoop.

6.2.4.7 The stringers should be carried above the floor level of the platform by at least 1 m and the ends of the stringers should be given lateral support and the top step or rung should be level with the floor of the platform unless the steps or rungs are fitted to the ends of the stringers.

6.2.4.8 As far as practicable, access ladders and walkways, and work platforms should be designed so that workers do not have to climb over piping or work in areas with permanent obstructions.

6.2.4.9 There should be no unprotected openings in any part of the workplace. Access opening must be protected with handrails or access covers that can be locked back during access.

6.2.4.10 As far as practicable, manholes should not be situated in transit areas, however, if they are, proper fencing should protect them.

6.2.4.11 Access ladders and manholes should be large enough for persons to safely enter and leave.

6.2.4.12 A foothold at least 150 mm deep should be provided.

6.2.4.13 Handholds should be provided at the top of the ladder to enable safe access to the platform to be gained.

6.2.4.14 Manhole openings that may present a fall hazard should be highlighted in contrasting colour around the rim of the opening.

6.2.4.15 Manhole openings at different levels of the lashing bridge should not be located directly below one another, as far as practicable.

6.3 Lashing systems

6.3.1 General provisions

Lashing systems, including tensioning devices, should:

- .1 conform to international standards[□], where applicable;
- .2 be compatible with the planned container stowages;
- .3 be compatible with the physical ability of persons to safely hold, deploy and use such equipment;
- .4 be uniform and compatible, e.g., twistlocks and lashing rod heads should not interfere with each other;
- .5 be subject to a periodic inspection and maintenance regime. Non-conforming items should be segregated for repair or disposal; and
- .6 be according to the CSM.

6.3.2 Twistlock design

6.3.2.1 Shipowners should ensure that the number of different types of twistlocks provided for cargo securing is kept to a minimum and clear instructions are provided for their operation. The use of too many different types of twistlocks may lead to confusion as to whether the twistlocks are locked.

6.3.2.2 The design of twistlocks should ensure the following:

- .1 positive locking with easy up and down side identification;
- .2 dislodging from corner fitting is not possible even when grazing a surface;
- .3 access and visibility of the unlocking device is effective in operational situations;
- .4 unlocked positions are easily identifiable and do not relock inadvertently due to jolting or vibration; and
- .5 unlocking poles are as light as possible, of a simple design for ease of use.

6.3.2.3 Where it is not feasible to entirely eliminate working on the tops of container stows, the twistlock designs used should minimize the need for such working, e.g., use of SATLs, fully automatic twistlocks or similar design.

[□] Refer to standard ISO 3874 – The Handling and Securing of Type 1 Freight Containers, annex A-D.

6.3.3 *Lashing rod design*

6.3.3.1 The design of containership securing systems should take into account the practical abilities of the workers to lift, reach, hold, control and connect the components called for in all situations anticipated in the cargo securing plan.

6.3.3.2 The maximum length of a lashing rod should be sufficient to reach the bottom corner fitting of a container on top of two high cube containers and be used in accordance with the instructions provided by the manufacturers.

6.3.3.3 The weight of lashing rods should be minimized as low as possible consistent with the necessary mechanical strength.

6.3.3.4 The head of the lashing rod that is inserted in the corner fitting should be designed with a pivot/hinge or other appropriate device so that the rod does not come out of the corner fitting accidentally.

6.3.3.5 The rods length in conjunction with the length and design of the turnbuckle should be such that the need of extensions is eliminated when lashing high cube (9' 6") containers.

6.3.3.6 Light weight rods should be provided where special tools are needed to lash high-cube containers.

6.3.4 *Turnbuckle design*

6.3.4.1 Turnbuckle end fittings should be designed to harmonize with the design of lashing rods.

6.3.4.2 Turnbuckles should be designed to minimize the work in operating them.

6.3.4.3 Anchor points for turnbuckles should be positioned to provide safe handling and to prevent the bending of rods.

6.3.4.4 To prevent hand injury during tightening or loosening motions, there should be a minimum distance of 70 mm between turnbuckles.

6.3.4.5 The turnbuckle should incorporate a locking mechanism which will ensure that the lashing does not work loose during the voyage.

6.3.4.7 The weight of turnbuckles should be minimized as low as possible consistent with the necessary mechanical strength.

6.3.5 *Storage bins and lashing equipment stowage design*

6.3.5.1 Bins or stowage places for lashing materials should be provided.

6.3.5.2 All lashing gear should be stowed as close to its intended place of use as possible.

6.3.5.3 The stowage of securing devices should be arranged so they can easily be retrieved from their stowage location.

6.3.5.4 Bins for faulty or damaged gear should also be provided and appropriately marked.

6.3.5.5 Bins should be of sufficient strength.

6.3.5.6 Bins and their carriers should be designed to be lifted off the vessel and restowed.

6.4 Lighting design

A lighting plan should be developed to provide for:

- .1 the proper illumination of access ways, not less than 10 lux (1 foot candle)*, taking into account the shadows created by containers that may be stowed in the area to be lit, for example different length containers in or over the work area;
- .2 a separate fixed or temporary (where necessary) lighting system for each working space between the container bays, which is bright enough, not less than 50 lux (5 foot candle)*, for the work to be done, but minimizes glare to the deck workers;
- .3 such illumination should, where possible, be designed as a permanent installation and adequately guarded against breakage; and
- .4 the illumination intensity should take into consideration the distance to the uppermost reaches where cargo securing equipment is utilized.

7 OPERATIONAL AND MAINTENANCE PROCEDURES

7.1 Introduction

7.1.1 Procedures for safe lashing and securing operations should be included in the ships Safety Management System as part of the ISM Code documentation.

7.1.2 Upon arrival of the ship, a safety assessment of the lashing positions and the access to those positions should be made before securing work commences.

7.2 Operational procedures

7.2.1 *Container deck working*

7.2.1.1 Transit areas should be safe and clear of cargo and all equipment.

* Refer to Safety and Health in Ports, ILO Code of Practice, section 7.1.5.

7.2.1.2 Openings that are necessary for the operation of the ship, which are not protected by fencing, should be closed during cargo securing work. Any necessarily unprotected openings in work platforms (i.e. those with a potential fall of less than 2 m), and gaps and apertures on deck should be properly highlighted.

7.2.1.3 The use of fencing is essential to prevent falls. When openings in safety barriers are necessary to allow container crane movements, particularly with derricking cranes, removable fencing should be used whenever possible.

7.2.1.4 It should be taken into account that when lifting lashing bars that can weigh between 11 and 21 kg and turnbuckles between 16 and 23 kg, there may be a risk of injury and severe illness as a result of physical strain if handled above shoulder height with the arms extended. It is therefore recommended that personnel work in pairs to reduce the individual workload in securing the lashing gear.

7.2.1.5 The company involved with cargo operation should anticipate, identify, evaluate and control hazards and take appropriate measures to eliminate or minimize potential hazards to prevent in particular with harmful lumbar spinal damage and severe illness as a result of physical strain.

7.2.1.6 Personnel engaged in containership cargo operations should wear appropriate Personnel Protective Equipment (PPE) whilst carrying out lashing operations. The PPE should be provided by the company.

7.2.1.7 Manual twistlocks should only be used where safe access is provided.

7.2.1.8 Containers should not be stowed in spaces configured for larger sized containers unless they can be secured under safe working conditions.

7.2.2 *Container top working*

7.2.2.1 When work on container tops can not be avoided, safe means of access should be provided by the container cargo operation terminal, unless the ship has appropriate means of access in accordance with the CSAP.

7.2.2.2 Recommended practice involves the use of a safety cage lifted by a spreader to minimize the risk to personnel.

7.2.2.3 A safe method of work should be developed and implemented to ensure the safety of lashers when on the top of container stows on deck. Where practical, the use of fall prevention equipment should take precedence over fall arrest equipment.

7.2.3 *Failure to provide safe lashing stations on board/carry out lashing by port workers*

7.2.3.1 Where there are lashing and unlashings locations on board ship where no fall protection, such as adequate handrails are provided, and no other safe method can be found, the containers should not be lashed or unlashings and the situation should be reported to shoreside supervisor and the master or deck officer immediately.

7.2.3.2 If protective systems cannot be designed to provide safe protected access and lashing work positions, in all cargo configurations then cargo should not be stowed in that location. Neither crew nor shore workers should be subjected to hazardous working conditions in the normal course of securing cargo.

7.3 Maintenance

7.3.1 In line with section 2.3 (Inspection and maintenance schemes) of the Revised Guidelines for the preparation of the cargo securing manual [(MSC.1/Circ....)] all ships should maintain a record book, which should contain the procedures for accepting, maintaining and repairing or rejecting of cargo securing devices. The record book should also contain a record of inspections.

7.3.2 Lighting should be properly maintained.

7.3.3 Walkways, ladders, stairways and fencings should be subject to a periodic maintenance programme which will reduce/prevent corrosion and prevent subsequent collapse.

7.3.4 Corroded walkways, ladders, stairways and fencings should be repaired or replaced as soon as practicable. The repairs should be effected immediately if the corrosion could prevent safe operations.

7.3.5 It should be borne in mind that turnbuckles covered with grease are difficult to handle when tightening.

7.3.6 Storage bins and their carriers should be maintained in a safe condition.

8 SPECIALIZED CONTAINER SAFETY DESIGN

8.1 Temperature controlled unit power outlets should provide a safe, watertight electrical connection.

8.2 Temperature controlled unit power outlets should feature a heavy duty, interlocked and circuit breaker protected electrical power outlet. This should ensure the outlet can not be switched “live” until a plug is fully engaged and the actuator rod is pushed to the “On” position. Pulling the actuator rod to the “Off” position should manually de-energize the circuit.

8.3 The temperature controlled unit power circuit should de-energize automatically if the plug is accidentally withdrawn while in the “On” position. Also, the interlock mechanism should break the circuit while the pin and sleeve contacts are still engaged. This provides total operator safety and protection against shock hazard while eliminating arcing damage to the plug and receptacle.

8.4 Temperature controlled unit power outlets should be designed to ensure that the worker is not standing directly in front of the socket when switching takes place.

8.5 The positioning of the temperature controlled unit feed outlets should not be such that the flexible cabling needs to be laid out in such a way as to cause a tripping hazard.

8.6 Stevedores or ships crew who are required to handle temperature controlled unit cables and/or connect and disconnect reefer units should be given training in recognizing defective wires and plugs.

8.7 Means or provisions should be provided to lay the temperature controlled unit cables in and protect them from lashing equipment falling on them during lashing operations.

8.8 Defective or inoperative temperature controlled unit plugs/electrical banks should be identified and confirmed as “locked out/tagged out” by the vessel.

9 REFERENCES

ILO Code of Practice – Safety and Health in Ports

ILO Convention 152 – Occupational Safety and Health in Dock Work

ISO Standard 3874 – The Handling and Securing of Type 1 Freight Containers

International Convention on Load Lines, 1966, as modified by the 1988 Protocol

Revised Recommendation on safety of personnel during container securing operations (MSC.1/Circ.1263)

Revised Guidelines for the preparation of the Cargo Securing Manual ([MSC.1/Circ....])”.

ANNEX 3**DRAFT MSC CIRCULAR****REVISED GUIDELINES FOR THE PREPARATION
OF THE CARGO SECURING MANUAL**

1 In accordance with regulations VI/5 and VII/6 of the 1974 SOLAS Convention, as amended, cargo units and cargo transport units shall be loaded, stowed and secured throughout the voyage in accordance with the Cargo Securing Manual approved by the Administration, which shall be drawn up to a standard at least equivalent to the guidelines developed by the Organization.

2 The Maritime Safety Committee, at its [eighty-seventh session (12 to 21 May 2010)], considered the proposal by the Sub-Committee on Dangerous Goods, Solid Cargoes and Containers, at its thirteenth session (21 to 25 September 2009), and approved the Revised Guidelines for the preparation of the Cargo Securing Manual, as set out in the annex.

3 These Revised Guidelines are based on the provisions contained in the annex to MSC/Circ.745 but have been expanded to include the safe access for lashing of containers, taking into account the provisions of the Code of Safe Practice for Cargo Stowage and Securing (CSS Code), as amended. They are of a general nature and intended to provide guidance on the preparation of such Cargo Securing Manuals, which are required on all types of ships engaged in the carriage of cargoes other than solid and liquid bulk cargoes.

4 Member Governments are invited to bring these Guidelines to the attention of all parties concerned, with the aim of having Cargo Securing Manuals carried on board ships prepared appropriately and in a consistent manner, and to:

- .4.1 apply the revised guidelines in its entirety for containerships, the keels of which were laid or which are at a similar stage of construction on or after 1 January 2015; and
- .4.2 apply chapters 1 to 4 of the revised guidelines to existing containerships, the keels of which were laid or which were at a similar stage of construction before 1 January 2015.

5 This circular supersedes MSC/Circ.745.

ANNEX

REVISED GUIDELINES FOR THE PREPARATION OF THE CARGO SECURING MANUAL

PREAMBLE

In accordance with the International Convention for the Safety of Life at Sea, 1974 (SOLAS) chapters VI, VII and the Code of Safe Practice for Cargo Stowage and Securing (CSS Code), cargo units, including containers shall be stowed and secured throughout the voyage in accordance with a Cargo Securing Manual, approved by the Administration.

The Cargo Securing Manual is required on all types of ships engaged in the carriage of all cargoes other than solid and liquid bulk cargoes.

The purpose of these guidelines is to ensure that Cargo Securing Manuals cover all relevant aspects of cargo stowage and securing and to provide a uniform approach to the preparation of Cargo Securing Manuals, their layout and content. Administrations may continue accepting Cargo Securing Manuals drafted in accordance with Containers and cargoes (BC) – Cargo Securing Manual (MSC/Circ.385) provided that they satisfy the requirements of these guidelines.

If necessary, those manuals should be revised explicitly when the ship is intended to carry containers in a standardized system.

It is important that securing devices meet acceptable functional and strength criteria applicable to the ship and its cargo. It is also important that the officers on board are aware of the magnitude and direction of the forces involved and the correct application and limitations of the cargo securing devices. The crew and other persons employed for the securing of cargoes should be instructed in the correct application and use of the cargo securing devices on board the ship.

CHAPTER 1 – GENERAL

1.1 Definitions

Cargo securing devices are all fixed and portable devices used to secure and support cargo units.

Maximum securing load (MSL) is a term used to define the allowable load capacity for a device used to secure cargo to a ship. *Safe working load (SWL)* may be substituted for MSL for securing purposes, provided this is equal to or exceeds the strength defined by MSL.

Standardized cargo means cargo for which the ship is provided with an approved securing system based upon cargo units of specific types.

Semi-standardized cargo means cargo for which the ship is provided with a securing system capable of accommodating a limited variety of cargo units, such as vehicles, trailers, etc.

Non-standardized cargo means cargo which requires individual stowage and securing arrangements.

1.2 Preparation of the manual

The Cargo Securing Manual should be developed, taking into account the recommendations given in these Guidelines, and should be written in the working language or languages of the ship. If the language or languages used is not English, French or Spanish, a translation into one of these languages should be included.

1.3 General information

This chapter should contain the following general statements:

- .1 “The guidance given herein should by no means rule out the principles of good seamanship, neither can it replace experience in stowage and securing practice.”
- .2 “The information and requirements set forth in this Manual are consistent with the requirements of the vessel’s trim and stability booklet, International Load Line Certificate (1966), the hull strength loading manual (if provided) and with the requirements of the International Maritime Dangerous Goods (IMDG) Code (if applicable).”
- .3 “This Cargo Securing Manual specifies arrangements and cargo securing devices provided on board the ship for the correct application to and the securing of cargo units, containers, vehicles and other entities, based on transverse, longitudinal and vertical forces which may arise during adverse weather and sea conditions.”
- .4 “It is imperative to the safety of the ship and the protection of the cargo and personnel that the securing of the cargo is carried out properly and that only appropriate securing points or fittings should be used for cargo securing.”
- .5 “The cargo securing devices mentioned in this manual should be applied so as to be suitable and adapted to the quantity, type of packaging, and physical properties of the cargo to be carried. When new or alternative types of cargo securing devices are introduced, the Cargo Securing Manual should be revised accordingly. Alternative cargo securing devices introduced should not have less strength than the devices being replaced.”
- .6 “There should be a sufficient quantity of reserve cargo securing devices on board the ship.”
- .7 “Information on the strength and instructions for the use and maintenance of each specific type of cargo securing device, where applicable, is provided in this manual. The cargo securing devices should be maintained in a satisfactory condition. Items worn or damaged to such an extent that their quality is impaired should be replaced.”
- .8 The Cargo Safe Access Plan (CSAP) is intended to provide detailed information for persons engaged in work connected with cargo stowage and securing. Safe access should be provided and maintained in accordance with this plan.

CHAPTER 2 – SECURING DEVICES AND ARRANGEMENTS

2.1 Specification for fixed cargo securing devices

This sub-chapter should indicate and where necessary illustrate the number, locations, type and MSL of the fixed devices used to secure cargo and should as a minimum contain the following information:

- .1 a list and/or plan of the fixed cargo securing devices, which should be supplemented with appropriate documentation for each type of device as far as practicable. The appropriate documentation should include information as applicable regarding:
 - * Name of manufacturer
 - * Type designation of item with simple sketch for ease of identification
 - * Material(s)
 - * Identification marking
 - * Strength test result or ultimate tensile strength test result
 - * Result of non destructive testing
 - * Maximum Securing Load (MSL);
- .2 fixed securing devices on bulkheads, web frames, stanchions, etc. and their types (e.g., pad eyes, eyebolts, etc.), where provided, including their MSL;
- .3 fixed securing devices on decks and their types (e.g., elephant feet fittings, container fittings apertures, etc.) where provided, including their MSL;
- .4 fixed securing devices on deckheads, where provided, listing their types and MSL; and
- .5 for existing ships with non-standardized fixed securing devices, the information on MSL and location of securing points is deemed sufficient.

