

SUB-COMMITTEE ON DANGEROUS
GOODS, SOLID CARGOES AND
CONTAINERS
16th session
Agenda item 15

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REPORT TO THE MARITIME SAFETY COMMITTEE

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1 GENERAL

Introduction

1.1 The Sub-Committee on Dangerous Goods, Solid Cargoes and Containers (DSC) held its sixteenth session from 19 to 23 September 2011 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 Governments:

ANGOLA	MALAYSIA
ARGENTINA	MARSHALL ISLANDS
AUSTRALIA	MEXICO
AZERBAIJAN	MOROCCO
BAHAMAS	NETHERLANDS
BELGIUM	NEW ZEALAND
BRAZIL	NIGERIA
CANADA	NORWAY
CHILE	PANAMA
CHINA	PERU
COLOMBIA	PHILIPPINES
COOK ISLANDS	POLAND
CUBA	REPUBLIC OF KOREA
CYPRUS	ROMANIA
DEMOCRATIC PEOPLE'S REPUBLIC OF KOREA	RUSSIAN FEDERATION
DENMARK	SAINT KITTS AND NEVIS
DOMINICAN REPUBLIC	SAUDI ARABIA
ECUADOR	SINGAPORE
EGYPT	SOUTH AFRICA
ESTONIA	SPAIN
FINLAND	SWEDEN
FRANCE	SWITZERLAND
GERMANY	THAILAND
GHANA	TRINIDAD AND TOBAGO
GREECE	TURKEY
INDONESIA	TUVALU
IRAN (ISLAMIC REPUBLIC OF)	UKRAINE
IRAQ	UNITED KINGDOM
ISRAEL	UNITED STATES
ITALY	URUGUAY
JAPAN	VANUATU
LATVIA	VENEZUELA (BOLIVARIAN REPUBLIC OF)
LIBERIA	

and the following Associate Member of IMO:

HONG KONG, CHINA

1.3 The session was also attended by representatives from the following United Nations and specialized agencies:

INTERNATIONAL ATOMIC ENERGY AGENCY (IAEA)

1.4 The session was also attended 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 LIMITED (ICHCA)
EUROPEAN CHEMICAL INDUSTRY COUNCIL (CEFIC)
OIL COMPANIES INTERNATIONAL MARINE FORUM (OCIMF)
INSTITUTE OF INTERNATIONAL CONTAINER LESSORS (IICL)
INTERNATIONAL FEDERATION OF SHIPMASTERS' ASSOCIATIONS (IFSMA)
INTERNATIONAL ASSOCIATION OF INDEPENDENT TANKER OWNERS
(INTERTANKO)
INTERNATIONAL GROUP OF P & I ASSOCIATIONS (P & I CLUBS)
INTERNATIONAL ROAD TRANSPORT UNION (IRU)
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)
INTERNATIONAL VESSEL OPERATORS DANGEROUS GOODS ASSOCIATION,
INC. (IVODGA)
INTERNATIONAL PAINT AND PRINTING INK COUNCIL (IPPIC)
HOT BRIQUETTED IRON ASSOCIATION (HBIA)
WORLD SHIPPING COUNCIL (WSC)
THE NAUTICAL INSTITUTE (NI)
BUREAU INTERNATIONAL DES CONTAINERS ET DU TRANSPORT
INTERMODAL (BIC)

Secretary-General's opening address

1.5 The Secretary-General welcomed participants and delivered his opening address, the full text of which is reproduced in document DSC 16/INF.10.

Chairman's remarks

1.6 In responding, the Chairman thanked the Secretary-General for his words and advice and stated that his advice and requests would be given every consideration in the deliberations of the Sub-Committee and its working groups.

Adoption of the agenda and related matters

1.7 The Sub-Committee adopted the agenda (DSC 16/1) and agreed to be guided during the session by the annotated agenda (DSC 16/1/1). The agenda, as adopted, with the list of documents considered under each agenda item, is set out in document DSC 16/INF.11.

1.8 The Sub-Committee agreed to the arrangements for the working and drafting groups as proposed in documents DSC 16/1/2 and DSC 16/1/2/Add.1, and further reflected under the respective sections of this report.

2 DECISIONS OF OTHER IMO BODIES

General

2.1 The Sub-Committee noted the decisions and comments pertaining to its work made by MEPC 61, C 105, LEG 97, MSC 88, SLF 53, STW 42, BLG 15, FSI 19, LEG 98, MSC 89, NAV 57, TC 61, C 106, MEPC 62 and FP 55, as reported in documents DSC 16/2, DSC 16/2/1 and DSC 16/2/2, and took them into account in its deliberations when dealing with relevant agenda items.

Information on development of guidance for coastal States on how to respond to a maritime emergency involving radioactive materials

2.2 The Sub-Committee noted that MSC 89 was informed that the IAEA Secretariat had advised the IMO Secretariat that, due to the recent earthquakes and tsunami in the Pacific region and the impact on the availability of Member State experts, work on the development of guidance for coastal States on how to respond to a maritime emergency involving radioactive materials had been placed on hold until further notice. It had also noted that the Secretariat would continue to participate in the work on this matter and keep the Committee informed accordingly.

Editorial and Technical (E&T) Group on the IMSBC Code

2.3 In regard to future working arrangements, the Sub-Committee noted that MSC 89, having considered several proposals to establish an Editorial and Technical (E&T) Group for dealing with matters related to the IMSBC Code, agreed to expand the terms of reference of the existing E&T Group to include the preparation of amendments to the IMSBC Code and supplements. Consequently, the MSC 89 approved the holding of two meetings of the E&T Group for the preparation of the amendments to the IMSBC Code, with the one meeting taking place in the first half of 2012 (19 to 23 March 2012) and another meeting to take place directly after DSC 17. Under this option, MSC 89 also agreed that the Sub-Committee would only convene two working groups at each session, starting in 2012 at DSC 17.

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

GENERAL

3.1 The Sub-Committee recalled that MSC 87 had agreed that though the Code would be amended every two years and, every four years, the amendment would be a consolidated text of the Code, replacing its earlier version and incorporating the relevant amendments

adopted or approved by that time, as appropriate, and also noted that amendment 36-12 of the IMDG Code would be the first amendment to follow this approach.

REPORT OF THE EDITORIAL AND TECHNICAL GROUP

3.2 The Sub-Committee considered the report of the Editorial and Technical (E&T) Group (DSC 16/3), which had met at its fifteenth session from 6 to 15 April 2011, and having approved it in general, in particular:

- .1 requested the Secretariat to ensure that the future versions of the IMDG Code (i.e. the publication, CD ROM and internet versions) are fully harmonized (paragraphs 2.2 and 2.3)*;
- .2 noting the recommendation of the group regarding additional errata and corrigenda relevant to the French and Spanish versions of the IMDG Code related to amendment 35-10 (paragraph 2.4), approved, in principle, the list of errata and corrigenda to the French version of amendment 35-10 to the Code, as proposed in document DSC 16/3/3 (France), and instructed E&T 16 to finalize the note verbale of the French version of the IMDG Code;
- .3 taking into account that UN 2977 and UN 2978 had not been assigned SP 172 in the Recommendations on the transport of dangerous goods (paragraph 2.5.1), noted that the UN Sub-Committee on the Transport of Dangerous Goods (TDG), at its thirty-ninth session (DSC 16/3/16, paragraph 3), considered the above and recommended that IMO should not amend the IMDG Code in this respect at this time and agreed that the inconsistencies should be resolved in the near future;
- .4 noting the group's opinion with regard to the assignment of PP40 to substances in P410 in the IMDG Code (paragraph 2.5.2), noted that TDG 39 (DSC 16/3/16, paragraph 4) had noted the need for consistency in the assignment of special packing provisions between the different modal regulations or for assignment of specific modal packing provisions and that proposals might be submitted to this effect;
- .5 having noted the group's invitation to the TDG Sub-Committee to note that the reference to "dangerous goods documentation" in 5.4.2.3 and 5.4.2.4 of the IMDG Code were incorrect (paragraph 2.5.3), noted also that TDG 39 (DSC 16/3/16, paragraph 5) had agreed to correct 5.4.2.3 and 5.4.2.4 as proposed by the group;
- .6 approved, in principle, the draft note verbale prepared by the group, instructed E&T 16 to finalize it, taking into account TDG 39's (DSC 16/3/16, paragraphs 11 to 17 and 24 and annex) prepared corrections, including those to the 17th revised edition of the Recommendations on the transport of dangerous goods, and requested the Secretariat to issue the note verbale before amendment 35-10 entered into force on 1 January 2012 (paragraph 2.6 and annex 2);

*

All paragraphs and annexes referenced in parentheses regarding the outcome of E&T 15 refer to the paragraphs of, and annexes to, the E&T Group's report to DSC 16 (DSC 16/3), unless stated otherwise.

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- .7 approved, in principle, the first set of modifications for incorporation in amendment 36-12 of the IMDG Code (paragraph 3.3.1 and annex 3);
- .8 taking into account the divergent opinions of the group on the use of Flexibly Bulk Containers (FBCs) in the context of maritime transport, noting that square brackets have been placed around the relevant text (paragraphs 3.5 to 3.7 and annex 3), and having agreed to retain the provisions on FBCs as in the Recommendations on the transport of dangerous goods, also agreed with the proposal in document DSC 16/3/15 (Belgium and the Netherlands) commenting on the proposed introduction of the use of FBCs in the IMDG Code, as prepared by the group, instructed E&T 16 to consider the matter further with a view to finalizing draft amendment 36-12, taking into account that the stack height should not be more than three FBCs, and invited interested delegations to submit proposals on the transport of FBCs in cargo transport units for consideration at DSC 17, as transport of FBC in Cargo Transport Units (CTUs) was not agreed at this session.
- .9 having considered the group's views with regard to the new provisions in 2.9.4 on lithium batteries (paragraph 3.8), concurred with the view of TDG 39 (DSC 16/3/16, paragraph 6) that cells and batteries manufactured before 1 January 2014 in accordance with the provisions contained in the fifth revised edition of the Manual of Tests and Criteria could continue to be transported after that date and agreed with the TDG 39 recommendation that transitional measures should be included in amendment 36-12 of the IMDG Code to ensure multimodal harmonization;
- .10 noted the decision of the group regarding the provisions on the placarding of cargo transport units containing dangerous goods in limited quantities (paragraph 3.9 and annex 3);
- .11 noted that the group was unable to reach a decision on the assignment of stowage category A and stowage category 01 with regard to articles of division 1.4 compatibility group S packed in limited quantities (paragraph 3.10 and annex 3) and, having considered document DSC 16/3/27 (DGAC), proposing, on the basis of lack of safety justification and potential practical problems that could be introduced, that the square bracketed exception in the revised text of 3.4.3 not be adopted, agreed with the proposal, in principle, and instructed E&T 16 to further consider the text with a view to finalizing draft amendment 36-12;
- .12 noted the group's observation that SOLAS regulation II-2/19 is not applicable to dangerous goods packed in limited quantities and, in considering whether the provisions of SOLAS regulation II-2/19 should be amended accordingly (paragraph 3.11), agreed that the relevant provisions in SOLAS are clear and do not require any amendment in the above context;
- .13 having noted that the group had mixed views on the alignment of the provisions related to the durability of the marking and placarding on packages containing dangerous goods in limited quantities (paragraph 3.12 and annex 3), agreed to align the above provisions with those of the Recommendations on transport of dangerous goods;

- .14 endorsed the group's decision on assigning a new SP965 for the transport of UN 2211 and UN 3314 in cargo transport units (paragraphs 3.15 and 3.16) and, in doing so, considered the document DSC 16/3/20 (CEFIC), proposing an amendment to new SP965 whereby closed transport units, other than temperature controlled transport units, may be used to transport UN 2211 and UN 3314 when packed in hermetically sealed and suitable pressure resistant packagings or IBCs, and agreed, in principle, with the proposal in document DSC 16/3/20, noted the invitation of TDG Sub-Committee (DSC 16/3/16, paragraph 7) to keep it informed of further developments regarding proposed provisions for the transport of polymeric beads and plastics moulding compounds (UN 2211 and UN 3314) as they are likely to have consequences for multimodal transport, and requested the Secretariat to keep TDG Sub-Committee informed accordingly;
- .15 endorsed the recommendation of the group on issues to be brought to the attention of the TDG Sub-Committee (paragraphs 3.18 to 3.20) and, in this regard, noted that TDG 39 (DSC 16/3/16, paragraphs 8, 9 and 10) had agreed:
- .1 to correct the anomaly Di – (3,5,5 - trimethyl hexanoyl peroxide) in the 17th revised edition of the Recommendations on the transport of dangerous goods;
 - .2 that SP 354 should not be assigned to UN 2381 and the dangerous goods list in the Recommendations on the transport of dangerous goods will be amended accordingly; and
 - .3 that SP 300 should have been assigned to UN 3497, PG III, and the Recommendations on the transport of dangerous goods will be amended accordingly;
- .16 agreed to the simplified version of the Preamble of the Code as modified by the group for incorporation in amendment 36-12 (paragraph 3.21 and annex 4);
- .17 agreed to the new text of 5.4.3 for incorporation in amendment 36-12 (paragraph 3.22 and annex 4);
- .18 endorsed the decision to delete Isodecyl diphenyl phosphate from the Index and instructed E&T 16 to finalize the Index of the Code, taking into account comments and decisions made at DSC 16 (paragraph 3.23);
- .19 instructed E&T 16 to address, in a cautious manner, issues related to the assignment of PP85 for incorporation in amendment 36-12 (paragraph 3.24);
- .20 endorsed the group's decision with regard to the transport of substances prohibited by sea mode (SP 900) in relation to column 17 of the dangerous goods list (paragraph 3.25 and annex 4) for incorporation in draft amendment 36-12;
- .21 noted the group's recommendation proposing amendments to bulk container instructions in order to harmonize the relevant provisions with those in the Recommendations on the transport of dangerous goods (paragraph 3.26);

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- .22 approved the group's proposed definition for semi-trailers (paragraph 3.27 and annex 4);
- .23 noted that the group finalized part 7 for incorporation in amendment 36-12 (paragraph 3.28 and annex 5) and, having considered the views of some delegations that, with regard to stowage of goods of class 1 from living quarters and life-saving appliances, except division 1.4, a distance of 12 metres had brought about operational constraints, invited interested delegations to submit relevant proposals to MSC 90, taking into account the decision of DSC 15 (DSC 15/18, paragraph 3.29.2);
- .24 noted the group's view on the possibility of clarification and improvement of the text in provision 7.2.5.3 (paragraph 3.29 and annex 5) (see also document DSC 15/18, paragraphs 3.29 to 3.31);
- .25 having considered the comments of the group regarding provisions relevant to segregation in relation to foodstuffs (paragraph 3.30 and annex 5), agreed to remove the square brackets and retain the text as prepared by the group;
- .26 noted the group's divergent views regarding the provisions for shipborne barges on barge-carrying ships (paragraph 3.31 and annex 5) and invited interested delegations to submit relevant proposals to DSC 17;
- .27 noted the group's deliberations regarding number "4" (Separated longitudinally by an intervening complete compartment or hold from) in the segregation table for containerhips (paragraph 3.32 and annex 5) and invited interested delegations to submit relevant proposals to DSC 17;
- .28 having noted the group's recommendations on consequential amendments to other parts of the Code as a result of revised part 7, approved the draft consequential modifications for incorporation in amendment 36-12 (paragraphs 3.33 to 3.36 and annex 6);
- .29 agreed to the draft MSC circular on Amendments to the Emergency Response Procedures for Ships carrying Dangerous Goods (EmS Guide), as set out in annex 1, for submission to MSC 90 for approval;
- .30 agreed to the draft MSC circular on Conversion table (record of amendments) for part 7 requirements concerning transport operations, as set out in annex 2, for submission to MSC 90 for approval;
- .31 agreed to the draft MSC circular on Illustrations of segregation of cargo transport units on board containerhips and ro-ro ships, as set out in annex 3, for submission to MSC 90 for approval;
- .32 noted the group's recommendations on the IMDG Code module in GISIS (paragraphs 6.1 and 6.2); and
- .33 noted that the Secretariat had prepared the consolidated text of the draft amendment 36-12 of the IMDG Code (DSC 16/3/1), for consideration by DSC 16 with the view to adoption by MSC 90 (paragraph 7.1).

MARINE POLLUTANTS

3.3 The Sub-Committee considered documents:

- .1 DSC 16/3/4 (Germany), proposing to harmonize the supplementary information in the dangerous goods description with other modal regulations by way of showing, where appropriate, "MARINE POLLUTANT/ ENVIRONMENTALLY HAZARDOUS";
- .2 DSC 16/3/12 (IPPIC), proposing to use the term "Aquatic Pollutant" in order to achieve multimodal harmony; and
- .3 DSC 16/3/29 (United States), proposing to retain the use of the term "MARINE POLLUTANT" as it accurately reflects the sea environment and that the use of the terms "ENVIRONMENTALLY HAZARDOUS" and/or "AQUATIC POLLUTANT" are not prohibited for inclusion in the transport document,

and, having recalled discussions taken on the issue at earlier sessions of the Sub-Committee: agreed that it was premature to change the existing provisions at this stage; and noted the possibility of additional information in the transport document exists in the current provisions and decided to provide an associated text in 5.4.1.4.3.5 of the Code based on the above proposal by Germany. The Sub-Committee invited interested delegations to consider the various regional lists of Environmentally Hazardous Substances with the view to harmonization. The above proposal by IPPIC had some support and the Sub-Committee agreed that further work was needed on the proposal before it could be taken further.

3.4 In considering document DSC 16/3/6 (Germany), proposing to clarify the provisions of the IMDG Code on the classification of substances and mixtures as marine pollutants if they are not indicated by the symbol "P" in the dangerous goods list, particularly UN 3077 and UN 3082, which caused difficulties for the users of the Code, the Sub-Committee noted merit in the proposal and instructed E&T 16 to review it further with a view to advising DSC 17.

3.5 In considering document DSC 16/3/11 (IPPIC), proposing a revision of technical names of marine pollutants in small sized packages, noting that from 1 January 2014 the amended regulations of MARPOL are envisaged to take effect such that the latest provisions of the IMDG Code relating to marking, labelling and documentation would apply, the Sub-Committee, having noted merit in the proposal, instructed E&T 16 to review it further with a view to incorporating it in amendment 36-12. In the above context, the Sub-Committee noted that when dangerous goods are transported in limited quantities, the proper shipping name and the technical name need not be shown on the package or the cargo transport unit; however, the proper shipping name and the technical name need to be shown on the transport document. The Sub-Committee instructed E&T 16 to ensure that the above concept is appropriately reflected in draft amendment 36-12.

MISCELLANEOUS PROPOSALS**Use of salvage packagings**

3.6 The Sub-Committee considered document DSC 16/3/2 (United Kingdom), proposing to allow the use of salvage packagings for the transport of damaged, defective, leaking or non-conforming packages from premises where the substances or materials are produced, and agreed, in principle, with the proposal.

Labels for classes 5.1 and 5.2

3.7 In considering document DSC 16/3/3 (Uruguay), proposing, for the sake of harmonization, to remove the subclass number for the labels for class 5 as the labels used for two classes are clearly distinguishable by the symbol and colours, the Sub-Committee agreed that the proposal is consistent with the approach taken for the other classes; however, noting that TDG and GHS Sub-Committees had taken a decision not to align labels with those of other classes, decided not to take the proposal further.

Provisions concerning transport operations

Allocation of segregation groups to mixtures, solutions or preparations shipped under NOS entries

3.8 The Sub-Committee considered document DSC 16/3/5 (IPPIC and CEFIC), proposing amendments to the provisions on allocation of segregation groups for NOS entries to remove an apparent contradiction concerning mixtures, solutions or preparations shipped under such entries, and agreed, in principle, with the proposal and instructed E&T 16 to consider it further with the view to incorporating it in amendment 36-12.

Application of SOLAS regulation II-2/19

3.9 The Sub-Committee considered document DSC 16/3/17 (Germany), proposing to rectify a minor editorial in 7.1.4.4.1 of the draft amendment 36-12 of the IMDG Code in order to clarify the application of SOLAS regulation II-2/19, and agreed, in principle, with the proposal.

Column 16 of the dangerous goods list

3.10 The Sub-Committee considered document DSC 16/3/8 (Germany), proposing to split up column 16 into separate parts for stowage provisions and for segregation provisions and, having agreed with the proposal in principle, instructed E&T 16 to further consider the proposal.

Definition and authorization for use of magazine

3.11 Having noted the information provided in document DSC 16/INF.5 (IVODGA), on modifications to 7.1, General Stowage provisions and in particular to stowage of class 1 in magazines, as outlined in document DSC 16/3, paragraph 3.28 and annex 5, and agreeing that IVODGA had touched upon a pertinent issue, the Sub-Committee instructed E&T 16 to further consider the above document, taking into account that a magazine may include, but is not limited to, a fixed part of a ship, with the view to incorporation in draft amendment 36-12.

Infringements of the provisions of the IMDG Code

3.12 In considering document DSC 16/3/7 (Germany), proposing to introduce the possibility to inform competent authorities of other contracting parties on severe and repeated infringements committed by entities with headquarters in their territories, the Sub-Committee, having agreed with the proposal in principle, instructed E&T 16 to consider it further, taking into account the use of the term "contracting party" and the preferred recommendatory nature of the proposal.

Amendment to packing group of Hydrogen Peroxide

3.13 The Sub-Committee considered document DSC 16/3/9 (Islamic Republic of Iran), proposing amendments to the entries against Hydrogen Peroxide in order to make its transport safer, noted that the accidents referred to in the above document were perhaps a result of poor quality of plastic packagings, observed that the proposal had a multimodal dimension and invited the delegation of Islamic Republic of Iran to submit details of the accident, in collaboration with interested delegations, for consideration at DSC 17.

Use of aluminium phosphide (UN 3048) as fumigant

3.14 The Sub-Committee considered document DSC 16/3/10 (Islamic Republic of Iran), proposing to include alternatives to the use of Aluminium Phosphide PESTICIDE (UN 3048) as a fumigant and categorizing this substance in class 4.3 in view of its potential to release highly flammable gas when in contact with moisture and water and, noting that UN 3048 is assigned SP 153 and SP 930, invited the delegation of Islamic Republic of Iran to reconsider its proposal, taking into account that the use of Methyl Bromide has an impact of the ozone layer. The Sub-Committee agreed that the use of any substitute of aluminium phosphide should not have any negative impact on the environment. In the above context, the Sub-Committee drew the attention of the delegation of Islamic Republic of Iran to ALUMINIUM PHOSPHIDE (UN 1397).

Outcome of TDG 39 – other issues

3.15 The Sub-Committee considered two remaining issues emanating from the outcome of TDG 39, which needed consideration by the Sub-Committee in the context of amendment 36-12, in particular:

- .1 the insertion in 5.2.1.1 of the exemption for cylinders of 60 litres water capacity or less (DSC 16/3/16, paragraph 19 and annex); and
- .2 the capacity limitation in 2.3.2.3 and in 2.3.2.5 (DSC 16/3/16, paragraphs 20 to 23) in order to determine the appropriateness of agreeing to the increased limits of 450 litres as compared with the current limit of 30 litres.

3.16 Regarding the proposal in 3.15.1, the Sub-Committee agreed to the proposal, in principle, and instructed E&T 16 to finalize it, taking into account the relevant decisions of the Joint RID/ADR/ADN meeting with a view to incorporating the proposal in amendment 36-12.

3.17 Regarding the proposal in 3.15.2, the Sub-Committee recalled its earlier decision not to agree to the increased limits of 450 litres and, in the absence of justification to increase the limits, agreed not to accept the proposal.

Use of sheeted bulk containers

3.18 The Sub-Committee considered document DSC 16/3/18 (United Kingdom and France), proposing the use of sheeted bulk containers (BK1) to transport UN 3077 Environmentally Hazardous Substances, Solid, NOS, for short international voyages, and agreed, in principle, with the proposal subject to the clarification that when EHS under 3077 are marine pollutants, they should not be shipped in BK1 except under the exemption provisions in chapter 7.9.

Amendments to entries against UN 3065, PG III

3.19 The Sub-Committee considered document DSC 16/3/19 (China) proposing to remove an apparent anomaly in the entries against UN 3065 relating to limited quantities and excepted quantities, and instructed E&T 16 to consider the proposal and advise DSC 17 accordingly.

Amendment to P903

3.20 In considering document DSC 16/3/22 (Republic of Korea), proposing to amend P903 applicable to UN Nos. 3090, 3091, 3480 and 3481 (lithium batteries) so that the possibility of short-circuit during transport is eliminated, the Sub-Committee noted that metal packagings are a good form of containment in the event of an accident and concluded that the new P903 might address the concern of the delegation of Republic of Korea.

Segregation of batteries and flammable substances

3.21 The Sub-Committee considered document DSC 16/3/23 (Republic of Korea), proposing that the stowage and segregation of UN 2794, BATTERIES, WET, FILLED WITH ACID and UN 2795, BATTERIES, WET, FILLED WITH ALKALI in column (16) of the dangerous goods list should be added to "away from" class 3 for safety at sea, and invited the delegation of Republic of Korea to provide more information in the future to enable the Sub-Committee to take an informed decision.

Marking for packages containing dangerous goods in limited quantities

3.22 In considering document DSC 16/3/24 (Republic of Korea), proposing revised provisions on marking for packages containing dangerous goods in limited quantities, the Sub-Committee, having recalled that the associated provisions were developed at the TDG Sub-Committee after deliberations spanning over six years and the corresponding text had been adopted by MSC in the context of amendment 35-10, agreed that it is premature to consider the proposal further.

Application of PP31 to UN 2845 in P400

3.23 The Sub-Committee considered document DSC 16/3/25 (Republic of Korea), proposing to apply PP31 to UN 2845 in P400, and agreed that inner packagings covered by P400 need to be hermetically sealed and noted that this provision is already included in the IMDG Code. The Sub-Committee also observed that, following the above approach, PP31 should be deleted from P400 and the entry against UN 2870 in the dangerous goods list and instructed E&T 16 to consider the matter with the view to amending draft amendment 36-12 accordingly.

Use of overpacks and unit loads

3.24 In considering document DSC 16/3/26 (Republic of Korea), proposing amendments to 5.1.2.1 to specify height of the word "OVERPACK", the Sub-Committee, having noted that associated discussions were ongoing at TDG Sub-Committee, invited interested delegations to submit proposals to TDG 41.

Dangerous goods which present negligible risk

3.25 In considering document DSC 16/3/28 (United Kingdom), proposing to clarify the relevant provisions in the draft amendment 36-12 of the IMDG Code such that dangerous goods which present negligible risks do not require dangerous goods transport documents and to amend column 16 for UN 3373, the Sub-Committee, having agreed with the proposal in principle, instructed E&T 16 to consider the proposal further with the view to incorporating it in amendment 36-12.

Information on the draft ECOSOC resolution on dangerous goods in relation to fumigated cargo transport units

3.26 The Sub-Committee noted the information provided in document DSC 16/INF.8 (UNECE), containing a draft ECOSOC resolution on Work of the Committee of Experts on the Transport of Dangerous Goods and on the Globally Harmonized System of Classification and Labelling of Chemicals, which covered the work during the biennium 2009-2010. In this context, the UNECE drew the attention of the Sub-Committee to 5.5.2 of the IMDG Code and invited delegations to ensure that the provisions of 5.5.2 are implemented correctly.

AMENDMENTS TO THE SUPPLEMENTS TO THE IMDG CODE**Amendments to the MFAG**

3.27 The Sub-Committee recalled that DSC 15 had considered documents DSC 15/3/14 (Germany) and DSC 15/3/17 (INTERANKO) regarding the provisions related to the carriage of antidotes in the Medical First Aid Guide and, noting that the guide was completely revised in 1998 and that until DSC 13 no concerns had been raised on the absence of antidotes on board ships, DSC 15, having agreed with the proposal by Germany, which was supported by other delegations not to review at this stage the current approach to the carriage of antidotes in the revised MFAG, invited INTERTANKO to submit information on recent incidents and operational exposure cases on board ships for consideration at DSC 16.

3.28 In considering documents DSC 16/3/21 (INTERTANKO), providing an overview of the progress of the issue at previous meetings of the Sub-Committee as well as a synopsis of a clinical study on cases of acute acrylonitrile poisoning and the use of antidotes in the treatment, and DSC 16/INF.6 (INTERTANKO), containing a Clinical Study of 144 cases published in China in 1999 regarding the diagnosis and treatment of Acute Acrylonitrile Poisoning in shore facilities, the Sub-Committee, following extensive discussion and noting that the use of Amyl Nitrite (not Nitrate) has severe secondary health implications and its use required enhanced medical attention, reiterated its earlier decision not to amend the MFAG.

IMO MODEL COURSE 1.10 (DANGEROUS, HAZARDOUS AND HARMFUL CARGOES)

3.29 The Sub-Committee, having recalled that DSC 15 agreed that updating the IMO Model Course 1.10 (Dangerous, Hazardous and Harmful cargoes) was particularly important in light of the mandatory training provisions for shore side personnel, which had taken effect from 1 January 2010, agreed with the proposal in document DSC 16/3/14 (Secretariat) to develop a generic Model Course, which need not be amended every two years and could be used for a number of years for technical co-operation activities.

DRAFT AMENDMENTS (36-12) OF THE IMDG CODE AND INSTRUCTIONS TO THE E&T GROUP

3.30 Having considered the above matters, the Sub-Committee agreed to draft amendment 36-12 of the IMDG Code on the basis of document DSC 16/3/1 (Secretariat)

and, in particular: authorized E&T 16 to prepare modifications to the agreed text on the basis of comments made and decisions taken at DSC 16; identify and correct any editorial mistakes; and requested the Secretariat to incorporate the modifications made by the group into the final text of draft amendment 36-12 of the IMDG Code. In this regard, the Sub-Committee noted that the provisional agenda for E&T 16 has been circulated under the symbol E&T 16/1.

3.31 The Sub-Committee requested the Secretary-General to circulate the final draft amendment 36-12 of the IMDG in accordance with SOLAS article VIII, for consideration and subsequent adoption by MSC 90.

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

GENERAL

4.1 The Sub-Committee recalled that MSC 86 had approved a new procedure for the adoption of future amendments to the IMSBC Code. Following the new procedure, the amendments (01-11) to the IMSBC Code finalized at DSC 15 were adopted by MSC 89, with a view to the new amendments coming into effect on 1 January 2012 on a voluntary basis and from 1 January 2013 on a mandatory basis. In continuation of this amendment process, preparation of the next set of draft amendments (02-13) to the Code are expected to be finalized at DSC 17 and E&T 17, for subsequent adoption at MSC 92 (May 2013), so that the amendments would come into effect on a voluntary basis from 1 January 2014 and on a mandatory basis from 1 January 2015 (see also paragraph 2.3).

MEASURES TO IMPROVE SAFE TRANSPORT OF SOLID BULK CARGOES

Measures to improve safe transport of cargoes that may liquefy

4.2 The Sub-Committee recalled that MSC 87, having noted information contained in document MSC 87/INF.13 (India), on the carriage of iron ore from Indian ports that led to serious casualties, had invited the delegation of India to submit full casualty investigation reports to the Secretariat for further consideration through the mechanism established under the FSI Sub-Committee, for concomitant consideration and advice to the Committee.

4.3 In this context, the Sub-Committee also recalled that DSC 15, having considered document MSC 87/INF.13 (India), and DSC 15/4/16 (BIMCO), proposing in particular to issue a DSC circular related to the transport of iron ore fines, approved DSC.1/Circ.63 on carriage of iron ore fines that may liquefy and that MSC 88 had endorsed the action taken by the Sub-Committee. In addition, MSC 88 noted the information provided by the observer from INTERCARGO regarding the recent foundering of two bulk carriers, causing a collective loss of 33 lives within the space of 12 days, and their concern with respect to the hazards and risks associated with cargoes which may liquefy, and invited Member Governments and international organizations to submit relevant information to the Sub-Committee for consideration and action, as appropriate.

4.4 The Sub-Committee further recalled that MSC 89, having considered documents MSC 89/7/4 (China) and MSC 89/7/7 (INTERCARGO and BIMCO), concerning "Measures to improve safe transport of solid bulk cargoes by ships", agreed to the proposals, in general, and forwarded the above documents to DSC 16 for detailed consideration under this agenda item and instructed the Sub-Committee to advise MSC 90 accordingly. The Committee also invited Member Governments and international organizations to submit any studies,

comments, proposals and reports on incidents involving solid bulk cargoes directly to the Sub-Committee in order to assist it in taking an informed decision.

General measures and consequential amendments

4.5 The Sub-Committee had the following documents for consideration regarding general measures and consequential amendments:

- .1 MSC 89/7/4 (China), proposing amendments to the IMSBC Code to develop and establish an independent cargo sampling, testing and certifying scheme and a control and enforcement scheme by the Administration, to develop an operational guidance for seafarers working on board ships carrying solid bulk cargo that may liquefy and to develop alternative requirements for preventing accidents through ship design;
- .2 MSC 89/7/7 (INTERCARGO and BIMCO), commenting on document MSC 89/7/4, in particular supporting the proposal to develop a scheme for ensuring reliable independent sampling, testing and certification of cargoes and to enhance education for ship and shore personnel involved with the shipment of dry bulk cargo, but opposing the transfer of responsibility, for ensuring dry bulk cargoes are safe to transport, to the ship;
- .3 DSC 16/4/10 (France), proposing amendments to the IMSBC Code to include a new subsection 4.3.3 on the establishment of procedures for sampling, testing and certifying and for controlling the moisture content; revision of all schedules for Group A cargoes to improve provisions concerning "Weather precautions"; and to continue working on test procedures with a view to proposing the addition of new tests or amendments to existing test in the Code, as appropriate;
- .4 DSC 16/4/77 (China), paragraphs 4 and 5, proposing the issuing of a certificate on transportable moisture limit (TML) or moisture content by an authorized entity and amendments to sections 4.3 and 4.8 and supporting the proposal in document MSC 89/7/4 regarding the establishment of an independent sampling, testing and certifying scheme for solid bulk cargoes;
- .5 DSC 16/4/95 (INTERCARGO et al.), providing further information focusing on the root causes of casualties and near misses, e.g. inaccurate shipper declarations, intimidation, threatening and on the attempted use of the exclusion clause in charter party to restrict the deployment of consulting scientists and third party cargo surveyors; and
- .6 DSC 16/4/99 (INTERCARGO et al.), providing comments in support of the proposals in document DSC 16/4/10, concerning the transportation of solid bulk cargoes that may liquefy, and proposing an amendment to require shippers to introduce procedures to control the sampling, testing and certification of such cargoes and for these procedures to be approved and periodically checked by the competent authority.

4.6 Having considered the above documents, the Sub-Committee instructed the working group to further consider the above documents, using the proposal in document DSC 16/4/10 as the basis and paying particular attention to issues relevant to procedures for sampling, testing and certification, enhancing education for ship and shore personnel involved in the

handling and transport of solid bulk cargoes, and achieving safe transport through ship design.

4.7 The Sub-Committee also instructed the working group to ensure, in its deliberations, that any new provisions do not add unnecessary burdens for competent authorities and to take into account that, while it is desirable to keep the competent authority independent of the shipper, there is a need for certain competent authorities to be shippers, particularly when transporting military hardware. In addition, the Sub-Committee agreed to develop a new schedule on nickel ore and further instructed the working group to prepare the aforementioned schedule on the basis of annex 2 to document DSC 16/4/10.

4.8 In the context of the proposal regarding ship design (MSC 89/7/4), the Sub-Committee noted that associated provisions are present in the IMSBC Code and invited SLF Sub-Committee to comment on the adequacy of such provisions relevant to the transport of solid bulk cargoes which may liquefy, taking into account document MSC 89/7/4.

Transport of iron ore fines in bulk

4.9 The Sub-Committee recalled that DSC 15 had considered document DSC 15/4/16 (BIMCO) and urged Member Governments and the industry to submit, to DSC 16, any relevant information regarding the safe handling and transport of Iron Ore Fines, taking into account the proposals contained in paragraphs 9.1 and 9.2 of document DSC 15/4/16 relating to the amendment of the existing schedule for Iron Ore and on the development of a new schedule for Iron Ore Fines.

4.10 The Sub-Committee, having considered the following documents for consideration on matters related to the transport of iron ore fines in bulk:

- .1 DSC 16/4/9 (Norway), proposing a new entry in the IMSBC Code for Iron Ore Fines as a Group A material;
- .2 DSC 16/4/74 (Brazil), proposing to review DSC.1/Circ.63 in order to include provisions related to the need for the ship to be fitted with special equipment and safeguards;
- .3 DSC 16/4/75 (Brazil), proposing to establish correspondence group to study the phenomenon of liquefaction of Iron Ore Fines and consequential amendment to the existing Iron Ore schedule;
- .4 DSC 16/4/75 (Brazil), containing comments on document DSC 16/4/9 and highlighting that there might be a need to have several schedules for Iron Ore Fines;
- .5 DSC 16/4/81 and DSC 16/4/88 (Japan), proposing a draft new schedule for Iron Ore Fines, including a formula to be used to calculate the TML when a cargo contains large particles, and amendments to 1.4.2 of the Code in order to clarify the mandatory nature of provisions in "Group" and "Class" of individual schedules;
- .6 DSC 16/4/86 (Australia), proposing to include a new schedule for Iron Ore Fines to modify accordingly the existing schedule for Iron Ore;

- .7 DSC 16/5/6 (ICHCA), containing outline of reports of incidents of serious near misses and their background, associated with the transport of Iron Ore Fines; and
- .8 DSC 16/INF.4 (Brazil), containing information about Iron Ore Fines,

supported the proposal to review DSC.1/Circ.63 with a view to improving provisions governing transport of iron ore fines, agreed to have a number of schedules of Iron Ore Fines, concurred with the proposal to amend 1.4.2 of the Code in order to make provisions regarding "Group" and "Class" mandatory and instructed the working group to further consider the above documents and advise the Sub-Committee on how to progress the matter, taking into account the behaviour of Iron Ore Fines under different circumstances.

Evaluation of the risk of liquefaction for cargoes not listed in the IMSBC Code

4.11 The Sub-Committee, having considered the following documents on the evaluation of the risk of liquefaction for cargoes not listed in the IMSBC Code for consideration:

- .1 DSC 16/4/16 (Japan), providing proposals concerning risk of liquefaction for cargoes not listed in the IMSBC Code and, in particular, proposing to request applicant to provide the maximum moisture content and the TML of the cargo to ensure that the moisture content is less than its TML without moisture control, to include in the section on Loading a requirement mandating the shipper to declare that the moisture content of the cargo is sufficiently low so that the cargo is not liable to liquefy, and to apply the "weather precautions" of Group A cargoes to Group C cargoes; and
- .2 DSC 16/4/76 (China), raising a potential issue concerning 1.3 of the IMSBC Code, which requires that the acceptability for safe shipment of solid cargoes not listed in appendix 1 of the IMSBC Code shall be assessed by the competent authority prior to loading; highlighting that the IMSBC Code provides definitions of Groups A, B and C and that while the properties of Group B cargoes can be classified according to the IMDG Code, no guidelines exist on a classification method or standard that can be used to assess the properties of Group A or C cargoes, and especially Group A cargoes; and proposing to establish guidelines on a classification method or standard for assessing the properties of Group A cargoes,

supported, in principle, the proposal in document DSC 16/4/76 and instructed the working group to further consider the above documents and advise the Sub-Committee accordingly.

Transport of cargoes not listed in the IMSBC Code

4.12 Having considered document DSC 16/4/90 (Germany), proposing to develop guidelines for the completion of the format for the properties of cargoes not listed in the IMSBC Code and the conditions of carriage as set out in 1.3.3 of the IMSBC Code, for dissemination via an MSC circular, and a consequential footnote in the IMSBC Code for ease of reference, the Sub-Committee agreed with the above proposal, in principle, and instructed the working group to further consider it with a view to finalizing the draft guidelines and the associated circular, for consideration by the Sub-Committee.

4.13 The Sub-Committee, having considered document DSC 16/4/94 (United States), proposing amendments to subsection 1.3 of the Code in order to assign more responsibility to the shipper to assess the hazards of their cargoes and to certify that they are safe for shipment in bulk, decided that it was premature to consider the above proposal further since the criteria for classification of MHB and solid bulk cargoes falling in Group A are still being developed.

Transport of cargoes under fumigation

4.14 The Sub-Committee considered document DSC 16/4/91 (Canada), proposing amendments to the IMSBC Code regarding precautions on the use of fumigation-in-transit, and instructed the working group to further consider the above proposal and advise the Sub-Committee accordingly.

REPORT OF THE CORRESPONDENCE GROUP

General

4.15 The Sub-Committee recalled that DSC 15 had established a Correspondence Group on Classification Criteria for Materials Hazardous only in Bulk (MHB) and approved terms of reference, as set out in paragraph 4.35 of document DSC 15/18, and had instructed the group to submit a report to DSC 16.

4.16 Having considered report of the correspondence group (DSC 16/4/13), the Sub-Committee approved it, in general, and took action as indicated in paragraphs 4.17 to 4.20.

Draft classification criteria for MHB

4.17 The Sub-Committee considered the proposal by the group in regarding classification criteria for MHB (DSC 16/4/13, paragraphs 3 to 6 and annex 1), together with document DSC 16/4/67 (Germany and the Netherlands), providing an in depth criteria on defining health hazards that are identified and considered relevant as they may affect crew in hazardous scenarios on board ships carrying MHB, and, having supported the proposal, in principle, instructed the working group to finalize text of classification of MHB.

Solid bulk information reporting questionnaire

4.18 The Sub-Committee considered the proposal by the group (DSC 16/4/13, paragraph 7 and annex 2) regarding the minimum information required for MHB classification and, having noted that the proposed questionnaire related to the procedure to evaluate cargoes not listed in the IMSBC Code, instructed the working group to consider the above proposal, together with document DSC 16/4/90 (see paragraph 4.12 above).

Development of a form similar to BLG data reporting form

4.19 The Sub-Committee considered the view of the group (DSC 16/4/13, paragraph 8) on whether to develop a solid bulk cargo reporting form along the lines of the BLG Product Data Reporting Form, as contained in MEPC.1/Circ.512 and decided that it was premature to take any action at this stage.

4.20 In the above context, the Sub-Committee also considered document DSC 16/4/98 (BIMCO), raising concern regarding the ambiguity as to whether MHB cargoes are considered dangerous or not under the SOLAS Convention, notwithstanding the fact that no reference is made to MHB in the Convention, and having agreed that MHB falls under

chapter VI of SOLAS and not under chapter VII, invited Member Governments and international organizations to consider submitting proposals to the Committee on amending SOLAS, if needed, once the status of MHB has been established, taking into account the Guidelines on the organization and method of work (MSC-MEPC.1/Circ.4).

SOLID BULK CARGO RESIDUES AND REVISED MARPOL ANNEX V

General

4.21 In considering matters related to solid bulk cargo residues and revised MARPOL Annex V, the Sub-Committee noted that:

- .1 MEPC 61, in considering matters related to the review of MARPOL Annex V, instructed the Sub-Committee to further consider the issue of categorization of environmental hazards for solid bulk cargoes and the treatment of solid cargo residues, including the convenience of using the GESAMP or GHS environmental criteria, taking into account the proposals contained in documents MEPC 61/7/5 (Norway), MEPC 61/7/12 (CSC) and MEPC 61/7/13 (United States), under this agenda item and advise the MEPC accordingly;
- .2 MEPC 62, having considered the draft text addressing the disposal of animal carcasses at sea (document MEPC 62/7/2 by Australia), agreed to re-establish its correspondence group to finalize the draft revised Guidelines for the implementation of MARPOL Annex V, for submission to MEPC 63; and
- .3 MEPC 62 had also instructed the Sub-Committee to consider the issue of discharging of cargo residues, as referred to in regulation 4.1.3 of the revised MARPOL Annex V, in particular what constituted harmful to the marine environment, under a new post-biennial output on "Development of criteria for the evaluation of environmentally hazardous solid bulk cargoes in relation to the revised MARPOL Annex V", with target completion year of 2012 (see also paragraph 12.3).

4.22 The Sub-Committee, having considered the following documents addressing this matter:

- .1 DSC 16/4/8 (Norway), highlighting the discussions relevant to environmental properties of solid bulk cargoes and proposing a draft new section for the classification of substances harmful to the marine environment in relation to the revised MARPOL Annex V;
- .2 DSC 16/4/83 (Australia), proposing to include a new supplementary schedule in the IMSBC Code on regulatory framework for the control of discharge of solid environmentally hazardous cargo residues; and
- .3 DSC 16/4/96 (Netherlands), providing three options and additional requirements relevant to these options to facilitate the discussion on the identification of criteria for environmentally hazardous solid cargoes under MARPOL Annex V,

took action as indicated in paragraphs 4.23 to 4.27.

Development of criteria for the evaluation of environmentally hazardous solid bulk cargoes in relation with 4.1.3 of the revised MARPOL Annex V

4.23 The Sub-Committee, having noted that future deliberations on this matter will take place under the new output on development of criteria for the evaluation of environmentally hazardous solid bulk cargoes in relation to the revised MARPOL Annex V (see also paragraph 4.21.3), taking into account that the revised MARPOL Annex V, which is envisaged to enter into force on 1 January 2013, considered different options to progress the issue, taking into account documents DSC 16/4/8 and DSC 16/4/96, and decided to instruct the working group to further consider the above documents, together with documents MEPC 61/7/5, MEPC 61/7/12 and MEPC 61/7/13.

Consideration of the classification procedure

4.24 The Sub-Committee considered the different alternatives on identifying environmentally hazardous solid bulk cargoes in the IMSBC Code, as reflected in documents DSC 16/4/8 and DSC 16/4/83, and, following extensive discussion, instructed the working group to consider the above documents, taking into account that clarification on the classification of solid bulk cargoes, as Group B, meeting the criteria of 2.9.3 of the IMDG Code is needed. In this context, the Sub-Committee noted the statement made by the delegation of Chile, as set out in annex 10.

Development of interim guidelines

4.25 The Sub-Committee, taking into account the envisaged mandatory entry into force date of amendment 02-13 to the IMSBC Code of 1 January 2015, noted that, even if the criteria for classification of substances harmful to the marine environment are finalized in 2012, the corresponding amendment to the IMSBC Code will not be able to enter into force before 1 January 2015. Hence, it was recognized that interim guidelines need to be developed to identify materials as "harmful to the marine environment" as the revised MARPOL Annex V is envisaged to enter into force on 1 January 2013.

4.26 In this context, the Sub-Committee, having noted that:

- .1 MEPC 62 established a correspondence group and instructed it to further develop the draft revised Guidelines for the implementation of the revised MARPOL Annex V and submit a report to MEPC 63; and
- .2 the two alternatives proposed on this subject, in particular, paragraph 16.4 of document MEPC 62/7/1 (United Kingdom), according to which all dangerous goods identified in the IMDG Code are to be considered harmful to the marine environment and paragraph 29 of document DSC 16/4/8 (Norway), proposing to issue a circular of solid bulk cargoes harmful to the environment,

instructed the working group to consider the above documents, taking into account that a list of solid bulk cargoes harmful to the environment may facilitate the implementation of the revised MARPOL Annex V during the interim period.

Treatment of solid cargo residues in relation with regulation 6 of the revised MARPOL Annex V

4.27 The Sub-Committee, having considered paragraph 18 of document MEPC 61/7/5, proposing to develop a scheme, similar to that on using cleaning additives permitted to be used in tank washing operations, for cleaning agents used for tank and deck washing of solid bulk cargoes, instructed the working group to further consider the above document and advise the Sub-Committee accordingly.

NEW ENTRIES AND AMENDMENTS TO EXISTING ENTRIES FOR SCHEDULES AND/OR INDEX ENTRY

4.28 The Sub-Committee recalled that DSC 15 had endorsed the recommendation to consider the need for the development of guidance on technical data to be submitted in support of the proposed schedules or a standardized procedure on how a schedule should be submitted and invited Member Governments and international organizations to submit proposals to DSC 16. Noting that there was no submission on this subject, the Sub-Committee decided to forward this issue to the working group in order to provide guidance to E&T 17, which will further the matter.

4.29 Due to time constraints, the Sub-Committee, taking into account that MSC 89 agreed to expand the terms of reference of the E&T Group to deal with amendments to the IMSBC Code and its supplements (see paragraph 2.3), agreed to forward the following documents to E&T 17 for consideration with a view to preparing draft amendment 02-13 to the IMSBC Code (for amendments to existing entries): DSC 16/4/12 (Germany), DSC 16/4/6 (Islamic Republic of Iran), DSC 16/4/68 (Venezuela, Bolivarian Republic of), DSC 16/4/69 and DSC 16/4/70 (Sweden), DSC 16/4/80 and DSC 16/4/89 (Japan), DSC 16/4/87 (Australia), DSC 15/4/3 (Japan) and DSC 15/4/4 (Japan); (for proposals for new schedules) DSC 16/4 (Germany), DSC 16/4/1 (New Zealand), DSC 16/4/3 (Canada), DSC 16/4/4 (Canada), DSC 16/4/5 (South Africa), DSC 16/4/7 (Canada and Norway), DSC 16/4/11 (Canada), DSC 16/4/14 (United States), DSC 16/4/15 (Canada), documents from DSC 16/4/17 to DSC 16/4/65 (Japan), DSC 16/4/66 (France), DSC 16/4/71 (Sweden), DSC 16/4/72 (Sweden), DSC 16/4/78 (China), DSC 16/4/79 and Corr.1 (Italy), DSC 16/4/82 (Australia), DSC 16/4/84 (Australia), DSC 16/4/85 (Australia), DSC 16/4/92 (United States) and DSC 16/4/93 (United States).

4.30 In this regard, the Sub-Committee instructed the working group to consider what information will be needed by E&T 17 to finalize the proposals on new schedules and invited interested delegations to work together with the view to submitting consolidated revised proposals for consideration at E&T 17.

4.31 In this context, the Sub-Committee noted the statement made by the delegation of Peru on the carriage of fish meal cargo, as set out in annex 11.

MISCELLANEOUS PROPOSALS**Amendments to MSC.1/Circ.1395**

4.32 The Sub-Committee recalled that MSC 89, having considered the draft MSC circular on 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, together with document MSC 89/7/5 (Japan), proposing to modify Table 1 to address cargoes which are not listed in the IMSBC Code, agreed to the proposed modifications to Table 1 and subsequently approved MSC.1/Circ.1395 on 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.

4.33 Having considered document DSC 16/4/73 (United States and Canada), proposing amendments to MSC.1/Circ.1395 in order to allow cargoes that are assigned to generic shipping schedules and new Group B cargoes that do not present a fire risk to be exempted from fixed gas fire-extinguishing systems requirements when they are assessed by the competent authority of the port of loading, the Sub-Committee, on the assumption that a conclusion will be reached on the MHB criteria in the current biennium, instructed the working group to consider the above proposal, including the option to incorporate the text from the circular into amendment 02-13 to avoid the need to amend the circular every so often, and advise the Sub-Committee accordingly.

Ventilation of cargo spaces as required by SOLAS regulation II-2/19.3.4

4.34 The Sub-Committee considered document DSC 16/4/100 (Secretariat), providing the outcome of FP 55 on matters related to the ventilation of cargo spaces as required by SOLAS regulation II-2/19.3, including its consideration of IACS unified interpretation SC 89 (FP 55/8/8), and, having noted its relevance to the ventilation provisions in the IMSBC Code, instructed the working group to further consider the above documents and advise the Sub-Committee accordingly.

Training scheme for terminal representatives

4.35 The Sub-Committee noted document DSC 16/INF.7 (IBTA), providing information on the development of a standardized training scheme for terminal representatives, and requested the observer of IBTA to keep the Sub-Committee apprised of the developments.

ESTABLISHMENT OF A WORKING GROUP

4.36 Having considered the above issues, the Sub-Committee established the Working Group on Amendments to the IMSBC Code, including evaluation of properties of solid bulk cargoes, and instructed it, taking into account the comments made and decisions taken in plenary, to:

- .1 consider document DSC 16/4/100 regarding consideration of IACS UI on ventilation of enclosed cargo spaces and advise the Sub-Committee accordingly;
- .2 consider documents MSC 89/7/4, MSC 89/7/7 and other submissions made to DSC 16 on measures to improve safe transport of solid bulk cargoes which may liquefy and advise the Sub-Committee accordingly;
- .3 consider documents MEPC 61/7/5, MEPC 61/7/12, MEPC 61/7/13, and other submissions made to DSC 16 in relation to the revised MARPOL Annex V and advise the Sub-Committee accordingly;
- .4 consider document DSC 16/4/13 and other submissions made to DSC 16 in relation to classification criteria for solid bulk materials hazardous only in bulk and advise the Sub-Committee accordingly;
- .5 prepare draft provisional agenda for E&T 17;

- .6 subject to availability of time, have discussions on other submissions made to DSC 16 under agenda item 4 and referred to the working group by plenary and, in particular, have discussions on how a proposal for a new schedule should be submitted in the future; and
- .7 submit part 1 of the report on tasks .1, .2, .3, .4 and .5 above by Thursday, 22 September 2011, deliver an oral report on the progress made on Friday, 23 September 2011, and submit part 2 of the report to DSC 17, as soon as possible after this session, so that it can also be considered at E&T 17.

REPORT OF THE WORKING GROUP

4.37 Having received the report of the working group (DSC 16/WP.3), the Sub-Committee approved it in general and took action as indicated in paragraphs 4.38 to 4.45.

Consideration of IACS unified interpretations on ventilation of enclosed cargo spaces

4.38 In considering the group's views on the outcome of FP 55 in regard to its consideration of IACS unified interpretation SC 89, the Sub-Committee agreed that no further amendments were necessary to the draft unified interpretation prepared by FP 55 on SOLAS regulation II-2/19.3.4, as set out in annex 6 to document FP 55/23, and invited MSC 90 to note the above view when considering the draft MSC circular on Unified interpretations to SOLAS chapter II-2 for approval.

Measures to improve safe transport of solid bulk cargoes

4.39 The Sub-Committee considered the group views with regard to the issue of developing alternative requirements on the prevention of accidents due to liquefaction through ship design and agreed to invite SLF 54 to consider the above matter under its agenda item on intact stability, taking into account that the sinking of vessels is due to a loss of positive stability, and advise MSC 90 accordingly on how best to proceed on this issue. In this context, the Sub-Committee also invited the DE Sub-Committee to note the ongoing work on this issue, taking into account that mitigation measures, if any are recommended, would fall under their purview.

Draft amendments to the IMSBC Code

4.40 The Sub-Committee agreed to the draft amendments to the IMSBC Code, as set out in annex 1 to document DSC 16/WP.3, for inclusion in amendment 02-13, and instructed E&T 17 to take action accordingly.

4.41 In regard to the group's discussion on the Can Test, the Sub-Committee instructed E&T 17 to further consider the issue and advise DSC 17 accordingly.

Transport of iron ore fines in bulk

4.42 The Sub-Committee approved DSC.1/Circ.66 on Carriage of iron ore fines that may liquefy, taking into account that the provisions of the circular are interim and subject to review by DSC 17, taking into account the input from the correspondence group (see also paragraph 4.45), and invited MSC 90 to endorse the above course of action.

Solid bulk cargo residues and revised MARPOL annex V

4.43 The Sub-Committee, having noted the divergent views with respect to operational dischargers and the classification of substances harmful to the marine environment, agreed to invite the MEPC to consider the issue, taking into account the deliberations contained in document DSC 16/WP.3 (paragraphs 29 to 34 and annex 3), bearing in mind that the technical competence for such classifications more properly lies with the Committee. In this context, the Sub-Committee noted a statement made by the delegation of Chile, which is set out in annex 12.

Provisional agenda for E&T 17

4.44 The Sub-Committee approved the provisional agenda for E&T 17, as set out in annex 4 of document DSC 16/WP.3, and instructed E&T 17 to consider any outstanding issues and advise DSC 17 accordingly. In this context, the Sub-Committee noted a statement made by the observer from IACS, as set out in annex 13.

ESTABLISHMENT OF A CORRESPONDENCE GROUP

4.45 Having consider the above matters, the Sub-Committee established a Correspondence Group on Transport of Iron Ore Fines in Bulk, under the coordination of Japan, and instructed it, taking into account the relevant decisions and comments taken at DSC 16, to:

- .1 prepare draft individual schedule(s) for iron ore fines and review the existing Iron Ore schedule as necessary;
- .2 consider the adequacy of, and the possibility for, improving current methods and developing alternative methods for determining transportable moisture limits for iron ore and iron ore fines;
- .3 inform E&T 17 of the progress made by the group regarding the consideration of the above tasks; and
- .4 submit a report to DSC 17.

OTHER ISSUES

4.46 The Sub-Committee noted that the delegation of France, in order to contribute to the safe carriage of nickel ore cargoes in bulk, expressed its willingness to submit information and proposal in January 2012, for consideration by E&T and DSC 17, with the aim to incorporate them into amendment 02-13 of the IMSBC Code, in particular:

- .1 the summary report of project *Rheolat*, which will include the full protocol of the new test to determine the risk of liquefaction of nickel ore in French and English;

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- .2 the third party report by the INERIS Expert Institute, also in French and English;
- .3 the charter of good storage and loading for cargoes of nickel ore, already in use in New Caledonia;
- .4 the French regulatory framework, provided as an example, which makes legally binding the application of this charter and the completion of the test to ensure the safe transport of nickel ore;
- .5 a draft amendment to the IMSBC Code, including the sampling procedure, testing (appendix 2) and a listing of nickel ore (appendix 1); and
- .6 a draft circular on guidelines for good practice of storage, sampling and loading of nickel ores.

5 CASUALTY AND INCIDENT REPORTS AND ANALYSIS

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

5.1 The Sub-Committee noted the results of container inspection programmes as submitted by means of documents DSC 16/5 (Canada), DSC 16/5/1 (Finland), DSC 16/5/3 (Belgium), DSC 16/5/4 (Hong Kong, China), DSC 16/5/7 (Sweden), DSC 16/5/9 (United States), DSC 16/5/10 (Republic of Korea) and DSC 16/5/11 (Secretariat).

5.2 The Sub-Committee considered the results of container inspection programmes based on the above submissions and presented in document DSC 16/5/11 (Secretariat), whereby a total of 56,350 CTUs were inspected and, of these, 6,303 CTUs were found with deficiencies, which means 11.9 per cent of the CTUs inspected had deficiencies. A total of 7,629 deficiencies were found, which is a deficiency rate of 13.5 per cent.

5.3 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 is 50 per cent, followed by documentation, which is 17 per cent.

5.4 The Sub-Committee requested Member Governments 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.

Development of requirements for onboard lifting appliances and winches

5.5 The Sub-Committee considered document DSC 16/5/5 (ICHCA), providing information on the outcome of an investigation undertaken by ICHCA International regarding into accidents involving ship's cranes, and highlighting, amongst other issues, that:

- .1 it is generally accepted that requirements relating to cargo handling lifting appliances are developed by ILO as part of its safety dock work provisions;
- .2 the current ILO Convention 152, which was adopted in 1979 and has been ratified by 26 states, only applied to the carrying out of dock work – generally

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- cargo handling and port State requirements are usually enforceable by shore side Labour inspectors in relation to the activities of dock workers;
- .3 SOLAS contained no specific requirements relating to the construction and use of cargo handling and non-cargo handling ships' lifting appliances;
 - .4 there is no requirement to class ships' cranes and very few are classed;
 - .5 accidents reviewed by the investigation were all subject to official investigations and the conclusions in each case were that the primary cause of an accident was bad maintenance or lack of maintenance; and
 - .6 it had been suggested to ILO that it should amplify the guidance in its Code of Practice on thorough examinations in respect of slewing rings and holding down bolts.

5.6 Following the discussion, the Sub-Committee agreed to forward document DSC 16/5/5 to the DE Sub-Committee for consideration, in due course, under the new post biennial agenda item approved by MSC 89 on "Development of requirements for onboard lifting appliances and winches", taking into account the maintenance and design issues raised in the above document.

Ionising radiation sources carried as ships' fittings, equipment and stores

5.7 The Sub-Committee considered document DSC 16/5/8 (United Kingdom), providing details on an incident involving ionising radiation sources carried as ships' fittings, equipment and stores and proposing action to assist emergency responders, salvors, shipowners, ship operators and managers, masters and officers of merchant ships, agents, charterers, ports authorities, terminal operators, enforcers, investigators, surveyors, inspectors, ships' crews in dealing with such incidents onboard ship. Furthermore, the document proposed that the Organization consider developing a comprehensive list of all ionising radiation equipment carried as ships' stores and to issue a related circular, and that the scope of the IAEA Guidance for coastal States on how to respond to a maritime emergency involving radioactive material under development should be expanded to address radioactive sources carried as ships' stores in addition to those radioactive sources carried as cargo.

5.8 The Sub-Committee invited the delegation of United Kingdom to finalize the draft comprehensive list and advise the Sub-Committee on how best to disseminate it, which should be forwarded to DE Sub-Committee for its contribution in due course. In this context, the Sub-Committee also invited the delegation of United Kingdom to consider making an appropriate contribution to the aforementioned IAEA Guidance currently under development, when the IAEA resumes the development of such guidance (see paragraph 2.2).

6 STOWAGE OF WATER-REACTIVE MATERIALS

General

6.1 The Sub-Committee recalled that DSC 15 had considered document DSC 15/8 (Germany), providing information on the ongoing activities for the FSA study on the cargo stowage, segregation and packing requirements for water-reactive substances and/or reacting with carbon dioxide in hot atmosphere, and noted the progress made on the FSA study, which is related to the substances covered by EmS Fire Schedule Golf. In additions, DSC 15 noted that Germany would present the completed FSA study to DSC 16.

6.2 Having considered documents DSC 16/6 and DSC 16/INF.2 (Germany), providing both a summary and full report of the Formal Safety Assessment on Safe Sea Transport of Dangerous Goods which react dangerously with Water and/or Carbon Dioxide, the Sub-Committee invited MSC 90 to consider documents DSC 16/6 and DSC 16/INF.2 under its agenda item on Formal Safety Assessment with a view to deciding whether the aforementioned FSA should be reviewed by the FSA Experts Group.

6.3 The Sub-Committee also decided to forward above documents to FP 56 for consideration of matters falling under its purview with a view to their advising DSC 18 and invited Member Governments and international organizations to submit detailed comments on the FSA study directly to the delegation of Germany, taking into account their intention to submit a definitive version of the proposal to DSC 17.

Extension of the target completion year

6.4 Taking the above decisions into account, the Sub-Committee invited the Committee to extend the target completion year for this output to 2013.

7 REVISED GUIDELINES FOR PACKING OF CARGO TRANSPORT UNITS

General

7.1 Having recalled the DSC 15 had agreed to the draft amendments to the IMO/ILO/UNECE Guidelines for packing cargo transport units (CTUs) for submission to MSC 89 for approval and for forwarding the above draft amendments to ILO and the UNECE for concurrent approval, as appropriate, and that the above amendment and any future revisions of the Guidelines should be under the coordination of this Organization, and that the Secretariats of IMO, ILO and UNECE should be invited to work together on these matters and advise DSC 16 accordingly.

7.2 The Sub-Committee noted that MSC 89 had approved the amendments to the IMO/ILO/UNECE Guidelines and requested the Secretariat to forward them to ILO and UNECE for concurrent approval. In this context, the Sub-Committee also noted that MSC 89, having considered document MSC 89/7/6 (ILO), proposing the elevation of the status of the IMO/ILO/UNECE Guidelines for packing cargo transport units (CTUs) to a non-mandatory Code of Practice, as recommended by the Global Dialogue Forum on Safety in the Supply Chain in relation to the Packing of Containers, endorsed the proposal of ILO and instructed DSC 16 to contribute to the development of the new Code under this agenda item.

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

- .1 DSC 16/7 (Secretariat), reporting on the outcome of the co-sponsoring organizations' inter-secretariat cooperation on the revision of the IMO/ILO/UNECE Guidelines, including the draft terms of reference for the Group of experts for the revision of the IMO/ILO/UNECE Guidelines for packing cargo transport units (CTUs);
- .2 DSC 16/7/1 (Germany), proposing that the CTU packing guidelines should provide an internationally accepted standard applicable to all modes of transport, that the values given in table of accelerations in section 1.7 of the existing guidelines should be reconsidered with the view to harmonizing them with other internationally agreed standards and guidance on calculation of the number and that strength of the lashing or blocking material used for the securing of cargo should be provided in the revised guidelines; and

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- .3 DSC 16/7/2 (FAO and IPPC), proposing the inclusion of new provisions in the existing guidelines (MSC/Circ.787, as amended) on measures to minimize contamination by plant pests.

7.4 In considering document DSC 16/7, the Sub-Committee agreed to the terms of reference for the group of experts, as set out in the annex 4, and requested the Secretariat to continue to cooperate with the ILO and UNECE Secretariats with a view to developing the non-mandatory Code of Practice. MSC 90 was invited to note the above course of action.

7.5 Having considered document DSC 16/7/1, the Sub-Committee agreed to forward it to the Group of experts. In supporting the proposal, the delegation of Sweden stated that, since IMO has developed the model course 3.18 on CTUs containing, among others, instructions on designing of cargo securing systems, it suggested that this should be the starting point for the development of the requirements in the new Code, taking into consideration other recently developed international standards as well as national rules and regulations. Furthermore, the delegation of Sweden did not agree on the use of friction coefficients (factor) from annex 13 of the CSS code (DSC 16/7/1, paragraph 4.1), as these are valid only for direct securing of cargo on board ships, and therefore, it proposes to use the coefficients of friction used in IMO Model course 3.18 be used instead, which are valid for cargo securing inside CTUs.

7.6 Having considered the above matters, the Sub-Committee requested the Secretariat to keep it informed of the progress made by the group of experts, as appropriate, and advise the Group of Experts accordingly.