2.2 Specification for portable cargo securing devices

This sub-chapter should describe the number of and the functional and design characteristics of the portable cargo securing devices carried on board the ship, and should be supplemented by suitable drawings or sketches if deemed necessary. It should contain the following information as applicable:

- .1 a list for the portable securing devices, which should be supplemented with appropriate documentation for each type of devices as far as practicable. The appropriate documentation should include information as applicable regarding:
 - * Name of manufacturer
 - * Type designation of item with simple sketch for ease of identification
 - * Material(s), including minimum safe operational temperature
 - * Identification marking
 - * Strength test result or ultimate tensile strength test result

- * Result of non destructive testing
 - * Maximum Securing Load (MSL);
- .2 container stacking fittings, container deck securing fittings, fittings for interlocking of containers, bridge-fittings, etc., their MSL and use;
 - .3 chains, wire lashings, rods, etc., their MSL and use;
 - .4 tensioners (e.g., turnbuckles, chain tensioners, etc.), their MSL and use;
 - .5 securing gear for cars, if appropriate, and other vehicles, their MSL and use;
 - .6 trestles and jacks, etc., for vehicles (trailers) where provided, including their MSL and use; and
 - .7 anti-skid material (e.g., soft boards) for use with cargo units having low frictional characteristics.

2.3 Inspection and maintenance schemes

This sub-chapter should describe inspection and maintenance schemes of the cargo securing devices on board the ship.

2.3.1 Regular inspections and maintenance should be carried out under the responsibility of the master. Cargo securing devices inspections as a minimum should include:

- .1 routine visual examinations of components being utilized; and
- .2 periodic examinations/re-testing as required by the Administration. When required, the cargo securing devices concerned should be subjected to inspections by the Administration.

2.3.2 This sub-chapter should document actions to inspect and maintain the ship's cargo securing devices. Entries should be made in a record book, which should be kept with the Cargo Securing Manual. This record book should contain the following information:

- .1 procedures for accepting, maintaining and repairing or rejecting cargo securing devices; and
- .2 record of inspections.

2.3.3 This sub-chapter should contain information for the master regarding inspections and adjustment of securing arrangements during the voyage.

2.3.4 Computerized maintenance procedures may be referred to in this sub-chapter.

CHAPTER 3 – STOWAGE AND SECURING OF NON-STANDARDIZED AND SEMI-STANDARDIZED CARGO

3.1 Handling and safety instructions

This sub-chapter should contain:

- .1 instructions on the proper handling of the securing devices; and
- .2 safety instructions related to handling of securing devices and to securing and unsecuring of units by ship or shore personnel.

3.2 Evaluation of forces acting on cargo units

This sub-chapter should contain the following information:

- .1 tables or diagrams giving a broad outline of the accelerations which can be expected in various positions on board the ship in adverse sea conditions and with a range of applicable metacentric height (GM) values;
- .2 examples of the forces acting on typical cargo units when subjected to the accelerations referred to in paragraph 3.2.1 and angles of roll and metacentric height (GM) values above which the forces acting on the cargo units exceed the permissible limit for the specified securing arrangements as far as practicable;
- .3 examples of how to calculate number and strength of portable securing devices required to counteract the forces referred to in 3.2.2 as well as safety factors to be used for different types of portable cargo securing devices. Calculations may be carried out according to Annex 13 to the CSS Code or methods accepted by the Administration;
- .4 it is recommended that the designer of a Cargo Securing Manual converts the calculation method used into a form suiting the particular ship, its securing devices and the cargo carried. This form may consist of applicable diagrams, tables or calculated examples; and
- .5 other operational arrangements such as electronic data processing (EDP) or use of a loading computer may be accepted as alternatives to the requirements of the above paragraphs 3.2.1 to 3.2.4, providing that this system contains the same information.

3.3 Application of portable securing devices on various cargo units, vehicles and stowage blocks

3.3.1 This sub-chapter should draw the master's attention to the correct application of portable securing devices, taking into account the following factors:

- .1 duration of the voyage;
- .2 geographical area of the voyage with particular regard to the minimum safe operational temperature of the portable securing devices;

- .3 sea conditions which may be expected;
- .4 dimensions, design and characteristics of the ship;
- .5 expected static and dynamic forces during the voyage;
- .6 type and packaging of cargo units including vehicles;
- .7 intended stowage pattern of the cargo units including vehicles; and
- .8 mass and dimensions of the cargo units and vehicles.

3.3.2 This sub-chapter should describe the application of portable cargo securing devices as to number of lashings and allowable lashing angles. Where necessary, the text should be supplemented by suitable drawings or sketches to facilitate the correct understanding and proper application of the securing devices to various types of cargo and cargo units. It should be pointed out that for certain cargo units and other entities with low friction resistance, it is advisable to place soft boards or other anti-skid material under the cargo to increase friction between the deck and the cargo.

3.3.3 This sub-chapter should contain guidance as to the recommended location and method of stowing and securing of containers, trailers and other cargo carrying vehicles, palletized cargoes, unit loads and single cargo items (e.g., woodpulp, paper rolls, etc.), heavy weight cargoes, cars and other vehicles.

3.4 Supplementary requirements for ro-ro ships

3.4.1 The manual should contain sketches showing the layout of the fixed securing devices with identification of strength (MSL) as well as longitudinal and transverse distances between securing points. In preparing this sub-chapter further guidance should be utilized from IMO Assembly resolutions A.533(13) and A.581(14), as appropriate.

3.4.2 In designing securing arrangements for cargo units, including vehicles and containers, on ro-ro passenger ships and specifying minimum strength requirements for securing devices used, forces due to the motion of the ship, angle of heel after damage or flooding and other considerations relevant to the effectiveness of the cargo securing arrangement should be taken into account.

3.5 Bulk carriers

If bulk carriers carry cargo units falling within the scope of chapter VI/5 or chapter VII/5 of SOLAS Convention, this cargo shall be stowed and secured in accordance with a Cargo Securing Manual, approved by the Administration.

CHAPTER 4 – STOWAGE AND SECURING OF CONTAINERS AND OTHER STANDARDIZED CARGO

4.1 Handling and safety instructions

This sub-chapter should contain:

- .1 instructions on the proper handling of the securing devices; and
- .2 safety instructions related to handling of securing devices and to securing and unsecuring of containers or other standardized cargo by ship or shore personnel.

4.2 Stowage and securing instructions

This sub-chapter is applicable to any stowage and securing system (i.e. stowage within or without cellguides) for containers and other standardized cargo. On existing ships the relevant documents regarding safe stowage and securing may be integrated into the material used for the preparation of this chapter.

4.2.1 Stowage and securing plan

This sub-chapter should consist of a comprehensive and understandable plan or set of plans providing the necessary overview on:

- .1 longitudinal and athwartship views of under deck and on deck stowage locations of containers as appropriate;
- .2 alternative stowage patterns for containers of different dimensions;
- .3 maximum stack masses;
- .4 permissible vertical sequences of masses in stacks;
- .5 maximum stack heights with respect to approved sight lines; and
- .6 application of securing devices using suitable symbols with due regard to stowage position, stack mass, sequence of masses in stack and stack height. The symbols used should be consistent throughout the Cargo Securing Manual.

4.2.2 Stowage and securing principle on deck and under deck

This sub-chapter should support the interpretation of the stowage and securing plan with regard to container stowage, highlighting:

- .1 the use of the specified devices; and
- .2 any guiding or limiting parameters as dimension of containers, maximum stack masses, sequence of masses in stacks, stacks affected by wind load, height of stacks.

It should contain specific warnings of possible consequences from misuse of securing devices or misinterpretation of instructions given.

4.3 Other allowable stowage patterns

This sub-chapter should provide the necessary information for the master to deal with cargo stowage situations deviating from the general instructions addressed to under sub-chapter 4.2, including appropriate warnings of possible consequences from misuse of securing devices or misinterpretation of instructions given.

Information should be provided with regard to, *inter alia*:

- .1 alternative vertical sequences of masses in stacks;
- .2 stacks affected by wind load in the absence of outer stacks;
- .3 alternative stowage of containers with various dimensions; and
- .4 permissible reduction of securing effort with regard to lower stacks masses, lesser stack heights or other reasons.

4.4 Forces acting on cargo units

This sub-chapter should present the distribution of accelerations on which the stowage and securing system is based, and specify the underlying condition of stability. Information on forces induced by wind and sea on deck cargo should be provided.

It should further contain information on the nominal increase of forces or accelerations with an increase of initial stability. Recommendations should be given for reducing the risk of cargo losses from deck stowage by restrictions to stack masses or stack heights, where high initial stability cannot be avoided.

CHAPTER 5 – CARGO SAFE ACCESS PLAN (CSAP)

5.1 Ships which are specifically designed and fitted for the purpose of carrying containers should be provided with a Cargo Safe Access Plan (CSAP) in order to demonstrate that personnel will have safe access for container securing operations. This plan should detail arrangements necessary for the conducting of cargo stowage and securing in a safe manner. It should include the following for all areas to be worked by personnel:

- .1 hand rails;
- .2 platforms;
- .3 walkways;
- .4 ladders;
- .5 access covers;

- .6 location of equipment storage facilities;
 - .7 lighting fixtures;
 - .8 container alignment on hatch covers/pedestals;
 - .9 fittings for specialized containers, such as reefer plugs/receptacles;
 - .10 first aid stations and emergency access/egress;
 - .11 gangways; and
 - .12 any other arrangements necessary for the provision of safe access.
- 5.2 Guidelines for specific requirements are contained in annex [14] to the CSS Code.

ANNEX 4**DRAFT MSC CIRCULAR****AMENDMENTS TO THE ELEMENTS TO BE TAKEN INTO ACCOUNT WHEN
CONSIDERING THE SAFE STOWAGE AND SECURING OF CARGO
UNITS AND VEHICLES IN SHIPS (RESOLUTION A.533(13))**

1 The Maritime Safety Committee, at its [eighty-seventh session (12 to 21 May 2010)], having considered the proposal by the Sub-Committee on Dangerous Goods, Solid Cargoes and Containers, at its thirteenth session (21 to 25 September 2009), approved amendments to the Elements to be taken into account when considering the safe stowage and securing of cargo units and vehicles in ships (resolution A.533(13)), set out in the annex.

2 Member Governments are invited to apply the amendments to resolution A.533(13) and bring them to the attention of shipowners, ship operators, shipmasters and crews and all other parties concerned.

3 Member Governments are invited to bring these Amendments to the attention of all parties concerned, with the aim of applying them in a consistent manner, and to implement them for containerships, the keels of which were laid or which are at a similar stage of construction on or after 1 January 2015.

ANNEX

**AMENDMENTS TO THE ELEMENTS TO BE TAKEN INTO ACCOUNT WHEN
CONSIDERING THE SAFE STOWAGE AND SECURING OF CARGO
UNITS AND VEHICLES IN SHIPS (RESOLUTION A.533(13))**

2 General elements

1 A new paragraph 2.1.3 is added as follows:

“3 safe access and safe places of work are provided for persons engaged in work connected with cargo stowage and securing.”

3 Elements to be considered by the shipowner and shipbuilder

2 A new paragraph 3.1.9 is added as follows:

“.9 safe access, safe place of work, illumination and working conditions for persons engaged in work connected with cargo stowage and securing.”

3 A new paragraph 3.4 is added as follows:

“3.4 Ships which are specifically designed and fitted for the purpose of carrying containers should be provided with a Cargo Safe Access Plan (CSAP) in order to demonstrate that personnel will have safe access for container securing operations.”

4 Elements to be considered by the master

4 A new paragraph 4.1.6 is added as follows:

“.6 where applicable, safe access to be provided in accordance with the CSAP and maintained throughout cargo operations.”

5 Elements to be considered by the shipper, forward agents, road hauliers and stevedores (and, where appropriate, by the port authorities)

5 A new paragraph 5.1.5 is added as follows:

“.5 the CSAP, when applicable, and the lashing plan as required for by the CSM should be provided to the terminal operator in adequate time prior to the arrival of the ships.”

ANNEX 5**DRAFT MSC CIRCULAR****AMENDMENTS TO THE GUIDELINES FOR SECURING ARRANGEMENTS
FOR THE TRANSPORT OF ROAD VEHICLES ON RO-RO SHIPS
(RESOLUTION A.581(14))**

1 The Maritime Safety Committee, at its [eighty-seventh session (12 to 21 May 2010)], having considered the proposal by the Sub-Committee on Dangerous Goods, Solid Cargoes and Containers, at its fourteenth session (21 to 25 September 2009), approved amendments to the Guidelines for securing arrangements for the transport of road vehicles on ro-ro ships (resolution A.581(14)), as amended by MSC/Circ.812, set out in the annex.

2 Member Governments are invited to apply the amendments to resolution A.581(14) and bring them to the attention of shipowners, ship operators, shipmasters and crews and all other parties concerned.

ANNEX

**AMENDMENTS TO THE GUIDELINES FOR SECURING ARRANGEMENTS
FOR THE TRANSPORT OF ROAD VEHICLES ON RO-RO SHIPS
(RESOLUTION A.581(14))**

- 1 The existing paragraph 6.1 is replaced by the following:

“6.1 The maximum securing load (MSL) of lashings should not be less than 100 kN and they should be made of material having suitable elongation characteristics. However, for vehicles not exceeding 15 tonnes (GVM), lashings with lower MSL values may be used. The required number and MSL of lashings may be calculated according to annex 13 to the Code of Safe Practice for Cargo Stowage and Securing (CSS Code), taking into consideration the criteria mentioned in paragraph 1.5.1 of the Code.”

ANNEX 6

DRAFT MSC RESOLUTION

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

THE MARITIME SAFETY COMMITTEE,

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

RECALLING ALSO resolution A.862(20), by which the Assembly, at its twentieth session, adopted the Code of Practice for the Safe Loading and Unloading of Bulk Carriers (BLU Code), as further amended by resolution MSC.238(82);

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

RECOGNIZING the need to amend the Code in view of the envisaged mandatory application of the International Maritime Solid Bulk Cargoes Code,

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

1. ADOPTS the amendments to the Code of Practice for the Safe Loading and Unloading of Bulk Carriers, the text of which is set out in the annex to the present resolution;
2. DETERMINES that the above-said amendments should become effective on 1 January 2011.

ANNEX

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

Section 1 Definitions

The following new paragraphs are inserted after existing paragraphs 1.1, 1.4 and 1.7:

1

1.2 “*Bulk Cargo Shipping Name (BCSN)* identifies a bulk cargo during transport by sea. When a cargo is listed in the IMSBC Code, the Bulk Cargo Shipping Name of the cargo is identified by capital letters in the individual schedules or in the index. When the cargo is a dangerous good, as defined in the International Maritime Dangerous Goods (IMDG) Code, as defined in regulation VII/1.1 of the SOLAS Convention, the Proper Shipping Name of that cargo is the Bulk Cargo Shipping Name.

1.6 *IMSBC Code* means the International Maritime Solid Bulk Cargoes Code as defined in regulation VI/1.1 of the SOLAS Convention.

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

and renumbered paragraphs 1.2,1.3 and 1.4 as paragraphs 1.3, 1.4 and 1.5; paragraphs 1.5, 1.6 and 1.7 as paragraphs 1.7, 1.8 and 1.9 and paragraphs 1.8, 1.9, 1.10 and 1.11 as paragraphs 1.11, 1.12, 1.13 and 1.14.

Section 3 Procedures between ship and shore prior to the ship’s arrival

2 The existing subparagraph .3 of paragraph 3.2.2 is replaced by the following:

.3 “nature and stowage of cargo already on board and, when solid bulk cargoes are on board, the Bulk Cargo Shipping Name (BCSN), the IMSBC Code Class and UN Number, when applicable.”

Section 5 Cargo loading and handling of ballast

3 In paragraph 5.1.4, the words “IMO Code of Safe Practice for Solid Bulk Cargoes (BC Code)” are replaced by the words “IMSBC Code”;

Appendix 4
Guidelines for completing ship/shore safety check list

- 4 In paragraph 12, replace the words “IMO BC Code” by the words “IMSBC Code”;
- 5 In paragraph 17, replace the words “BC Code” with “IMSBC Code”; and

Appendix 5
Form for cargo information
(recommended layout)

- 6 Replace the recommended form for cargo information with recommended form in section 4.2.3 of the IMSBC Code.

ANNEX 7

DRAFT MSC CIRCULAR

**AMENDMENTS TO THE MANUAL ON LOADING AND UNLOADING OF SOLID
BULK CARGOES FOR TERMINAL REPRESENTATIVES**

1 The Maritime Safety Committee, at its [eighty-seventh session (12 to 21 May 2010)], having considered a proposal by the Sub-Committee on Dangerous Goods, Solid Cargoes and Containers, at its fourteenth session, approved the Amendments to the Manual on Loading and Unloading of Solid Bulk Cargoes for Terminal Representatives (MSC/Circ.1160), set out in the annex.

2 Member Governments are invited to bring the annexed amendments to the attention of the parties concerned.

ANNEX

AMENDMENTS TO THE MANUAL ON LOADING AND UNLOADING OF SOLID BULK CARGOES FOR TERMINAL REPRESENTATIVES (MSC/CIRC.1160)

FOREWORD

- 1 Revise paragraph 1 as follows:

“In response to the continuing loss of ships carrying solid bulk cargoes – sometimes without trace and with heavy loss of life – the Code of Safe Practice for the Safe Loading and Unloading of Bulk Carriers (BLU Code) was developed by IMO as one of a number of measures to enhance the operational and structural safety of bulk carriers. It was adopted as a recommendatory instrument by the International Maritime Organization’s Assembly at its twentieth session in November 1997 by resolution A.862(20) and amended by resolutions MSC.238(82) [and MSC....(87)].

DEFINITIONS

- 2 Delete the definition for “Dry or solid bulk cargo”;

Section 1 – Definitions

- 3 Add/revise the following in the left-hand column (BLU Code column):

- .1 add the following definitions in section 1 in alphabetical order:

“*Bulk Cargo Shipping Name (BCSN)* identifies a bulk cargo during transport by sea. When a cargo is listed in the IMSBC Code, the Bulk Cargo Shipping Name of the cargo is identified by capital letters in the individual schedules or in the index. When the cargo is a dangerous good, as defined in the International Maritime Dangerous Goods (IMDG) Code, as defined in regulation VII/1.1 of the SOLAS Convention, the Proper Shipping Name of that cargo is the Bulk Cargo Shipping Name.”

“*IMSBC Code* means the International Maritime Solid Bulk Cargoes Code as defined in regulation VI/1.1 of the SOLAS Convention.”