8 CONSIDERATION FOR THE EFFICACY OF CONTAINER INSPECTION PROGRAMME

General

8.1 The Sub-Committee recalled that DSC 15 had considered a number of proposed amendments to the draft Guidelines for the inspection of cargo transport units carrying dangerous goods, as contained in the annex to document DSC 14/17/1 (Republic of Korea), and decided to establish the Correspondence Group on Consideration for the Efficacy of Container Inspection Programme, with terms of reference set out in paragraph 11.6 of document DSC 15/18, and instructed the group to submit a report to DSC 16.

Report of the correspondence group

8.2 The Sub-Committee considered the report of the correspondence group (DSC 16/8) and, having approved it in general, in particular:

- .1 concurred with the group's view to have a complete new MSC circular on Guidance on Inspection programmes for cargo transport units carrying dangerous goods, which would supersede MSC/Circ.1202; and
- .2 noted the decisions on the inclusion of occupational safety provisions and agreed to establish a drafting group to finalize text in the draft guidance concerning entry into cargo transport units having hazardous atmosphere;
- .3 concurred with the group's view that the scope of the guidance should not extend beyond dangerous goods; and

- .4 concurred with the group's view that inspection should be comprehensive and should not be limited or terminated at the finding of the first deficiency.

Establishment of the drafting group

8.3 Having considered the group's report, the Sub-Committee established a Drafting Group on Consideration for the Efficacy of Container Inspection Programme and instructed it, taking into account the comments and decisions in plenary, to finalize draft Guidelines on Inspection programmes for cargo transport units carrying dangerous goods together with the associated draft MSC circular.

Report of the drafting group

8.4 Having received the report of the group (DSC 16/WP.6), the Sub-Committee approved it in general and, in particular:

- .1 noted the group's view that the format of report on inspection programmes may be considered as adequately complete for the purposes of collecting and analysing information on CTU deficiencies, but that more detailed information may be needed in the future;
- .2 noted the group's view that a general reference to the parties concerned under the IMDG Code and CSC will best reflect the possible allocation of legal responsibility for the purposes of the draft MSC circular;
- .3 noted the action taken by the group with regard to operational safety aspects covered by the draft MSC circular and, in particular, agreed to delete the square brackets in the text of paragraph 4.1.11 of the draft Guidelines;
- .4 noted that the group included a reference to MSC-FAL.1/Circ.1 on Securing and Facilitating Global Trade in paragraph 4.3 of the draft Guidelines;
- .5 noted that the serious structural deficiencies provisions of the draft guidelines do not apply to all containers, but only to those subject to CSC, as amended;
- .6 in considering the opinion of the group in respect of developing provisions for training for inspectors and decided to invite Member Governments, invited international organizations to submit proposals to MSC for inclusion of an appropriate output into the biennial agenda of the Sub-Committee in according with the Committee's Guidelines (MSC-MEPC.1/Circ.4); and
- .7 encouraged joint or consolidated inspections to make the inspection processes more efficient.

8.5 Having considered the above issues, the Sub-Committee agreed to the draft MSC circular on Inspection programmes for cargo transport units carrying dangerous goods, as set out in annex 5, for approval by MSC 90.

Completion of the work on this output

8.6 The Committee was invited to note that the work on this output has been completed.

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

General

9.1 The Sub-Committee recalled that DSC 15 had noted the information provided in document DSC 15/INF.8 (IAEA), regarding the development of safety and security guidance on the detection of radioactive contaminated objects, and that the IAEA Nuclear Security Plan for 2011-2013 foresees the completion of a comprehensive set of guidance documents for the prevention, detection and response to nuclear security events and that similar response guidance was already available for cases of detection of radioactive materials. In this context, the Sub-Committee also recalled that DSC 15, having noted the verbal information provided by the Secretariat on the IAEA draft Nuclear Security Recommendations on Nuclear and other Radioactive Material out of Regulatory Control and Nuclear Glossary, requested the Secretariat to submit these documents to DSC 16.

Latest developments draft Nuclear Security Recommendations

9.2 Having noted the information provided in document DSC 16/INF.3 (Secretariat), advising on the latest developments regarding the draft Nuclear Security Recommendations on Nuclear and other Radioactive Material out of Regulatory Control and the Nuclear Security Glossary and informing the Sub-Committee that Member Governments interested in having access to the related developments should visit the IAEA's website (www.iaea.org), the Sub-Committee agreed that Members Governments and international organizations interested in the above work should contact their respective counterparts, who attend IAEA meetings, for information, advice and providing contributions to the ongoing related developments at the Agency.

9.3 The representative from IAEA, having concurred with the information and recommendations contained in document DSC 16/INF.3, advised the Sub-Committee stated that the documents that have been under development at IAEA on this subject have particular bearing to the work of the Sub-Committee. However, due to the time constraints and the applicability of this matter to agenda Item 3, the representative from IAEA decided to only draw the Sub-Committee's attention to the new edition of the *Regulations for the Safe Transport of Radioactive Material* (TS-R-1) rather than highlighting the details. The representative from IAEA also informed the Sub-Committee that it was hosting an International Conference on the Safe and Secure Transport of Radioactive Material, from 17 to 21 October 2011, in Vienna, Austria and made available informational brochures for interested delegations. In conclusion, he stated that the IAEA looked forward to continued coordination, cooperation and communication on future activities involving both the Organizations.

Completion of work on this output

9.4 The Committee was invited to note that work on this output had been completed and requested the Secretariat to continue to cooperate with the IAEA in areas of mutual interest and to keep the Sub-Committee and the Committee informed, as appropriate, of any relevant developments.

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

ENTRY INTO FORCE OF THE 1993 CSC AMENDMENTS

General

10.1 The Sub-Committee recalled that MSC 88 (DSC 16/10), taking into account the need to facilitate the entry into force of the 1993 CSC Amendments, had instructed DSC 16 to prepare a new set of amendments to the Annex to the 1972 CSC on the basis of the 1993 CSC Amendments in such a way that amendments to Article II of the Convention are not necessary and that the new amendments to the Annex may come into force under the existing tacit acceptance procedures for amendments to the annexes of the 1972 CSC.

Establishment of the drafting group

10.2 The Sub-Committee, having considered the following documents submitted on matters related to the entry into force of the 1993 CSC Amendments:

- .1 DSC 16/10/2 (Secretariat), providing a proposal to facilitate the entry into force of the provisions of the 1993 CSC Amendments, including draft amendments to the annex of the 1972 CSC on the basis of the 1993 Amendments and a proposed new Annex IV on definitions; and
- .2 DSC 16/10/3 (Germany), proposing amendments to the annexes to the CSC on the basis of the 1993 CSC Amendments, whereby the amendments to the definitions in the articles of the Convention according to resolution A.737(18) would be replaced by a new regulation in Annex I in order to ensure uniform usage of terminology for all parts of the CSC and its annexes, all 1993 CSC Amendments to Annexes I and II, as adopted by resolution A.737(18), which should be implemented by a new MSC resolution under the tacit acceptance procedure, and all amendments to the Annexes adopted by resolution MSC.310(88) should be reconsidered with respect to consistency of dimensions and units,

decided to establish a Drafting Group on Entry into Force of the 1993 CSC Amendments and instructed it, taking into account comments made and decisions taken in plenary and documents DSC 16/10/2 and DSC 16/10/3, to prepare draft amendments to the 1972 CSC and an associated draft MSC resolution, such that the 1993 CSC Amendments may enter into force using the tacit acceptance procedure.

Report of the drafting group

10.3 Having considered the report of the drafting group (DSC 16/WP.7), the Sub-Committee approved it in general and, in particular:

- .1 noted the view of the group regarding the inclusion of all definitions in a new Annex IV to the 1972 CSC, taking into account document DSC 16/10/2, and that of references have been added to the new Annex IV at the beginning of the existing Annexes I and II;
- .2 agreed that the definition of the term "loading" included in resolution A.737(18) is no longer needed and should be deleted;

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- .3 endorsed the draft amendments to the Convention's Annexes I and II and the draft new Annex IV, in order to implement all 1993 CSC Amendments;
 - .4 endorsed the group's recommendation to replace the unit "newtons" by "kN" wherever it is used throughout the annexes;
 - .5 agreed that the draft amendments to implement the 1993 CSC Amendments, as set out in annex 1 of document DSC 16/WP.7, should enter into force simultaneously with the proposed modifications to the 2010 CSC Amendments, as set out in annex 2 of document DSC 16/WP.7;
 - .6 noted that the amended regulation 1 of Annex I, as adopted by resolution MSC.310(88), will enter into force on 1 January 2012 without any transitional period and will become effective as soon as the amendments to ISO 6346 are published;
 - .7 concurred with the view of the group that a transitional period is necessary for the marking of existing containers with reduced stacking and racking capacity; and
 - .8 noted that the group had identified modifications to the 2010 CSC Amendments and that CSC.1/Circ.138, on Revised Recommendations on harmonized interpretation and implementation of the International Convention for Safe Containers, 1972, may need to be amended, for the sake of consistency.

Other amendments to the CSC and CSC.1/Circ.138

10.4 The Sub-Committee considered the document by Germany (DSC 16/10/4), proposing that the table on serious structural deficiencies in Annex III of the CSC and in CSC.1/Circ.138 be supplemented with a second set of criteria for "minor deficiencies requiring advice to owner and restrictions for transport", including the applicable restrictions, and the existing table of deficiencies would then become the table containing the criteria for "serious deficiencies requiring immediate out of service determination".

10.5 Following discussion, the Sub-Committee, having noted that:

- .1 MSC 87 had approved Revised Recommendations on harmonized interpretation and implementation of the International Convention for Safe Containers, 1972, as amended (CSC.1/Circ.138); and
- .2 MSC 88 had adopted amendments to the International Convention for Safe Containers, 1972, (resolution MSC.310(88)) and that these amendments will enter into force on 1 January 2012,

invited interested Member Governments and international organizations to submit proposals to DSC 17 regarding additional amendments to the Convention and CSC.1/Circ.138, taking into account the discussions at this session, the relevant decisions of the Committee and the lessons learned from the application of the recommendations and amendments, as appropriate. The Sub-Committee also agreed that it would be useful to have one set of amendments to the CSC, rather than preparing amendments on a piecemeal basis, and invited interested delegations to submit comments and proposals for consideration at DSC 17.

10.6 In light of the above, the Sub-Committee invited the Committee to note that the work to facilitate the entry into force of the 1993 Amendments has been delayed in order to approve a consolidated set of amendments, incorporating the set of amendments prepared at DSC 16, as set out in annex 1 to document DSC 16/WP.6, to DSC 17, with a view to approval of a new set of amendments at MSC 91.

PLACING AND MARKING OF CONTAINERS WITH LIMITED STACKING AND/OR RACKING CAPACITY

10.7 The Sub-Committee recalled that DSC 15, having noted the information provided by the observer from ISO that TC 104 would meet in January 2011 to consider ISO 6346:1995 on *Freight containers – Coding, identification and marking*, taking into account DSC 14's request for it to considering including within the appropriate standard specific marking criteria to denote containers with such limited racking and stacking capacities, invited ISO, Member Governments and other international organizations to submit comments and proposals to DSC 16.

10.8 Having noted the information provided in document DSC 16/INF.9 (ISO), regarding the progress by ISO in developing suitable marking standard for containers with reduced stacking and/or racking strength, which include the use of two digits of the container's Type Code that will be shown on the top and front side of the container for easy identification of such containers and other proposed changes to ISO 6346:1995, the Sub-Committee requested the observer from ISO to continue to keep it informed of the progress made in respect of finalization of the above standard and invited interested delegations to submit proposals on associated amendments to the Convention for consideration at DSC 17.

RECORDS OF APPROVED CONTINUOUS EXAMINATION PROGRAMMES (ACEP)

10.9 The Sub-Committee recalled that DSC 15, having noted that the majority of the delegations who spoke were in favour of continuing work on how best to make the list of the records of approved continuous examination programmes maintained by the Administrations publicly available, invited Member Governments and international organizations to submit comments and proposals to DSC 16:

10.10 The Sub-Committee, having considered documents:

- .1 DSC 16/10/1 (Russian Federation), suggesting the information to be included in the list of records of ACEP following document DSC 15/13 and relevant decisions on the subject taken at DSC 15; and
- .2 DSC 16/10/5 (BIC), offering to develop a database of ACEP, at no cost to the Organization, to be made publicly available, as provided in new paragraph 7 of regulations 2, chapter 1, annex 1 of the CSC (resolution MSC.310(88)) and in paragraph 9.1 of the annex to CSC.1/Circ.138,

expressed its support to BIC for their willingness to undertake this exercise and invited it to keep the Sub-Committee informed of the progress made, taking into account the comments and queries made related to the costs associated with the development of such a database.

10.11 The Sub-Committee supported, in principle, for the proposal DSC 16/10/1 and agreed to consider it, at DSC 17, under the new planned output on "Development of guidance for Approved Continuous Examination Programmes (ACEP)".

Extension of the target completion year

10.12 The Sub-Committee invited the Committee to extend the target completion year for this output to 2013.

11 AMENDMENTS TO SOLAS TO MANDATE ENCLOSED SPACE ENTRY AND RESCUE DRILLS

General

11.1 The Sub-Committee recalled that DSC 15, due to time constraints, was unable to reach a consensus on the way forward regarding the preparation of amendments to SOLAS to mandate enclosed space entry and rescue drills and had invited Member Governments and international organizations to submit comments and proposals on this issue to DSC 16, taking into account that the majority of the delegations who spoke on the issue were of the view that the issuance of guidance (i.e. resolution A.864(20), etc.) had not achieved the desired effect and, therefore, the only practical approach that can be taken is to mandate drills in SOLAS to ensure that all seafarers properly understand the risks and how to safely manage them.

11.2 The Sub-Committee also recalled that, at BLG 15 (DSC 16/2), the majority of the delegations who spoke were of the view that the most practicable way to reduce the number of fatalities was to have SOLAS mandated drills so that seafarers who are expected to enter enclosed spaces are familiarized with the precautions to be taken prior to entry and the effective rescue strategies in the event of an accident, taking into account that the SOLAS Convention requires drills for fire-fighting and life-saving operations and that past IMO initiatives in this regard had not achieved a reduction in the number of fatalities.

Establishment of the working group

11.3 Having considered document DSC 16/11 (Nautical Institute), providing information and comments on entry into enclosed spaces on board ships, which had been provided by the Nautical Institute's seagoing correspondence group, the Sub-Committee, recalling its relevant decision at DSC 15, established the Working Group on Amendments to SOLAS to Mandate Enclosed Space Entry and Rescue Drills and instructed it, taking into account the comments and decisions in plenary, to:

- .1 finalize the draft amendments to SOLAS chapters III or XI, based on annexes 1 and 2 of document DSC 15/17;
- .2 further consider mandatory carriage requirement and continuous use of oxygen meters or other such devices; and
- .3 identify any matters that need to be specifically considered by BLG 16.

Report of the working group

11.4 Having received the report of the working group (DSC 16/WP.4), the Sub-Committee approved it in general and, in particular:

- .1 agreed to the draft amendments to SOLAS regulation III/19 to mandate enclosed space entry and rescue drills, as set out in annex 12 to document DSC 16/WP.4;

- .2 endorsed the group's recommendation on mandatory carriage and continuous use of an oxygen meter or other such devices;
- .3 agreed to refer the draft amendments to BLG 16 and STW 43, subject to endorsement by MSC 90, for consideration; and
- .4 agreed to finalize the above draft amendments at DSC 17, taking into account the comments of BLG 16 and STW 43.

11.5 With regard to the issue of mandatory carriage and continuous use of an oxygen meter or other such devices, the Sub-Committee noted that SOLAS regulation VI/3 requires an appropriate instrument for measuring the concentration of gas or oxygen in the air to be provided when transporting a bulk cargo which is liable to emit a toxic or flammable gas, or cause oxygen depletion in the cargo space, as referred to in paragraph 11.4.2 above. In this context, the Sub-Committee also invited Member Governments and international organizations to submit comments and proposals to BLG 16 and/or DSC 17, as appropriate, if there are still concerns.

12 BIENNIAL AGENDA AND PROVISIONAL AGENDA FOR DSC 17

12.1 The Sub-Committee noted that MSC 89 and MEPC 62 had approved the revisions to the Guidelines on the organization and method of work, taking into account the provisions of the Migration Plan prepared by the Council to harmonize the Committee's Guidelines with the Guidelines on the Application of the Strategic Plan and the High-level Action Plan (resolution A.1013(26)), and that the revised Guidelines have been issued as MSC-MEPC.1/Circ.4. In this regard, the Sub-Committee also noted that the Committees urged all concerned to strictly apply them.

Proposals for the biennial agenda for 2012-2013 and provisional agenda for DSC 17

12.2 Taking into account the progress made during this session, the Sub-Committee prepared the proposed biennial agenda for the 2012-2013 biennium in SMART terms, and the provisional agenda for DSC 17 (DSC 16/WP.2, annexes 1 and 2), based on the biennial agenda approved by MSC 89 (DSC 16/2/1, annex), as set out in annexes 6 and 7, respectively, for consideration by CWGSP 12, C/ES.26 and MSC 90, as appropriate.

Report on the status of planned outputs

12.3 The Sub-Committee prepared the report of the status of the planned outputs of the High-level Action Plan of the Organization and priorities for the 2010-2011 biennium relevant to the Sub-Committee (DSC 16/WP.2, annex 4), as set out in annex 8, which the Committee is invited to note.

Arrangements for the next session

12.4 The Sub-Committee noted that, at DSC 17, two working groups (see paragraph 2.3) and up to two drafting groups, if necessary, would be established on the subjects selected from the following list:

- .1 revised guidelines for packing of cargo transport units;
- .2 amendments to the International Convention for Safe Containers, 1972 and associated circulars;

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- .3 amendments to SOLAS to mandate enclosed space entry and rescue drills; and
 - .4 development of guidance for Approved Continuous Examination Programmes,

whereby the Secretariat, in consultation with the outgoing Chairman, would advise the Sub-Committee, in due course, on the final selection of such groups, taking into account the submissions received.

12.5 The Sub-Committee recalled it had established correspondence groups on the following subjects, due to report to DSC 17:

- .1 transport of iron fines (established under agenda item 4); and
- .2 development of guidance for Approval Continuous Examination Programme (established under agenda item 14).

Intersessional meetings

12.6 The Sub-Committee noted that MSC 89 had approved, and C 106 endorsed, the seventeenth and eighteenth intersessional meetings of the E&T Group and, in this regard, noted that E&T 17 will take place from 19 to 23 March 2012 and that E&T 18 will take place from 24 to 28 September 2012, the week after DSC 17.

Date of the next session

12.7 The Sub-Committee noted that its seventeenth session had been tentatively scheduled to take place from 17 to 21 September 2012.

13 ELECTION OF CHAIRMAN AND VICE-CHAIRMAN FOR 2012

13.1 The Sub-Committee, having been informed of the Chairman's and Vice-Chairman's decision not to stand for re-election, expressed its deep appreciation to Mrs. Olga P. Lefèvre (France) and Mr. Arsenio A. Domínguez (Panama) for the outstanding contribution they had made over many years to the attainment of IMO's objectives in general and to the work of the Organization, especially the Sub-Committee, which they had served with unique distinction, and wished them every success in their future undertakings.

13.2 The Sub-Committee agreed to hold the election of officers at the start of DSC 17.

14 ANY OTHER BUSINESS

Revision of the Code of safe practice for ships carrying timber deck cargoes, 2011

14.1 The Sub-Committee noted that MSC 89, having recognized that a few technical issues raised at the Committee could not be resolved at that session, approved, in principle, the draft Assembly resolution on Adoption of the Code of Safe Practice for Ships Carrying Timber Deck Cargoes, 2011 (MSC 89/25, annex 9), for submission to the twenty-seventh session of the Assembly for adoption; instructed DSC 16 to further consider documents MSC 89/7/2 and Corr.1, MSC 89/7/3 and MSC 89/7/8 with a view to preparing proposed amendments to the draft 2011 TDC Code; and authorized the Sub-Committee to submit them directly to the twenty-seventh session of the Assembly. In this regard, MSC 89 invited experts on the stability timber deck carriers to attend DSC 16.

Establishment of the working group

14.2 Having considered the above documents, together with document DSC 16/14/3 (IACS), proposing improvements to the draft 2011 TDC Code and suggesting, in particular, that a review should be undertaken by the experts to look into the apparent significant anomalies between bending resistance requirements obtained by direct calculations provided in paragraph 7.3 of Annex B and from the use of Table 7.1 of the draft 2011 TDC Code, the Sub-Committee established the Working Group on Revision of the Code of Safe Practice for Ships Carrying Timber Deck Cargoes, 2011, and instructed it, taking into account comments made and decisions taken in plenary, to prepare modifications to the draft revised Code of Safe Practice for Ships Carrying Timber Deck Cargoes, 2011, as set out in annex 9 to document MSC 89/25/Add.1, taking into account documents MSC 89/7/2 and Corr.1, MSC 89/7/3, MSC 89/7/8 and DSC 16/14/3.

Report of the working group

14.3 Having received the report of the working group (DSC 16/WP.5), the Sub-Committee approved it in general and took action as follows:

- .1 agreed to the modifications to the draft Code of Safe Practice for Ships Carrying Timber Deck Cargoes, 2011, as set out in annex 9, for submission to A 27 for consideration in conjunction with the adoption of the draft 2011 TDC Code approved by MSC 89;
- .2 invited the SLF Sub-Committee to develop guidance for ships carrying timber deck cargoes regarding the increased weight of ice in relation to the 2008 IS Code (part B, section 6.3);
- .3 invited the SLF Sub-Committee to consider updating the footnote to paragraph (6) of regulation 44 of the 1988 Load Lines Protocol;
- .4 invited IACS to develop a Unified Interpretation regarding the connection of uprights to the deck or hatch relating to regulation 44 (5) and (6) of the 1988 Load Lines Protocol and paragraph 7.2 of the draft 2011 TDC Code.

Development of measures to prevent loss of containers

14.4 The Sub-Committee noted that MSC 89, having considered document MSC 89/22/11 (Australia, Denmark and the Netherlands), proposing to reduce the amount of damaged and lost containers through the strengthening of the requirements for lashing gear, the verification of proper weight used on the shipboard loading computers, the adequate stacking of containers and the provision of a feedback instrument for the crew of container ships, taking into account comments provided in document MSC 89/22/17 (ICS and WCS), agreed to include, in the post-biennial agenda of the Committee, an output on "Development of measures to prevent loss of containers", with a target completion year of 2013, assigning the Sub-Committee as the coordinating organ, in association with the DE, SLF and STW Sub-Committees as and when requested by the Sub-Committee; and instructed DSC 16 to give preliminary consideration to the output at this session under the agenda item "Any other business", taking into account the above documents and the effect this output may have on the work related to the development of a new mandatory Polar Code, and include the output in the provisional agenda for DSC 17.

14.5 With regard to the issues concerning strengthening of the requirements for lashing gear and adequate stacking of containers, the Sub-Committee, having noted that there was no proposal submitted, invited the DE Sub-Committee to consider the proposal (MSC 89/22/11) to strengthen the requirements for lashing gear and agreed that DSC 17 will consider the issue of adequate stacking of containers under the new output on the "Development of Measures to prevent loss of containers". In this context, the Sub-Committee also invited Member Governments and international organizations to submit comments and proposals to the DE Sub-Committee and DSC 17, as appropriate.

14.6 The Sub-Committee also considered document DSC 16/4 (WCS, ICS and BIMCO), providing observations and comments intended to assist the Sub-Committee in its consideration of the mandatory container weighing component of the new output and recommending that SOLAS be amended to require verification of containers' actual weight before loading onto a ship regulated by SOLAS. In the regard, the Sub-Committee, having reconfirmed the importance of, and need for, correct declaration of weights for carriage on board ships, invited WCS, ICS and BIMCO and others to submit a definitive version of their proposal, taking into account comments made at the session, for consideration at DSC 17.

Development of guidance for Approved Continuous Examination Programmes (ACEP)

14.7 The Sub-Committee noted that MSC 89 had considered document MSC 89/22/3 (United States), proposing to develop guidance for Approved Continuous Examination Programmes (ACEP) in order to establish a foundation for recognizing ACEP outlined in the CSC, 1972, as amended, as meeting accepted international standards, and agreed to include, in the post-biennial agenda of the Committee, an output on "Development of guidance for Approved Continuous Examination Programmes (ACEP)", with the target completion year of 2013, assigning the Sub-Committee as the coordinating organ; and instructed the Sub-Committee to give preliminary consideration to the output at DSC 16 under the agenda item "Any other business" and include the output in the provisional agenda for DSC 17.

Establishment of a correspondence group

14.8 Having given preliminary consideration to the issue, together with document DSC 16/14/2 (United States), identifying gaps in international standardized procedures for examinations, documentation and the availability of documentation on ACEP and proposing that the development of international guidance for development of ACEP would improve the consistency and content of ACEP and provide a foundation for recognition of compliance with internationally accepted requirements, the Sub-Committee established the Correspondence Group on Development of Guidance for Approved Continuous Examination Programmes (ACEP), under the coordination of the United States,* and instructed it, taking into account the relevant decisions taken and comments made taken at DSC 16, to: prepare draft international guidance for the development of Approved Continuous Examination Programme; and submit a report to DSC 17.

*

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Guidance on protective clothing

14.9 The Sub-Committee recalled that, in the context of matters related to guidance on protective clothing associated with chapter 7 of the 2000 HSC Code and SOLAS regulation II-2/19, DSC 15 had noted that ISO/TC 94 and ISO/TC 8 were in the process of revising ISO 16602:2007 on *Protective clothing for protection against chemicals* and that a Publically Available Specification would not be available for at least one year and decided to await the outcome of ISO in order to avoid a duplication of the work. Therefore, DSC 15 decided to postpone work on this planned output pending the outcome of the work by ISO on the revisions of ISO 16602.

14.10 The Sub-Committee, in considering document DSC 16/14/1 (ISO), responding to the request of DSC 15, noted that:

- .1 ISO 16602 is under a process of amendment (minor change), but no progress has been made by ISO/TC 94 since April 2010, ISO/TC 8 reviewed the standard and found that it is basically suitable for maritime use, although it does not include provisions on use of the chemical protective clothing in the marine environment, and that ISO/TC 8 previously had thought it necessary to work in co-operation with ISO/TC 94/SC13;
- .2 ISO/TC 8 observed that ISO 16602 specifies various classes of chemical protective clothing which provide protection against particular chemicals, but there is no class of chemical protective clothing which provides protection against all chemical types and, as such, appropriate chemical protective clothing should be chosen, in principle, for each ship dependent on the chemical cargo carried by the ship; and
- .3 the proposal to amend SOLAS and the insertion of a footnote should be looked into by experts of the Sub-Committee.

14.11 Following discussion, the Sub-Committee instructed the E&T Groups dealing with the IMDG and IMSBC Codes to consider the proposal from ISO with a view to advising DSC 17 and invited ISO to provide ISO 16602:2007 to the experts of the E&T Group.

14.12 In this regard, the Sub-Committee agreed to place the postponed output on "Guidance on protective clothing" in the provisional agenda of DSC 17.

Expression of appreciation

14.13 The Sub-Committee expressed appreciation to the following delegates and members of the Secretariat, who had recently relinquished their duties, retired or were transferred to other duties or were about to, for their invaluable contribution to its work and wished them a long and happy retirement or, as the case might be, every success in their new duties:

- Captain Valentin Ruz Rodriguez (Argentina) (on return home)
- Commander Roberto Annichini (Argentina) (on return home)
- Ms. Petra Bethge (Germany) (on return home)
- Captain Hadi Supriyono (Indonesia) (on return home)
- Captain Manuel Nogueira Romero (Spain) (transfer to new duties)
- Admiral Giancarlo Olimbo (Italy) (on retirement)
- Mr. Irfan Rahim (Secretariat) (on secondment to UNESCAP)
- Mr. Mike Compton (ICHCA) (on retirement)
- Mr. John Alexander (ICHCA) (on retirement)

15 ACTION REQUESTED OF THE COMMITTEE

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

- .1 approve the draft MSC circular on Amendments to the Emergency Response Procedures for Ships carrying Dangerous Goods (EmS Guide), (paragraph 3.2.29 and annex 1);
- .2 approve the draft MSC circular on Conversion table (record of amendments) for part 7 requirements concerning transport operations, (paragraph 3.2.30 and annex 2);
- .3 approve the draft MSC circular on Illustrations of segregation of cargo transport units on board container ships and ro-ro ships, (paragraph 3.2.31 and annex 3);
- .4 endorse the Sub-Committee's recommendation to develop a generic model course on dangerous, hazardous and harmful cargoes that can be used for a number of years for technical co-operation activities without the need for frequent updates (i.e. every two years) and request the Secretariat to take action accordingly (paragraph 3.29);
- .5 note that the Sub-Committee authorized E&T 16 to prepare the final text of the draft amendments (36-12) of the IMDG Code, based on decisions taken at the session, and requested the Secretary-General to circulate them in accordance with SOLAS article VIII, for consideration and subsequent adoption by MSC 90 (paragraphs 3.1, 3.30 and 3.31);
- .6 note that the Sub-Committee agreed to the draft unified interpretation to SOLAS regulation II-2/19.3.4 prepared by FP 55, as set out in annex 6 to document FP 55/23, when considering the draft MSC circular on Unified interpretations to SOLAS chapter II-2 for approval (paragraph 4.38);
- .7 note that SLF 54 has been invited to consider, within the context of their work on intact stability, matters related to the development of alternative ship design requirements for the prevention of accidents due to liquefaction, taking into account that the sinking of vessels is due to a loss of positive stability, and advise the Committee accordingly on how best to proceed in this issue (paragraph 4.39);
- .8 endorse the actions taken by the Sub-Committee on matters related to transport of iron ore fines in bulk, including the approval of DSC.1/Circ.66 on Carriage of iron ore fines that may liquefy (paragraph 4.42);
- .9 note that document DSC 16/5/5, regarding accidents involving ships' cranes, was forwarded to the DE Sub-Committee for consideration, in due course, under the new post biennial agenda item on "Development of requirements for onboard lifting appliances and winches" (paragraph 5.6);
- .10 consider whether the FSA study on sea transport of dangerous goods, as set out in documents DSC 16/6 and DSC 16/INF.2, should be reviewed by the FSA Experts Group (paragraph 6.2);

- .11 note that FP 56 has been invited to comment on documents DSC 16/6 and DSC 16/INF.2 for matters falling under its purview and advise DSC 17 accordingly (paragraph 6.3);
- .12 note that the Sub-Committee agreed to the draft terms of reference for the Group of Experts for the revision of the IMO/ILO/UNECE Guidelines for packing cargo transport units of and requested the Secretariat to continue to cooperate with the ILO and UNECE Secretariats on the development of a non-mandatory Code of Practice (paragraph 7.4 and annex 4);
- .13 approve the draft MSC circular on Inspection programmes for cargo transport units carrying dangerous goods (paragraph 8.5 and annex 5);
- .14 note the decision to revise the Recommendations on harmonized interpretation and implementation of the International Convention for Safe Containers, 1972, as amended (CSC.1/Circ.138), for the sake of consistency with the 2010 CSC Amendments (paragraphs 10.3.8 and 10.5);
- .15 note that the Sub-Committee has decided to prepare modifications to the 2010 CSC Amendments and, as a result, the work to facilitate the entry into force of the 1993 CSC Amendments has been delayed in order to prepare a consolidated set of amendments for submission to MSC 91 for approval (paragraph 10.6);
- .16 endorse the course of action of the Sub-Committee to forward the draft amendments to SOLAS regulation III/19, to mandate enclosed space entry and rescue drills, to BLG 16 and STW 43, taking to account that the draft amendments will be finalized at DSC 17 (paragraph 11.4);
- .17 approve the biennial agenda of the Sub-Committee for the 2012-2013 biennium (paragraph 12.2 and annex 6);
- .18 approve the provisional agenda for FP 56 (paragraph 12.3 and annex 7);
- .19 note the report on the status of the Sub-Committee's planned outputs in the High-level Action Plan for the 2010-2011 biennium (paragraph 12.4 and annex 8);
- .20 note the modifications to the draft Assembly resolution on Adoption of the Code of Safe Practice for Ships Carrying Timber Deck Cargoes, 2011 (2011 TDC Code), for submission to the twenty-seventh session of the Assembly for consideration in conjunction with the adoption of the draft Code, as approved by MSC 89 (paragraph 14.3.1 and annex 9);
- .21 endorse the Sub-Committee's action to invite the SLF Sub-Committee to develop guidance for ships carrying timber deck cargoes regarding the increased weight of ice, for inclusion in the 2008 IS Code (paragraph 14.3.2);
- .22 endorse the Sub-Committee action to invite the SLF Sub-Committee to consider updating the footnote to paragraph (6) of regulation 44 of the 1988 Load Lines Protocol (paragraph 14.3.3); and
- .23 approve the report in general.

15.2 The Marine Environment Protection Committee, at its sixty-third session, is invited to note the divergent views with respect to operational dischargers and the classification of substances harmful to the marine environment, taking into account the deliberations contained in document DSC 16/WP.3 (paragraphs 29 to 34 and annex 3), bearing in mind the views expressed that the technical competence for such classifications more properly lies with the MEPC (paragraph 4.43).

ANNEX 1

DRAFT MSC CIRCULAR

**AMENDMENTS TO THE EMERGENCY RESPONSE PROCEDURES FOR
SHIPS CARRYING DANGEROUS GOODS (EMS GUIDE) (MSC/CIRC.1025)**

1 The Maritime Safety Committee, at its [ninetieth session (16 to 25 May 2012)], approved amendments to the Emergency response procedures for ships carrying dangerous goods (EmS Guide) (MSC/Circ.1025, as amended by MSC.1/Circ.1025/Add.1, MSC.1/Circ.1262 and MSC.1/Circ.1360), set out in the annex, which consequential to the amendments to the IMDG Code, as adopted by resolution [MSC....(90)].

2 Member Governments are invited to bring the annexed amendments to the EmS Guide to the attention of all concerned, taking into account the voluntary application date of [1 January 2013] of amendment 36-12 of the IMDG Code pending its envisaged mandatory entry into force date of [1 January 2014].

ANNEX

**AMENDMENTS TO THE EMERGENCY RESPONSE PROCEDURES FOR SHIPS
CARRYING DANGEROUS GOODS (EmS GUIDE)
(MSC/Circ.1025, as amended by MSC.1/Circ.1025/Add.1 and MSC.1/Circ.1262)**

EmS Guide

Emergency Schedules for FIRE

F-D
FLAMMABLE GASES

In the row for Special Cases, add the following:

UN 3501, UN 3504, UN 3505	A flammable liquid, paste or powder may be expelled if the package is ruptured. Also consult FIRE SCHEDULE F-E.
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Emergency Schedules for SPILLAGE

S-B
CORROSIVE SUBSTANCES

In the row for Special Cases, add the following:

Add "UN 3506" after "UN 2809".

S-U
GASES (FLAMMABLE, TOXIC OR CORROSIVE)

In the row for Special Cases, add the following:

UN 3501	A flammable liquid, paste or powder may be expelled if the package is ruptured. Also consult SPILLAGE SCHEDULES S-D or S-G as appropriate.
UN 3504	A flammable or toxic liquid, paste or powder may be expelled if the package is ruptured. Also consult SPILLAGE SCHEDULES S-D, S-G or S-A as appropriate.
UN 3505	A flammable or corrosive liquid, paste or powder may be expelled if the package is ruptured. Also consult SPILLAGE SCHEDULES S-C or S-G as appropriate.

S-V
GASES (NON-FLAMMABLE, NON-TOXIC)

In the row for Special Cases, add the following:

UN 3502	A toxic liquid, paste or powder may be expelled if the package is ruptured. Also consult SPILLAGE SCHEDULE S-A.
UN 3503	A corrosive liquid, paste or powder may be expelled if the package is ruptured. Also consult SPILLAGE SCHEDULES S-C or S-G as appropriate.

INDEX

In the index, add the following new entries in numerical order:

UN No.	EmS Fire	EmS Spill
3497	F-A	S-J
3498	F-A	S-B
3499	F-A	S-I
3500	F-C	S-V
3501	<u>F-D</u>	<u>S-U</u>
3502	F-C	<u>S-V</u>
3503	F-C	<u>S-V</u>
3504	<u>F-D</u>	<u>S-U</u>
3505	<u>F-D</u>	<u>S-U</u>
3506	F-A	<u>S-B</u>

ANNEX 2

DRAFT MSC CIRCULAR

**CONVERSION TABLE (RECORD OF AMENDMENTS) FOR
PART 7 REQUIREMENTS CONCERNING TRANSPORT OPERATIONS**

1 The Maritime Safety Committee, at its [ninetieth session (16 to 25 May 2012)], approved the Conversion table (record of amendments) for part 7 requirements concerning transport operations, set out in the annex.

2 Member Governments are invited to bring the annexed Conversion table (record of amendments) for part 7 requirements concerning transport operations to the attention of all concerned, taking into account the voluntary application date of [1 January 2013] of amendment 36-12 of the IMDG Code pending its envisaged mandatory entry into force date of [1 January 2014].

ANNEX

**CONVERSION TABLE (RECORD OF AMENDMENTS) FOR
PART 7 REQUIREMENTS CONCERNING TRANSPORT OPERATIONS**

Note: The table below indicates which provisions of part 7 in amendment 35-10 of the IMDG Code have been carried forward to amendment 36-12 of this Code. Some parts of the text have been deleted as they did not contain a mandatory requirement but a recommendation or an explanation, or as the requirement is already covered by SOLAS regulation II-2/19 or by other provisions in the code. Some text has been editorially changed.

Former section (amendment 35-10)	New section (amendment 36-12)
7.1	7.1
7.1.1	7.1.1
7.1.1.1	Deleted
	7.1.2
7.1.1.2	7.1.3.2
7.1.1.3	Deleted
7.1.1.4	Deleted
7.1.1.5	7.6.2.1.1
7.1.1.5.1	7.6.2.1.2
7.1.1.6	Deleted
7.1.1.7	7.6.2.1.4
7.1.1.8	DSC 16/3
7.1.1.9	7.6.2.1.3
7.1.1.10.1	7.6.2.1.3
7.1.1.10.2	Deleted, covered by column 16 of the dangerous goods list
7.1.1.11	7.1.4.1
7.1.1.12	7.1.4.3
7.1.1.13	DSC 15/INF.7*
7.1.1.14	7.1.2
7.1.1.15	7.1.2
7.1.1.16	7.6.2.1.5
7.1.2.1	7.1.2
7.1.2.2	DSC 15/INF.7*
7.1.2.3	Deleted
7.1.2.4	Deleted
7.1.3	Deleted
7.1.4.1	Deleted
7.1.4.2 to 7.1.4.3	7.1.4.2
7.1.5	1.2.1, 7.3.4.2, 7.6.3.1, 7.7.3.6
7.1.6	Deleted
7.1.7.1.1	7.1.2
7.1.7.1.2 to 7.1.7.1.4	Deleted

Former section (amendment 35-10)	New section (amendment 36-12)
7.1.7.1.5	Column 16 of dangerous goods list (UN Nos. 0075 0160, 0161, 0340, 0341, 0498, 0499)
7.1.7.1.6 to 7.1.7.1.7	Deleted
7.1.7.2	7.1.3.1
7.1.7.3	Deleted
7.1.7.4	7.1.4.4 and 7.6.2.4
7.1.7.5	7.1.4.4.5
7.1.8.1.1	7.4.2.3.2
7.1.8.1.2.1	Deleted
7.1.8.1.2.2 to 7.1.8.1.2.3	7.6.2.6
7.1.8.1.2.4	Deleted, ventilation for ships built before 1 Sept. 1984 7.4.2.4.1, 7.5.2.11, 7.6.2.3.1
7.1.8.1.3 to 7.1.8.1.5	Deleted
7.1.8.2.	Deleted, covered by column 16 or SOLAS
7.1.9.1	Deleted
7.1.9.2	7.6.2.5
7.1.9.3	Deleted
7.1.9.4 to 7.1.9.8	Deleted, ventilation for ships built before 1 Sept. 1984 7.4.2.4.1, 7.5.2.11, 7.6.2.3.1
7.1.10.1.1 to 7.1.10.1.4	Deleted, covered by column 16 of dangerous goods list or SOLAS
7.1.10.2	Deleted , covered by column 16
7.1.10.3	7.4.1.3, 7.6.2.7.2
7.1.10.4	7.6.2.7.3
7.1.11.1 to 7.1.11.4	7.6.2.8.1 to 7.6.2.8.3 and 7.6.2.8.5
7.1.11.5	7.4.1.4, 7.6.2.8.4
7.1.12.1 to 7.1.12.3	Deleted
7.1.12.4 to 7.1.12.5	7.6.2.9.1 to 7.6.2.9.1
7.1.13.1.1	7.6.2.10.1
7.1.13.2	Deleted, covered by column 16 of dangerous goods list or SOLAS
7.1.14.1	Deleted
7.1.14.2	7.1.4.5.1
7.1.14.3	Deleted
7.1.14.4 to 7.1.14.14	7.1.4.5.2 to 7.1.4.5.12.
7.1.15.1.1	7.6.2.10.2
7.1.15.1.2	Deleted
7.1.15.2	Deleted, covered by column 16 of dangerous goods list or SOLAS
7.1.16.1	7.6.2.11.1
7.1.16.2	7.6.2.11.2
7.2	7.2
7.2.1.1	Deleted
7.2.1.2	7.2.2.1
7.2.1.3	7.2.2.1
7.2.1.4	7.2.2.1
7.2.1.5	7.2.2.2
7.2.1.6	7.2.3.1

Former section (amendment 35-10)	New section (amendment 36-12)
7.2.1.6.1	7.2.3.3
7.2.1.6.2	7.2.3.4
7.2.1.7.1	7.2.5.1
7.2.1.7.2	7.2.5.2
7.2.1.7.3	7.2.5.3
7.2.1.7.4	7.2.5.4
7.2.1.8	deleted
7.2.1.9	7.2.4
7.2.1.10	7.2.3.3
7.2.1.11	7.2.6.1
7.2.1.12	7.2.6.2
7.2.1.13.1	7.2.6.3
7.2.1.13.2	7.2.6.4
7.2.1.14	7.2.2.2
7.2.1.15	Deleted
7.2.1.16	7.2.4
7.2.2.1	7.6.1
7.2.2.2	7.6.3.2
7.2.2.3	7.3.4.1
7.2.2.4	7.6.3.3
7.2.3.1.1 to 7.2.3.1.2	7.4.3.1
7.2.3.1.3	Deleted
7.2.3.2	7.4.3.2
7.2.3.2.1	DSC 15/INF.7*
7.2.3.3	7.4.3.3
7.2.3.3.1	DSC 15/INF.7*
7.2.4.1	7.5.1
7.2.4.2	7.5.3.2
7.2.4.2.1	DSC 15/INF. 7*
7.2.5.1.1	7.7.1.2
7.2.5.1.2	7.7.5.1
7.2.5.2	7.7.3.5 7.7.3.6
7.2.5.3	7.7.5.2 to 7.7.5.5
7.2.6	7.6.3.5
7.2.7	7.2.7
7.2.7.1	7.2.7.2.1
7.2.7.2.1	7.2.7.1
7.2.7.2.2	Deleted
7.2.9.1	7.1.4.5.13
7.2.9.2	Deleted
7.2.9.3 to 7.2.9.7	7.1.4.5.14 to 7.1.4.5.18

Former section (amendment 35-10)	New section (amendment 36-12)
7.2.9.8 to 7.2.9.10	Deleted
7.3	7.8
7.4	7.4
7.4.1	7.3.1
7.4.2.1 to 7.4.2.3	7.3.2.1 to 7.3.2.3
7.4.2.4	7.3.8
7.4.2.5.1	Deleted
7.4.2.5.2	7.3.6.1
7.4.2.5.3	Deleted
7.4.2.6	7.1.2
7.4.4.1	7.4.2.3 to 7.4.2.4
7.4.4.2	7.4.2.1
7.4.5.1 to 7.4.5.5	7.5.2.1 to 7.5.2.5
7.4.5.6	Deleted
7.4.5.7 to 7.4.5.8	7.5.2.6 to 7.5.2.7
7.4.5.9	7.5.2.12
7.4.5.10	Deleted
7.4.5.11 to 7.4.5.13	7.5.2.8 to 7.5.2.10
	7.5.2.11
7.4.5.14	Deleted
7.4.5.15	7.5.2.13
7.4.6.1 to 7.4.6.3	Deleted
7.4.6.4	7.1.2
7.5	7.3
7.5.1	7.3.2
7.5.2	7.3.3
7.5.3.1	7.3.6.2
7.5.3.2	7.3.6.3
7.5.4	7.3.5
7.6	7.7
7.6.1	7.7.1
7.6.2	7.7.2
7.6.3	Deleted
7.6.4	7.7.3
7.6.5	7.7.4.1
7.6.6.1	7.7.4.2
7.6.6.2	7.7.4.2
7.6.6.3	Deleted
7.6.6.4	Deleted
7.6.6.5	7.7.3.7
7.6.6.6	7.7.3.8
7.6.7.1	Deleted
7.6.7.2	7.7.4.3
7.6.7.3	7.7.4.4
7.6.7.4	7.7.4.5

Former section (amendment 35-10)	New section (amendment 36-12)
7.6.7.5	7.7.4.6
7.7	Chapter deleted, text transferred to relevant chapters, see below
7.7.1	7.3.7.1
7.7.2.1 to 7.7.2.3	7.3.7.2.1 to 7.7.2.3
7.7.2.4 to 7.7.2.5	7.1.4.6
7.7.2.6 to 7.7.2.9	7.3.7.2.4 to 7.3.7.2.7
7.7.3	7.3.7.3
7.7.4	7.3.7.4
7.7.5	7.3.7.5
7.7.6	7.3.7.6
7.7.7	7.3.7.7
7.7.8	7.3.7.8
7.8	Chapter deleted, text transferred to 2.0.5
7.9	7.9

ANNEX 3

DRAFT MSC CIRCULAR

**ILLUSTRATIONS OF SEGREGATION OF CARGO TRANSPORT UNITS ON BOARD
CONTAINERSHIPS AND RO-RO SHIPS**

1 The Committee, at its [ninetieth session (16 to 25 May 2012)], having considered the proposal by the Sub-Committee on Dangerous Goods, Solid Cargoes and Containers, at its sixteenth session, with regard to illustrations of segregation of cargo transport units on board containerships and ro-ro ships, which apply to the carriage of packaged dangerous goods in pursuance of the requirements of SOLAS chapter VII and the relevant provisions of the IMDG Code, approved the illustrations of segregation of cargo transport units on board containerships and ro-ro ships, as set out in the attached annex.

2 Member Governments are invited to bring the illustrations of segregation of cargo transport units on board containerships and ro-ro ships, as set out in the annex, to the attention of competent authorities, mariners and others concerned, taking into account the voluntary application date of [1 January 2013] of amendment 36-12 of the IMDG Code pending its envisaged mandatory entry into force date of [1 January 2014].

ANNEX

ILLUSTRATIONS OF SEGREGATION OF CARGO TRANSPORT UNITS ON BOARD CONTAINERSHIPS AND RO-RO SHIPS

1 Scope

- 1.1 The segregation requirements applicable to containerships with hatch covers, hatchless containerships and ro-ro ships are provided in 7.4.3 and 7.5.3 of the IMDG Code. To facilitate familiarization with these requirements and to support training of relevant personnel, the following illustrations have been developed. It should be noted that only the relevant tables in the IMDG Code are legally binding. In case of any discrepancy, they shall take precedence over the illustrations in this circular.
- 1.2 This circular contains illustrations of segregation of:
- containers on board containerships with hatch covers (see section 2 of this circular);
 - containers on board hatchless containerships (see section 3 of this circular); and
 - cargo transport units on board ro-ro ships.

2 Illustrations of segregation of containers on board containerships with hatch covers

- 2.1 The illustrations of this section apply to the segregation of containers which meet the definition of a container within the term of the International Convention for Safe Containers (CSC) 1972, as amended, and are transported on deck and in the cargo holds of container ships or on deck and in the cargo holds of other types of ships provided that these stowage positions are properly fitted to give a permanent stowage of containers during transport¹.
- 2.2 To determine locations in which containers are not permitted to contain dangerous goods that are incompatible with those in a reference container, the following method applies: container spaces (such as one container space, two container spaces) are identified in accordance with the applicable segregation provisions in the direct fore-and-aft and athwartships directions from the reference container. Lines are projected between the outermost corners of the containers occupying these spaces as shown in the figure. Containers located partially or completely between these lines and the reference container shall not contain dangerous goods that are incompatible with those in the reference container.
- 2.3 The deck/hold layout used for the illustrations is:
- two 20' containers stowed in a 40' container space
 - distance between two 40' container spaces is 2 ft/60 cm

¹ For containerships with partly hatchless container cargo spaces, the illustrations of section 3 apply to such spaces.

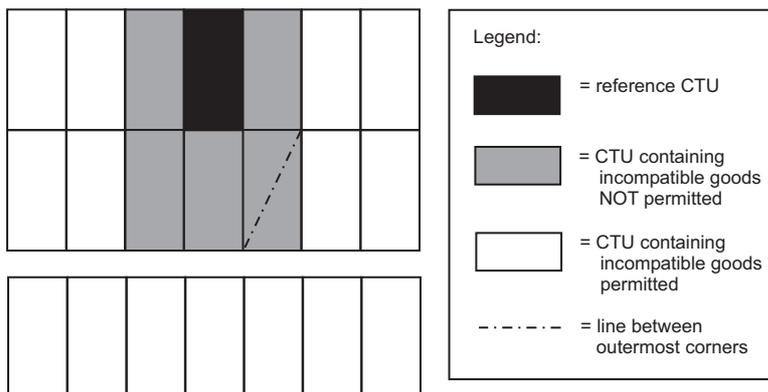
2.4 Explanation of the segregation terms

(1)	Reference container.....		
(2)	container containing incompatible goods NOT permitted ...		
(3)	container containing incompatible goods permitted.....		
(4)	Distance athwartships	(a) one container space	
		(b) two container spaces	
		(c) three container spaces	
(5)	Distance Fore and Aft:	(a) one container space	
		(b) two container spaces	

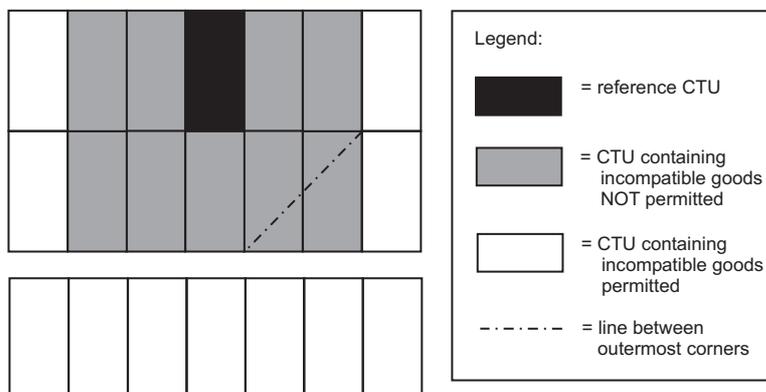
Note 1: All bulkheads and decks shall be resistant to fire and liquids.

Note 2: When an illustration has more than one reference container, only one should be used when interpreting the illustration. When an illustration contains several reference containers, they have to be considered as different examples.

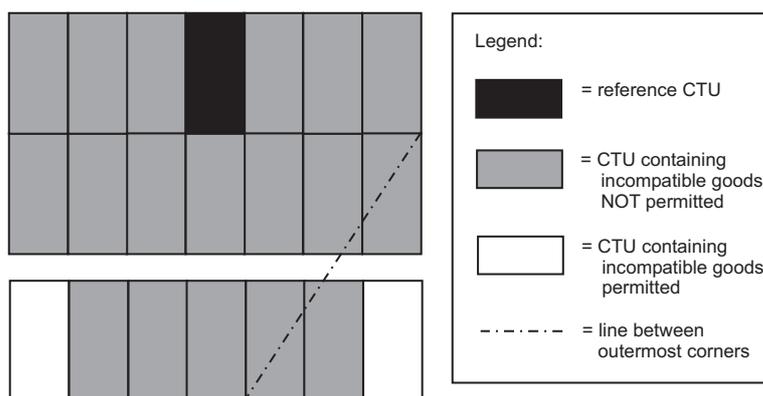
Situation fore & aft + athwartships: 1 container space



Situation fore & aft: 1 container space & athwartships: 2 container spaces



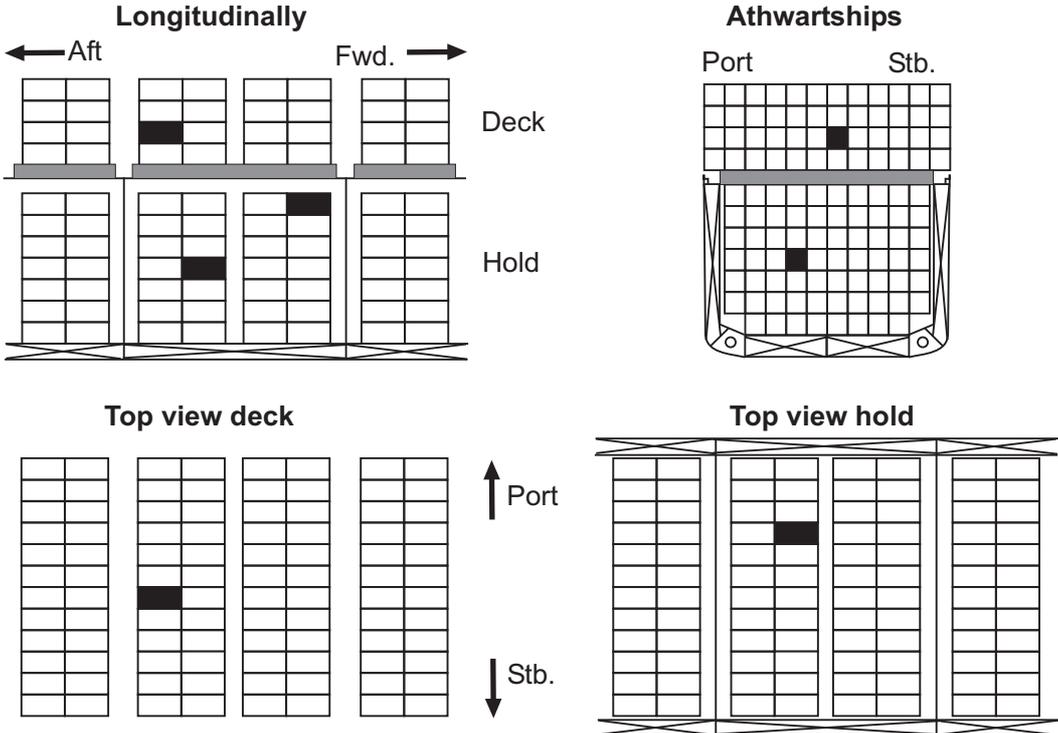
Situation fore & aft: 2 container spaces & athwartships: 3 container spaces



00006

Note: All bulkheads and decks shall be resistant to fire and liquids.

"AWAY FROM" .1			
CLOSED VERSUS CLOSED	HORIZONTAL		VERTICAL
	ON DECK	UNDER DECK	
FORE AND AFT	No Restriction	No Restriction	One on top of the other permitted
ATHWARTSHIPS	No Restriction	No Restriction	

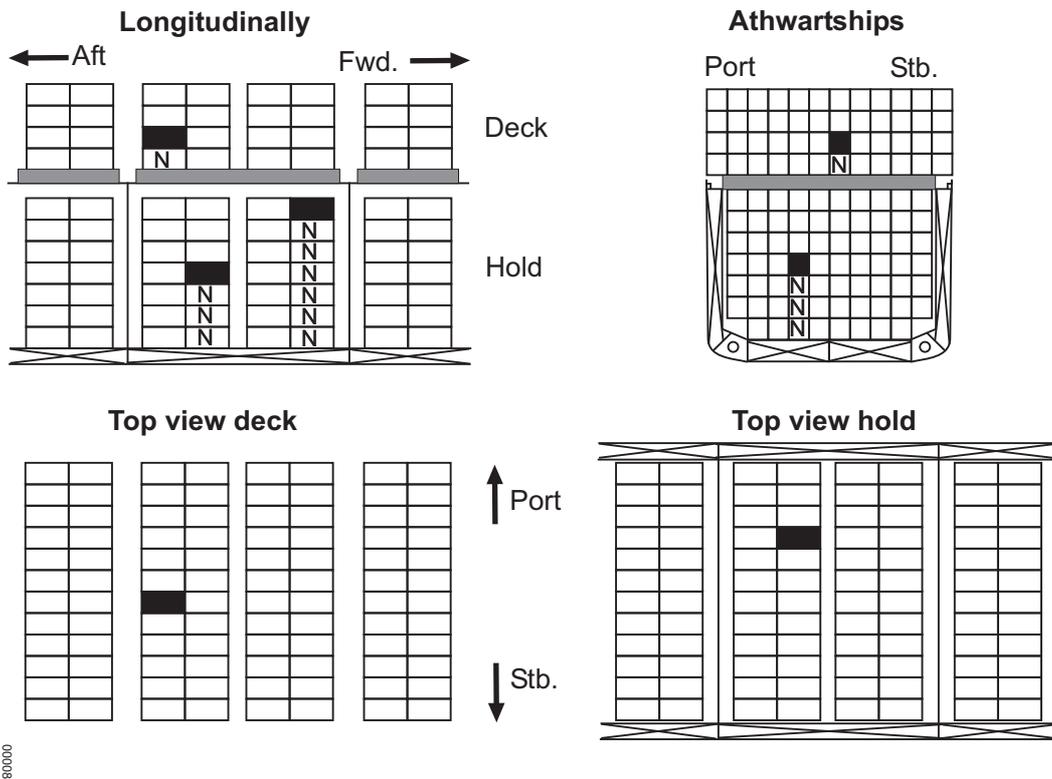


00007

1 – Situation *closed versus closed*

Note: All bulkheads and decks shall be resistant to fire and liquids.

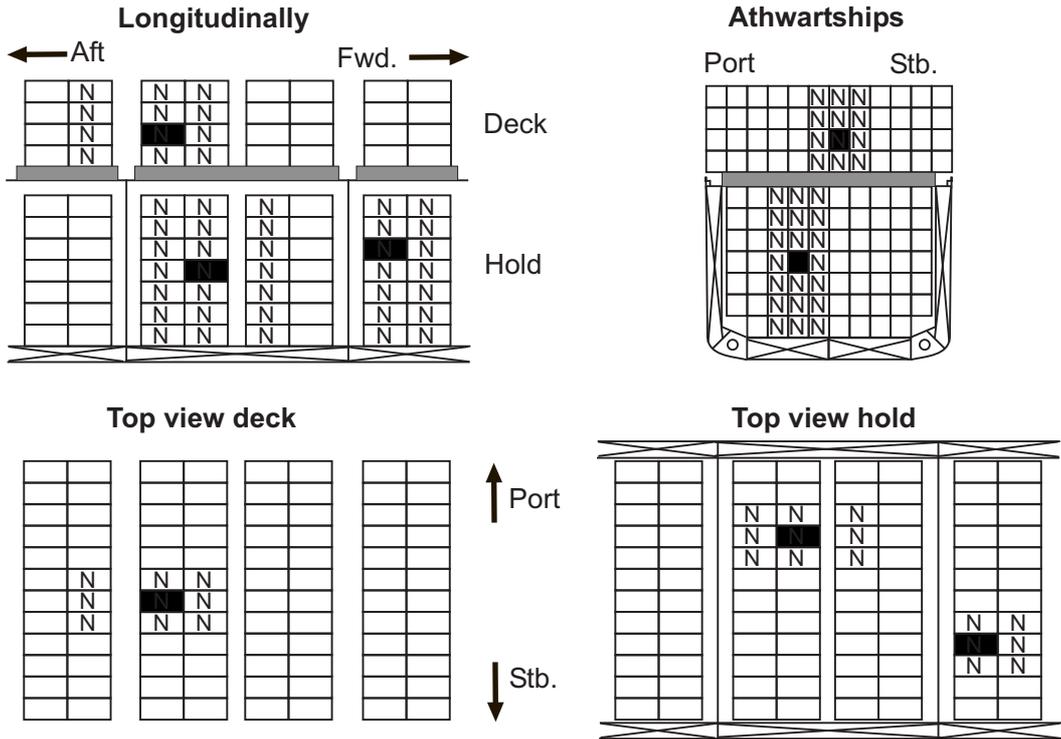
"AWAY FROM" .1			
CLOSED VERSUS OPEN	HORIZONTAL		VERTICAL
	ON DECK	UNDER DECK	
FORE AND AFT	No Restriction	No Restriction	Open on top of closed permitted
ATHWARTSHIPS	No Restriction	No Restriction	Otherwise NOT in the same vertical line unless segregated by a deck



1 – Situation closed versus open

Note: All bulkheads and decks shall be resistant to fire and liquids.

"AWAY FROM" .1			
OPEN VERSUS OPEN	HORIZONTAL		VERTICAL
	ON DECK	UNDER DECK	
FORE AND AFT	One container space	One container space or one bulkhead	NOT in the same vertical line unless segregated by a deck
ATHWARTSHIPS	One container space	One container space	

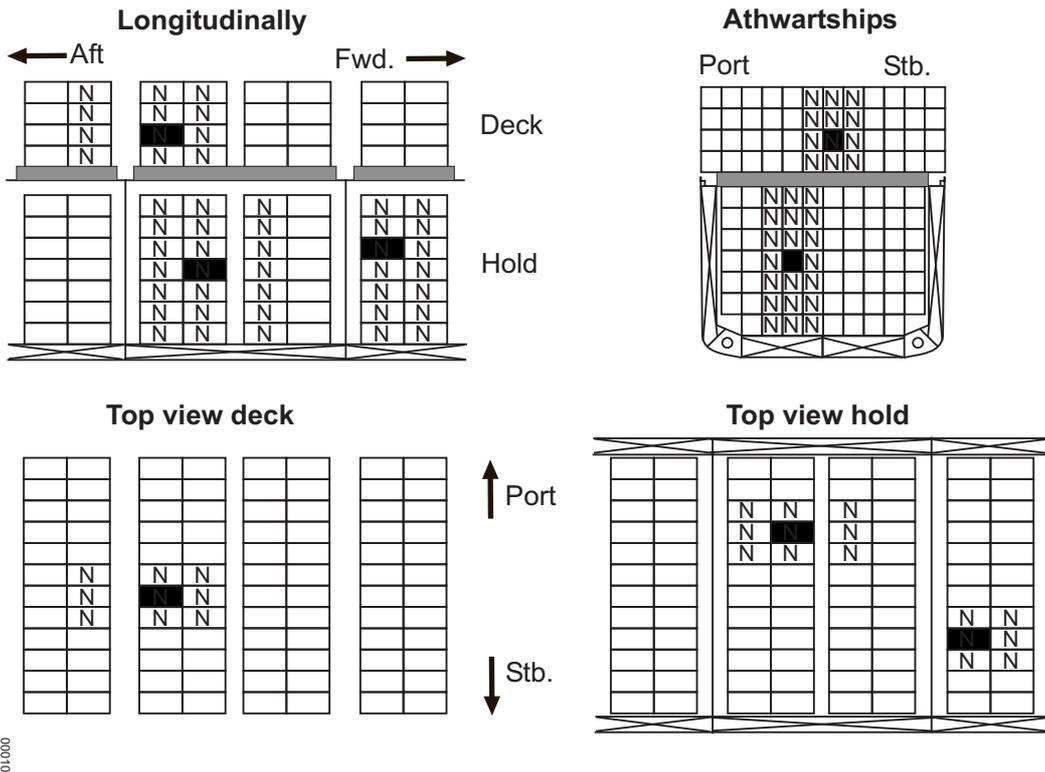


60000

1 – Situation *open versus open*

Note: All bulkheads and decks shall be resistant to fire and liquids.

"SEPARATED FROM" .2			
CLOSED VERSUS CLOSED	HORIZONTAL		VERTICAL
	ON DECK	UNDER DECK	
FORE AND AFT	One container space	One container space or one bulkhead	NOT in the same vertical line unless segregated by a deck
ATHWARTSHIPS	One container space	One container space	

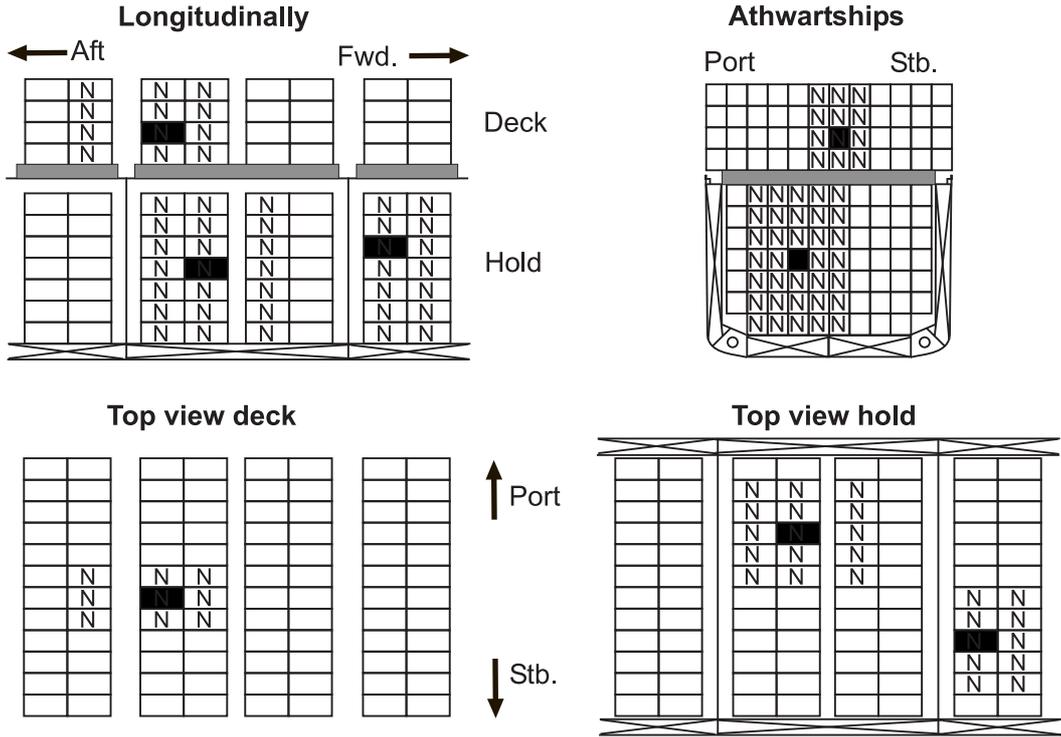


01.000

2 – Situation *closed versus closed*

Note: All bulkheads and decks shall be resistant to fire and liquids.