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

Section 3 – Procedures between ship and shore prior to ship’s arrival

- 4 Revise the text of paragraph 3.1.4 (right-hand column) to read as follows:

- .2 “The transportable moisture limit and average moisture content in the case of a concentrate or other cargo which may liquefy.”

5 Revise the text of paragraph 3.2.2 (left-hand column) to read as follows:

.3 “nature and stowage of cargo already on board and, when solid bulk cargoes are on board, the Bulk Cargo Shipping Name (BCSN), the IMSBC Code Class and UN Number, when applicable.”

6 Delete footnote corresponding to 3.2.2 (left-hand column);

Section 5 – Cargo loading and handling of ballast

7 In paragraph 5.1.4 (left-hand column), replace “IMO Code of Safe Practice for Solid Bulk Cargoes (BC Code)” with “IMSBC Code”;

Section 6 – Unloading cargo and handling of ballast

8 In paragraph 6.2.2 (right-hand column), replace “BC Code (Code of Safe Practice for Solid Bulk Cargoes) recommendations” with “IMSBC Code”;

ANNEX 4 – TRAINING OF TERMINAL PERSONNEL INVOLVED IN LOADING AND/OR UNLOADING OF BULK CARRIERS

9 In paragraph 1, replace the reference “BC Code (Code of Safe Practice for Solid Bulk Cargoes)” with “the International Maritime Solid Bulk Cargoes (IMSBC) Code”; and

ANNEX 6 – EMERGENCY PROCEDURES

10 In bullet point 8, replace the reference “BC Code” with “IMSBC Code”.

ANNEX 8**DRAFT MSC CIRCULAR****ADDITIONAL CONSIDERATIONS FOR THE SAFE LOADING OF BULK CARRIERS**

1 The Maritime Safety Committee, at its [eighty-seventh (12 to 21 May 2010)] session, noted concerns that the provisions of SOLAS chapter VI, regulation 7 (Loading, unloading and stowage of solid bulk cargoes), and the Code of Practice for the Safe Loading and Unloading of Bulk Carriers (BLU Code) are not being universally applied. In particular, the Committee noted that these concerns may be attributed to the lack of a mutual agreement between terminal representatives and masters on appropriate loading and unloading rates for solid bulk cargoes to prevent over-stressing of the ship's structure. In addition, the Committee noted that an agreed loading/unloading plan between the terminal representative and master is a mandatory requirement under SOLAS regulation VI/7.3.

2 The Committee recognized the need to provide further guidance to supplement the Code of practice for the safe loading and unloading of bulk carriers (BLU Code) and agreed to the Additional considerations for the safe loading of bulk carriers, set out in the annex.

3 The Committee further noted IACS Recommendation No.46, which provides relevant guidance and information on bulk cargo loading and discharging to reduce the likelihood of over-stressing the hull structure for bulk carriers.

4 The Committee urges Member Governments, terminal representatives, shipowners, ship operators, ship masters, ship charterers, shippers, receivers and other relevant parties to consider IACS Recommendation No.46 and the annexed Additional consideration for the safe loading of bulk carriers when developing an agreed loading or unloading plan in accordance with SOLAS regulation VI/7 and the BLU Code (resolution A.862(20), as amended).

ANNEX

ADDITIONAL CONSIDERATIONS FOR THE SAFE LOADING OF BULK CARRIERS

Introduction

1 SOLAS chapter VI, regulation 7.3 requires that before any solid bulk cargo is loaded or unloaded, the master and the terminal representative shall agree on a plan which shall ensure that the permissible forces and moments on the ship are not exceeded during loading and unloading. To facilitate the development of the plan, the Code of Practice for the Safe Loading and Unloading of Bulk Carriers (BLU Code) (resolution A862(2), as amended) is referenced.

2 The BLU Code requires co-operation and mutual agreement between the terminal representative and master with regard to how the ship is to be loaded and unloaded. The basic requirement of the Code is an agreed plan detailing the loading, unloading, ballasting and de-ballasting sequences. The preparation of a plan and maintaining control of the loading and unloading process in accordance with the plan and the BLU Code is fundamental to the safe loading of dry bulk cargoes.

3 The BLU Code also advises that charterers and shippers should allocate ships to terminals at which the ship will be capable of safely loading or unloading. Ships should be maintained in a sound, seaworthy condition and be free of defects that may prejudice the ships' safe loading, unloading or navigation. Terminal equipment should be properly certified, maintained and operated by duly qualified and, if appropriate, certificated personnel. All personnel, ship and terminal, should be trained in all aspects of safe loading and unloading of bulk carriers, commensurate with their responsibilities; including knowledge of the adverse effect that failure to comply with the agreed loading/unloading plan may have on the safety of the ship.

4 To supplement the BLU Code, guidance for terminal representatives and others involved in the handling of solid bulk cargoes is given in the Manual on Loading and Unloading of Solid Bulk Cargoes for Terminal Representatives (MSC/Circ.1160, as amended).

5 This document is intended to provide further guidance for Member Governments, terminal representatives, shipowners, ship operators, ship masters, ship charterers, shippers, receivers and other relevant parties in the loading of bulk cargoes with the aim of supporting the safe operation of ships and terminals.

Time taken for loading

6 The total time to load and the nominal loading rate must be agreed to in advance of loading and must take into account the safe operational limits of the ship and the terminal. This agreement must be a part of the loading plan required under SOLAS, regulation VI/7.3, and should also be in line with the provisions of the BLU Code.

7 While a terminal may have a high nominal loading rate (the pour rate that can be achieved by the loading equipment), the total time taken for loading will also be influenced by the steps required to safely load a ship in order to keep the structural stresses within permissible limits.

Arrival condition

8 Arrival in port in a very lightly ballasted state should be avoided as such conditions can have detrimental consequences on manoeuvrability and structural strength. Manoeuvrability can be significantly affected by a large trim associated with a very light ballast condition, for example: increasing bodily drift and difficulty in swinging the ship in windy conditions, decreasing turning performance and increasing difficulty in maintaining the ship's course and position under the actions of wind and currents. In terms of hull structures, loading cargo in a shallow draught condition can impose high stresses in the double bottom, cross deck and transverse bulkhead structures if the cargo in the holds is not adequately supported by the buoyancy up thrust.

9 In developing the loading plan, and determining the arrival condition, consideration should be given to manoeuvrability issues and local loading criteria in the loading manual.

Loading sequences

10 The loading sequences must be agreed to in advance of loading and must take into account the safe operational limits of the ship and the terminal. This agreement must be a part of the loading plan required under SOLAS regulation VI/7.3, and should also be in line with the provisions of the BLU Code.

11 In developing loading sequences it should be noted that in general the stress range imposed on the ship can be reduced by increasing the number of pours.

12 It is recommended that the loading sequences consist of a minimum of two pours per hold plus two trim pours. When calculating the stresses at each step consideration may be given to using a margin (i.e. using less than 100% of the permissible limit) to allow for potential over-runs or decoupling of ballast synchronization; providing time to stop loading operations, and subsequently take corrective action, while remaining within permissible limits.

During loading

13 Ballast operations need to be synchronized with loading operations as laid down and agreed in the loading plan required under SOLAS regulation VI/7.3. Ballast and loading operations should be carried out in a controlled manner in accordance with the loading plan and the provisions of BLU Code.

14 If at any time during loading the safe operational limits of the ship are exceeded, or likely to become so if the loading continues, the ship master has the right to suspend loading operations in order to take corrective actions (see SOLAS regulation VI/7.7).

Consequences of failure to apply BLU Code

15 Exceeding the permissible limits specified in the ship's approved loading manual will lead to over-stressing of the ship's structure and may result in catastrophic failure of the hull structure.

16 It is important to be aware that over-stressing of local structural members can occur even when the hull girder still water shear forces and bending moments are within their permissible limits. In this regard particular attention should be given to double bottom loading utilizing local loading diagrams in the loading manual.

17 If time for ensuring the cargo in each hold is trimmed (evenly distributed) is not included in the loading plan there is an increased risk of asymmetric loading. Asymmetric loading in the fore-aft direction can increase the lateral cargo pressure acting on the transverse bulkhead and increase the loads carried by the transverse bulkhead structure and the magnitude of transverse compressive stresses in the cross deck. Transverse asymmetric loading will introduce torsional loads leading to warping of the hull section giving rise to shearing and bending of the cross deck structure.

18 For more guidance please refer to IACS Recommendation No.46 Guidance and Information on Bulk Cargo Loading and Discharging to Reduce the Likelihood of Over-stressing the Hull Structure.

References

- 19 International Maritime Organization (IMO), 4 Albert Embankment, London, SE1 7SR, United Kingdom.

The IMO Code of practice for the Safe Loading and Unloading of Bulk Carriers, also known as the “BLU Code”, as adopted by resolution A.862(20) and amended by resolution MSC.238(82).

The IMO Manual on Loading and Unloading of Solid Bulk Cargoes for Terminal Representatives, MSC/Circ.1160, as amended by MSC.1/Circ.1230.

IMO publications are available for purchase from www.imo.org.

- 20 International Association of Classification Societies (IACS), 36 Broadway, London, SW1H 0BH, United Kingdom.

IACS Recommendation No.46: Guidance and Information on Bulk Cargo Loading and Discharging to Reduce the Likelihood of Over-stressing the Hull Structure, available for downloading from www.iacs.org.uk.

ANNEX 9

DRAFT MSC CIRCULAR

RECOMMENDATIONS ON THE SAFE USE OF PESTICIDES IN SHIPS

1 The Maritime Safety Committee, at its sixty-second session (24 to 28 May 1993), approved the Recommendations on the safe use of pesticides in ships (MSC/Circ.612), proposed by the Sub-Committee on Containers and Cargoes at its thirty-second session.

2 The Maritime Safety Committee, at its [eighty-seventh session (12 to 21 May 2010)], approved the revised Recommendations on the safe use of pesticides in ships in pursuance of the requirement of SOLAS regulation VI/4, proposed by the Sub-Committee on Dangerous Goods, Solid Cargoes and Containers at its fourteenth session, as set out in the annex to the present circular.

3 Member Governments are invited to bring the revised Recommendations to the attention of competent authorities, mariners, fumigators, fumigant and pesticide manufacturers and others concerned.

4 The present circular supersedes MSC/Circ.612, as amended by MSC/Circ.689 and MSC/Circ.746.

ANNEX

**RECOMMENDATIONS ON THE SAFE USE OF PESTICIDES IN SHIPS
(Revised in 1993)**

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1 INTRODUCTION

1.1 These Recommendations have been compiled by the Sub-Committee on Dangerous Goods, Solid Cargoes and Containers under the direction of the Maritime Safety Committee of the International Maritime Organization (IMO).

1.2 Insects and rodents on ships are objectionable for various reasons. In addition to aesthetic and nuisance aspects, pests may damage equipment and spread disease and infection, contaminate food in galleys and food stores and cause damage to cargoes that will result in commercial or other losses. Very few pesticides are suitable for use against all kinds of pests that may occur aboard or in different parts of ships. It is therefore necessary to consider the main categories of pesticides individually.

1.2.1 Insects in cargo spaces and cargoes

1.2.1.1 Insect and mite pests of plant and animal products may be carried into the cargo spaces with goods (introduced infestation): they may move from one kind of product to another (cross infestation) and may remain to attack subsequent cargoes (residual infestation). Their control may be required to comply with phytosanitary requirements to prevent spread of pests and for commercial reasons to prevent infestation and contamination of, or damage to cargoes of human and animal food.* In severe cases of infestation of bulk cargoes such as cereals, excessive heating may occur.

1.2.2 Rodents

1.2.2.1 Rodents should be controlled not only because of the damage they may do to cargo or the ship's equipment, but also, as required by the International Health Regulations, to prevent the spread of disease.

1.3 The following sections provide guidance to shipmasters in the use of pesticides** with a view to safety of personnel and to avoidance of excessive residues of toxic agents in human and animal food. They cover pesticides used for control of insect*** and rodent pests in empty and loaded cargo spaces, in crew and passenger accommodation and in food stores. Account has been taken of existing recommendations of the World Health Organization (WHO), the International Labour Organization (ILO), and the Food and Agriculture Organization (FAO) of the United Nations, in regard to pesticide residues and occupational safety.

2 PREVENTION OF INFESTATION

2.1 Maintenance and sanitation

2.1.1 Ship cargo spaces, tank top ceilings and other parts of the ship should be kept in a good state of repair to avoid infestation. Many ports of the world have rules and by-laws dealing specifically with the maintenance of ships intended to carry grain cargoes; for example, boards and ceilings should be completely grain tight.

* References to human and animal food include both raw and processed material.

** The word "pesticide" as used throughout the text means insecticides, fumigants and rodenticides. Examples of some commonly used pesticides are listed in the annex.

*** The word "insect" as used throughout the text includes mites.

2.1.2 Cleanliness, or good housekeeping, is as important a means of controlling pests on a ship as it is in a home, warehouse, mill or factory. Since insect pests on ships become established and multiply in debris, much can be done to prevent their increase by simple, thorough cleaning. Box beams and stiffeners, for example, become filled with debris during discharge of cargo and unless kept clean can become a source of heavy infestation. It is important to remove thoroughly all cargo residues from deckhead frames and longitudinal deck girders at the time of discharge, preferably when the cargo level is suitable for convenient cleaning. Where available, industrial vacuum cleaners are of value for the cleaning of cargo spaces and fittings.

2.1.3 The material collected during cleaning should be disposed of, or treated, immediately so that the insects cannot escape and spread to other parts of the ship or elsewhere. In port it may be burnt or treated with a pesticide, but in many countries such material may only be landed under phytosanitary supervision. Where destruction ashore is not practicable, the sweepings should be jettisoned well out to sea. If any part of the ship is being fumigated the material may be left exposed the gas.

2.2 Main sites of infestation

2.2.1 Tank top ceiling: If, as often happens, cracks appear between the ceiling boards, food material may be forced down into the underlying space and serve as a focus of infestation for an indefinite period. Insects bred in this space can readily move out to attack food cargoes and establish their progeny in them.

2.2.2 Tween-deck centre lines, wooden feeders and bins are often left in place for several voyages and because of their construction are frequent sources of infestation. After unloading a grain cargo, burlap and battens covering the narrow spaces between the planks should be removed and discarded before the holds are cleaned or washed down. These coverings should be replaced by new material in preparation for the next cargo.

2.2.3 Transverse beams and longitudinal deck girders which support the decks and hatch openings may have an L-shaped angle-bar construction. Such girders provide ledges where grain may lodge when bulk cargoes are unloaded. The ledges are often in inaccessible places overlooked during cleaning operations.

2.2.4 Insulated bulkheads near engine-rooms: When the hold side of an engine-room bulkhead is insulated with a wooden sheathing, the air space and the cracks between the boards often become filled with grain and other material. Sometimes the air space is filled with insulating material which may become heavily infested and serves as a place for insect breeding. Temporary wooden bulkheads also provide an ideal place for insect breeding, especially under moist conditions, such as when green lumber is used.

2.2.5 Cargo battens: The crevices at the sparring cleats are ideal places for material to lodge and for insects to hide.

2.2.6 Bilges: Insects in accumulations of food material are often found in these spaces.

2.2.7 Electrical conduit casings; Sometimes the sheet-metal covering is damaged by general cargo and when bulk grain is loaded later, the casings may become completely filled. This residual grain has often been found to be heavily infested. Casings that are damaged should be

repaired immediately or, where possible, they should be replaced with steel strapping, which can be cleaned more easily.

2.2.8 Other places where material accumulates and where insects breed and hide include:

The area underneath burlap, which is used to cover limber boards and sometimes to cover tank top ceilings.

Boxing around pipes, especially if it is broken.

Corners, where old cereal material is often found.

Crevices at plate landings, frames and chocks.

Wooden coverings of manholes or wells leading to double-bottom tanks or other places.

Cracks in the wooden ceiling protecting the propeller shaft tunnel.

Beneath rusty scale and old paint on the inside of hull plates.

Shifting boards.

Dunnage material, empty bags and used separation cloths.

Inside lockers.

3 CHEMICAL CONTROL OF INSECT INFESTATION

3.1 Methods of chemical disinfestations

3.1.1 Types of pesticides and methods of insect control

3.1.1.1 To avoid insect populations becoming firmly established in cargo spaces and other parts of a ship, it is necessary to use some form of chemical toxicant for control. The materials available may be divided conveniently into two classes: contact insecticides and fumigants. The choice of agent and method of application depend on the type of commodity, the extent and location of the infestation, the importance and habits of the insects found, and the climatic and other conditions. Recommended treatments are altered or modified from time to time in accordance with new developments.

3.1.1.2 The success of chemical treatments does not lie wholly in the pesticidal activity of the agents used. In addition, an appreciation of the requirements and limitations of the different available methods is required. Crew members can carry out small-scale or "spot treatments" if they adhere to the manufacturer's instructions and take care to cover the whole area of infestation. However, extensive or hazardous treatments including fumigation and spraying near human and animal food should be placed in the hands of professional operators, who should inform the master of the identity of the active ingredients used, the hazards involved and the precautions to be taken.

3.1.2 Contact insecticides

3.1.2.1 Space treatments – insecticides may be discharged into the air as fine particles of liquid or solid. There are a number of types of equipment for producing and distributing such particles. This method of treatment kills flying insects and deals with superficial infestation where exposed insects come into contact with the particles, whilst there may be limited residual pesticidal effect on surfaces on which the particles settle.

3.1.2.2 For use in cargo spaces, space sprays and fogs can be produced in several different ways. These include fog generators in which an insecticide in the form of a liquid or coarse spray is vaporized. Such vaporized insecticides may condense into fine particles on reaching cool air. Alternatively, fine particles may be produced mechanically from suitable formulations by dispersing nozzles, venturi systems or centrifugal force. Insecticidal smokes are evolved from generators simply by igniting the material and such generators are a convenient form of application for use by ships' personnel.

3.1.2.3 Tests have shown that these insecticidal smokes and sprays can be very effective against insects moving freely in the open, in spaces such as holds. However, no appreciable penetration or control of insects can be obtained in deep crevices, or between or under deck boards, tank top ceilings and limber boards, places where infestation commonly occurs. Where insects are deep seated, it is usually necessary to use a fumigant.