"SEPARATED FROM" .2			
CLOSED VERSUS OPEN	HORIZONTAL		VERTICAL
	ON DECK	UNDER DECK	
FORE AND AFT	One container space	One container space or one bulkhead	NOT in the same vertical line unless segregated by a deck
ATHWARTSHIPS	One container space	Two container spaces	

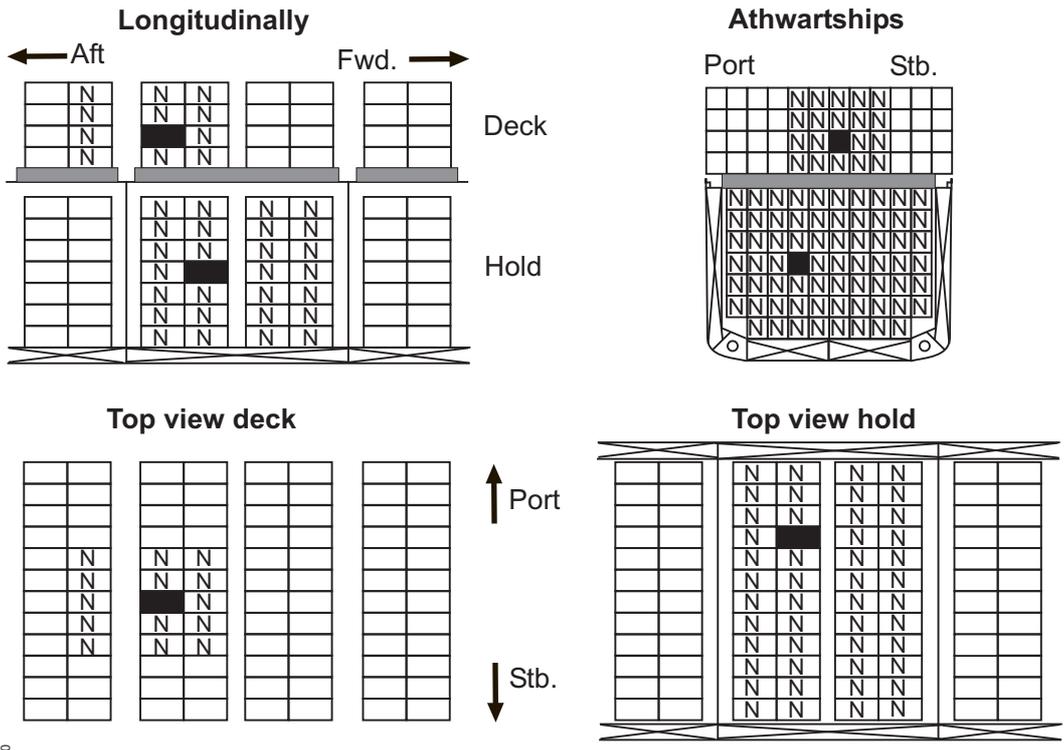


00011

2 – Situation closed versus open

Note: All bulkheads and decks shall be resistant to fire and liquids.

"SEPARATED FROM" .2			
OPEN VERSUS OPEN	HORIZONTAL		VERTICAL
	ON DECK	UNDER DECK	
FORE AND AFT	One container space	One bulkhead	NOT in the same vertical line unless segregated by a deck
ATHWARTSHIPS	Two container spaces	One bulkhead	

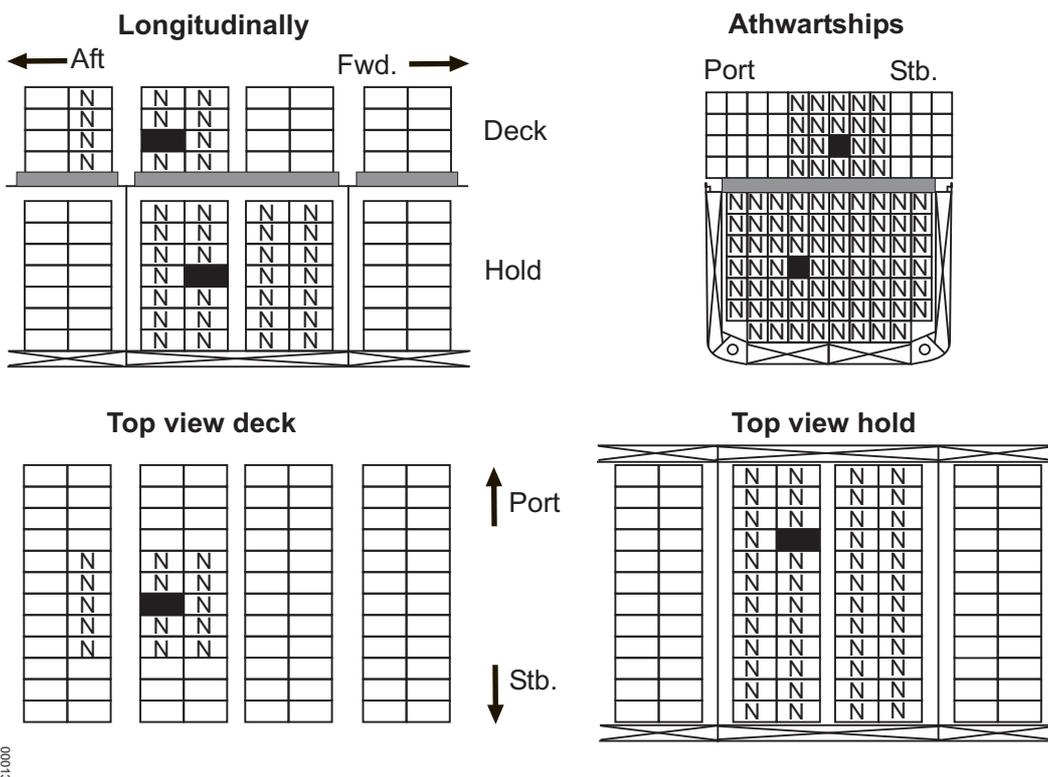


00012

2 – Situation *open versus open*

Note: All bulkheads and decks shall be resistant to fire and liquids.

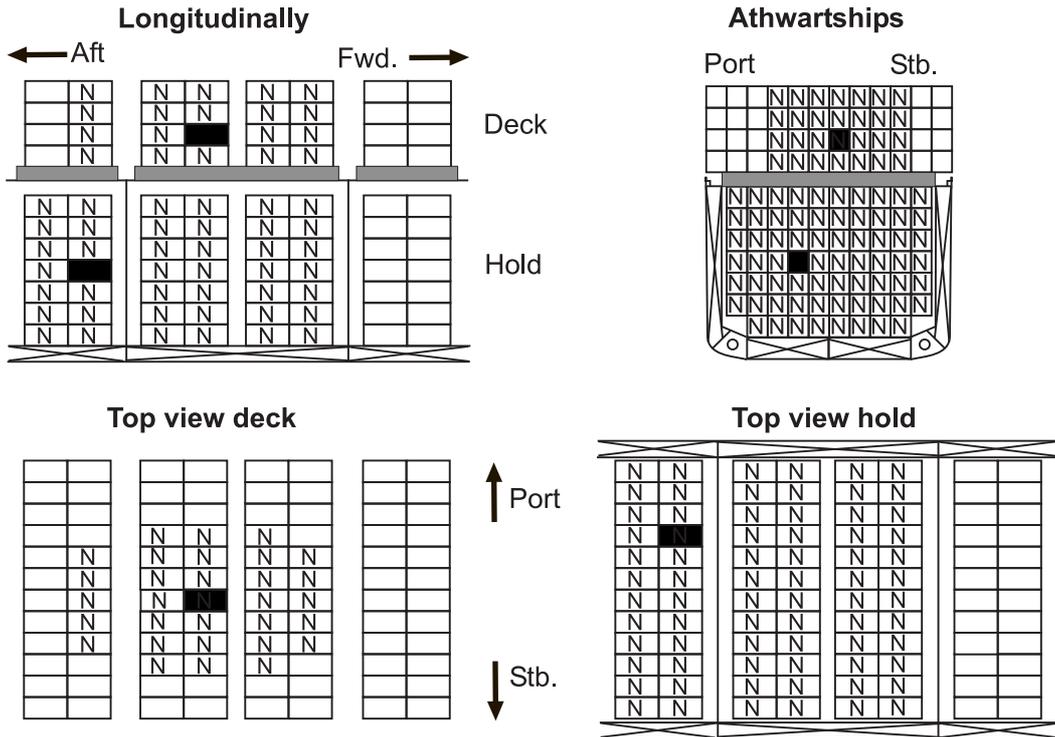
"SEPARATED BY A COMPLETE COMPARTMENT OR HOLD FROM" .3			
CLOSED VERSUS CLOSED OR CLOSED VERSUS OPEN	HORIZONTAL		VERTICAL
	ON DECK	UNDER DECK	
FORE AND AFT	One container space	One bulkhead	NOT in the same vertical line unless segregated by a deck
ATHWARTSHIPS	Two container spaces	One bulkhead	



00013

3 – Situations *closed versus closed* and *closed versus open*
Note: All bulkheads and decks shall be resistant to fire and liquids.

"SEPARATED BY A COMPLETE COMPARTMENT OR HOLD FROM" .3			
OPEN VERSUS OPEN	HORIZONTAL		VERTICAL
	ON DECK	UNDER DECK	
FORE AND AFT	Two container spaces	Two bulkheads	NOT in the same vertical line unless segregated by a deck
ATHWARTSHIPS	Three container spaces	Two bulkheads	

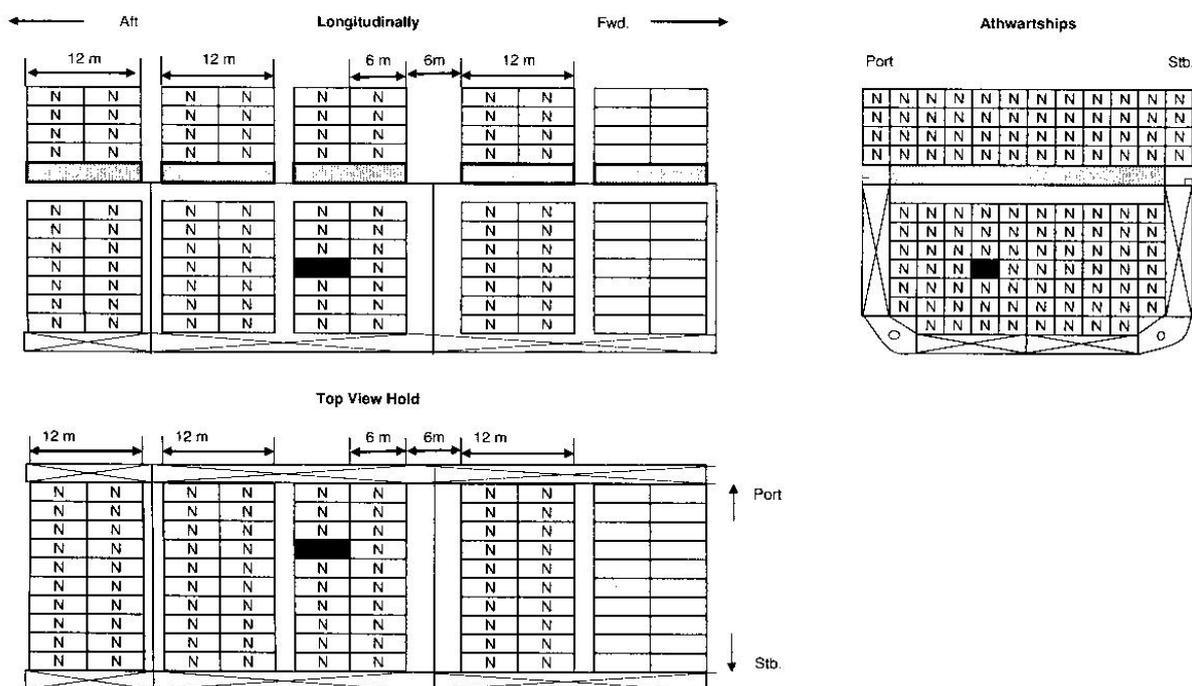


00014

3 – Situation *open versus open*

Note: All bulkheads and decks shall be resistant to fire and liquids.

"SEPARATED LONGITUDINALLY BY AN INTERVENING COMPLETE COMPARTMENT OR HOLD FROM" .4		
CLOSED VERSUS CLOSED	HORIZONTAL	VERTICAL
	UNDER DECK	
FORE AND AFT	One bulkhead and minimum horizontal distance of 24 metres*	Prohibited
ATHWARTSHIPS	Prohibited	

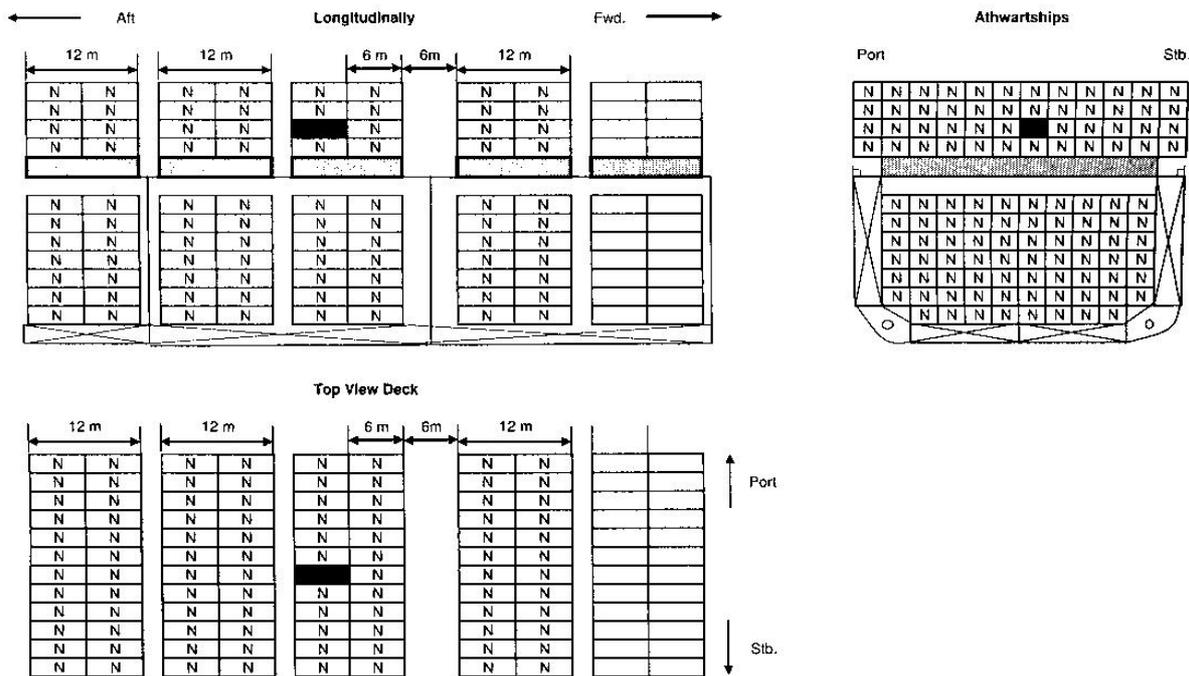


4 – Situation closed versus closed – UNDER DECK

Note: All bulkheads and decks shall be resistant to fire and liquids

* Containers not less than 6 m from intervening bulkhead.

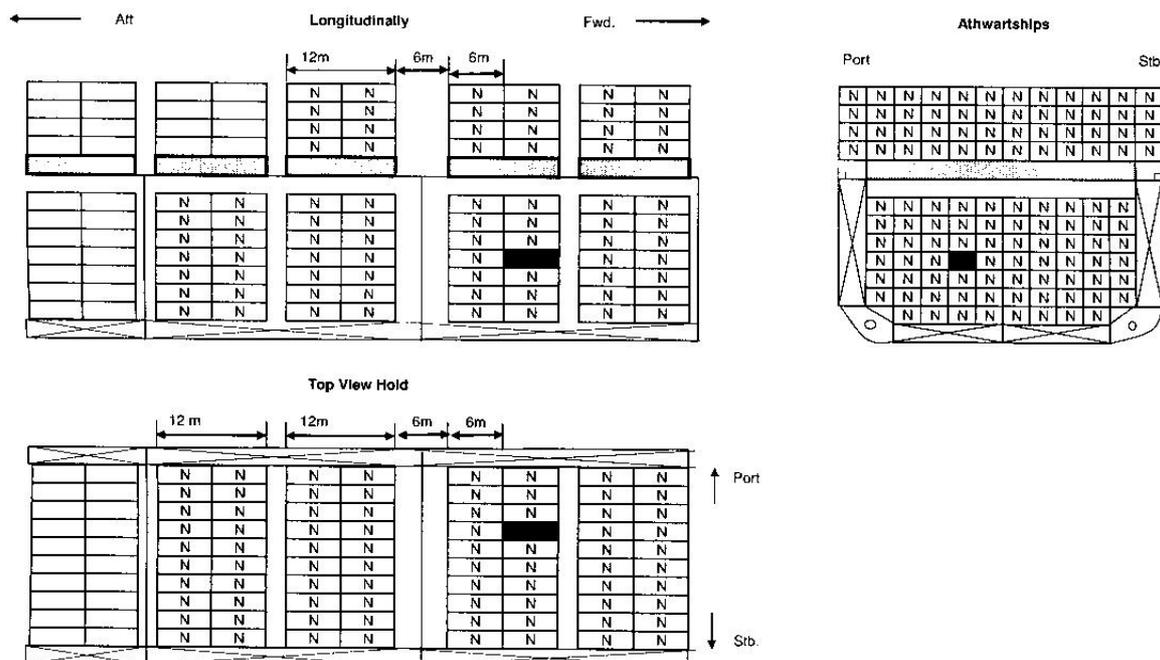
"SEPARATED LONGITUDINALLY BY AN INTERVENING COMPLETE COMPARTMENT OR HOLD FROM" .4		
CLOSED VERSUS OPEN OR OPEN VERSUS OPEN OR CLOSED VERSUS CLOSED	HORIZONTAL	VERTICAL
	ON DECK	
FORE AND AFT	Minimum horizontal distance of 24 metres	Prohibited
ATHWARTSHIPS	Prohibited	



**4 – Situation closed versus open, open versus open
and closed versus closed – ON DECK**

Note: All bulkheads and decks shall be resistant to fire and liquids

"SEPARATED LONGITUDINALLY BY AN INTERVENING COMPLETE COMPARTMENT OR HOLD FROM" .4		
CLOSED VERSUS OPEN OR OPEN VERSUS OPEN	HORIZONTAL	VERTICAL
	UNDER DECK	
FORE AND AFT	Two bulkheads	Prohibited
ATHWARTSHIPS	Prohibited	



4 – Situation *closed versus open* and *open versus open* – UNDER DECK

Note: All bulkheads and decks shall be resistant to fire and liquids

3 Illustrations of segregation of containers on board hatchless containerships

- 3.1 The illustrations of this section apply to the segregation of containers which are transported on board hatchless containerships provided that stowage positions are properly fitted to give permanent stowage of the containers during transport².
- 3.2 To determine locations in which containers are not permitted to contain dangerous goods that are incompatible with those in a reference container, the following method applies: container spaces (such as one container space, two container spaces) are identified in accordance with the applicable segregation provisions in the direct fore-and-aft and athwartship directions from the reference container. Lines are projected between the outermost corners of the containers occupying these spaces as shown in the figure. Containers located partially or complete completely between these lines and the reference container shall not contain dangerous goods that are incompatible with those in the reference container.

² For partly hatchless containerships with hatch-covered container cargo spaces, the illustrations of section 2 apply to such spaces.

3.3 The deck/hold layout used for the illustrations is:

- two 20' containers stowed in a 40' container space
- distance between two 40' container spaces is 2 feet/60 cm

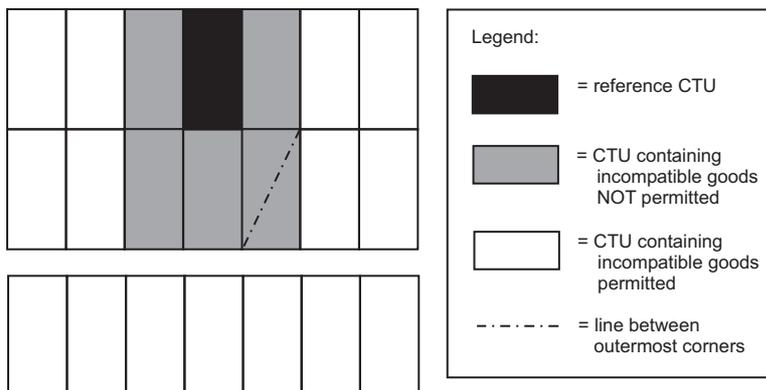
3.4 *Explanation of the segregation terms*

(1)	Reference container		
(2)	Container containing incompatible goods NOT permitted ..		
(3)	Container containing incompatible goods permitted		
(4)	Distance athwartships	(a) one container space	
		(b) two container spaces	
		(c) three container spaces	
(5)	Distance Fore and Aft:	(a) one container space	
		(b) two container spaces	

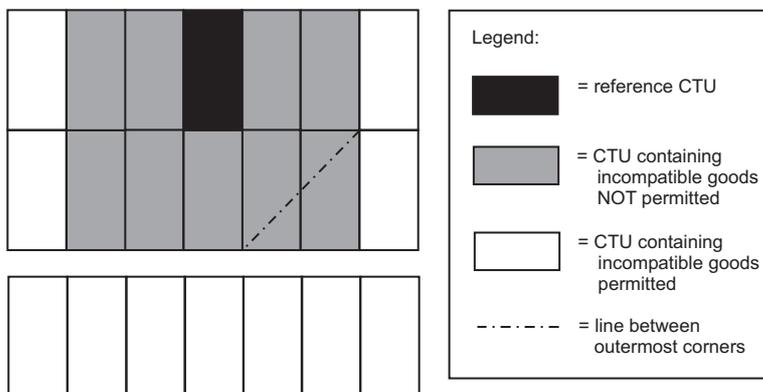
Note 1: All bulkheads and decks shall be resistant to fire and liquids.

Note 2: When an illustration has more than one reference container only one should be used when interpreting the illustration. When an illustration contains several references, containers they have to be considered as different examples.

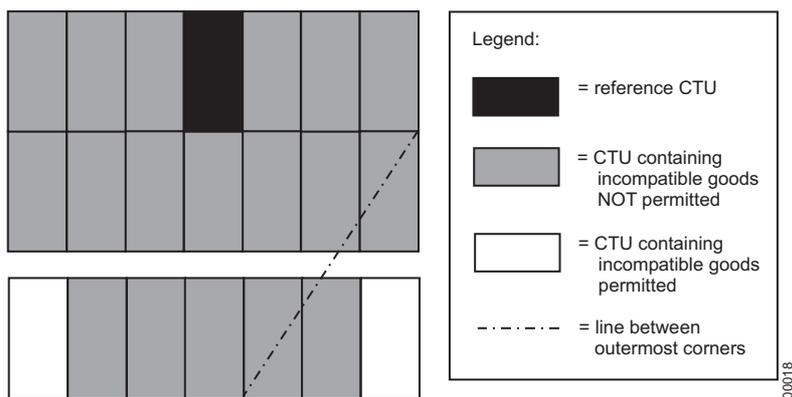
Situation fore & aft + athwartships: 1 container space



Situation fore & aft: 1 container space & athwartships: 2 container spaces

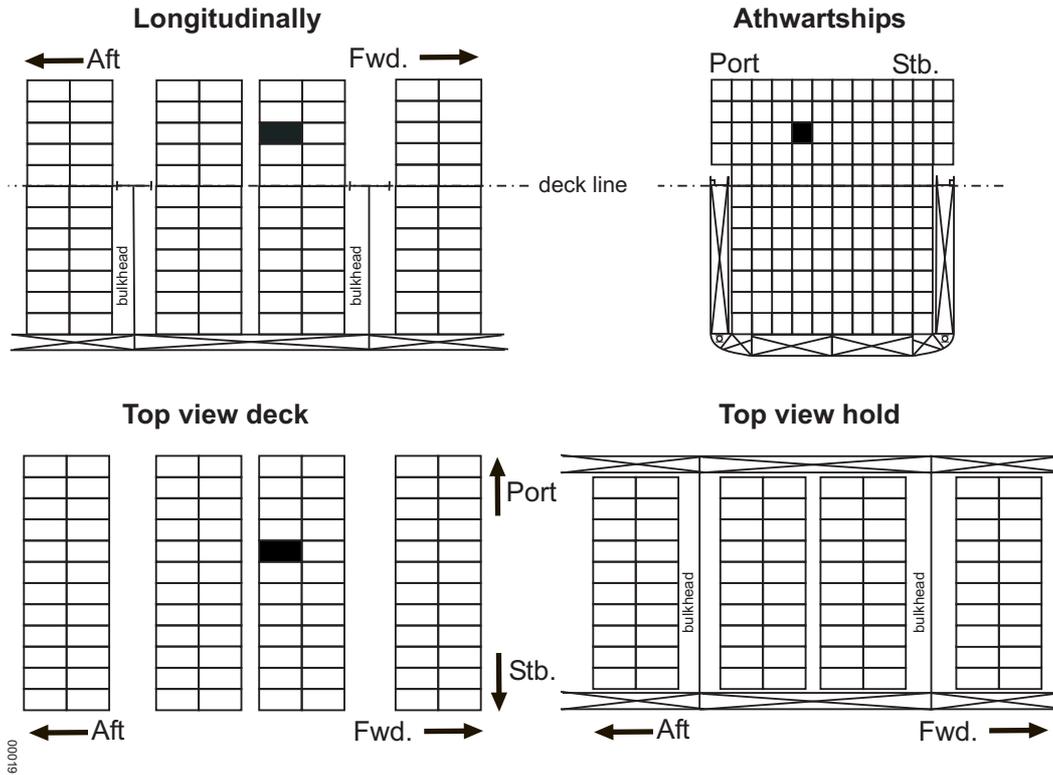


Situation fore & aft: 2 container spaces & athwartships: 3 container spaces



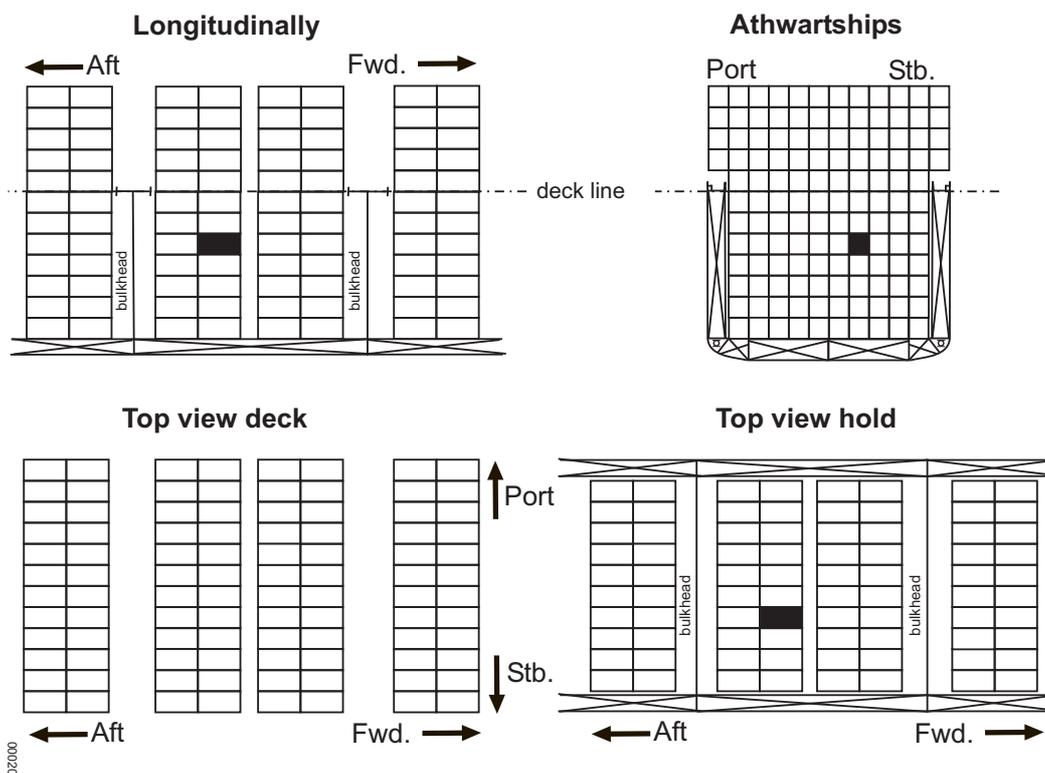
Note: All bulkheads and decks shall be resistant to fire and liquids.

"AWAY FROM" .1		
CLOSED VERSUS CLOSED	HORIZONTAL	VERTICAL
	ON DECK	
FORE AND AFT	No Restriction	One on top of the other permitted
ATHWARTSHIPS	No Restriction	



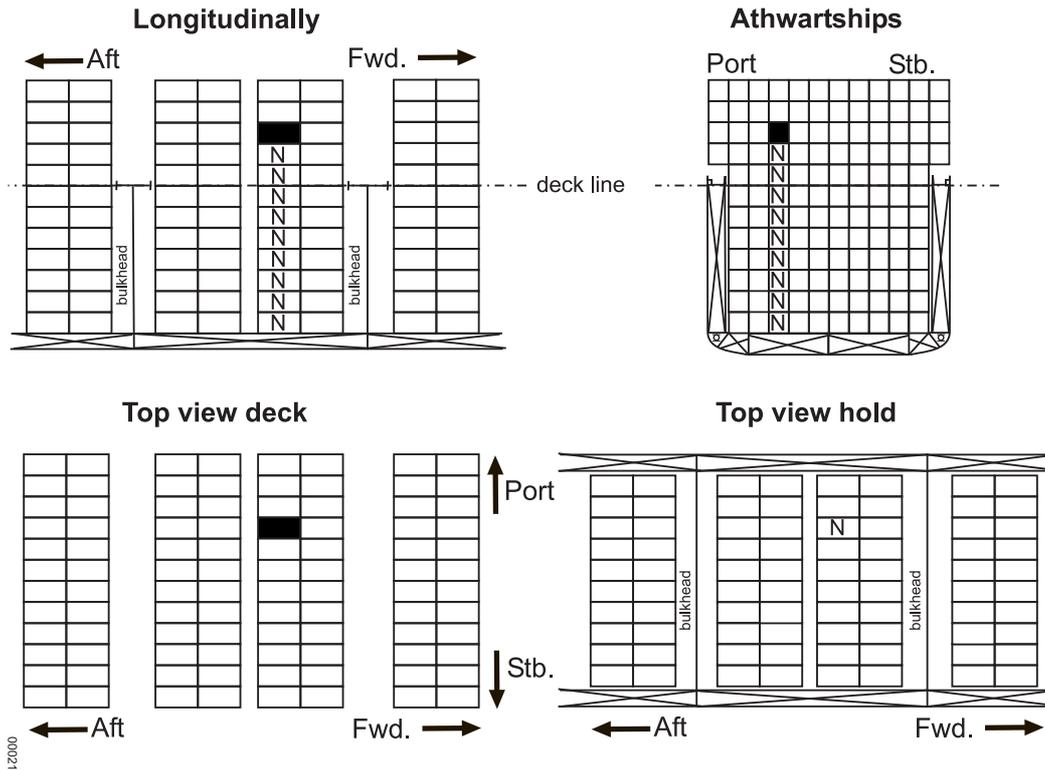
1 – Situation closed versus closed – ON DECK
Note: All bulkheads and decks shall be resistant to fire and liquids.