3.1.2.4 Surface sprays – spraying with a suitable insecticide can also be used to control residual infestation. Within the limitations of the technique this is a convenient way to control insects as it does not require evacuation of spaces not being treated. Various formulations are available:

- .1 emulsifiable concentrates and water-dispersible powder concentrates for dilution with water; and
- .2 oil concentrates for dilution with a suitable carrier oil and, for small-scale use, ready-to-use formulations, usually in a light oil.

3.1.2.5 Hand-operated or mechanically-operated sprayers may be used according to the size of the job to be done. To reach the heights of some ships' holds, power equipment is required which will develop enough pressure to get the spray material where it is needed. Hand sprayers are rarely adequate; "Knapsack" sprayers which develop enough pressure to reach infested areas may be used. Such surface sprays produce a deposit toxic to insects present at the time and also to those that subsequently crawl over or settle on treated surfaces.

3.1.2.6 As with fogging, a disadvantage of spraying is that the insecticide does not kill insects hidden in inaccessible parts of cargo spaces. Insecticidal sprays applied in oil solutions or water emulsions take some time to dry and may be hazardous to persons moving about the ship. No cargo should be loaded until spray deposits have dried.

3.1.2.7 In addition to methods described above, insecticidal lacquers may be painted on to boundary junctures in accommodation and galley areas in accordance with the manufacturers' instructions, to provide control of pests. Hand sprayers and hand-held aerosols may also be effective in these areas.

3.1.2.8 During the application of contact insecticides by any method all personnel not directly involved should be evacuated from the areas being treated for a period of time not less than that recommended by the manufacturer of the specific pesticide used on the label or package itself.

3.1.3 Fumigants

3.1.3.1 Fumigants are used where contact insecticides will not give control. Fumigants act in a gaseous phase even though they may be applied as solid or liquid formulations from which the gas arises. Effective and safe use requires that the space being treated be rendered gas-tight for the period of exposure, which may vary from a few hours to several days, depending on the fumigant type and concentration used, the pests, the commodities treated and the temperature. Additional information is provided on two of the most widely used fumigants, methyl bromide and phosphine (hydrogen phosphide) in annex (D).

3.1.3.2 Since fumigant gases are poisonous to humans and require special equipment and skills in application, they should only be used by specialists and not by the ship's crew.

3.1.3.3 Evacuation of the space under gas treatment is mandatory and in some cases it will be necessary for the whole ship to be evacuated (see 3.1.4 and annex (D)).

3.1.3.4 A "Fumigator-in-charge" should be designated by the Fumigation Company, Government Agency or appropriate authority. He should be able to provide documentation to the master proving his competence and authorization. The master should be provided with written instructions by the Fumigator-in-charge on the type of fumigant used, the hazards involved, and the precautions to be taken, and in view of the highly toxic nature of all commonly used fumigants these should be followed carefully. Such instructions should be written in a language readily understood by the master or his representative.

3.1.4 Fumigation with aeration (ventilation) in port

3.1.4.1 Fumigation and aeration (ventilation) of spaces on board a ship should always be carried out in port (alongside or at anchorage). Ships should not be permitted to leave port until gas-free certification has been received from the fumigator-in-charge.

3.1.4.2 Prior to the application of fumigants to spaces, the crew should be landed and remain ashore until the ship is certified "gas-free", in writing, by the fumigator-in-charge or other authorized person. During this period a watchman should be posted to prevent unauthorized boarding or entry, and warning signs should be prominently displayed at gangways and at entrances to accommodation.

3.1.4.3 The fumigator-in-charge should be retained throughout the fumigation period and until such time as the ship is declared gas-free.

3.1.4.4 At the end of the fumigation period the fumigator will take the necessary action to ensure that the fumigant is dispersed from the space. If crew members are required to assist in such actions, for example in opening hatches, they should be provided with adequate respiratory protection and adhere strictly to instructions given by the fumigator-in-charge.

3.1.4.5 The fumigator-in-charge should notify the master in writing of any spaces determined to be safe for re-occupancy by essential crew members prior to the aeration of the ship.

3.1.4.6 In such circumstances the fumigator-in-charge should monitor throughout the fumigation and aeration periods, spaces to which personnel have been permitted to return. Should the concentration in any such area exceed the occupational exposure limit values set by the flag State regulations or by the regulations of the port State where the fumigation is carried out, crew members should be evacuated from the area until measurements show re-occupancy to be safe.

3.1.4.7 No unauthorized persons should be allowed on board until all parts of the ship have been determined gas-free, warning signs removed and gas-free certificates issued by the fumigator-in-charge.

3.1.4.8 Gas-free certificates should only be issued when tests show that all residual fumigant has been dispersed from empty cargo spaces and adjacent working spaces and any residual fumigant material has been removed.

3.1.4.9 Entry into a space under fumigation should never take place except in the event of an extreme emergency. If entry is imperative the fumigator-in-charge and at least one other person should enter, each wearing adequate protective equipment including respiratory protection appropriate for the fumigant used and safety harness and lifeline. Each lifeline should be tended by a person outside the space, who should be similarly equipped.

3.2 Disinfestation of empty cargo spaces

3.2.1 An empty cargo space may be treated by any of the methods described, excepting the use of insecticidal lacquers. Care should be taken to avoid contamination and taint to subsequent cargoes. Examples of some commonly used pesticides are listed in the annex. (For precautions see 3.1.4.)

3.3 Disinfestation of food stores, galleys, and crew and passenger accommodation

3.3.1 In general only those insecticides suitable for use in cargo spaces should be used in dry food stores in ships. A wider range of insecticides may be needed for treatments in-galleys and in passenger and crew accommodation, especially against pests such as cockroaches, ants, flies and bed-bugs. Examples of some commonly used pesticides are listed in the annex.

3.4 Disinfestation of cargoes and surrounds

3.4.1 The recommendations applicable to the fumigation of loaded or partially loaded cargo holds are contained in MSC.1/Circ.1264.

3.5 Carriage of fumigated freight containers, barges and other cargo transport units on a ship

3.5.1 The recommendations applicable to the fumigation of cargo transport units are contained in MSC.1/Circ.[1265].

4 CONTROL OF RODENT PESTS

4.1 General

4.1.1 With regard to rodent control, ships are subject to the provisions of the WHO's International Health Regulations.

4.1.2 Rodents may be controlled by fumigation, by the use of a bait incorporating a poison which acts within a few minutes (acute poison), or one which acts over a period (chronic poison), or by trapping.

4.2 Fumigation and baiting

4.2.1 Fumigation against rodents is normally done at dosages and periods of exposure much less than those required for insect control. It follows that an insect fumigation also controls rodents in areas that are treated. However, rodent control often requires fumigation of accommodation and working spaces that may not normally be treated for insect control.

4.2.2 Fumigation against rodents alone should be undertaken in port and ventilation completed in port. The precautions in 3.1.4 should be observed.

4.2.3 Methods involving fumigation or the use of acute poisons should be employed only by qualified personnel of pest control servicing firms or appropriate authorities (e.g., Port Health Authorities). Baits containing acute poisons should be collected and disposed of by such personnel when the treatment is completed. Chronic poisons should be used strictly in accordance with the manufacturer's instructions contained on the label or on the package itself.

4.3 Rodents baits (Chronic poisons permitted for use by ship's personnel)

4.3.1 Careless use may cause injury to ship's personnel.

4.3.2 For rodenticides to be efficient, they should be placed where the rodents are moving. Runways are usually detected by evidence of marking, debris and dirt. The use of rodenticides, however, is no substitute for high standards of hygiene and the rodent proofing of equipment whenever possible.

4.3.2.1 Baits should be protected from accidental consumption by humans or domestic animals and from contact with human and animal food.

4.3.2.2 Where practicable, cereal baits should be replaced within 30 days to avoid providing a source of insect infestation.

4.3.3 A record should be kept of the locations in which baits are set, particular care being taken to search for and remove all baits from cargo spaces prior to the loading of bulk foodstuffs and livestock cargoes.

5 REGULATIONS FOR THE USE OF PESTICIDES

5.1 National and international controls on pesticides usage

5.1.1 In many countries the sale and use of pesticides are regulated by governments to ensure safety in application and prevention of contamination of foodstuffs. Among the factors taken into account in such regulations, are the recommendations made by international organizations such as the FAO and the WHO, especially in regard to maximum limits of pesticide residues in food and foodstuffs.

5.1.2 Examples of some commonly used pesticides are listed in the annex. Pesticides should be used strictly in accordance with the manufacturer's instructions as given on the label or package itself. National regulations and requirements vary from one country to another, therefore particular pesticides which may be used for treatment of cargo spaces and accommodation in ships may be limited by the regulations and requirements of:

- .1 the country where the cargo is loaded or treated:
- .2 the country of destination of the cargo, especially in regard to pesticide residues in foodstuffs; and
- .3 the country of registration of the ship.

5.1.3 Ships' masters should ensure that they have the necessary knowledge of the above regulations and requirements.

6 SAFETY PRECAUTIONS – GENERAL

6.1 Pesticide materials

6.1.1 Pesticides are often at least as poisonous to humans as to the pests against which they are used. The instructions given on the label or package itself, particularly those relating to safety and disposal of residual material, should be strictly followed.

6.1.2 Pesticides should be stored in strict compliance with national regulations and requirements or the manufacturers' instructions.

6.1.3 Smoking, eating or drinking while using pesticides should always be avoided.

6.1.4 Empty pesticide receptacles and packaging should never be re-used.

6.1.5 Hands should always be washed after applying pesticides.

6.2 Space and surface spraying (see also 3.1.2 above)

6.2.1 When spraying is being carried out by professional operators they are responsible for taking the necessary safety precautions. If operations are carried out by the crew, the master should ensure that the following safeguards are observed, both in the preparation and the application of the pesticides:

- .1 wear protective clothing, gloves, respirators and eye protection appropriate to the pesticides being used;

- .2 do not remove clothes, gloves, respirators or eye protection whilst applying pesticides, even under hot conditions; and
- .3 avoid excessive application and run-off on surfaces and avoid contamination of foodstuff.

6.2.2 If clothing becomes contaminated:

- .1 stop work immediately and leave area;
- .2 remove clothing and footwear;
- .3 take a shower and wash skin thoroughly;
- .4 wash clothing and footwear, and wash skin again; and
- .5 seek medical advice.

6.2.3 After work:

- .1 remove and wash clothing, footwear and other equipment; and
- .2 take a shower using plenty of soap.

6.3 Fumigation

6.3.1 Ships' personnel should not handle fumigants and such operations should be carried out only by qualified operators. Personnel allowed to remain in the vicinity of a fumigation operation for a particular purpose should follow the instructions of the Fumigator-in-charge implicitly.

6.3.2 Aeration of treated spaces on board a ship should be completed and a gas-free certificate should be issued as described in 3.1.4 before personnel are permitted to enter.

6.4 Exposure to pesticides resulting in illness

6.4.1 In the case of exposure to pesticides and subsequent illness, medical advice should be sought immediately. Information on poisoning by specific compounds may be found in the IMO Medical First Aid Guide for use in Accidents Involving Dangerous Goods (MFAG), or on the package (manufacturer's instructions and safety precautions on the label or the package itself).

Annex

PESTICIDES SUITABLE FOR SHIPBOARD USE

The materials listed should be used strictly in accordance with the manufacturers' instructions and safety precautions, given on the label or package itself, especially in respect of flammability and with regard to any further limitations applied by the law of the country of loading, destination or flag of the ship, contracts relating to the cargo, or the shipowner's instructions.

Materials may be used by ship's personnel unless the contrary is indicated. A space-application insecticide may be used in conjunction with a residual insecticide.

It should be especially noted that some materials listed may taint sensitive commodities, e.g., coffee and cocoa, and special care should be taken when stowing these commodities in order to prevent this. The reason for naming purified grades in the list below is to minimize tainting.

A. Contact insecticides in a cargo space:

A1. Fast-acting insecticides for space application, e.g., against flying insects:

Pyrethrins (with or without synergist)

Bioresmethrin

Dichlorvos

A2. Slower-acting residual insecticides for surface application:

Malathion (premium grade)

Bromophos

Carbaryl

Fenitrothion

Chlorpyrifos-methyl

Pirimiphos-methyl

B. Contact insecticides and baits in accommodation:

B1. Fast-acting insecticides for space application, e.g., against flying insects:

Pyrethrins (with or without synergist)

Bioresmethrin

Dichlorvos

B2. Slower-acting residual insecticides:

Malathion (premium grade)

Diazinon

Fenitrothion

Propoxur

Bendiocarb

Permethrin

B3. Insecticides for use against particular pests and as an additional treatment:

Diazinon, as an aerosol spray or lacquer against ants, cockroaches and flies

Dieldrin and Aldrin, in lacquers for control of ants and cockroaches

Methoprene bait, for control of Pharaoh's ants

Chlorpyrifos-ethyl, as a bait and as a lacquer

C. Rodenticides:

C1. Chronic poisons in baits:

Calciferol

Any Anticoagulant in the following two classes:

Hydroxycoumarins (e.g., Warfarin, Fumarin, Coumatetralyl, Difenacoum, Brodifacoum)

Indandiones (e.g., Pival, Diphacinone, Chlorophacinone)

C2. Acute poisons in baits or liquids:

TO BE USED ONLY IN PORT AND BY QUALIFIED OPERATORS

Barium fluoroacetate

Fluoroacetamide

Sodium fluoroacetate

Zinc phosphide

D. FUMIGANTS

TO BE APPLIED ONLY BY QUALIFIED OPERATORS

Additional information on methyl bromide and phosphine (hydrogen phosphide) to be read in conjunction with 3.1.3.

Methyl bromide

Methyl bromide is used in situations where a rapid treatment of spaces or commodities is required. Fumigation with methyl bromide should be **permitted only when the ship is in the confines of a port** (either at anchor or alongside) and to disinfest the spaces after the crew members have disembarked (see 3.1.3.3). Prior to re-embarkation of the crew, ventilation of the treated spaces should be completed and a gas-free certificate should be issued as described in 3.1.4 before personnel are permitted to enter.

Phosphine (Hydrogen phosphide)

A variety of phosphine-generating formulations are used for at-berth fumigations and also for in-ship in-transit fumigations. Application methods vary widely and include surface only treatment, probing, perforated tubing laid at the bottom of spaces, recirculation systems and gas-injection systems or their combinations. Ventilation of the treated spaces should be completed and a gas-free certificate should be issued as described in 3.1.4 before personnel are permitted to enter. **All safety recommendations related to the fumigation of cargo in cargo holds under in-ship in-transit fumigation are laid down in MSC.1/Circ.1264.**

D1. Fumigants against insects in empty cargo spaces and against rodents anywhere aboard ship:

Carbon dioxide

Nitrogen

Methyl bromide and carbon dioxide mixture

Methyl bromide

Hydrogen cyanide

Phosphine (Hydrogen phosphide)

D2. Fumigants against insects in loaded or partially loaded cargo spaces and cargo transport units:

Refer to MSC.1/Circ.1264 and MSC.1/Circ.[1265]

CARE IS NEEDED IN SELECTING TYPES AND AMOUNTS OF FUMIGANTS FOR TREATMENT OF PARTICULAR COMMODITIES

Carbon dioxide

Nitrogen

Methyl bromide and carbon dioxide mixture

Methyl bromide

Phosphine (Hydrogen phosphide)

ANNEX 10**DRAFT CSC CIRCULAR****REVISED RECOMMENDATIONS ON HARMONIZED INTERPRETATION AND IMPLEMENTATION OF THE INTERNATIONAL CONVENTION FOR SAFE CONTAINERS, 1972, AS AMENDED**

- 1 The Maritime Safety Committee, at its sixty-second session (24 to 28 May 1993), approved Recommendations on harmonized interpretation and implementation of the International Convention for Safe Containers, 1972, as amended (CSC/Circ.100).
- 2 The Committee, at its seventy-fifth session (15 to 24 May 2002), agreed that information on the implementation of the requirements for material characteristics of the CSC Safety Plates should be circulated to all Contracting Parties to the CSC Convention (CSC/Circ.123).
- 3 The Committee, at its seventy-fifth session (15 to 24 May 2002), approved CSC/Circ.124 on Amendments to the harmonized interpretation and implementation of the International Convention for Safe Containers, 1972, as amended (CSC/Circ.100).
- 4 The Committee, at its eightieth session (11 to 20 May 2005), recognizing the need for guidance to the officer exercising control under the provisions of article VI of the International Convention for Safe Containers, 1972, as amended, approved the Guidance on serious structural deficiencies in containers (CSC/Circ.134).
- 5 The Committee, at its eighty-sixth session (27 May to 5 June 2009), approved CSC/Circ.137 on Amendments to the Guidance on serious structural deficiencies in containers (CSC/Circ.134) (CSC/Circ.137).
- 6 The Sub-Committee on Dangerous Goods, Solid Cargoes and Containers, at its [fourteenth session (21 to 25 September 2009)] reviewed the aforementioned circulars, in order to remove ambiguities on the maintenance and examination, and control requirements for containers, and prepared a consolidated document.
- 7 The Committee, at its [eighty-seventh session (12 to 21 May 2010)], after having considered the above proposal by the Sub-Committee on Dangerous Goods, Solid Cargoes and Containers, at its [fourteenth session], approved the Revised Recommendations on harmonized interpretation and implementation of the International Convention for Safe Containers, 1972, as amended, as set out in the annex.
- 8 Contracting Parties to the International Convention for Safe Containers, 1972, as amended, are invited to bring this Revised Recommendation to the attention of all parties concerned.
- 9 This circular supersedes CSC/Circ.100, CSC/Circ.123, CSC/Circ.124, CSC/Circ.134 and CSC/Circ.137.

ANNEX

REVISED RECOMMENDATIONS ON HARMONIZED INTERPRETATION AND IMPLEMENTATION OF THE INTERNATIONAL CONVENTION FOR SAFE CONTAINERS, 1972, AS AMENDED

1 GENERAL

The various points concerning harmonized interpretation and implementation of the International Convention for Safe Containers (CSC), 1972, as amended on which consensus has been reached are given below.

2 DEFINITIONS (article II, paragraphs 8 to 10)

2.1 *New container and existing container.* Where necessary, individual Administrations should determine the date on which the construction of a container shall be deemed to have commenced for purposes of determining whether a container should be considered as “new” or as “existing”.

2.2 *Owner,* for the purpose of these Revised Recommendations also includes the owner’s local representative.

2.3 For the purposes of these Revised Recommendations, the following definitions are used:

.1 *depot* means a repair or storage facility or location; and

.2 *structurally sensitive components* means those container components that are significant in allowing the container to be safely used in transportation; they are listed under paragraph 10.4 below and shown in figures 1 to 5.

3 APPLICATION (article III, paragraph 1)

3.1 Swap bodies/demountables

3.1.1 It is agreed that the CSC does not have to be applied to containers known as swap bodies/demountables and designed and used for carriage by road only or by rail and road only and which are without stacking capability and top lift facilities.

3.1.2 It is also agreed that CSC does not have to be applied to such swap bodies/demountables transported by sea on condition that they are mounted on a road vehicle or rail wagon. However, CSC does apply to swap bodies/demountables used in transoceanic services.

3.2 Offshore containers

It is agreed that the CSC does not necessarily apply to offshore containers that are handled in open seas. Offshore containers are subject to different design, handling and testing parameters as determined by the Administration. None the less offshore containers may be approved under the provisions of the CSC provided the containers meet all applicable provisions and requirements of the Convention*.

* Refer to Guidelines for the approval of offshore containers handled in open seas (MSC/Circ.860).

3.3 Ship's gear carriers and bins

3.3.1 It is agreed that the CSC does not necessarily apply to ship's gear carriers and bins, as skeletal platform based containers with fixed end posts and associated storage bins used for the storage of twist-locks, lashing bars, etc., are not used for international transport as defined by this Convention and so are not containers as defined. However, these specialist containers are carried aboard container and other ships and are handled in the same way as all other containers, and therefore present the same risks during loading and discharging from the ship.

3.3.2 Consequently, it is recommended that these units should be included in a maintenance and examination scheme and subject to periodic inspections.

4 ENTRY INTO FORCE (articles III and VIII)

All containers should be inspected and affixed with Safety Approval Plates by the Administration of the Contracting Party not later than five years from the date of entry into force of the Convention for that Party.

5 TESTING, INSPECTION AND APPROVAL (article IV, paragraphs 1 and 2): SELECTION OF ORGANIZATIONS ENTRUSTED TO CARRY OUT THESE FUNCTIONS

Administrations will require a basic description of the organizations to be entrusted with testing, inspection and approval functions, together with evidence of their technical capability to carry this out, and will have to satisfy themselves as to the financial well-being of such organizations. The Administrations will, furthermore, have to satisfy themselves that the organizations are free from undue influence by any container owner, operator, manufacturer, lessor, repairer and other concerned party who may have a vested interest in obtaining container approval.

6 APPROVAL OF CONTAINERS FOR FOREIGN OWNERS OR MANUFACTURERS (article IV, paragraph 3) AND RECIPROCITY

6.1 Where possible, Contracting Parties should make every effort to provide facilities or means to grant approvals to foreign container owners or manufacturers seeking their approval of containers in accordance with the provisions of the Convention.

6.2 Approval of containers would be facilitated if classification societies or other organizations approved by one Contracting Party could be authorized to act for other contracting Parties under arrangements acceptable to the parties involved.

7 MAINTENANCE AND STRUCTURAL MODIFICATIONS (article IV)

7.1 Development of detailed guidelines on standards of maintenance will create an unnecessary burden for Administrations attempting to implement the Convention as well as for owners. However, in order to ensure uniformity in the inspection of containers and their ongoing operational safety, the Contracting Party concerned should ensure the following elements are covered in each prescribed periodic or approved continuous examination programme:

- .1 methods, scope and criteria to be used during examinations;
- .2 frequency of examinations;

- .3 qualifications of personnel to carry out examinations;
- .4 system of keeping records and documents (see section 12 below);
- .5 a system for recording and updating the identification numbers for all containers covered by the appropriate examination scheme;
- .6 methods and systems for maintenance criteria that addresses the design characteristics of the specific containers;
- .7 provisions for maintaining leased containers if different than those used for owned containers; and
- .8 conditions and procedures for adding containers into an already approved programme.

7.2 All prescribed periodic or approved continuous examination programmes should be subject to a period of validity of the approval and shall be reviewed by the Administration not later than 10 years after approval or re-approval to ensure their continued viability.

7.3 Administrations should periodically evaluate, by audits or other equivalent means, that the provisions of the approved programme are being fully followed. Such evaluations should occur as determined by the Administration, but at least once every five years.

7.4 The interpretation of the provision “the owner of the container shall be responsible for maintaining it in safe condition” (Annex I, regulation 2, paragraph 1 of the Convention) should be such that the owner of a container (as defined in article II, paragraph 10 of the Convention) should be held accountable to the Government of any territory on which the container is operated for the safe condition of that container.

7.5 The owner should be bound by the existing safety laws of such a territory and such law or regulation as may implement the control requirements of article VI of the Convention. Nevertheless the methods by which owners achieve, under the provisions of article IV, the safe condition of their containers, that is the appropriate combination of planned maintenance, procedures for refurbishment, refit and repair and the selection of organizations to perform this work, should be their own responsibility. If there is clear evidence for believing that an owner is repeatedly failing to achieve a satisfactory level of safety, the government of the territory in which the owner has his Head Office of domicile should be requested to ensure that appropriate corrective action is taken.

7.6 The responsibility of the owner to maintain his container in a safe condition includes the responsibility to ensure that any modifications carried out on an approved container do not adversely affect or render inaccurate the information recorded on the Safety Approval Plate. Under the provisions of Annex I, chapter V, regulation 11, the owner of a container which has been modified in a manner resulting in structural changes shall notify the Administration or an approved organization duly authorized by it of those changes. The Administration or authorized organization may determine whether the results of the original tests conducted in accordance with Annex II for the initial container approval remain valid for the modified container.

7.7 If an owner removes a container from service and it no longer requires to comply with the Convention or does not maintain that container in accordance with the provisions of the Convention, or makes structural modifications without following the procedures in paragraph 7.6 above, the owner must remove the Safety Approval Plate.

8 WITHDRAWAL OF APPROVAL (article IV, paragraph 5)

8.1 With regard to withdrawal of approval, the *Administration concerned* should be considered as the Administration that issued the approval. While any Contracting Party may exercise control over container movement pursuant to article VI, only the Administration that approved the container has the right to withdraw its approval. When approval has been withdrawn, the Administration concerned should require the removal of the Safety Approval Plate.

9 ACCEPTANCE OF APPROVALS (article V)

9.1 Records of approved Continuous Examination Programmes

Administrations should maintain a list of approved Continuous Examination Programmes (ACEP) and make the list publicly available.

10 CONTROL (article VI)

10.1 General

10.1.1 This section concerns the control of containers under the Convention and does not address maintenance and examination issues.

10.1.2 For the purposes of effecting control (as envisaged in article VI of the Convention) Contracting Parties should only appoint authorized control officers of government bodies. Article VI requires that such control should be limited to verifying that the container carries a valid Safety Approval Plate, and an ACEP or a valid Next Examination Date (NED) marking, unless there is significant evidence for believing that the condition of the container is such as to create an obvious risk to safety.

10.2 Training of authorized control officers

The Contracting Party exercising control should ensure that authorized control officers have received the necessary training. This training should involve both theoretical and practical instruction.

10.3 Unsafe containers

10.3.1 Control officers who find a container that is in a condition that creates an obvious risk to safety should stop the container until it can be ensured that it is in a safe condition to continue in service.

10.3.2 All containers with serious structural deficiencies in structurally sensitive components (see section 10.4) should be considered to be in a condition that creates an obvious risk to safety.

10.3.3 Control officers should notify the container owner whenever a container is placed under control.

10.3.4 Control officers may permit the onward movement of a container that has been stopped to its ultimate destination providing that it is not lifted from its current means of transport.

10.3.5 Empty containers with serious structural deficiencies to structurally sensitive components are also deemed to place a person in danger. Empty containers are typically repositioned for repair at an owner-selected depot provided they can be safely moved; this can involve either a domestic or an international move. Any damaged container being so repositioned should be handled and transported with due regard to its structural deficiency. Clear signage should be placed on all sides and the top of the damaged container to indicate it is being moved for repairs only.

10.3.6 Empty containers with severe damage that prevents safe lifting of the container, e.g., damaged, misplaced or missing corner fittings or a failure of the connection between side walls and bottom side rails, should only be moved when carried on a platform-based container, such as a flatrack.

10.3.7 Major damage may be the result of significant impact which could have been caused by improper handling of the container or other containers, or significant movement of the cargo within the container. Therefore, special attention should be given to signs of recent impact damage.

10.3.8 Damage to a container may appear serious without creating an obvious risk to safety. Some damage, such as holes, may infringe customs requirements but may not be structurally significant.

10.4 Structurally sensitive components and definition of serious structural deficiencies for consideration by authorized control officers only

10.4.1 The structurally sensitive components of a container that should be examined for serious deficiencies are the:

- .1 top rail;
- .2 bottom rail;
- .3 header;
- .4 sill;
- .5 corner posts;
- .6 corner and intermediate fittings;
- .7 understructure; and
- .8 locking rods.

10.4.2 The following criteria should be used to make immediate out-of-service determinations by authorized control officers. They should not be used as repair and in-service criteria under a CSC ACEP or a periodic examination scheme. Figure 5 is a flow chart that illustrates the actions to be taken by an authorized control officer.

STRUCTURALLY SENSITIVE COMPONENT	SERIOUS STRUCTURAL DEFICIENCY
Top rail	Local deformation to the rail in excess of 60 mm or separation or cracks or tears in the rail material in excess of 45 mm in length. Note: On some designs of tank containers the top rail is not a structurally significant component.
Bottom rail	Local deformation perpendicular to the rail in excess of 100 mm or separation or cracks or tears in the rail's material in excess of 75 mm in length.
Header	Local deformation to the header in excess of 80 mm or cracks or tears in excess of 80 mm in length.
Sill	Local deformation to the sill in excess of 100 mm or cracks or tears in excess of 100 mm in length.
Corner posts	Local deformation to the post exceeding 50 mm or tears or cracks in excess of 50 mm in length.
Corner and intermediate fittings (Castings)	Missing corner fittings, any through cracks or tears in the fitting, any deformation of the fitting that precludes full engagement of securing or lifting fittings, any deformation of the fitting beyond 5 mm from its original plane, any aperture width greater than 66.0 mm, any aperture length greater than 127.0 mm, any reduction in thickness of the plate containing the top aperture that makes it less than 23.0 mm thick or any weld separation of adjoining components in excess of 50 mm in length.
Understructure	Two or more adjacent cross members missing or detached from the bottom rails. 20% or more of the total number of cross members missing or detached. Note: If onward transportation is permitted, it is essential that detached cross members are precluded from falling free.
Locking rods	One or more inner locking rod are non-functional. Note: Some containers are designed and approved (and so recorded on the CSC Plate) to operate with one door open or removed.