7"AWAY FROM" .1		
CLOSED VERSUS CLOSED	HORIZONTAL	VERTICAL
	UNDER DECK	
FORE AND AFT	No Restriction	One on top of the other permitted
ATHWARTSHIPS	No Restriction	



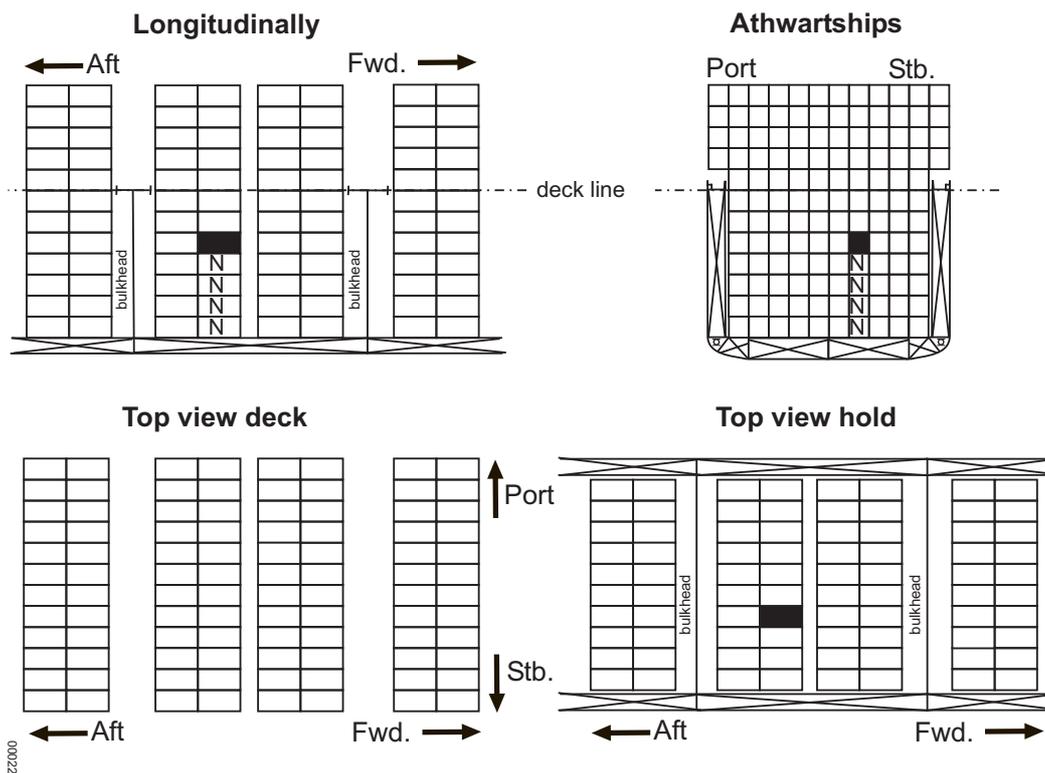
1 – Situation *closed versus closed* – UNDER DECK
Note: All bulkheads and decks shall be resistant to fire and liquids.

"AWAY FROM" .1		
CLOSED VERSUS OPEN	HORIZONTAL	VERTICAL
	ON DECK	
FORE AND AFT	No Restriction	Open on top of closed permitted
ATHWARTSHIPS	No Restriction	Otherwise NOT in the same vertical line



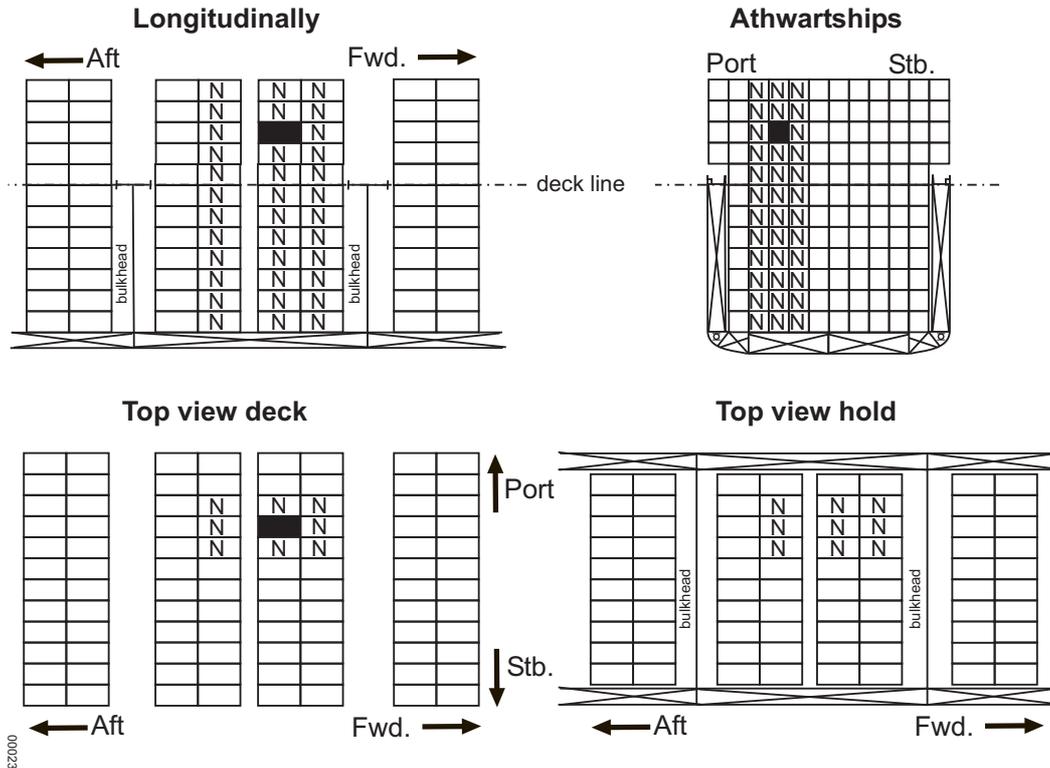
1 – Situation *closed versus open* – ON DECK
Note: All bulkheads and decks shall be resistant to fire and liquids.

"AWAY FROM" .1		
CLOSED VERSUS OPEN	HORIZONTAL	VERTICAL
	UNDER DECK	
FORE AND AFT	No Restriction	
ATHWARTSHIPS	No Restriction	Open on top of closed permitted Otherwise NOT in the same vertical line



1 – Situation *closed versus open* – UNDER DECK
Note: All bulkheads and decks shall be resistant to fire and liquids.

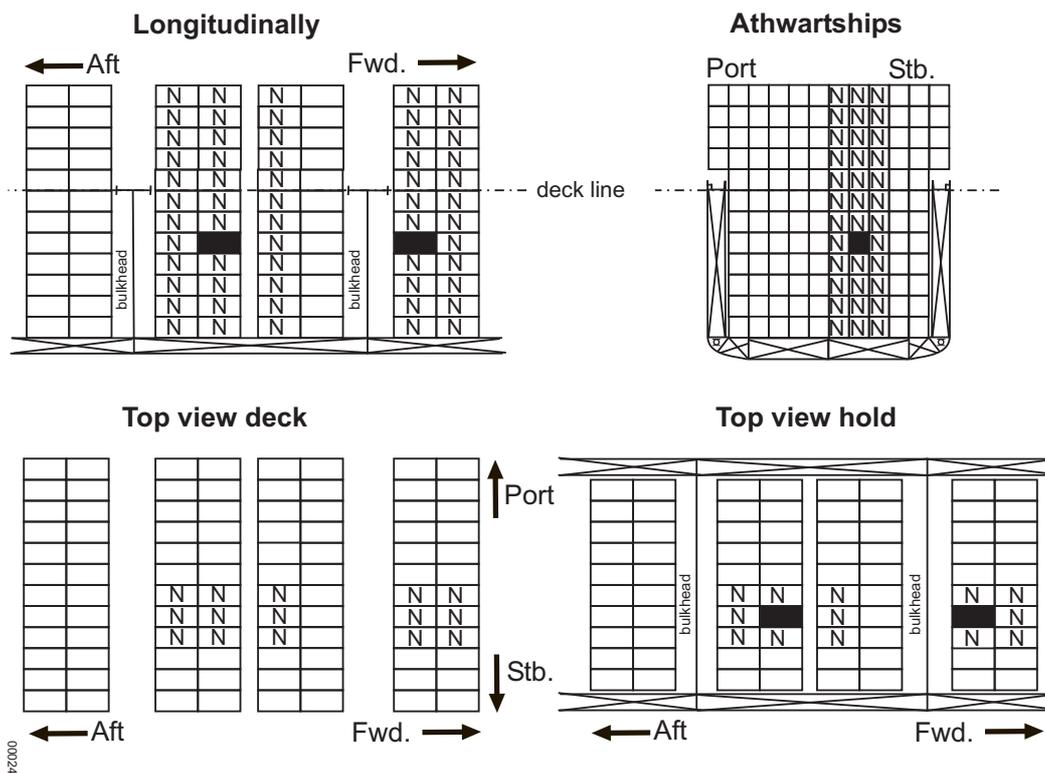
"AWAY FROM" .1		
OPEN VERSUS OPEN	HORIZONTAL	VERTICAL
	ON DECK	
FORE AND AFT	One container space	NOT in the same vertical line
ATHWARTSHIPS	One container space	



1 – Situation *open versus open* – ON DECK

Note: All bulkheads and decks shall be resistant to fire and liquids.

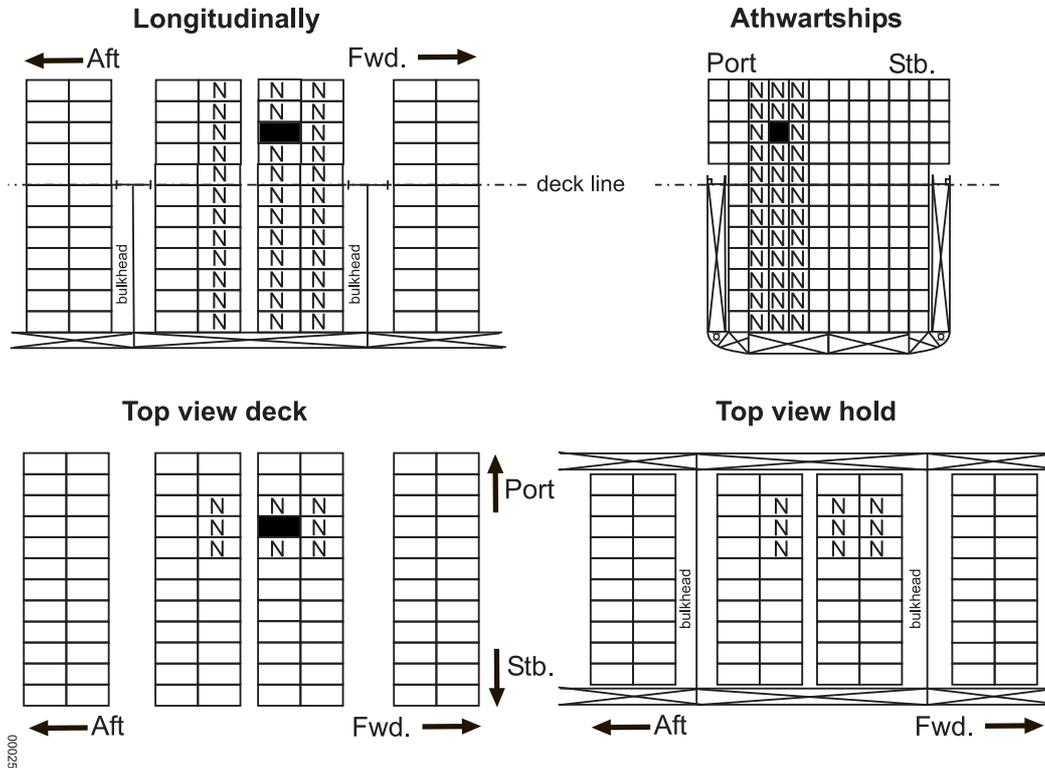
"AWAY FROM" .1		
OPEN VERSUS OPEN	HORIZONTAL	VERTICAL
	UNDER DECK	
FORE AND AFT	One container space or one bulkhead	
ATHWARTSHIPS	One container space	



1 – Situation *open versus open* – UNDER DECK

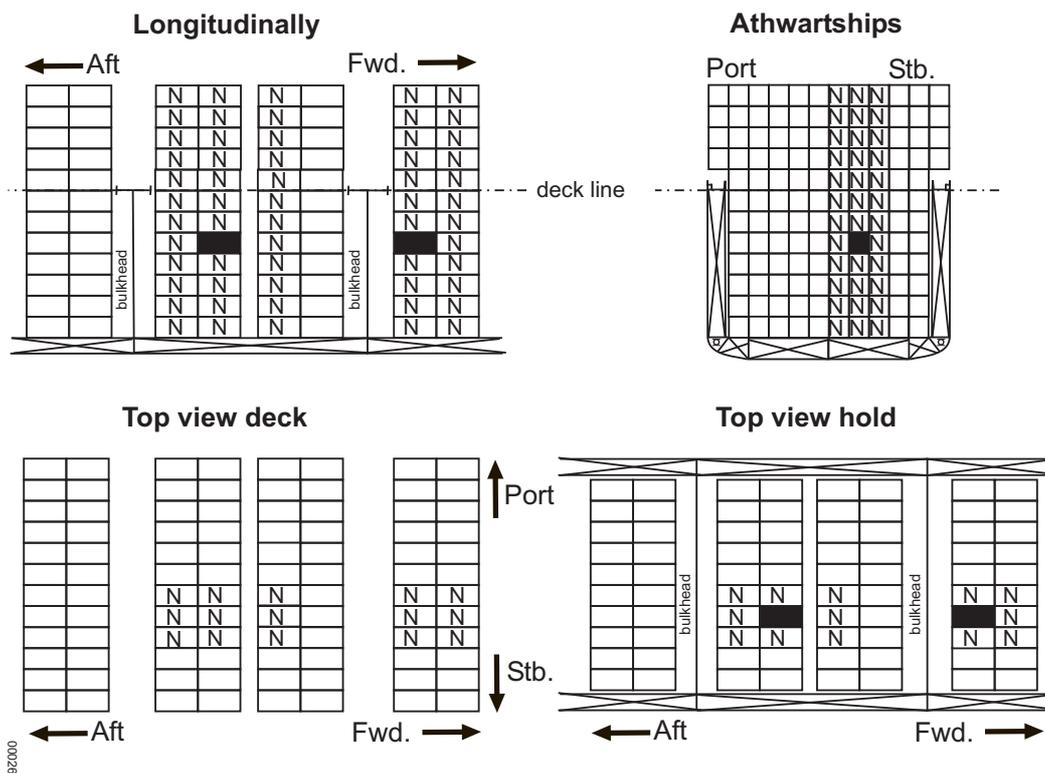
Note: All bulkheads and decks shall be resistant to fire and liquids.

"SEPARATED FROM" .2		
CLOSED VERSUS CLOSED	HORIZONTAL	VERTICAL
	ON DECK	
FORE AND AFT	One container space	NOT in the same vertical line
ATHWARTSHIPS	One container space	



2 – Situation closed versus closed – ON DECK
Note: All bulkheads and decks shall be resistant to fire and liquids.

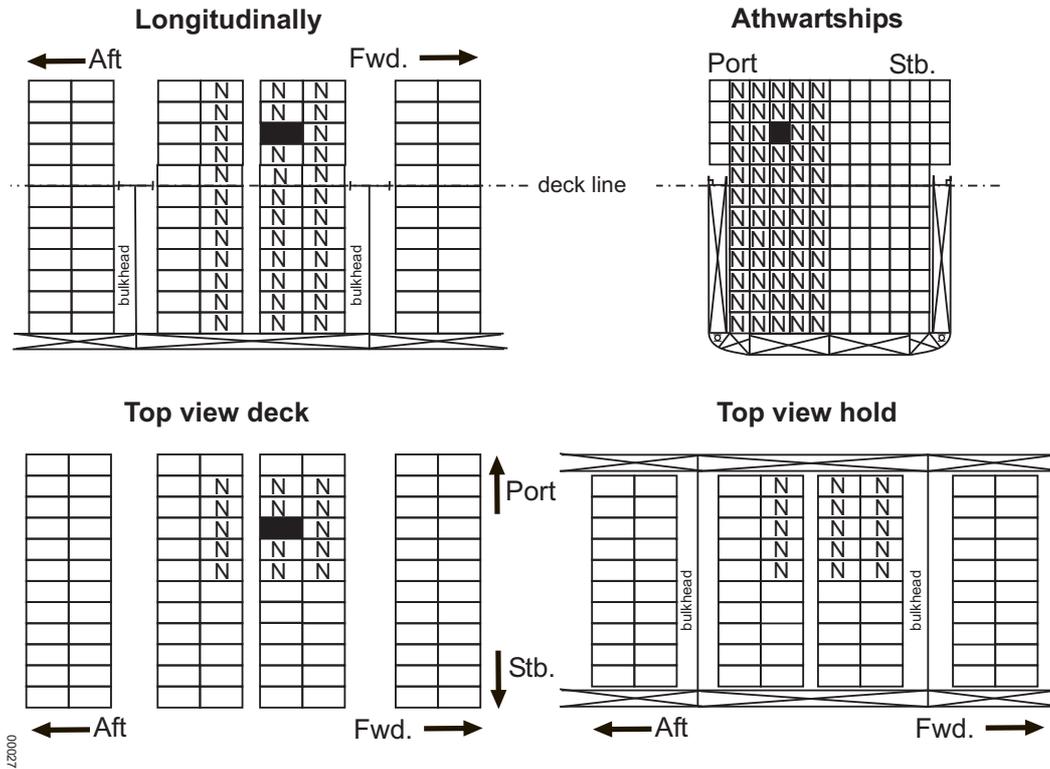
"SEPARATED FROM" .2		
CLOSED VERSUS CLOSED	HORIZONTAL	VERTICAL
	UNDER DECK	
FORE AND AFT	One container space or one bulkhead	NOT in the same vertical line
ATHWARTSHIPS	One container space	



2 – Situation *closed versus closed* – UNDER DECK

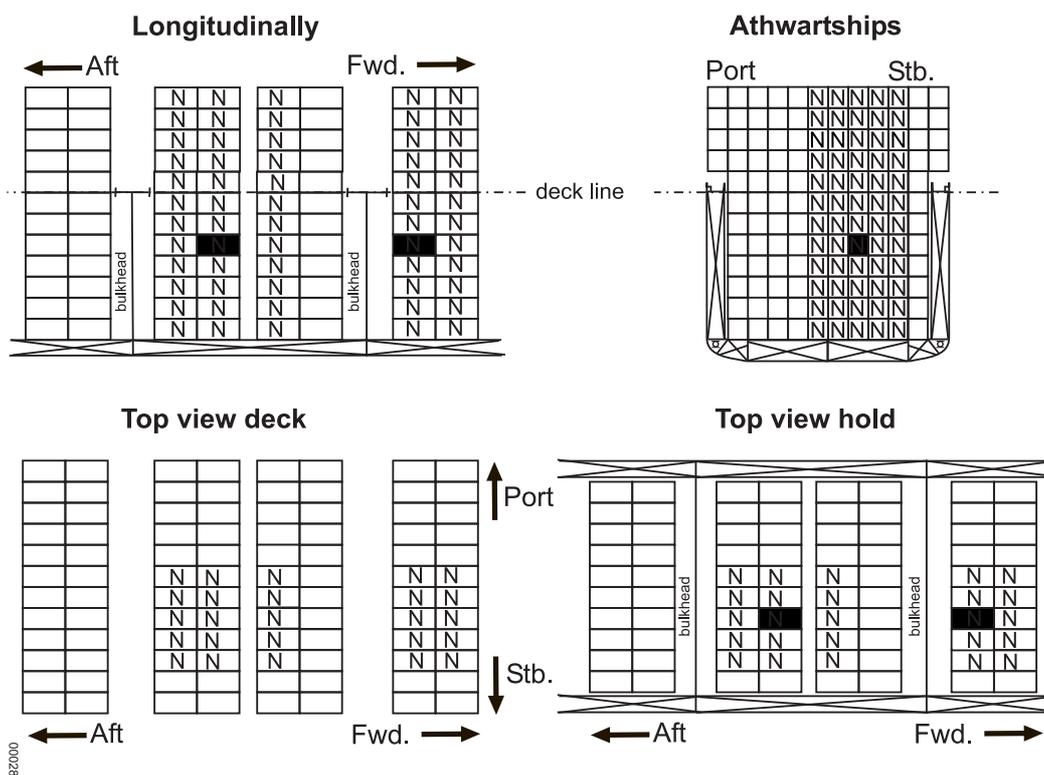
Note: All bulkheads and decks shall be resistant to fire and liquids.

"SEPARATED FROM" .2		
CLOSED VERSUS OPEN	HORIZONTAL	VERTICAL
	ON DECK	
FORE AND AFT	One container space	
ATHWARTSHIPS	Two container spaces	



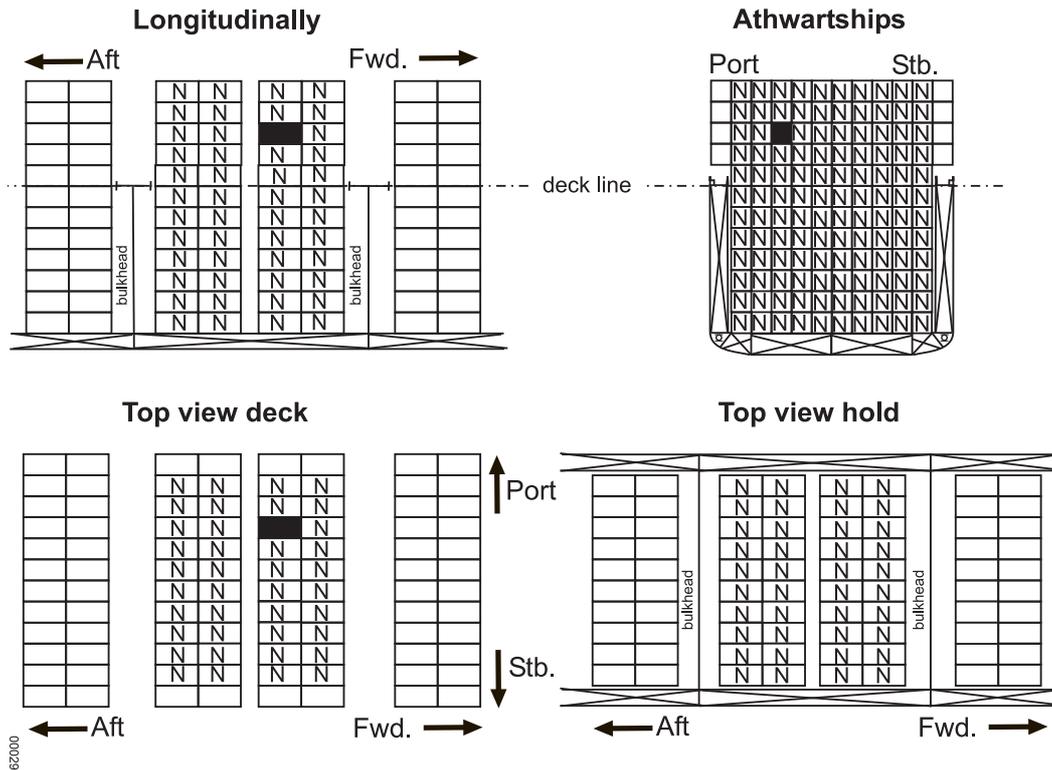
2 – Situation *closed* versus *open* – ON DECK
Note: All bulkheads and decks shall be resistant to fire and liquids.

"SEPARATED FROM" .2		
CLOSED VERSUS OPEN	HORIZONTAL	VERTICAL
	UNDER DECK	
FORE AND AFT	One container space or one bulkhead	NOT in the same vertical line
ATHWARTSHIPS	Two container spaces	



2 – Situation *closed* versus *open* – UNDER DECK
Note: All bulkheads and decks shall be resistant to fire and liquids.

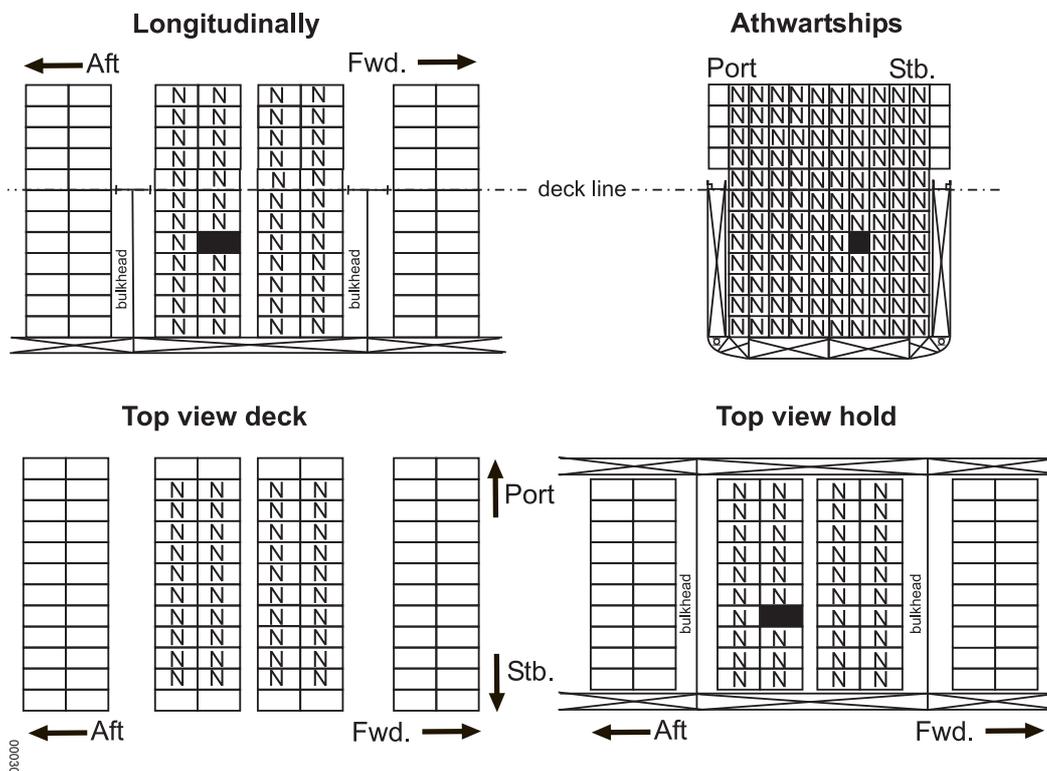
"SEPARATED FROM" .2		
OPEN VERSUS OPEN	HORIZONTAL	VERTICAL
	ON DECK	
FORE AND AFT	One container space and not in or above same hold	NOT in the same vertical line
ATHWARTSHIPS	Two container spaces and not in or above same hold	



2 – Situation *open versus open* – ON DECK

Note: All bulkheads and decks shall be resistant to fire and liquids.

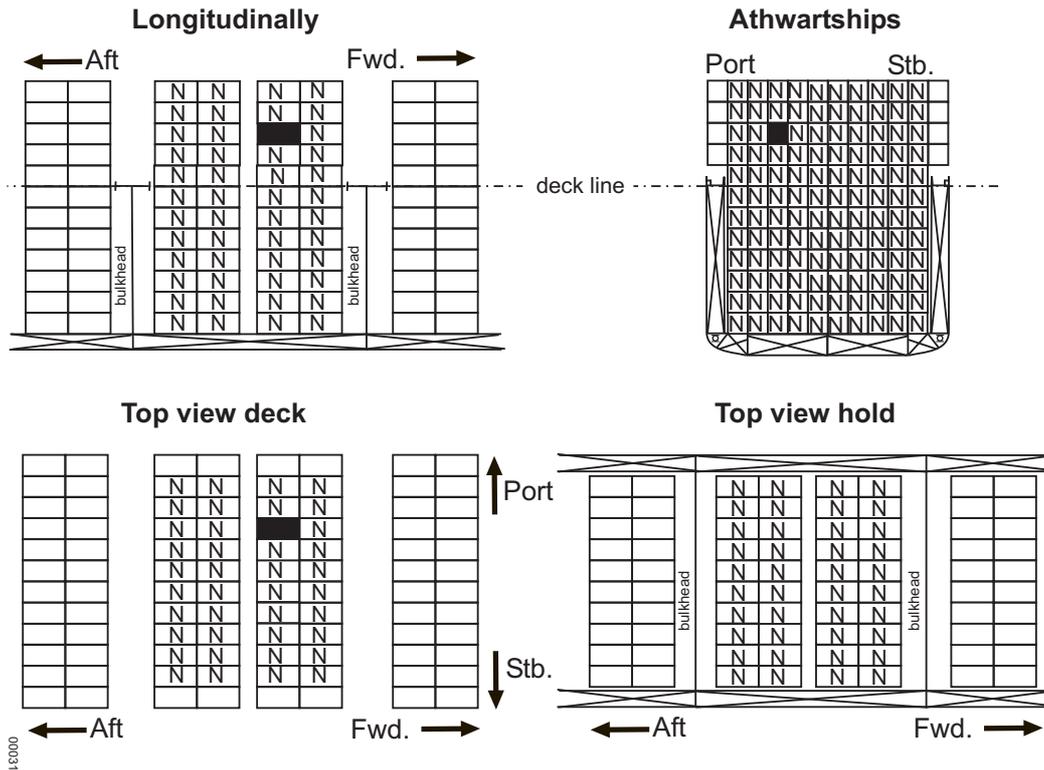
"SEPARATED FROM" .2		
OPEN VERSUS OPEN	HORIZONTAL	VERTICAL
	UNDER DECK	
FORE AND AFT	One bulkhead	
ATHWARTSHIPS	One bulkhead	



2 – Situation *open versus open* – UNDER DECK

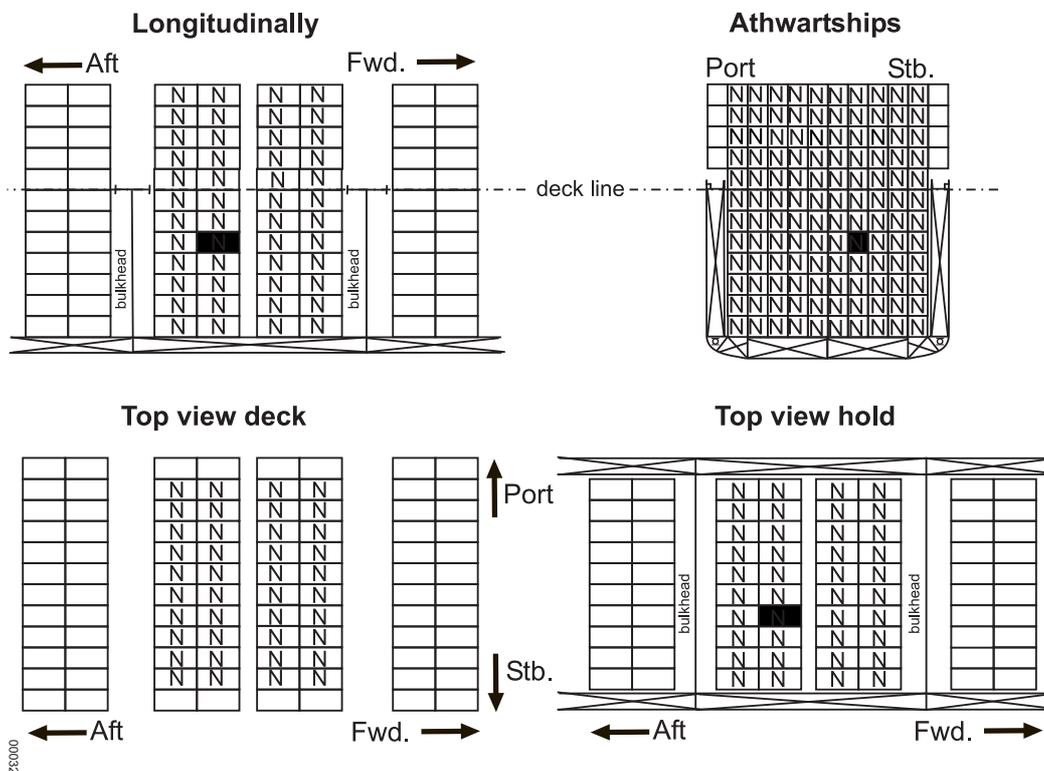
Note: All bulkheads and decks shall be resistant to fire and liquids.

"SEPARATED BY A COMPLETE COMPARTMENT OR HOLD FROM" .3		
CLOSED VERSUS CLOSED	HORIZONTAL	VERTICAL
	ON DECK	
FORE AND AFT	One container space and not in or above same hold	NOT in the same vertical line
ATHWARTSHIPS	Two container spaces and not above same hold	



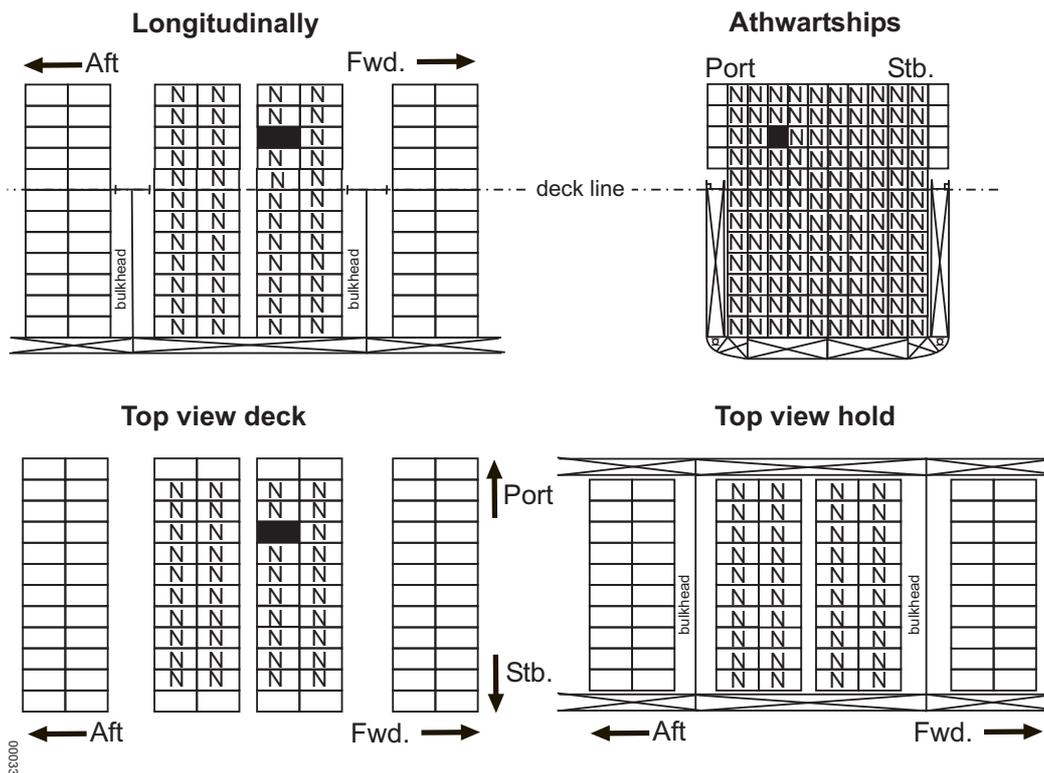
3 – Situation *closed versus closed* – ON DECK
Note: All bulkheads and decks shall be resistant to fire and liquids.

"SEPARATED BY A COMPLETE COMPARTMENT OR HOLD FROM" .3		
CLOSED VERSUS CLOSED	HORIZONTAL	VERTICAL
	UNDER DECK	
FORE AND AFT	One bulkhead	
ATHWARTSHIPS	One bulkhead	



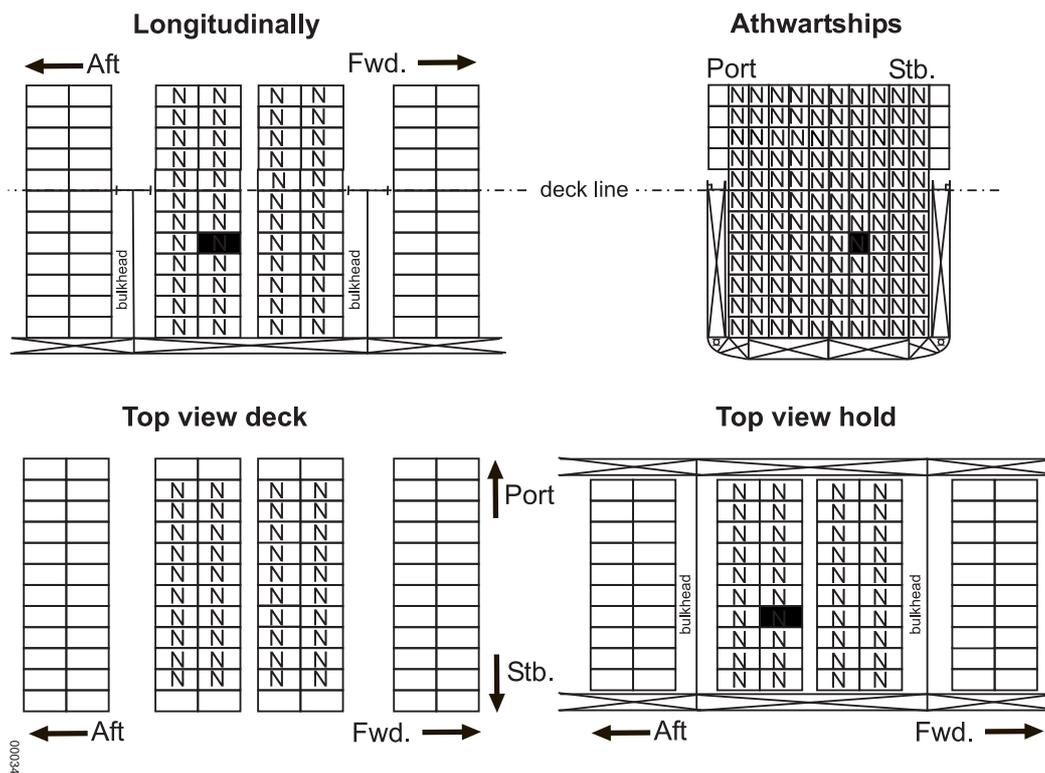
3 – Situation *closed versus closed* – UNDER DECK
Note: All bulkheads and decks shall be resistant to fire and liquids.

"SEPARATED BY A COMPLETE COMPARTMENT OR HOLD FROM" .3		
CLOSED VERSUS OPEN	HORIZONTAL	VERTICAL
	ON DECK	
FORE AND AFT	One container space and not in or above same hold	NOT in the same vertical line
ATHWARTSHIPS	Two container spaces and not above same hold	



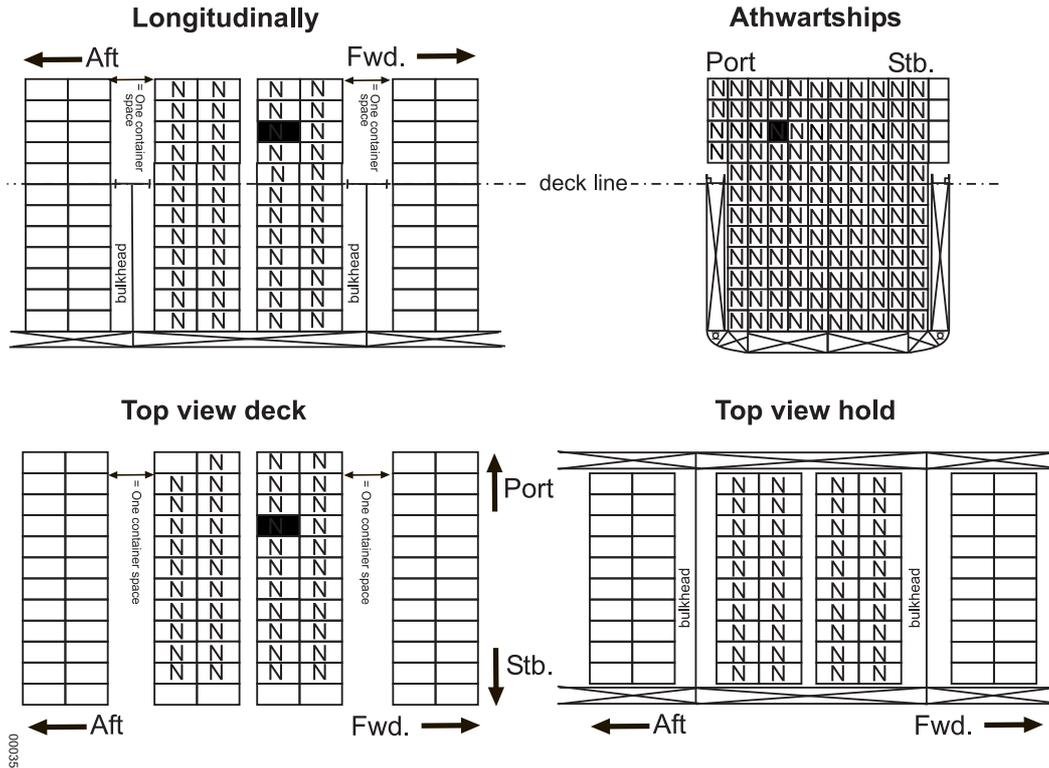
3 – Situation *closed* versus *open* – ON DECK
Note: All bulkheads and decks shall be resistant to fire and liquids.

"SEPARATED BY A COMPLETE COMPARTMENT OR HOLD FROM" .3		
CLOSED VERSUS OPEN	HORIZONTAL	VERTICAL
	UNDER DECK	
FORE AND AFT	One bulkhead	NOT in the same vertical line
ATHWARTSHIPS	One bulkhead	



3 – Situation *closed* versus *open* – UNDER DECK
Note: All bulkheads and decks shall be resistant to fire and liquids.

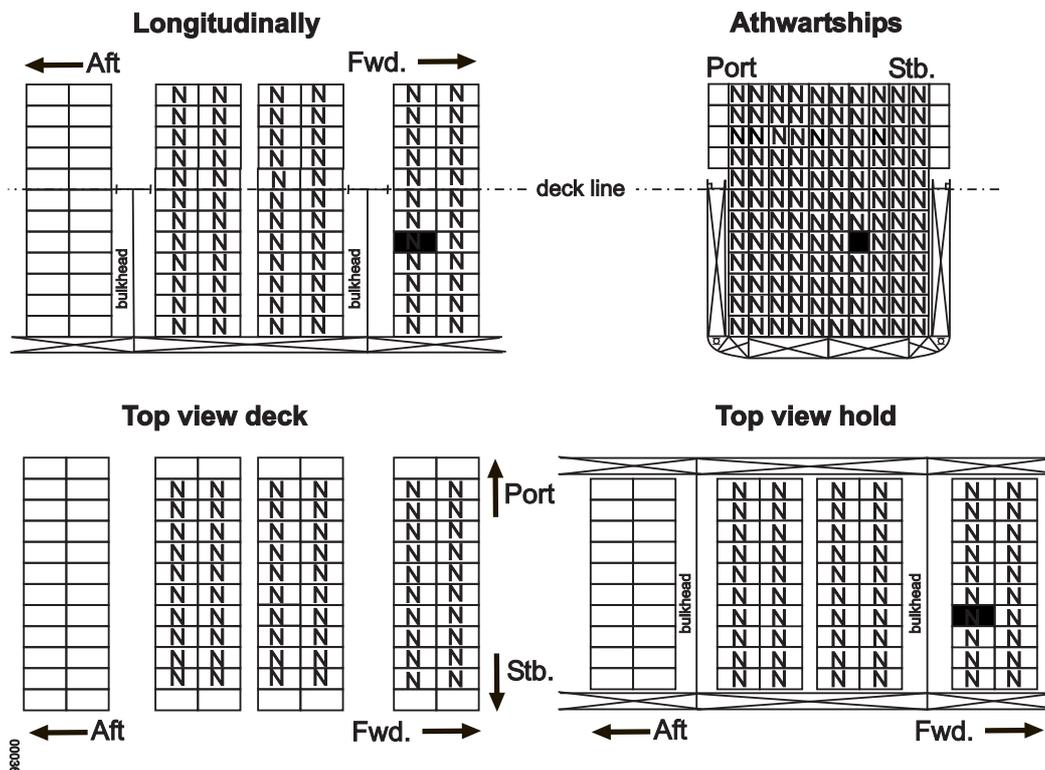
"SEPARATED BY A COMPLETE COMPARTMENT OR HOLD FROM" .3		
OPEN VERSUS OPEN	HORIZONTAL	VERTICAL
	ON DECK	
FORE AND AFT	Two container spaces and not in or above same hold	NOT in the same vertical line
ATHWARTSHIPS	Three container spaces and not above same hold	



3 – Situation *open versus open* – ON DECK

Note: All bulkheads and decks shall be resistant to fire and liquids.

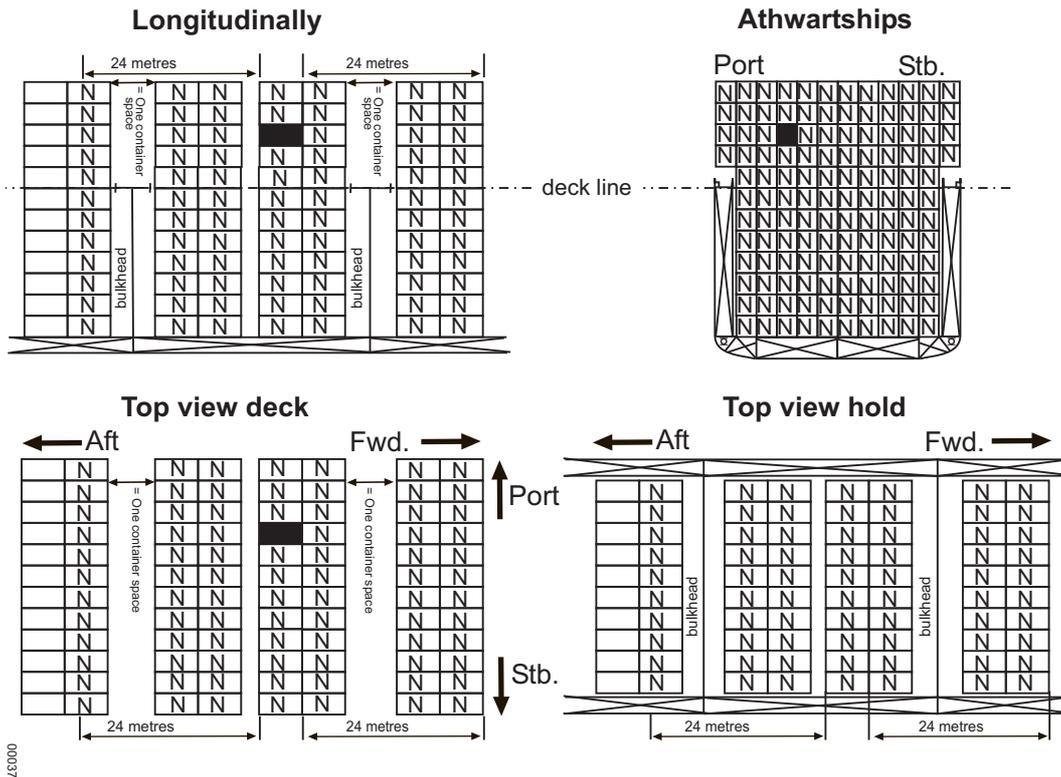
"SEPARATED BY A COMPLETE COMPARTMENT OR HOLD FROM" .3		
OPEN VERSUS OPEN	HORIZONTAL	VERTICAL
	UNDER DECK	
FORE AND AFT	Two bulkheads	NOT in the same vertical line
ATHWARTSHIPS	Two bulkheads	



3 – Situation *open versus open* – UNDER DECK

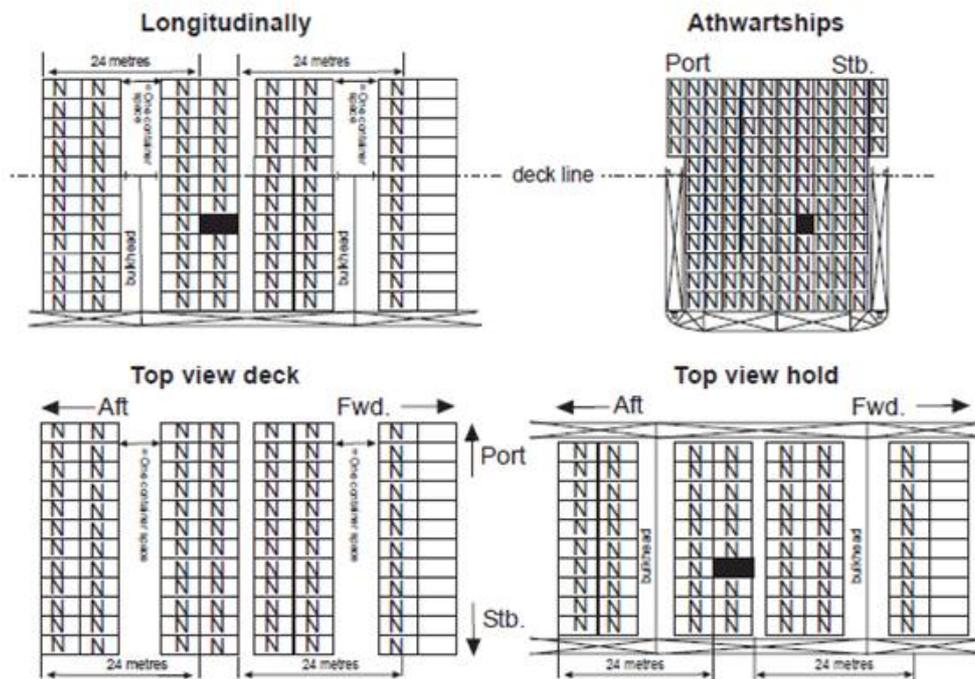
Note: All bulkheads and decks shall be resistant to fire and liquids.

"SEPARATED LONGITUDINALLY BY AN INTERVENING COMPLETE COMPARTMENT OR HOLD FROM" .4		
CLOSED VERSUS CLOSED	HORIZONTAL	VERTICAL
	ON DECK	
FORE AND AFT	Minimum horizontal distance of 24 metres and not in or above same hold	Prohibited
ATHWARTSHIPS	Prohibited	



4 – Situation closed versus closed – ON DECK
Note: All bulkheads and decks shall be resistant to fire and liquids

"SEPARATED LONGITUDINALLY BY AN INTERVENING COMPLETE COMPARTMENT OR HOLD FROM" .4		
CLOSED VERSUS CLOSED	HORIZONTAL UNDER DECK	VERTICAL
FORE AND AFT	One bulkhead and minimum horizontal distance of 24 metres*	Prohibited
ATHWARTSHIPS	Prohibited	

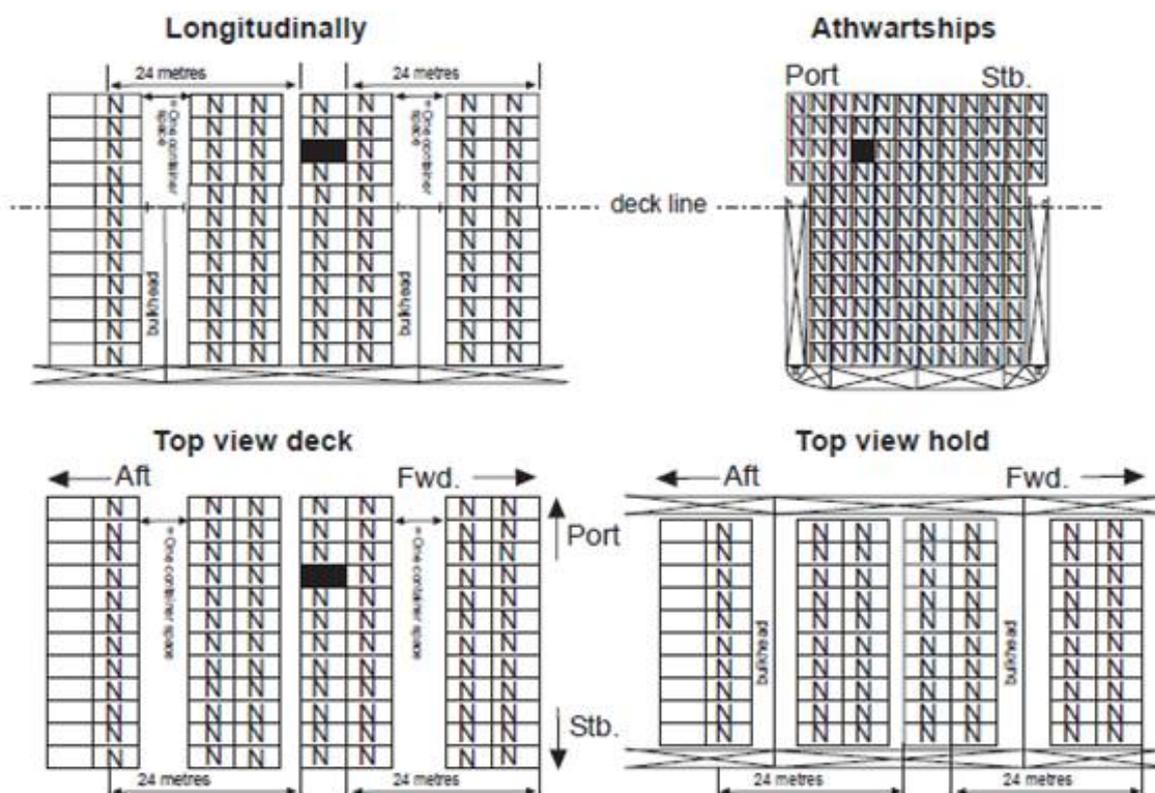


4 – Situation closed versus closed – UNDER DECK

Note: All bulkheads and decks shall be resistant to fire and liquids.

*Containers not less than 6 m from intervening bulkhead.

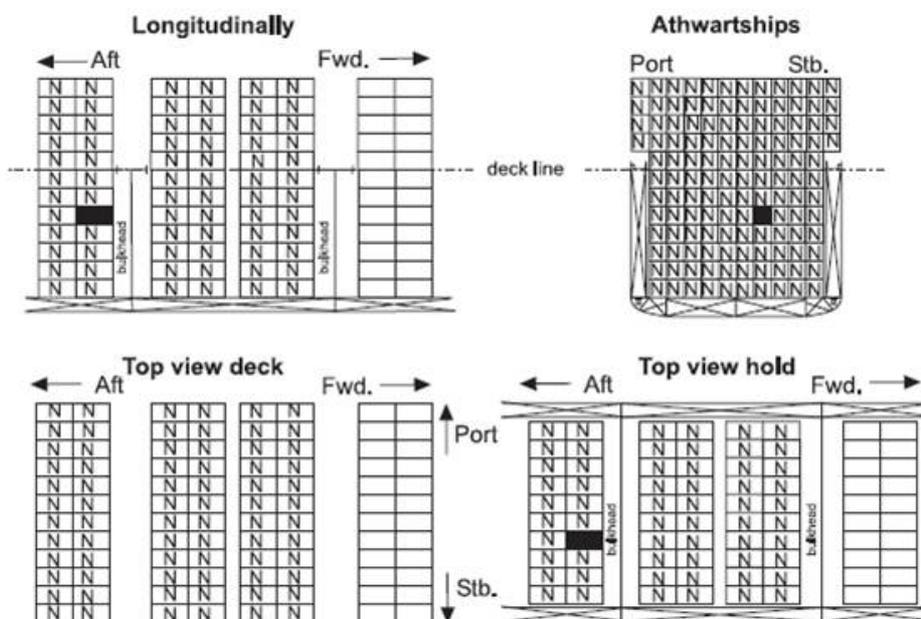
"SEPARATED LONGITUDINALLY BY AN INTERVENING COMPLETE COMPARTMENT OR HOLD FROM" .4		
CLOSED VERSUS OPEN OR OPEN VERSUS OPEN	HORIZONTAL	VERTICAL
	ON DECK	
FORE AND AFT	Minimum horizontal distance of 24 metres and not above same hold	Prohibited
ATHWARTSHIPS	Prohibited	



4 – Situations closed versus open and open versus open – ON DECK

Note: All bulkheads and decks shall be resistant to fire and liquids.

"SEPARATED LONGITUDINALLY BY AN INTERVENING COMPLETE COMPARTMENT OR HOLD FROM" .4		
CLOSED VERSUS OPEN OR OPEN VERSUS OPEN	HORIZONTAL	VERTICAL
	UNDER DECK	
FORE AND AFT	Two bulkheads	Prohibited
ATHWARTSHIPS	Prohibited	



4 – Situations closed versus open and open versus open – UNDER DECK

Note: All bulkheads and decks shall be resistant to fire and liquids.

4 Illustrations of segregation of cargo transport units on board ro-ro ships

4.1 The illustrations of this section apply to the segregation of cargo transport units which are transported on board roll-on/roll-off ships or in roll-on/roll-off cargo spaces³.

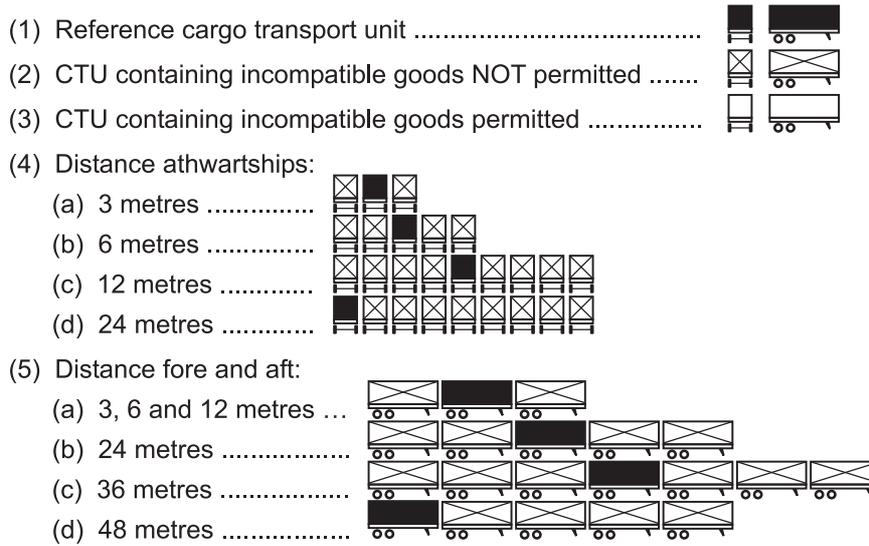
4.2 To determine locations in which cargo transport units are not permitted to contain dangerous goods that are incompatible with those in a reference cargo transport unit, the following method applies: locations where incompatible dangerous goods are not permitted with respect to the referenced cargo transport unit are first determined in the direct fore and aft and athwartships directions. The relevant segregation distances to be considered in both directions are defined in metres as shown in the figure. Cargo transport units located partially or completely within these distances from the reference cargo transport unit shall not contain dangerous goods that are incompatible with those in the reference cargo transport unit.

4.3 The standard dimension of a cargo transport unit used for the illustrations is:

- length: 12 m
- width: 2.50 m

³ For ro-ro ships which carry containers on decks or in holds, the illustrations of section 2 apply to such spaces.

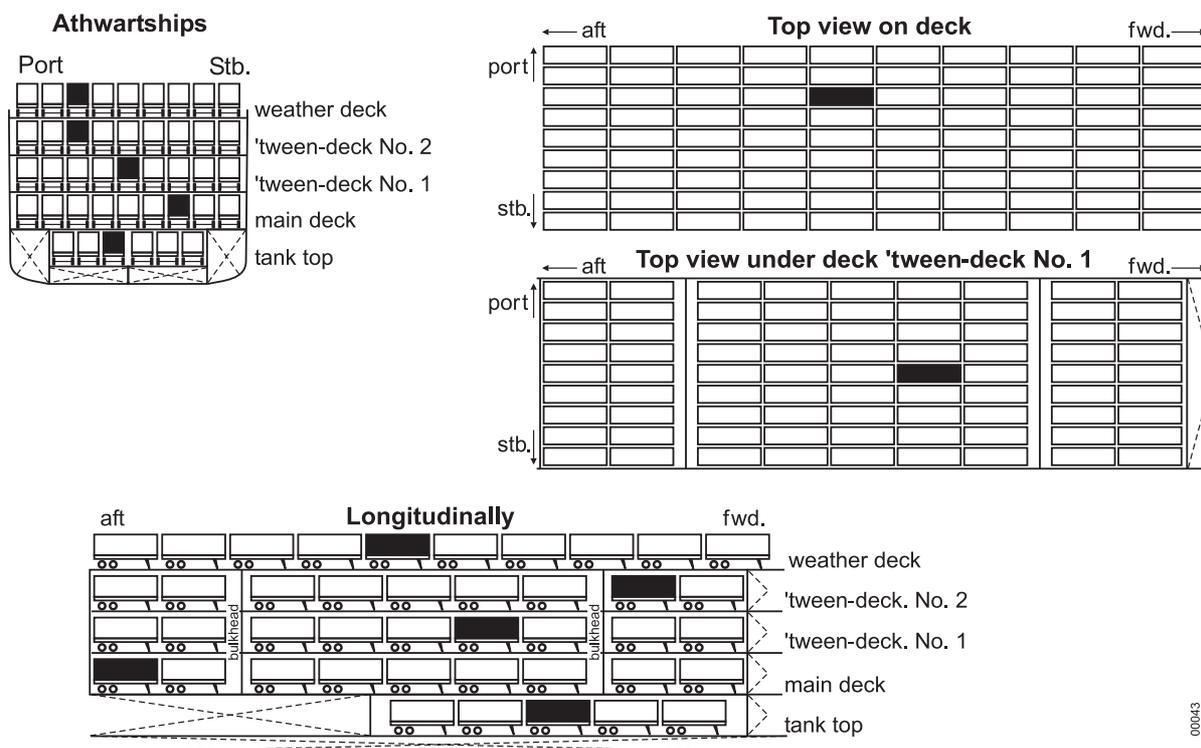
4.4 Explanation of the segregation terms



00041

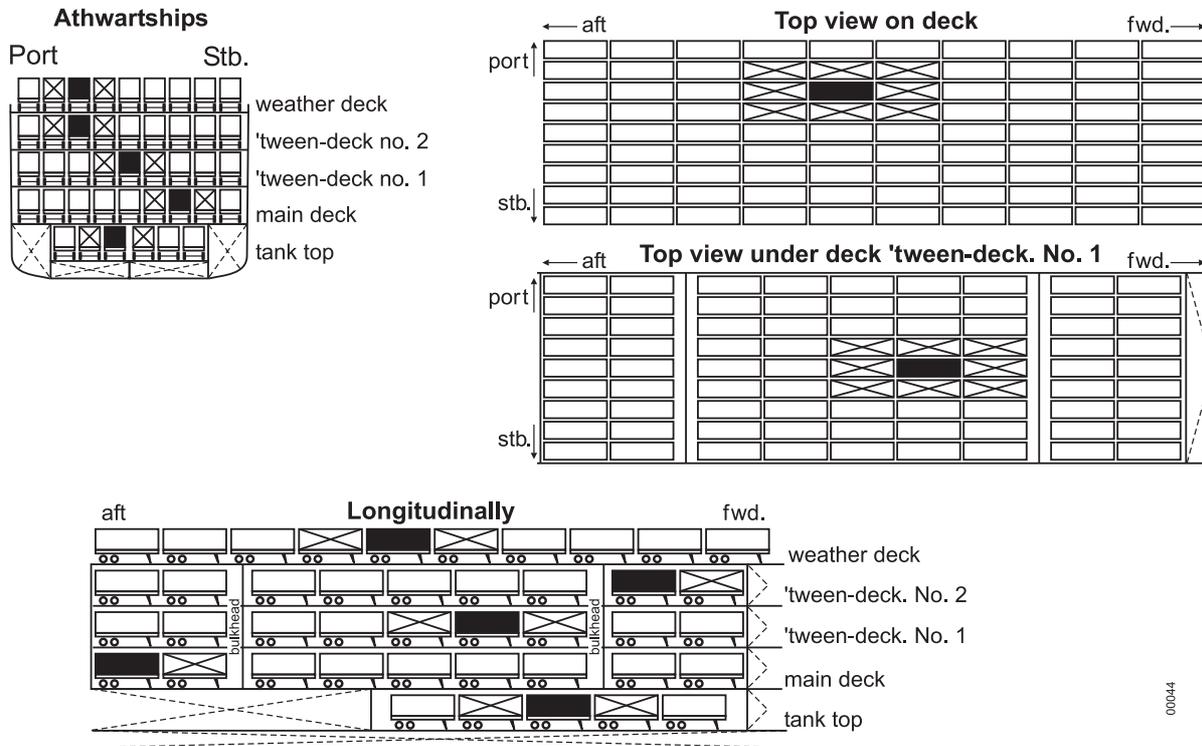
Note 1: All bulkheads and decks shall be resistant to fire and liquid.
Note 2: When an illustration has more than one reference cargo transport units, only one should be used when interpreting the illustration. When an illustration contains several reference cargo transport units, they have to be considered as different examples.

"AWAY FROM" .1		
CLOSED VERSUS CLOSED OR CLOSED VERSUS OPEN	ON DECK	UNDER DECK
FORE AND AFT	No restriction	No restriction
ATHWARTSHIPS	No restriction	No restriction



1 – Situations *closed versus closed* and *closed versus open*
Note: All bulkheads and decks shall be resistant to fire and liquids.