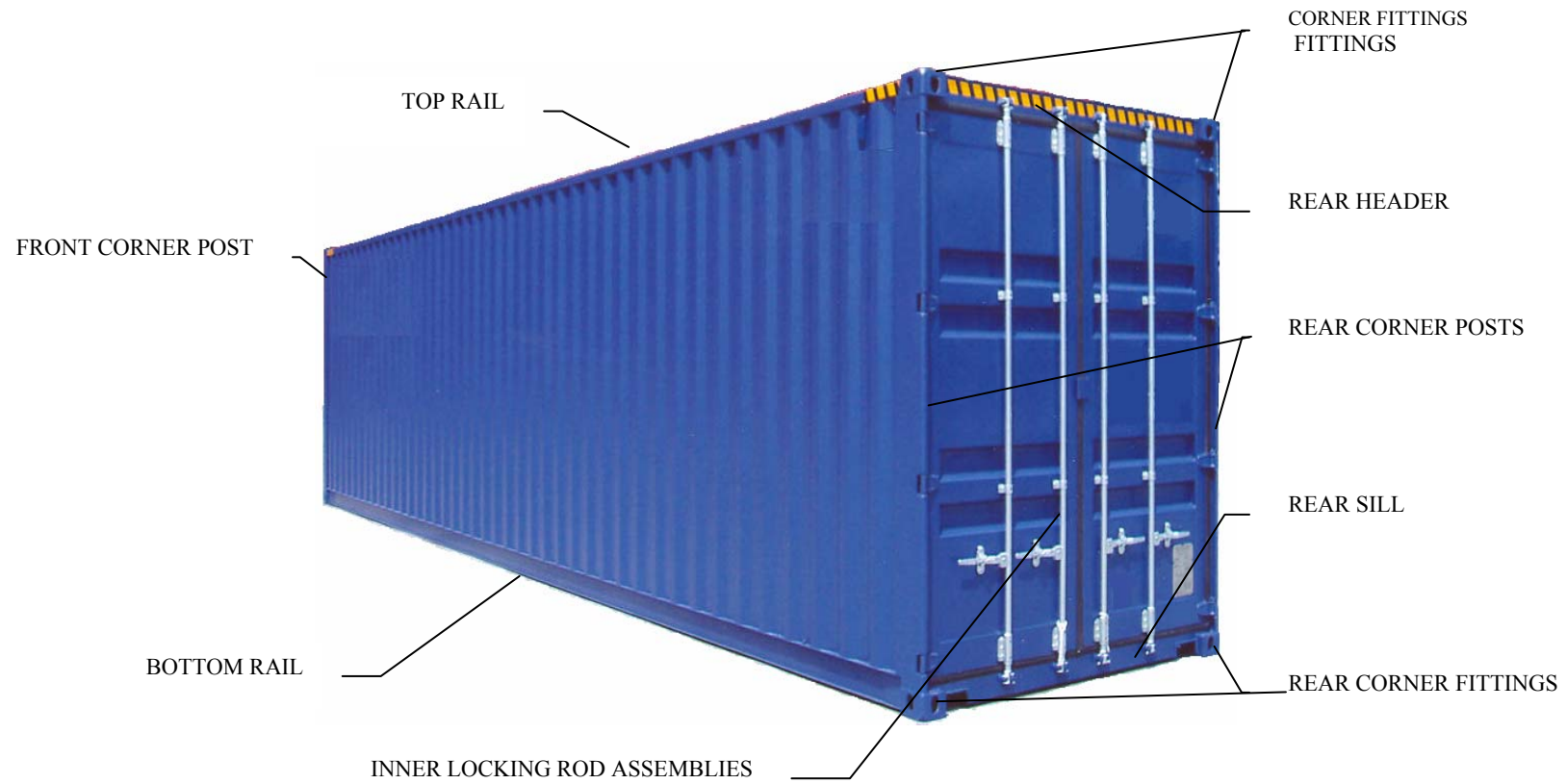


Figure 1

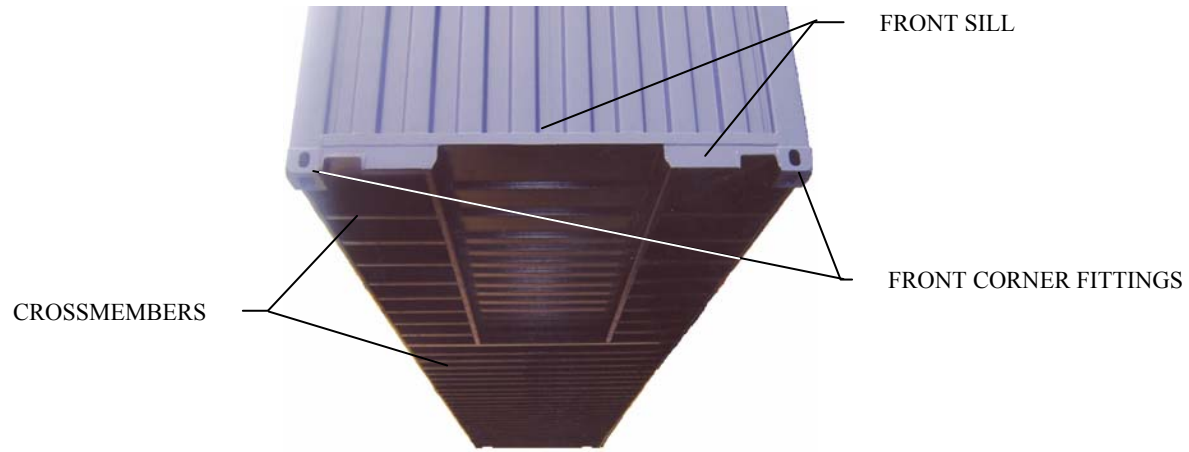


Figure 2

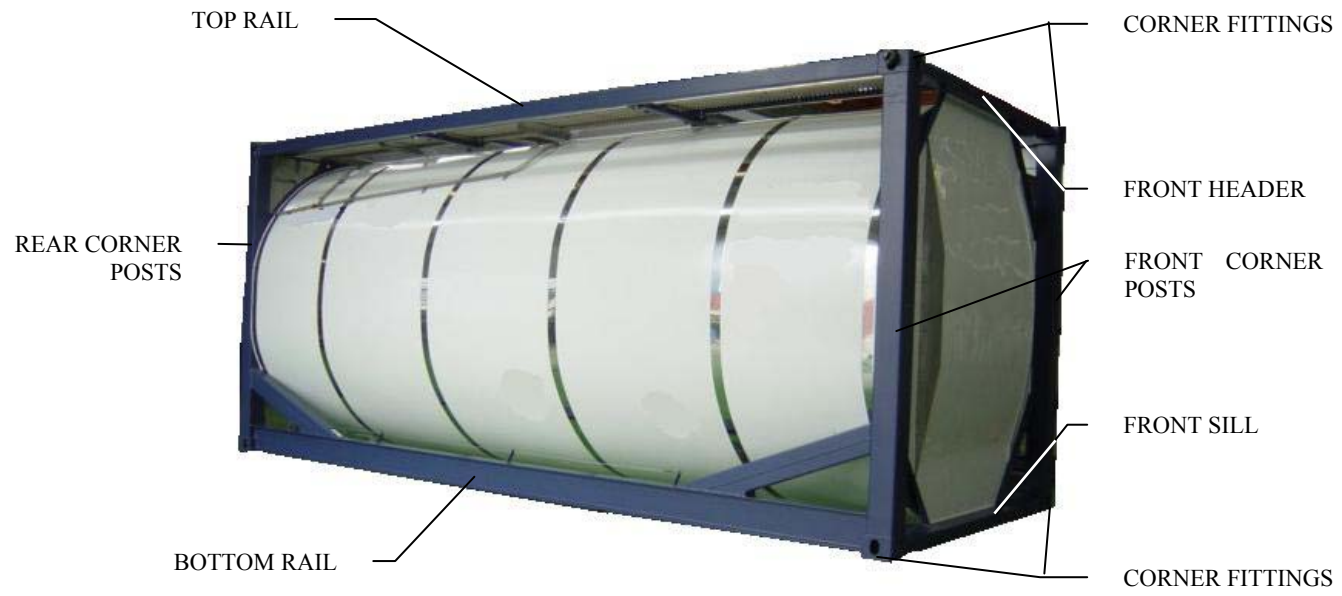


Figure 3



Figure 4

SERIOUS STRUCTURAL DEFICIENCIES IN CONTAINERS

Control flow chart for use by Authorized Control Officers

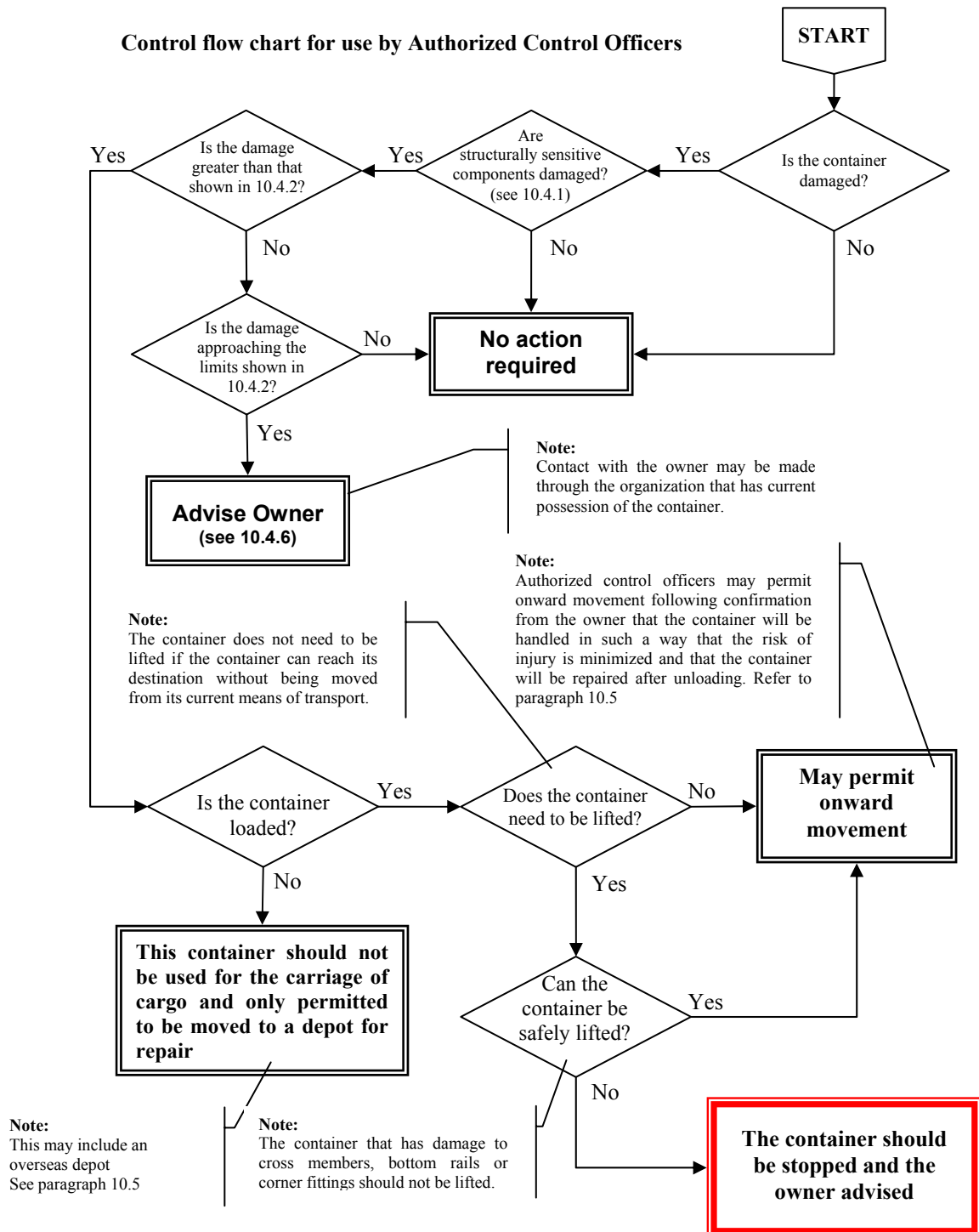


Figure 5

10.4.2 The effect of two or more items of damage in the same structurally sensitive component, even though each is less than that specified in the above table, could be equal to, or greater than, the effect of a single item of damage listed in the table. In such circumstances, the control officer may stop the container and seek further guidance from the Contracting Party.

10.4.3 For tank containers, the attachment of the shell to the container frame should also be examined for any readily visible serious structural deficiency comparable to that specified in the table. If any such serious structural deficiency is found in any of these attachments, the control officer should stop the container.

10.4.4 The end frame locking mechanism of platform containers with folding end frames and the hinge pins about which the end frame rotates are structurally sensitive components and should also be inspected for significant damage. Containers with folding end walls that cannot be locked in the erect position should not be moved with the end walls erect.

10.4.5 The deficiencies listed in paragraph 10.4.1 are not exhaustive for all types of containers or all possible deficiencies or combination of deficiencies.

10.4.6 When an authorized control officer is concerned that a container is found to be approaching the limit of a serious structural deficiency the officer should advise the owner to take precautions as necessary to allow container movement.

10.5 International movement of containers under control

It is recognized that in any of the cases covered by this section the owner may wish to move a container to another territory where the appropriate corrective action can be more conveniently carried out. Control officers may permit such movements, but should take such measures as may be reasonably practicable to ensure that the movement is carried out safely and that the appropriate corrective action is indeed taken. In particular, the control officer permitting such a movement should consider whether it would be necessary to inform the control officer or officers in the other territory or countries through which the container is to be moved.

10.6 Notification concerning unsafe containers of a given approved series

If a considerable number of containers in a given approved series is found to be unsafe as a result of defects which may have existed prior to approval (article VI, paragraph 2), Administrations should notify the Organization as well as the Contracting Party concerned.

10.7 Containers that are not defective but have no Safety Approval Plate or that have an incorrectly completed plate

Containers that have no Safety Approval Plate or an incorrectly completed Safety Approval Plate should be stopped. However, where evidence can be produced either to the effect that such a container has been approved under the terms of the Convention or to the effect that such a container meets the standards of the Convention, the authority exercising control may permit the container to proceed to its destination for unloading, with the proviso that it shall be plated as expeditiously as may be practicable and not reloaded before it has been correctly plated under the Convention.

10.8 Containers that are “out of date”

A container being maintained under a Periodic Examination Scheme (PES) that is found to have marked on or near to its Safety Approval Plate a next maintenance examination date that is in the past should be stopped. However, the competent authority exercising control may permit the container to proceed to its destination for unloading with the proviso that it should be examined and updated as expeditiously as may be practicable and not reloaded before this has been done.

10.9 Containers that are missing their ACEP or NED marking

When there is neither a NED nor an ACEP marking on or near the Safety Approval Plate, the container should be stopped until it can be proven that the container is being operated and maintained under a valid programme. If the container is being operated under an approved ACEP the container should be allowed to continue its journey and the operator should be notified. The missing marking should be applied after unloading the container at the final destination and prior to its next reloading or at its next interchange, whichever is earlier.

10.10 Containers with defects when approved

Where a container appears to have become unsafe as a result of a defect that may have existed when the design of the container was approved, the Contracting Party that detected the defect should inform the Administration responsible for that approval.

11 SAFETY APPROVAL PLATE (regulation 1)

11.1 The following approaches to complying with certain aspects of the data requirements of the Convention, listed in this section, are deemed to be in conformity therewith.

11.2 A single approval number may be assigned to each owner for all existing containers in a single application for approval which could be entered on line 1 of the plate.

11.3 The example given in line 1 of the model Safety Approval Plate (see appendix to Annex I of the Convention) should not be construed to require the inclusion of the date of approval in the approval reference.

11.4 The appendix to Annex I of the Convention allows the use of the owner's ISO alphanumeric identification codes or manufacturer's serial numbers on existing containers. Only the manufacturer's serial number should be used as the identification number (line 3) on the Safety Approval Plate for containers approved on or after [*date of approval of this circular*]. Where the Safety Approval Plate forms part of a larger grouped or consolidated plate (see paragraph 10.9) the manufacturer's serial number may be marked elsewhere on that plate. The owner's ISO alphanumeric identification code may also be shown elsewhere on a consolidated plate.

11.5 Where marking of the end-wall or side-wall strength on the plate is not required (e.g., a container with the end-wall or side-wall strength equal to 0.4P or 0.6P, respectively) a blank space need not be retained on the Safety Approval Plate for such marking but can be used instead to meet other data requirements of the Convention, e.g., subsequent date marks.

11.6 Where end-wall or side-wall strength is required to be marked on the Safety Approval Plate, this should be done as follows:

- in the English language:

END-WALL STRENGTH
SIDE-WALL STRENGTH

- in the French language:

**RÉSISTANCE DE LA PAROI D'EXTRÉMITÉ
RÉSISTANCE DE LA PAROI LATÉRALE**

11.7 In cases where a higher or lower wall strength is to be marked on the Safety Approval Plate, this can be done briefly by referring to the formula related to the payload P.

Example: **SIDE-WALL STRENGTH 0.5P**

11.8 With respect to the material characteristics of the Safety Approval Plate (see appendix to Annex I of the Convention), each Administration, for purposes of approving containers, may define *permanent*, *non-corrosive* and *fireproof* in its own way or simply require that Safety Approval Plates be of a material which it considers meets this definition (e.g., a suitable metal).

11.9 Regulation 1 of Annex I requires that the Safety Approval Plate be affixed adjacent to any approval plate issued for official purposes. To comply with this requirement, when practicable, the CSC Safety Approval Plate may be grouped with the data plates required by other international conventions and national requirements on one base plate. The base plate should be conveniently located on the container.

11.10 For the purposes of this Convention, the word *weight* is considered to be equivalent to the word *mass*, and therefore can be used on the Safety Approval Plate. Beginning [date of approval of this circular], the word **MASS** should replace **WEIGHT** on plates fitted to containers.

12 MAINTENANCE AND EXAMINATION PROCEDURES (regulation 2)

12.1 The Convention allows owners the option of having containers examined at intervals specified in the Convention in accordance with an examination scheme prescribed or approved by the Administration concerned, as set out in regulation 2, paragraph 2, and hereinafter referred to as "PERIODIC EXAMINATION SCHEME", or under a continuous examination programme approved by the Administration concerned, as set out in regulation 2, paragraph 3, and hereinafter referred to as "CONTINUOUS EXAMINATION PROGRAMME".

12.2 Both procedures are intended to ensure that the containers are maintained to the required level of safety and both should be considered equal, provided the Administration is satisfied with the examination scheme used by the owner.

12.3 The owner should be allowed the option of having part of his fleet covered by one examination procedure and the remaining part of his fleet covered by the other procedure, and provision should be made to allow an owner to change the procedure applicable to their containers.

12.4 Elements to be included in the examination

12.4.1 *For containers covered by periodic examination schemes or continuous examination programmes*

12.4.1.1 While Administrations may specify factors to be taken into account in a container examination scheme, it should not be necessary at this time to agree on a specific list of factors or minimum listing of parts of a container which should be included in an examination. However,

each examination should include a detailed visual inspection for defects or other safety-related deficiencies or damage which will render the container unsafe and include examination of all structurally significant components of the container, particularly the corner fittings.

12.4.1.2 It is accepted that a visual examination of the exterior of the container will normally be sufficient. However, an examination of the interior should also be performed if reasonably practicable (e.g., if the container is empty at the time). Furthermore, the top and underside of the container, including the underside of the lower corner fittings, should be examined. This may be done either with the container supported on a skeletal chassis or, if the examiner considers it necessary, after the container has been lifted on to other supports.

12.4.1.3 The examination of a container should be carried out by a person having such knowledge and experience of containers as will enable him to determine whether it has any defect that could place any person in danger.

12.4.1.4 The person performing the external examination should have the authority to require a more detailed examination of a container if the condition of the container appears to warrant such examination. If there is a possibility of serious structural deficiency in structurally sensitive components (see 10.4 above), measuring tools to fully assess the defects that are noted should be used.

12.4.2 *Additional requirements for containers under a continuous examination programme*

12.4.2.1 Under an approved continuous examination programme a container is subject to examinations and inspections during the course of normal operations. These are:

- .1 *thorough examinations*, which are examinations conducted in connection with a major repair, refurbishment, or on-hire/off-hire or depot interchange; and
- .2 *routine operating inspections*, which are frequent inspections performed to detect any damage or deterioration that might necessitate corrective action.

12.4.2.2 Thorough examinations should be carried out in accordance with the requirements of the approved examination programme and care should be taken to ensure that any damaged parts or components have been adequately and safely repaired or replaced. Although Administrations may specify factors to be taken into account during routine operating inspections, normally a visual inspection of the exterior and the underside should be sufficient.

12.4.3 *Container markings for examinations*

12.4.3.1 *Containers under a periodic examination scheme – next examination date (NED)*

12.4.3.1.1 The use of decals should be allowed to indicate the date of the first examination and subsequent re-examination of a container examined at intervals specified in the Convention provided that:

- .1 the relevant date (month and year) is shown in internationally recognizable words or figures on the decals or on the plate itself;
- .2 the date of the first examination for new containers is shown by decals or otherwise on the plate itself as regulation 2.2 of Annex I of the CSC requires; and

- .3 the decals have a white background with lettering that may be coloured in accordance with the year of next examination as follows:

BROWN	2004	2010	2016
BLUE	2005	2011	2017
YELLOW	2006	2012	2018
RED	2007	2013	etc.
BLACK	2008	2014	
GREEN	2009	2015	

12.4.3.2 *Containers under a continuous examination programme*

12.4.3.2.1 A container examined under an approved continuous examination programme should bear a decal showing the letters ACEP and the identification of the Administration which has granted the approval, in a similar manner to that stated in Annex I, appendix 1, paragraph 1. This decal should be placed on or as close as practicable to the Safety Approval Plate.

12.4.4.3 *Containers operated by a lessee*

12.4.4.3.1 Containers marked with an NED but operated by a lessee with an approved continuous examination programme should be re-marked by the fitting of the lessee's ACEP reference decal and removal or covering of the next examination date.

12.4.4.3.2 Containers marked with an ACEP reference but operated by a lessee with a Periodic Examination Scheme (PES) should be re-marked by the removal or covering of the ACEP reference and the fitting of an NED decal following the first examination under the lessee's examination scheme.

12.4.4.4 *For containers built with limited stacking or racking capacity*

Containers tested in accordance with Annex II, chapter 2 (Stacking) with an allowable superimposed static stacking weight less than 192,000 kg for their outer most corner posts, or tested in accordance with Annex II, chapter 4 (Transverse Racking) with forces less than 150 kN, should be conspicuously marked, as required under the relevant ISO standard*.

12.4.5 *Use of decals*

The use of decals for containers under a periodic examination scheme should remain optional and in no way derogate from the relevant provisions of the Convention to which reference is made above. The responsibility for developing and introducing a decal system should remain with the owners.

13 RECORDS OF EXAMINATIONS

13.1 The owner should ensure a system is maintained where examination records are kept, which should include the following:

- .1 the owner's unique serial number of the container;
- .2 the date on which the examination was carried out;

* Refer to current standard ISO 6346, Freight containers – Coding, identification and marking.

- .3 identification of the competent person who carried out the examination;
- .4 the name and location of the organization where the examination was carried out;
- .5 the results of the examination; and
- .6 in the case of a PES, the NED.

13.2 There is no need to standardize the method by which such records should be kept and existing record systems may be accepted. Such records should be auditable and made available within a reasonable time to the Administration on its request. There is no requirement to keep records of routine operating inspections.

14 FREQUENCY OF EXAMINATIONS

14.1 Containers under a periodic examination scheme

14.1.1 The Convention recognizes that it may be necessary to examine containers more frequently than every 30 months when they are subject to frequent handling and transshipment. It should be borne in mind, however, that any significant reduction in the 30-month interval between examinations would create severe examination control problems. It should be noted that where containers are subjected to frequent handling and transshipment they are also liable to be subjected to frequent checking.

14.1.2 Therefore, in determining whether it is acceptable that the interval between examinations under the Convention should be the maximum of 30 months, proper account should be taken of intermediate examinations, having regard to their extent and to the technical competence of the persons by whom they are performed.

14.2 Containers under a continuous examination programme

14.2.1 Containers examined under an approved continuous examination programme are subject to a thorough examination in connection with a major repair, refurbishment or on-hire/off-hire or depot interchange and in no case less than once every 30 months.

15 MODIFICATIONS OF EXISTING CONTAINERS

15.1 Applicants for approval of existing containers may be required to certify that, to the best of their knowledge, any modifications previously carried out do not adversely affect safety or the relevance to those containers of the information presented with the application in accordance with Annex I, regulation 9, paragraph 1(d)(ii) and (iii). Alternatively, applicants may submit details of the modification for consideration.

15.2 The removal of a door of a container to enable “one door operation” is considered to be a modification that may adversely affect the safety of the container. Consequently it requires specific approval by the Contracting Party and appropriate markings on the CSC Plate, which must remain on the container after the door has been removed.

15.3 Containers that have been subjected to a modification should retain the original date of manufacture on the Safety Approval Plate and add an additional line showing the date when the modification was carried out.

16 TEST METHODS AND REQUIREMENTS (Annex II)

Containers tested in accordance with the methods described in the relevant ISO standard* should be deemed to have been fully and sufficiently tested for the purposes of the Convention, except that tank-containers provided with fork-lift pockets should be additionally tested in accordance with Annex II, test 1(B)(i).

17 STACKING TEST (Annex II, chapter 2)

17.1 The following can be used as guidance in interpreting paragraphs 1 and 2 of the stacking test:

For a 9-high stacking of 24-ton (24,000 kg/52,915 lb) containers, the mass on the bottom container would be 8 x 24 tons (24,000 kg/52,915 lb), i.e. 192 tons (192,000 kg/423,320 lb). Thus, in the case of a 24-ton container with 9-high stacking capability, the plate should indicate: **ALLOWABLE STACKING MASS FOR 1.8G: 192,000 kg/423,320 lb.**

17.2 The following may be useful guidance for determining allowable stacking mass:

The allowable stacking mass for 1.8 g may be calculated by assuming a uniform stack loading on the corner post. The stacking test load applied to one corner of the container shall be multiplied by the factor 4/1.8 and the result expressed in appropriate units.

17.3 The following is a useful example of how the allowable stacking mass could be varied, as prescribed in paragraph 1 of the stacking test:

If on a particular journey the maximum vertical acceleration on a container can be reliably and effectively limited to 1.2 g, the allowable stacking mass permitted for that journey would be the allowable stacking mass stamped on the plate multiplied by the ratio of 1.8 to 1.2 (i.e. allowable stacking mass on the plate x 1.8/1.2 = stacking mass permitted for the journey).

18 LONGITUDINAL RESTRAINT TEST (STATIC TEST) (Annex II, chapter 5)

The acceleration of 2 g is to be considered as the usual value for dynamic loads on containers in normal operation when carried by inland modes of transport. The externally applied test forces of 2 R prescribed for the static test for longitudinal restraint, together with the fulfilment of the criteria of the other prescribed tests, are to ensure that the structural strength of a container is sufficient to withstand the stresses resulting from normal operation.

* Refer to current ISO 1496, Series 1 freight containers – Specification and testing.

19 VALIDITY OF APPROVALS

Approvals remain valid if the Contracting Party issuing the approval changes provided the new entity agrees to maintain responsibility for the proper administration of the Convention and the existing approvals. Approvals also remain valid when container ownership changes provided the new owner continues to maintain the container to a standard and under procedures that are at least as effective as those originally approved.

ANNEX 11**PROPOSED AMENDMENTS TO THE ANNEXES TO THE CSC****ANNEX I
REGULATIONS FOR THE TESTING, INSPECTION, APPROVAL AND
MAINTENANCE OF CONTAINERS****Chapter I
Regulations common to all systems of approval****Regulation 1 – Safety Approval Plate**

1 In paragraph 3, a new sentence is added at the end as follows:

“Where the stacking or racking values are less than 192,000 kg or 150 kN, respectively, the container shall be considered as having limited stacking or racking capacity and shall be conspicuously marked, as required under the relevant standards*.”

* Refer to current standard ISO 6346, Freight containers – Coding, identification and marking.

2 After the existing paragraph 3, new paragraphs 4 and 5 are added as follows and the existing paragraph 4 is renumbered as 6:

“4 As a minimum approved programmes should be reviewed once every 10 years to ensure their continued viability. In order to ensure uniformity by all involved in the inspection of containers and their ongoing operational safety, the Contracting Party concerned shall ensure the following elements are covered in each prescribed periodic or approved continuous examination programme:

- .1 methods, scope and criteria to be used during examinations;
- .2 frequency of examinations;
- .3 qualifications of personnel to carry out examinations;
- .4 system of keeping records and documents that will capture:
 - .4.1 the owner’s unique serial number of the container;
 - .4.2 the date on which the examination was carried out;
 - .4.3 identification of the competent person who carried out the examination;

- .4.4 the name and location of the organization where the examination was carried out;
- .4.5 the results of the examination; and
- .4.6 in the case of a Periodic Examination Scheme (PES), the Next Examination Date (NED);
- .5 a system for recording and updating the identification numbers of all containers covered by the appropriate examination scheme;
- .6 methods and systems for maintenance criteria that addresses the design characteristics of the specific containers;
- .7 provisions for maintaining leased containers if different than those used for owned containers; and
- .8 conditions and procedures for adding containers into an already approved programme.

5 The Contracting Party shall carry out periodic audits of approved programmes to ensure compliance with the provisions approved by the Contracting Party. The Contracting Party shall withdraw any approval when the conditions of approval are no longer complied with.”

3 After the renumbered paragraph 6, a new paragraph 7 is added as follows:

“7 Administrations shall make information on approved Continuous Examination Programmes publicly available.”

APPENDIX

4 After the existing paragraph 9, new paragraphs 10 and 11 are added as follows:

“10 One door off stacking strength to be indicated on plate only if the container is approved for one door off operation. The marking shall show: ALLOWABLE STACKING MASS ONE DOOR OFF FOR 1.8 g kg..... lbs. This marking shall be displayed immediately near the racking test value (see line 5).

11 One door off racking strength to be indicated on plate only if the container is approved for one door off operation. The marking shall show: RACKING TEST LOAD VALUE ONE DOOR OFF kg lb. This marking shall be displayed immediately near the stacking test value (see line 6).”

ANNEX II STRUCTURAL SAFETY REQUIREMENTS AND TESTS

Test loads and test procedures

5 A new test for containers being approved for operation with one door removed is added as follows:

“8 ONE DOOR OFF OPERATION

1. Containers with one door removed have a significant reduction in their ability to withstand racking loads and, potentially, a reduction in stacking strength. The removal of a door on a container in operation is considered a modification of the container. Containers must be approved for one door off operation. Such approval will be based on test results as set forth below.
2. On successful completion of the stacking test the container may be rated for the allowable superimposed stacking mass, which should be indicated on the Safety Approval Plate immediately below line 5: ALLOWABLE STACKING MASS FOR 1.8 g (kg and lbs) ONE DOOR OFF.
3. On successful completion of the racking test the racking test load should be indicated on the Safety Approval Plate immediately below line 6: RACKING TEST LOAD VALUE (kg and lbs) ONE DOOR OFF.

TEST LOADINGS AND APPLIED FORCES

TEST PROCEDURES

Stacking

Internal loading:

A uniformly distributed load such that the combined mass of the container and test load is equal to 1.8R.

The test procedures should be as set forth under **2 STACKING**

Externally applied forces:

Such as to subject each of the four corner fittings to a vertical downward force equal to 0.25 x 1.8 x the allowable superimposed static stacking mass.

Transverse Racking

Internal loading:

None.

The test procedures should be as set forth under **4 TRANSVERSE RACKING**

Externally applied forces:

Such as to rack the end structures of the container sideways. The forces shall be equal to those for which the container was designed.”

6 A new annex III is added as follows:

“ANNEX III

Control and Verification

1 Introduction

Article VI of the Convention refers to the control measures that may be taken by Contracting Parties. Such control should be limited to verifying that the container carries a valid Safety Approval Plate, and an ACEP or a valid Next Examination Date (NED) marking, unless there is significant evidence for believing that the condition of the container is such as to create an obvious risk to safety. This Annex provides specifics to enable authorized officers to assess the integrity of structurally sensitive components of containers and to help them decide whether a container is safe to continue in transportation or whether it should be stopped until remedial action has been taken. The criteria given are to be used to make immediate out of service determinations, and should not be used as repair or in-service criteria under a CSC approved continuous examination programme (ACEP) or a periodic examination scheme.

CONTROL MEASURES

Authorized officers should consider the following:

- .1 control should be exercised on those containers that create an obvious risk to safety;
- .2 loaded containers with damages equal to, or in excess of, the criteria set forth below are deemed to place a person in danger. The authorized officer should stop those containers. However, the authorized officer may permit the onward movement of the container, if it is to be moved to its ultimate destination without lifting from its current means of transport;
- .3 empty containers with damages equal to, or in excess of, the criteria set forth below are also deemed to place a person in danger. Empty containers are typically repositioned for repair at an owner-selected depot provided they can be safely moved; this can involve either a domestic or an international move. Any damaged container being repositioned should be handled and transported with due regard to its structural deficiency;
- .4 authorized officers should notify the container owner, lessee or bailee, as appropriate, whenever a container is placed under control;
- .5 the provisions set forth in this Annex are not exhaustive for all types of containers or all possible deficiencies or combination of deficiencies;
- .6 damage to a container may appear serious without creating an obvious risk to safety. Some damage such as holes may infringe customs requirements but may not be structurally significant; and

- .7 major damage may be the result of significant impact which could be caused by improper handling of the container or other containers, or significant movement of the cargo within the container. Therefore, special attention should be given to signs of recent impact damage.

TRAINING OF AUTHORIZED OFFICERS

The Contracting Party exercising control should ensure that authorized officers tasked to carry out these assessments and control measures receive the necessary training. This training should involve both theoretical and practical instruction.

STRUCTURALLY SENSITIVE COMPONENTS AND DEFINITION OF SERIOUS STRUCTURAL DEFICIENCIES IN EACH

The following components are structurally sensitive and should be examined for serious deficiencies.

STRUCTURALLY SENSITIVE COMPONENT	SERIOUS STRUCTURAL DEFICIENCY
Top rail	Local deformation to the rail in excess of 60 mm or separation or cracks or tears in the rail material in excess of 45 mm in length. Note: On some designs of tank containers the top rail is not a structurally significant component.
Bottom rail	Local deformation perpendicular to the rail in excess of 100 mm or separation or cracks or tears in the rail's material in excess of 75 mm in length.
Header	Local deformation to the header in excess of 80 mm or cracks or tears in excess of 80 mm in length.
Sill	Local deformation to the sill in excess of 100 mm or cracks or tears in excess of 100 mm in length.
Corner posts	Local deformation to the post exceeding 50 mm or tears or cracks in excess of 50 mm in length.
Corner and intermediate fittings (Castings)	Missing corner fittings, any through cracks or tears in the fitting, any deformation of the fitting that precludes full engagement of securing or lifting fittings, any deformation of the fitting beyond 5 mm from its original plane, any aperture width greater than 66.0 mm, any aperture length greater than 127.0 mm, any reduction in thickness of the plate containing the top aperture that makes it less than 23.0 mm thick or any weld separation of adjoining components in excess of 50 mm in length.
Understructure	Two or more adjacent cross members missing or detached from the bottom rails. 20% or more of the total number of cross members are missing or detached. Note: If onward transportation is permitted, it is essential that detached cross members are precluded from falling free.
Locking rods	One or more inner locking rod are non-functional. Note: Some containers are designed and approved (and so recorded on the CSC Plate) to operate with one door open or removed.

The effect of two or more incidents of damage in the same structurally sensitive component, even though each is less than in the above table, could be equal to, or greater than, the effect of the single damage noted in the table. In such circumstances, the authorized officer may stop the container and seek further guidance from the Contracting Party.

For tank containers, the attachment of the shell to the container frame shall also be examined for any readily visible serious structural deficiency comparable to that specified in the table. If any such serious structural deficiency is found in any of these attachments, the control officer shall stop the container.

For platform containers with folding end frames, the end frame locking mechanism and the hinge pins about which the end frame rotates are structurally sensitive and shall also be inspected for damage.”

ANNEX 12

PROPOSED AMENDMENT TO SOLAS CHAPTER VII, REGULATION 4

Chapter VII – Carriage of dangerous goods

Part A – Carriage of dangerous goods in packaged form

Regulation 4

Regulation 4 “*Documents*” is replaced by the following:

“Documents

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

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

ANNEX 13**PROPOSED AMENDMENTS TO ANNEX III OF MARPOL**

The text of MARPOL Annex III, as set out in resolution MEPC.156(55), is replaced by the following:

“REGULATIONS FOR THE PREVENTION OF POLLUTION BY HARMFUL SUBSTANCES CARRIED BY SEA IN PACKAGED FORM**Regulation 1***Application*

- 1 Unless expressly provided otherwise, the regulations of this Annex apply to all ships carrying harmful substances in packaged form.
 - .1 For the purpose of this Annex, “harmful substances” are those substances which are identified as marine pollutants in the International Maritime Dangerous Goods Code (IMDG Code)* or which meet the criteria in the Appendix of this Annex.
 - .2 For the purposes of this Annex, “packaged form” is defined as the forms of containment specified for harmful substances in the IMDG Code.
- 2 The carriage of harmful substances is prohibited, except in accordance with the provisions of this Annex.
- 3 To supplement the provisions of this Annex, the Government of each Party to the Convention shall issue, or cause to be issued, detailed requirements on packing, marking, labelling, documentation, stowage, quantity limitations and exceptions for preventing or minimizing pollution of the marine environment by harmful substances.*
- 4 For the purposes of this Annex, empty packagings which have been used previously for the carriage of harmful substances shall themselves be treated as harmful substances unless adequate precautions have been taken to ensure that they contain no residue that is harmful to the marine environment.
- 5 The requirements of this Annex do not apply to ship’s stores and equipment.

Regulation 2*Packing*

Packages shall be adequate to minimize the hazard to the marine environment, having regard to their specific contents.

* Refer to the IMDG Code adopted by the Organization by resolution MSC.122(75), as amended by the Maritime Safety Committee.

Regulation 3

Marking and labelling

- 1 Packages containing a harmful substance, shall be durably marked or labelled to indicate that the substance is a harmful substance in accordance with the relevant provisions of the IMDG Code.
- 2 The method of affixing marks or labels on packages containing a harmful substance shall be in accordance with the relevant provisions of the IMDG Code.

Regulation 4*

Documentation

- 1 Transport information relating to the carriage of harmful substances shall be in accordance with the relevant provisions of the IMDG Code and shall be made available to the person or organization designated by the port State authority.
- 2 Each ship carrying harmful substances shall have a special list, manifest or stowage plan setting forth, in accordance with the relevant provisions of the IMDG Code, the harmful substances on board and the location thereof. A copy of one of these documents shall be made available before departure to the person or organization designated by the port State authority.

Regulation 5

Stowage

Harmful substances shall be properly stowed and secured so as to minimize the hazards to the marine environment without impairing the safety of the ship and persons on board.

Regulation 6

Quantity limitations

Certain harmful substances may, for sound scientific and technical reasons, need to be prohibited for carriage or be limited as to the quantity which may be carried aboard any one ship. In limiting the quantity, due consideration shall be given to size, construction and equipment of the ship, as well as the packaging and the inherent nature of the substances.

Regulation 7

Exceptions

- 1 Jettisoning of harmful substances carried in packaged form shall be prohibited, except where necessary for the purpose of securing the safety of the ship or saving life at sea.
- 2 Subject to the provisions of the present Convention, appropriate measures based on the physical, chemical and biological properties of harmful substances shall be taken to regulate the washing of leakages overboard, provided that compliance with such measures would not impair the safety of the ship and persons on board.

* Reference to “documents” in this regulation does not preclude the use of electronic data processing (EDP) and electronic data interchange (EDI) transmission techniques as an aid to paper documentation.

Regulation 8

Port State control on operational requirements^{*}

- 1 A ship when in a port or an offshore terminal of another Party is subject to inspection by officers duly authorized by such Party concerning operational requirements under this Annex, where there are clear grounds for believing that the master or crew are not familiar with essential shipboard procedures relating to the prevention of pollution by harmful substances.
- 2 In the circumstances given in paragraph 1 of this regulation, the Party shall take such steps as will ensure that the ship shall not sail until the situation has been brought to order in accordance with the requirements of this Annex.
- 3 Procedures relating to the port State control prescribed in article 5 of the present Convention shall apply to this regulation.
- 4 Nothing in this regulation shall be construed to limit the rights and obligations of a Party carrying out control over operational requirements specifically provided for in the present Convention.

^{*} Refer to the Procedures for port State control adopted by the Organization by resolution A.787(19) and amended by resolution A.882(21).

ANNEX

APPENDIX TO ANNEX III

Criteria for the identification of harmful substances in packaged form

For the purposes of this Annex, substances identified by any one of the following criteria are harmful substances* :

(a) Acute (short-term) aquatic hazard

Category: Acute 1

96 hr LC ₅₀ (for fish)	≤ 1 mg/l and/or
48 hr EC ₅₀ (for crustacea)	≤ 1 mg/l and/or
72 or 96 hr ErC ₅₀ (for algae or other aquatic plants)	≤ 1 mg/l

(b) Long-term aquatic hazard

(i) Non-rapidly degradable substances for which there are adequate chronic toxicity data available

Category Chronic 1:

Chronic NOEC or EC _x (for fish)	≤ 0.1 mg/l and/or
Chronic NOEC or EC _x (for crustacea)	≤ 0.1 mg/l and/or
Chronic NOEC or EC _x (for algae or other aquatic plants)	≤ 0.1 mg/l

Category Chronic 2:

Chronic NOEC or EC _x (for fish)	≤ 1 mg/l and/or
Chronic NOEC or EC _x (for crustacea)	≤ 1 mg/l and/or
Chronic NOEC or EC _x (for algae or other aquatic plants)	≤ 1 mg/l

(ii) Rapidly degradable substances for which there are adequate chronic toxicity data available

Category Chronic 1:

Chronic NOEC or EC _x (for fish)	≤ 0.01 mg/l and/or
Chronic NOEC or EC _x (for crustacea)	≤ 0.01 mg/l and/or
Chronic NOEC or EC _x (for algae or other aquatic plants)	≤ 0.01 mg/l

Category Chronic 2:

Chronic NOEC or EC _x (for fish)	≤ 0.1 mg/l and/or
Chronic NOEC or EC _x (for crustacea)	≤ 0.1 mg/l and/or
Chronic NOEC or EC _x (for algae or other aquatic plants)	≤ 0.1 mg/l

* The criteria are based on those developed by the United Nations Globally Harmonized System of Classification and Labelling of Chemicals (GHS), as amended.
For definitions of acronyms or terms used in this appendix, refer to the relevant paragraphs of the IMDG Code.

(iii) Substances for which adequate chronic toxicity data are not available

Category Chronic 1:

96 hr LC₅₀ (for fish) ≤ 1 mg/l and/or

48 hr EC₅₀ (for crustacea) ≤ 1 mg/l and/or

72 or 96 hr ErC₅₀ (for algae or other aquatic plants) ≤ 1 mg/l

and the substance is not rapidly degradable and/or the experimentally determined BCF is ≥ 500 (or, if absent the log K_{ow} ≥ 4).

Category Chronic 2:

96 hr LC₅₀ (for fish) >1 but ≤ 10 mg/l and/or

48 hr EC₅₀ (for crustacea) >1 but ≤ 10 mg/l and/or

72 or 96 hr ErC₅₀ (for algae or other aquatic plants) >1 but ≤ 10 mg/l

and the substance is not rapidly degradable and/or the experimentally determined BCF is ≥ 500 (or, if absent the log K_{ow} ≥ 4).

Additional guidance on the classification process for substances and mixtures is included in the IMDG Code.

ANNEX 14

PROPOSED REVISED WORK PROGRAMME OF THE SUB-COMMITTEE

		Target completion date/number of sessions needed for completion	Reference
1	Harmonization of the IMDG Code with the UN Recommendations on the Transport of Dangerous Goods <i>Strategic direction: 1.3</i> <i>High-level action: 1.3.5</i> <i>Planned output: 1.3.5.1</i>	Continuous	MSC 63/23, paragraph 10.6
2	Reports on incidents involving dangerous goods or marine pollutants in packaged form on board ships or in port areas <i>Strategic direction: 12.3</i> <i>High-level action: 12.3.1</i> <i>Planned output: -</i>	Continuous	CDG 45/22, section 11 and paragraph 20.2; DSC 13/20, section 6
3	Amendments to the IMSBC Code, including evaluation of properties of solid bulk cargoes <i>Strategic direction: 5.2</i> <i>High-level action: 5.2.3</i> <i>Planned output: -</i>	Continuous	BC 34/17, section 3; DSC 13/20, section 4
4	Casualty analysis (coordinated by FSI) <i>Strategic direction: 12.1</i> <i>High-level action: 12.1.2</i> <i>Planned output: 12.1.2.1 to .2</i>	Continuous	MSC 70/23, paragraphs 9.17 and 20.4; DSC 13/20, section 6
H.1	Amendment (35-10)(36-12) to the IMDG Code and supplements <i>Strategic direction: 5.2</i> <i>High-level action: 5.2.3</i> <i>Planned output: 5.2.3.1</i>	2009 2011	DSC 3/15, paragraph 12.6; DSC 13/20, section 3

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- Notes:**
- 1 “H” means high priority item and “L” means a low priority item. However, within the high and low priority groups, items have not been listed in any order of priority.
 - 2 Items printed in bold letters have been selected for the provisional agenda for DSC 15.

		Target completion date/number of sessions needed for completion	Reference
H.2	Amendments to the CSS Code and associated recommendations — Strategic direction: 5.2 — High-level action: 5.2.3 — Planned output: 5.2.3.1	2009	MSC 78/26, paragraph 24.15.3; DSC 13/20, section 8
H.3	Review of the BLU Code — Strategic direction: 5.2 — High-level action: 5.2.3 — Planned output: —	2009	MSC 79/23, paragraph 20.7; DSC 13/20, section 7
H.4	Review of the Recommendations on the safe use of pesticides in ships — Strategic direction: 5.2 — High-level action: 5.2.3 — Planned output: 5.2.3.2	2009	DSC 10/17, paragraph 4.23; DSC 13/20, section 9
H.5 H.2	Guidance on protective clothing <i>Strategic direction:</i> 5.2 <i>High-level action:</i> 5.2.3 <i>Planned output:</i> 5.2.3.2	2009 2010	MSC 81/25, paragraph 23.8; DSC 13/20, section 10 DSC 14/22, section 9
H.6 H.3	Revision of the Code of Safe Practice for Ships Carrying Timber Deck Cargoes <i>Strategic direction:</i> 5.2 <i>High-level action:</i> 5.2.3 <i>Planned output:</i> -	2010	MSC 82/24, paragraph 21.11; DSC 13/20, section 11 DSC 14/22, section 10
H.7 H.4	Stowage of water-reactive materials (in cooperation with FP, as necessary) <i>Strategic direction:</i> 5.2 <i>High-level action:</i> 5.2.3 <i>Planned output:</i> -	2009 2010	MSC 83/28, paragraph 25.12; DSC 13/20, section 13 DSC 14/22, section 11
H.8	Amendments to the International Convention for Safe Containers, 1972 and associated circulars <i>Strategic direction:</i> 5.2 <i>High-level action:</i> 5.2.3 <i>Planned output:</i> 5.2.3.1	2009 2010	DSC 12/19, section 16; MSC 83/28, paragraph 25.13.1; DSC 14/22, section 12

		Target completion date/number of sessions needed for completion	Reference
H.9 H.5	Review of the Guidelines for packing of cargo transport units <i>Strategic direction:</i> 5.2 <i>High-level action:</i> 5.2.3 <i>Planned output:</i> 5.2.3.2	2009 2010	MSC 83/28, paragraph 25.13.2; DSC 13/20, section 15 DSC 14/22, section 13
H.10	Amendments to MARPOL Annex III <i>Strategic direction:</i> 5.2 <i>High-level action:</i> 5.2.3 <i>Planned output:</i>	2009	DSC 13/20, section 16
H.11 H.6	Revision of the Recommendations for entering enclosed spaces aboard ships (in cooperation with BLG, FP and STW) <i>Strategic direction:</i> 5.2 <i>High-level action:</i> 5.2.3 <i>Planned output:</i> -	2010	DSC 13/20, section 19; MSC 85/26, paragraph 23.7
H.12 H.7	Installation of equipment for detection of radioactive sources or radioactive contaminated objects in ports <i>Strategic direction:</i> 1 <i>High-level action:</i> 1.3.5 <i>Planned output:</i> -	2011	MSC 86/26, paragraph 23.6
L.1	Review of documentation requirements for dangerous goods in packaged form <i>Strategic direction:</i> 5.2 <i>High-level action:</i> 5.2.3 <i>Planned output:</i> 5.2.3.1	2009	MSC 84/24, paragraph 22.9
L.2 H.8	Consideration for the efficacy of Container Inspection Programme <i>Strategic direction:</i> 5.2 <i>High-level action:</i> 5.2.3 <i>Planned output:</i> 5.2.3.1	2010	MSC 84/24, paragraph 22.10; DSC 13/20, section 16

ANNEX

PROPOSED PROVISIONAL AGENDA

**for the fifteenth session of the Sub-Committee to be held at
IMO Headquarters, 4 Albert Embankment, London SE1 7SR
from Monday, 13 to Friday, 17 September 2010
(Session commences at 9.30 a.m. on Monday, 13 September 2010)**

- Opening of the session
- 1 Adoption of the agenda
 - 2 Decisions of other IMO bodies
 - 3 Amendments to the IMDG Code and supplements, including harmonization of the IMDG Code with the UN Recommendations on the transport of dangerous goods
 - .1 harmonization of the IMDG Code with the UN Recommendations on the transport of dangerous goods
 - .2 amendment (36-12) to the IMDG Code and supplements
 - 4 Amendments to the IMSBC Code, including evaluation of properties of solid bulk cargoes
 - 5 Casualty and incident reports and analysis
 - 6 Guidance on protective clothing
 - 7 Revision of the Code of Safe Practice for Ships Carrying Timber Deck Cargoes
 - 8 Stowage of water-reactive materials
 - 9 Review of the Guidelines for packing of cargo transport units
 - 10 Revision of the Recommendations for entering enclosed spaces aboard ships
 - 11 Consideration for the efficacy of Container Inspection Programme
 - 12 Installation of equipment for detection of radioactive contaminated objects in port
 - 13 Amendments to the International Convention for Safe Containers, 1972 and associated circulars
 - 14 Work programme and agenda for DSC 16
 - 15 Election of Chairman and Vice-Chairman for 2011
 - 16 Any other business
 - 17 Report to the Maritime Safety Committee

ANNEX 15

**STATUS OF PLANNED OUTPUTS OF THE SUB-COMMITTEE RELATING TO THE HIGH-LEVEL ACTION PLAN
OF THE ORGANIZATION AND PRIORITIES FOR THE 2008-2009 BIENNIUM AND 2010-2011 BIENNIUM**

2008-2009 BIENNIUM

Strategic Directions (SDs) (A.989(25))		High-level Actions (HLAs)		Planned outputs for 2008-2009		
ENHANCING THE STATUS AND EFFECTIVENESS OF IMO						
1	IMO is the primary international forum for technical matters of all kinds affecting international shipping and legal matters related thereto. An inclusive and comprehensive approach to such matters will be a hallmark of IMO. In order to maintain that primacy, it will:	1.1	Further develop its role in maritime affairs <i>vis-à-vis</i> other intergovernmental organizations, so as to be able to deal effectively and comprehensively with complex cross-agency issues	1.1.2	Co-operate with the United Nations and other international bodies on matters of mutual interest	1.1.2.1 Co-operation with IAEA Status: Ongoing Policy input or guidance issued to or on: 1.1.2.3 Safety and security topics (MSC): - Development of carriage requirements for class 7 radioactive material Status: Ongoing - Facilitation of the shipment of class 7 radioactive materials Status: Ongoing - UN Sub-Committee on Dangerous Goods: harmonization of multimodal transport of dangerous goods Status: Ongoing
		1.3	Actively seek to reap synergies and avoid duplication of efforts made by other UN agencies in shipping matters	1.3.5	Harmonize IMO instruments with other relevant international instruments, as necessary	1.3.5.1 Harmonized provisions relating to the safe, secure and efficient carriage of dangerous goods following participation in the activities of UN CETDG and GHS, and IAEA (MSC) Status: Ongoing Installation of equipment for detection of radioactive sources or radioactive contaminated objects in ports Status: Progressing

Strategic Directions (SDs) (A.989(25))			High-level Actions (HLAs)		Planned outputs for 2008-2009		
<i>The related performance indicators are: 1, 2, 3, 16, 17 and 19</i>							
DEVELOPING AND MAINTAINING A COMPREHENSIVE FRAMEWORK FOR SAFE, SECURE, EFFICIENT AND ENVIRONMENTALLY SOUND SHIPPING							
5		5.2	Enhancing technical, operational and safety management standards	5.2.3	Keep under review standards for safe handling and carriage by sea of solid and liquid cargoes carried in bulk and packaged form	5.2.3.1	<p>New or amended mandatory IMO instruments (MSC):</p> <ul style="list-style-type: none"> - Amendments to MARPOL Annex III <p>Status: Completed</p> <ul style="list-style-type: none"> - Amendments to the IMSBC Code, including evaluation of properties of solid bulk cargoes <p>Status: Ongoing</p> <ul style="list-style-type: none"> - Amendments to the CSC, 1972 and associated circulars <p>Status: Completed</p> <ul style="list-style-type: none"> - Amendments to the IMDG Code and supplements, including harmonization of the IMDG Code with the UN Recommendations on the transport of dangerous goods. <p>Status: Ongoing</p> <ul style="list-style-type: none"> - SOLAS amendments to make the IMSBC Code mandatory <p>Status: Completed</p> <ul style="list-style-type: none"> - Review of documentation requirements for dangerous goods in packaged form <p>Status: Completed</p> <ul style="list-style-type: none"> - Correction for the efficacy of container Inspection Programme <p>Status: Progressed</p>
						5.2.3.2	<p>New or amended non-mandatory IMO instruments (MSC):</p> <ul style="list-style-type: none"> - Stowage of water-reactive materials <p>Status: Progressed</p>

Strategic Directions (SDs) (A.989(25))				High-level Actions (HLAs)		Planned outputs for 2008-2009	
							<ul style="list-style-type: none"> - Form and procedure for approval of the Cargo Securing Manual (MSC) Status: Completed - Revision of the recommendations for entering enclosed spaces aboard ships Status: Progressed - Guidance on protective clothing Status: Ongoing - Review of recommendations on the safe use of pesticides in ships Status: Completed - Review of the Guidelines for packing of cargo transport units Status: Progressed - Review of the BLU Code Status: Completed - Revision of the Code of safe practice for ships carrying timber deck cargoes Status: Progressed - Amendments to the CSS Code and associated recommendations Status: Completed
12	IMO will take the lead in enhancing the quality of shipping by:	12.1	Encouraging the utilization of the best available techniques not entailing excessive costs, in all aspects of shipping	12.1.2	Use formal safety assessment techniques in the development of technical standards	12.1.2.2	<p>A casualty analysis process effectively implemented and monitored (MSC)</p> <p>Status: Progressed</p>

Strategic Directions (SDs) (A.989(25))				High-level Actions (HLAs)		Planned outputs for 2008-2009	
		12.3	Promoting and enhancing the availability of, and access to, information – including casualty information – relating to ship safety and security (i.e. transparency)	12.3.1	Consider the wider dissemination of information, analyses and decisions, taking account of the financial implications	12.3.1.3	Reports of incidents involving dangerous goods or marine pollutants in packaged form on board ships or in port areas (MSC/MEPC) (DSC 11/19, section 6, continuous) Status: Ongoing

2010-2011 BIENNIUM

Strategic Directions (SDs) (A.989(25))		High-level Actions (HLAs)		Planned outputs for 2010-2011	
ENHANCING THE STATUS AND EFFECTIVENESS OF IMO					
1	IMO is the primary international forum for technical matters of all kinds affecting international shipping and legal matters related thereto. An inclusive and comprehensive approach to such matters will be a hallmark of IMO. In order to maintain that primacy, it will:	1.1	Further develop its role in maritime affairs <i>vis-à-vis</i> other intergovernmental organizations, so as to be able to deal effectively and comprehensively with complex cross-agency issues	1.1.2	Co-operate with the United Nations and other international bodies on matters of mutual interest
		1.3	Actively seek to reap synergies and avoid duplication of efforts made by other UN agencies in shipping matters	1.3.5	Harmonize IMO instruments with other relevant international instruments, as necessary
				1.1.2.1	Co-operation with IAEA Status: Continuous
				1.1.2.3	Policy input or guidance issued to or on: Safety and security topics (MSC): - Development of carriage requirements for class 7 radioactive material Status: Continuous - Facilitation of the shipment of class 7 radioactive materials Status: Continuous - UN Sub-Committee on Dangerous Goods: harmonization of multimodal transport of dangerous goods Status: Continuous
				1.3.5.1	Harmonized provisions relating to the safe, secure and efficient carriage of dangerous goods following participation in the activities of UN CETDG and GHS, and IAEA (MSC) Status: Continuous Installation of equipment for detection of radioactive sources or radioactive contaminated objects in ports. Status: 2011

The related performance indicators are: 1, 2, 3, 16, 17 and 19

Strategic Directions (SDs) (A.989(25))		High-level Actions (HLAs)		Planned outputs for 2010-2011			
DEVELOPING AND MAINTAINING A COMPREHENSIVE FRAMEWORK FOR SAFE, SECURE, EFFICIENT AND ENVIRONMENTALLY SOUND SHIPPING							
5		5.2	Enhancing technical, operational and safety management standards	5.2.3	Keep under review standards for safe handling and carriage by sea of solid and liquid cargoes carried in bulk and packaged form	5.2.3.1	New or amended mandatory IMO instruments (MSC): <ul style="list-style-type: none"> - Amendments to the IMSBC Code including evaluation of continuous properties of solid bulk cargoes - Amendments to the IMDG Code and supplements, including harmonization of the IMDG Code with the UN Recommendations on the Transport of dangerous goods Status: Continuous
						5.2.3.2	New or amended non-mandatory IMO instruments (MSC): <ul style="list-style-type: none"> - Stowage of water-reactive materials Status: 2010 <ul style="list-style-type: none"> - Revision of the recommendations for entering enclosed spaces aboard ships Status: 2010 <ul style="list-style-type: none"> - Guidance on protective clothing Status: 2010 <ul style="list-style-type: none"> - Review of the Guidelines for packing of cargo transport units Status: 2010 <ul style="list-style-type: none"> - Revision of the Code of safe practice for ships carrying timber deck cargoes Status: 2010 <ul style="list-style-type: none"> - Consideration for the efficacy of container inspection programme Status: 2010

Strategic Directions (SDs) (A.989(25))			High-level Actions (HLAs)		Planned outputs for 2010-2011		
12	IMO will take the lead in enhancing the quality of shipping by:	12.1	Encouraging the utilization of the best available techniques not entailing excessive costs, in all aspects of shipping	12.1.2	Use formal safety assessment techniques in the development of technical standards	12.1.2.2	A casualty analysis process effectively implemented and monitored (MSC) Status: Continuous
		12.3	Promoting and enhancing the availability of, and access to, information – including casualty information – relating to ship safety and security (i.e. transparency)	12.3.1	Consider the wider dissemination of information, analyses and decisions, taking account of the financial implications	12.3.1.3	Reports of incidents involving dangerous goods or marine pollutants in packaged form on board ships or in port areas (MSC/MEPC) (DSC 11/19, section 6, continuous) Status: Continuous

ANNEX 16

DRAFT MSC CIRCULAR

INFORMATION ON LOCAL REGULATIONS

1 The Maritime Safety Committee, at its eighty-sixth session (27 May to 5 June 2009), endorsed the decision of DSC 13 that an appropriate way to disseminate information on local regulations is to maintain this information in GISIS and to issue an MSC circular informing entities of the availability of such information in GISIS.

2 In pursuance of the decision of MSC 86, the Secretariat [has developed a module in GISIS for the dissemination of information on local regulations, as provided by Member Governments].

3 Member Governments are invited to bring the content of the circular to the attention of all interested parties.

ANNEX 17**STATEMENT BY THE DELEGATION OF CHINA
ON CLASSIFICATION OF NICKEL METAL HYDRIDE BATTERIES**

(Document 14/3/6)

1 The Chinese delegation informed the Sub-Committee on its position as stated during the 35th Session of the UN Sub-Committee of Experts on the Transport of Dangerous Goods (SCOE 35). This delegation is against the classification of nickel metal hydride batteries as dangerous goods and wishes to state the following opinions:

- .1 China regrets that the UN SCOE 35 included the aforementioned battery in the list of DG without clear grounds and sufficient scientific study. Based on the transportation practice for this type of cargo and the results of tests carried out according to the IEC criteria, nickel metal hydride batteries should not be classified as dangerous goods.
- .2 Detailed information about the incidents mentioned by VOHMA is required to be presented to the Sub-Committee. Before having clear grounds and sufficient scientific research, the Sub-Committee and Member States should be very cautious in dealing with this matter. The comments and concerns from shipping and battery industry should be taken into account. Before the accident investigation report for the above mentioned incident becomes available, it is premature to make any decision.
- .3 The Chinese delegation is of the view that when drafting SP for UN 3496, comments from all stakeholders should be considered so as to appropriately deal with the issue of nickel metal hydride batteries which were proved to be safe since long time ago.

2 The delegation of China requested the Sub-Committee to refer this statement to the E&T group to be taken into account for its deliberation of the matter, and for further consideration at MSC 87.