"AWAY FROM" .1		
OPEN VERSUS OPEN	ON DECK	UNDER DECK
FORE AND AFT	At least 3 metres	At least 3 metres
ATHWARTSHIPS	At least 3 metres	At least 3 metres

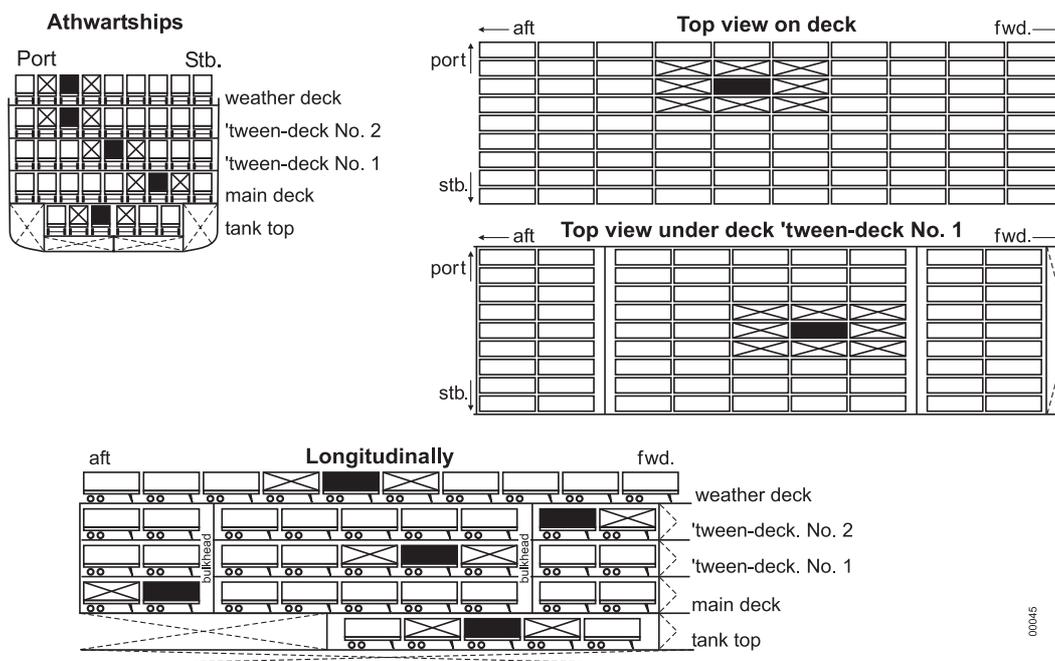


00044

1 – Situation *open versus open*

Note: All bulkheads and decks shall be resistant to fire and liquids.

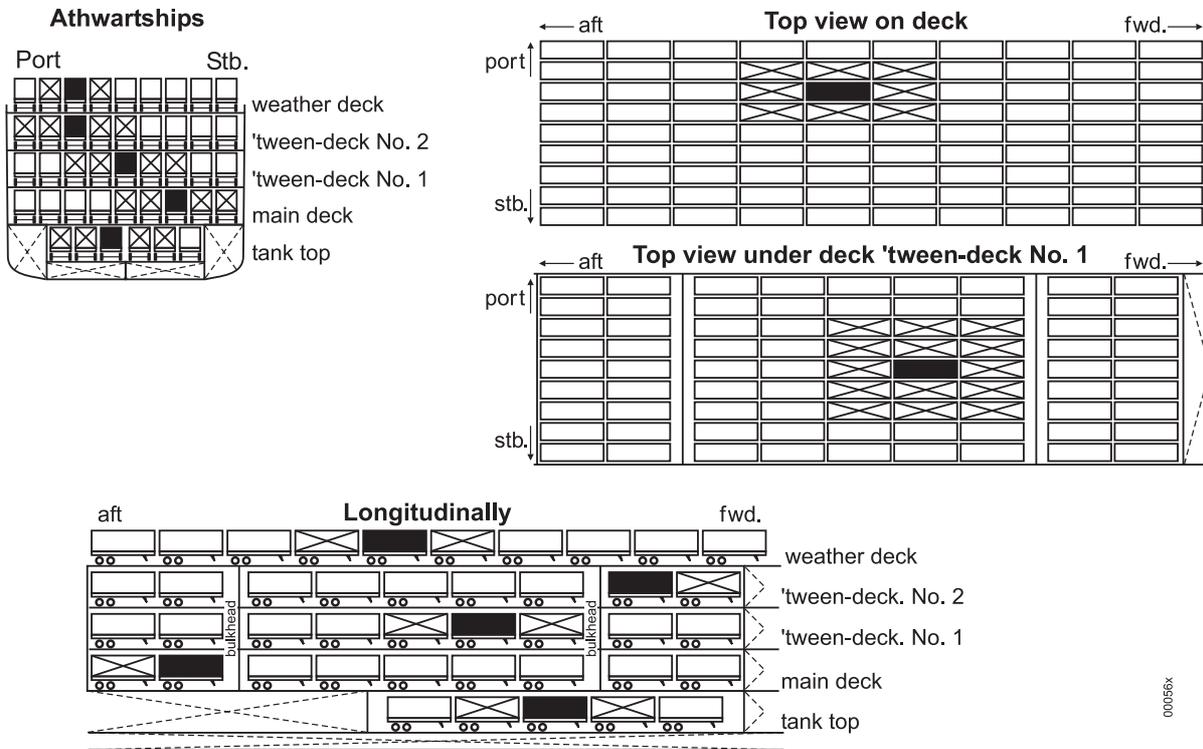
"SEPARATED FROM" .2		
CLOSED VERSUS CLOSED	ON DECK	UNDER DECK
FORE AND AFT	At least 6 metres	At least 6 metres or ONE bulkhead
ATHWARTSHIPS	At least 3 metres	At least 3 metres or ONE bulkhead



2 – Situation *closed versus closed*

Note: All bulkheads and decks shall be resistant to fire and liquids.

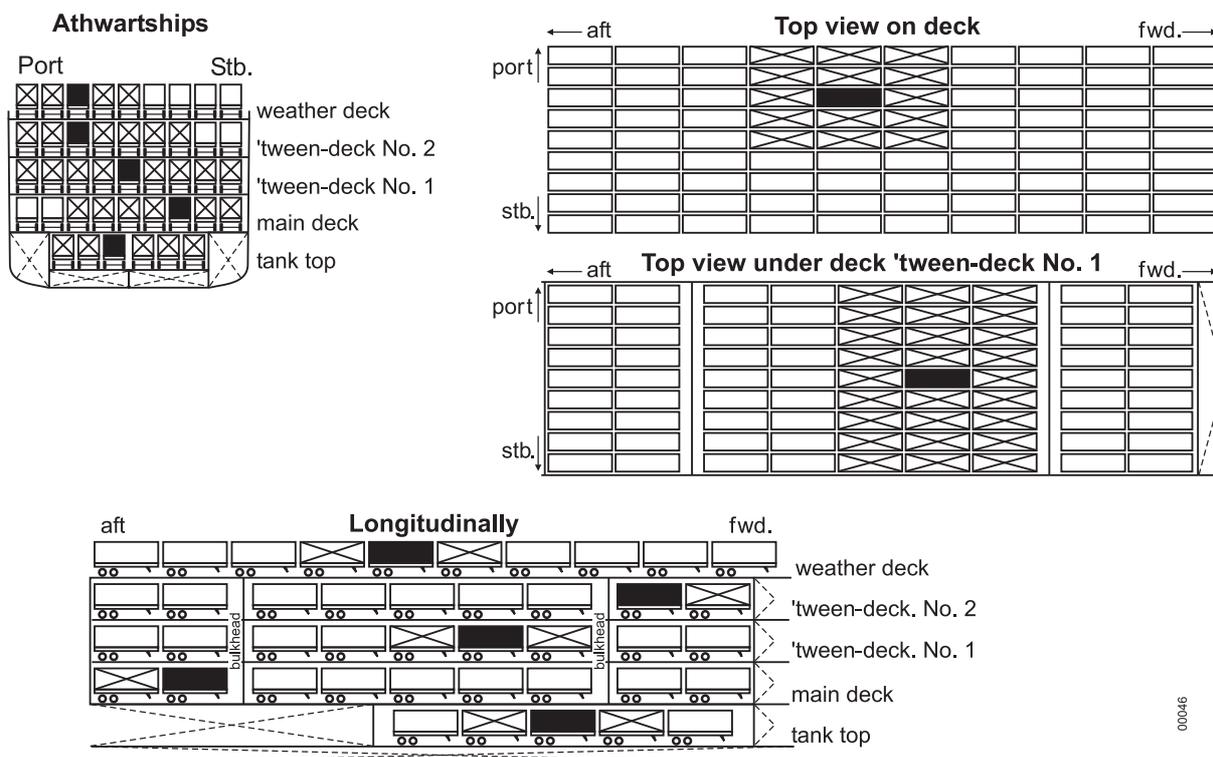
"SEPARATED FROM" .2		
CLOSED VERSUS OPEN	ON DECK	UNDER DECK
FORE AND AFT	At least 6 metres	At least 6 metres or ONE bulkhead
ATHWARTSHIPS	At least 3 metres	At least 6 metres or ONE bulkhead



2 – Situation *closed versus open*

Note: All bulkheads and decks shall be resistant to fire and liquids.

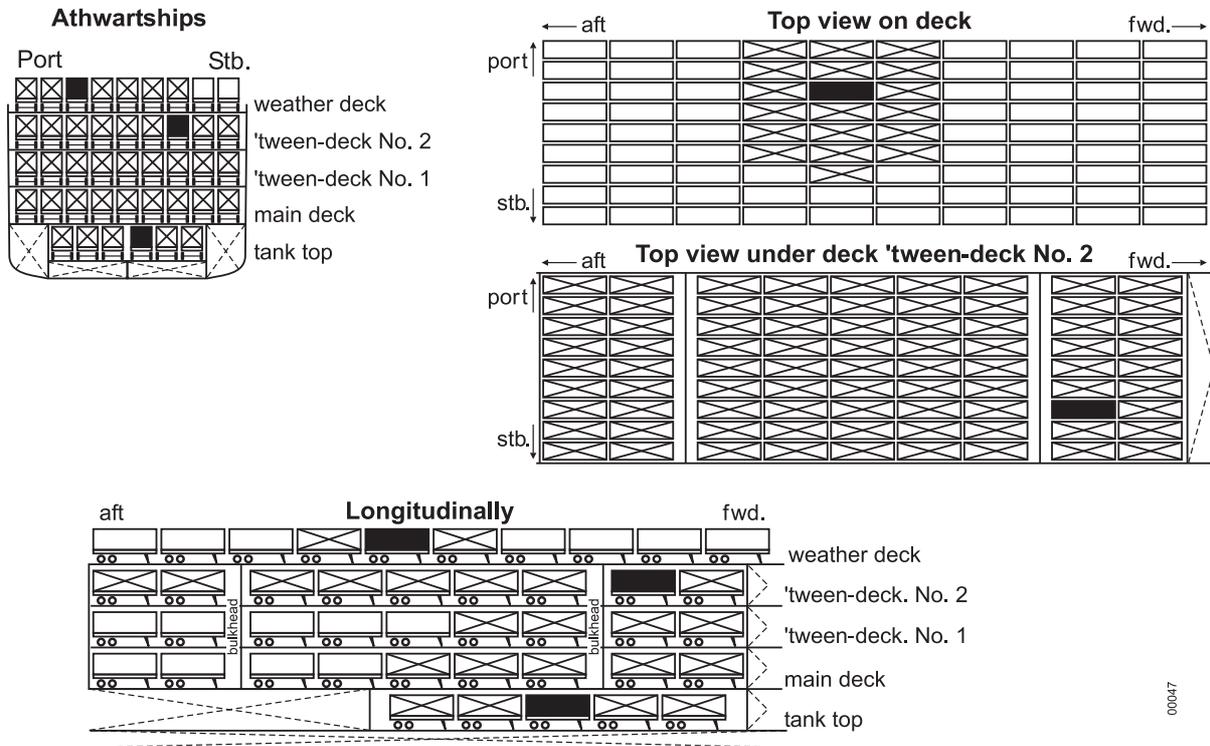
"SEPARATED FROM" .2		
OPEN VERSUS OPEN	ON DECK	UNDER DECK
FORE AND AFT	At least 6 metres	At least 12 metres or ONE bulkhead
ATHWARTSHIPS	At least 6 metres	At least 12 metres or ONE bulkhead



2 – Situation *open versus open*

Note: All bulkheads and decks shall be resistant to fire and liquids.

"SEPARATED BY A COMPLETE COMPARTMENT OR HOLD FROM" .3		
CLOSED VERSUS CLOSED	ON DECK	UNDER DECK
FORE AND AFT	At least 12 metres	At least 24 metres + deck
ATHWARTSHIPS	At least 12 metres	At least 24 metres + deck

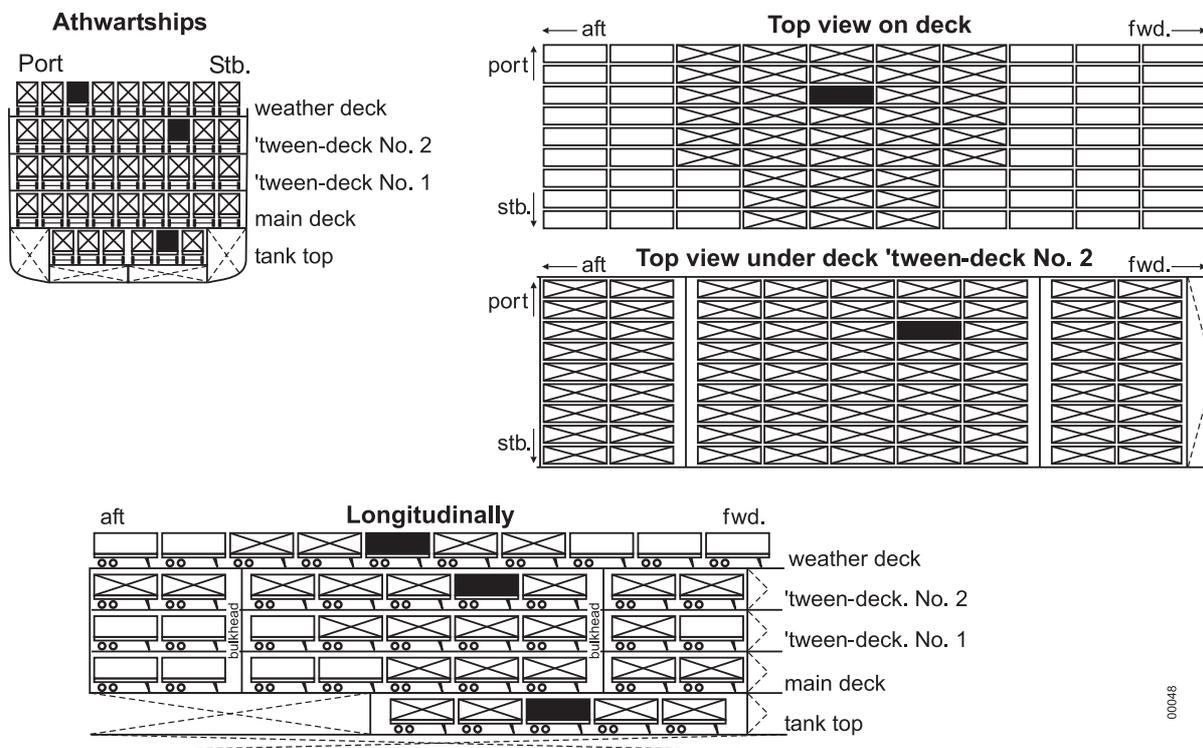


00047

3 – Situation *closed versus closed*

Note: All bulkheads and decks shall be resistant to fire and liquids.

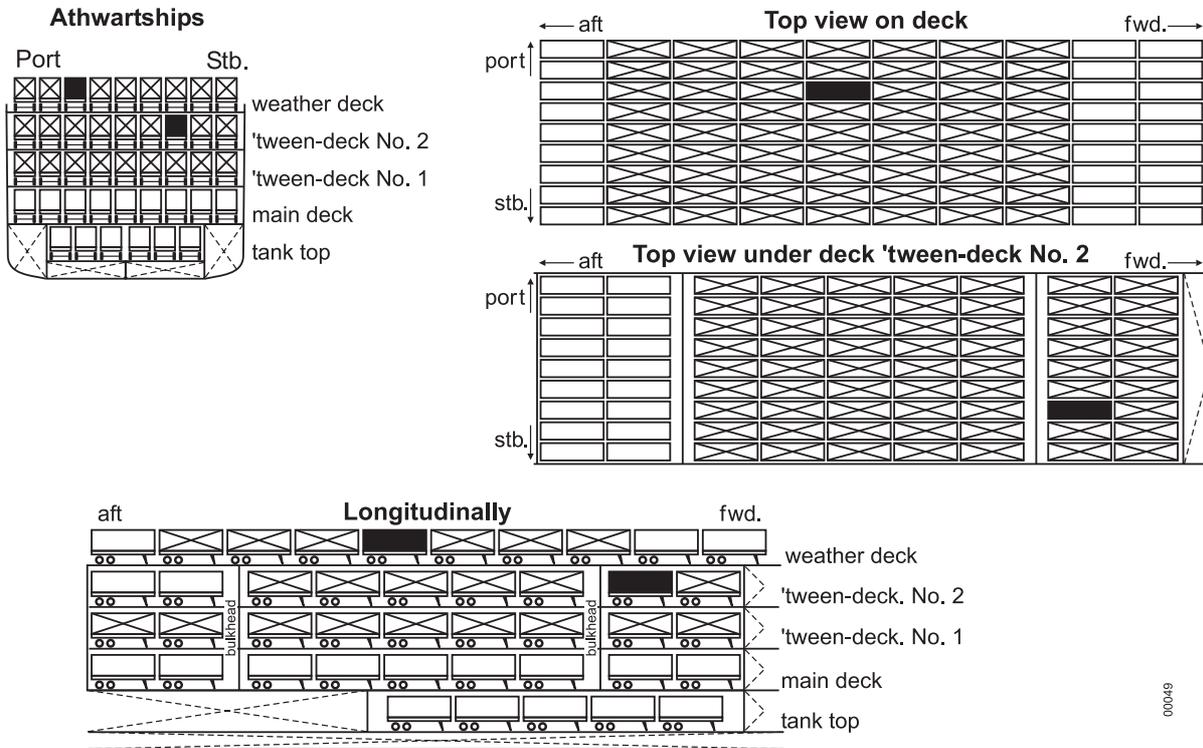
S"SEPARATED BY A COMPLETE COMPARTMENT OR HOLD FROM" .3		
CLOSED VERSUS OPEN	ON DECK	UNDER DECK
FORE AND AFT	At least 24 metres	At least 24 metres + deck
ATHWARTSHIPS	At least 24 metres	At least 24 metres + deck



3 – Situation *closed versus open*

Note: All bulkheads and decks shall be resistant to fire and liquids.

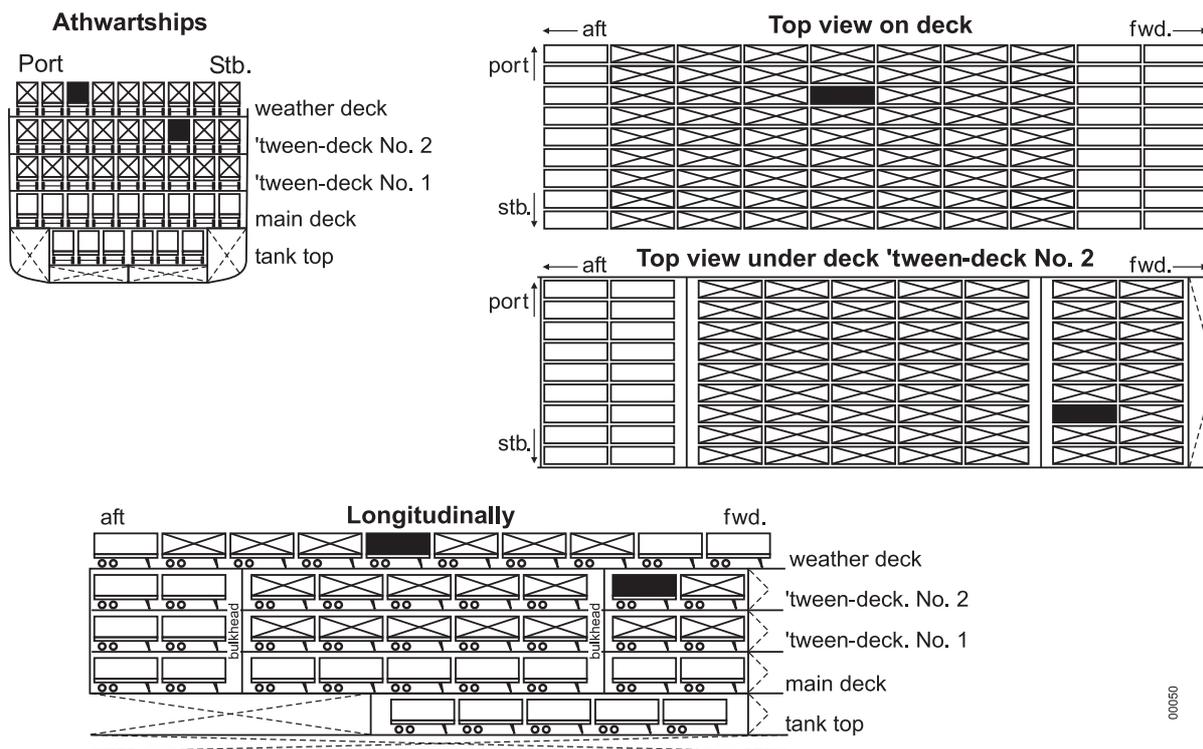
"SEPARATED BY A COMPLETE COMPARTMENT OR HOLD FROM" .3		
OPEN VERSUS OPEN	ON DECK	UNDER DECK
FORE AND AFT	At least 36 metres	Two decks or TWO bulkheads
ATHWARTSHIPS	Prohibited	Prohibited



3 – Situation *open versus open*

Note: All bulkheads and decks shall be resistant to fire and liquids.

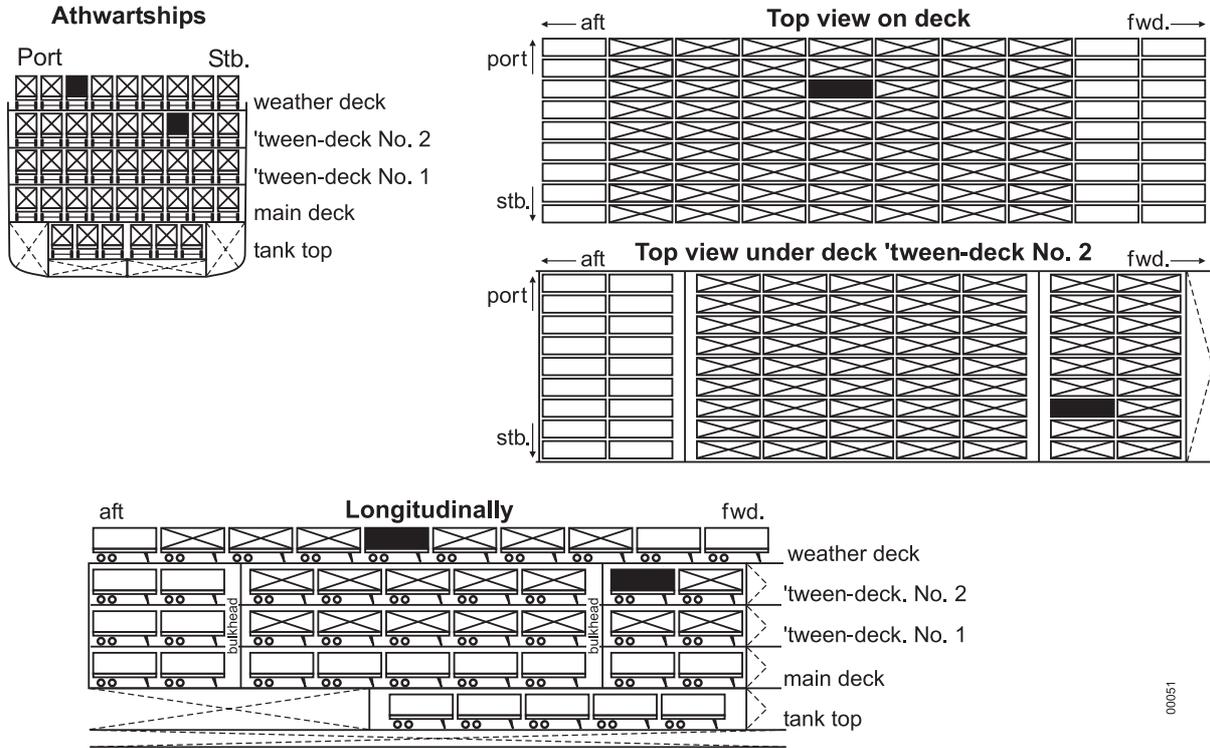
"SEPARATED LONGITUDINALLY BY AN INTERVENING COMPLETE COMPARTMENT OR HOLD FROM" .4		
CLOSED VERSUS CLOSED	ON DECK	UNDER DECK
FORE AND AFT	At least 36 metres	Two bulkheads or at least 36 metres + two decks
ATHWARTSHIPS	Prohibited	Prohibited



4 – Situation *closed versus closed*

Note: All bulkheads and decks shall be resistant to fire and liquids.

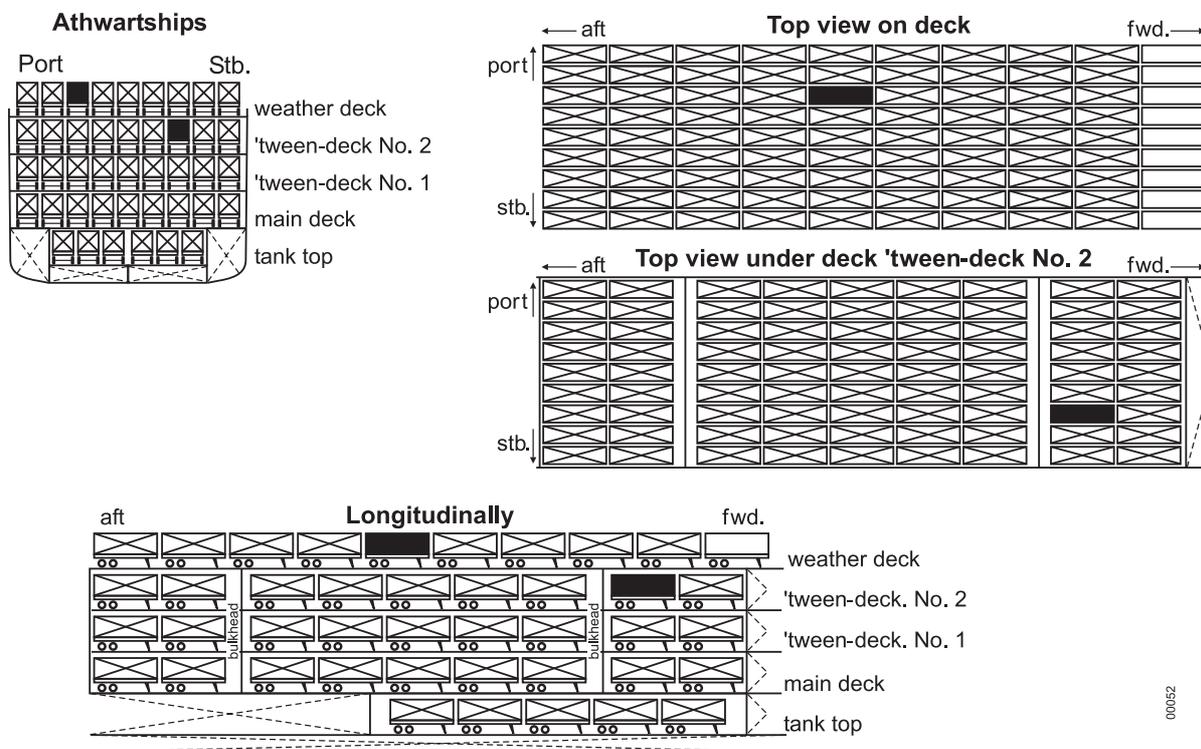
"SEPARATED LONGITUDINALLY BY AN INTERVENING COMPLETE COMPARTMENT OR HOLD FROM" .4		
CLOSED VERSUS OPEN	ON DECK	UNDER DECK
FORE AND AFT	At least 36 metres	At least 48 m including TWO bulkheads
ATHWARTSHIPS	Prohibited	Prohibited



4 – Situation *closed versus open*

Note: All bulkheads and decks shall be resistant to fire and liquids.

"SEPARATED LONGITUDINALLY BY AN INTERVENING COMPLETE COMPARTMENT OR HOLD FROM" .4		
OPEN VERSUS OPEN	ON DECK	UNDER DECK
FORE AND AFT	At least 48 metres	Prohibited
ATHWARTSHIPS	Prohibited	Prohibited



4 – Situation *open versus open*

Note: All bulkheads and decks shall be resistant to fire and liquids.

ANNEX 4

TERMS OF REFERENCE FOR THE GROUP OF EXPERTS FOR THE REVISION OF THE IMO/ILO/UNECE GUIDELINES FOR PACKING OF CARGO TRANSPORT UNITS (CTUs)

1 Background

The Maritime Safety Committee of IMO, at its sixty-seventh session (2 to 6 December 1996), approved the IMO/ILO/UNECE Guidelines for Packing of Cargo Transport Units (CTUs) which were prepared by the Working Group on Ship/Port Interface (SPI Working Group) in co-operation with the UNECE Working Party on Combined Transport (WP.24).

The Guidelines were subsequently endorsed by the Inland Transport Committee of the UNECE in January 1997 and by the Governing Body of the ILO at its 268th Session (March 1997).

In accordance with the Maritime Safety Committee's instruction the IMO Secretariat published the Guidelines by means of an MSC Circular (MSC/Circ.787) on 2 May 1997, in co-operation with the UNECE and ILO, after endorsement by these two organizations. This circular revoked MSC/Circ.383 (IMO/ILO Guidelines for Packing Cargo in Freight Containers or Vehicles), as amended by MSC/Circ.557 and Rev.1.

These Guidelines, which have been based on the existing IMO/ILO Guidelines for Packing Cargo in Freight Containers or Vehicles, are applicable to transport operations by all surface and water modes of transport and the whole intermodal transport chain. Following inter-secretariat consultations of the ILO, IMO and UNECE, the three organizations have concluded that these Guidelines should be urgently revised and made available.

The Maritime Safety Committee of IMO at its 83rd session (3 to 12 October 2007) decided to review of the Guidelines for packing of cargo transport units within the framework of the Editorial and Technical (E&T) Group of the Sub-Committee on Dangerous Goods, Solid Cargoes and Containers (DSC), which covered basically the carriage of dangerous goods in the maritime mode.

At its meeting that took place at the Palais des Nations in Geneva on 19 and 20 March 2009, the UNECE Working Party on Intermodal Transport and Logistics (WP.24) acknowledged the need for the updating/revision of the IMO/ILO/UNECE Guidelines for packing cargo transport units and requested the UNECE secretariat to collaborate with the IMO and ILO in order to update/revise the said publication. In the context, the UNECE secretariat held informal consultations with the ILO and IMO on the modality of this collaboration.

A tripartite Global Dialogue Forum on Safety in the Supply Chain in Relation to Packing of Containers that was held by the ILO in Geneva from 21 to 22 February 2011 unanimously adopted a set of points of consensus in relation to the subject matter, one of which refers to the revision of the IMO/ILO/UNECE Guidelines for packing cargo transport units (CTUs) and reads as follows: "It is agreed that an ILO/IMO/UNECE code of practice on the packing of CTUs is necessary. The three organizations are requested to proceed with the revision of the existing guidelines for packing of CTUs which would form the code of practice."

At its 310th Session (March 2011), the ILO Governing Body authorized the development of an IMO/ILO/UNECE code of practice through the revision of the IMO/ILO/UNECE Guidelines for packing of cargo transport units by a joint IMO/ILO/UNECE working group in consultation with the secretariats of the IMO and the United Nations Economic Commission for Europe

(UNECE), and the participation of the ILO in the joint working group through one or more ILO officials, as well as one Government, one Worker and one Employer representative, nominated by the Government group and the secretariats of the Workers' and Employers' groups of the Governing Body, respectively.

The Maritime Safety Committee of IMO at its 89th session (11 to 20 May 2011) approved the draft amendments to the IMO/ILO/UNECE Guidelines for packing cargo transport units (CTUs) that had been made by the E&T Group of the Sub-Committee on Dangerous Goods, Solid Cargoes and Containers (DSC), and which covered only the part of the guidelines on dangerous goods, and requested the Secretariat to forward them to ILO and the UNECE for concurrent approval, as appropriate.

2 Objectives of the Group of Experts

The Group of Experts will be tasked to prepare and recommend for endorsement to the IMO, ILO and UNECE a draft revised version of the IMO/ILO/UNECE Guidelines for packing cargo transport units (CTUs), which would reflect the latest information, best practices and requirements on the subject. It will be asked to take into account the draft amendments to a part of the Guidelines, which concerns dangerous goods prepared by the IMO. The group will adopt the draft revised version of the Guidelines by consensus.

3 Composition of the Group of Experts

The Group of Experts would comprise members to be nominated or invited by the ILO, the UNECE and IMO secretariats, as follows:

- the ILO will be represented in the Group of Experts by representatives of its constituents as well as by ILO officials;
- the UNECE will be represented in the Group of Experts by representatives of UN Member States, concerned IGOs and NGOs as well as by the UNECE secretariat; and
- representative(s) from the IMO secretariat will be available to provide necessary support.

(Note: as the work of the Group of Experts would be adopted by consensus, any imbalances in the number of representatives of the three organizations would not be important.)

The work of the group would be supported by a consultant. The consultant will be assigned with the task to prepare the various draft versions of the revised Guidelines, taking into account the guidance and inputs to be provided by the members of the Group and on the basis of his/her knowledge and findings of his/her own research.

4 Responsibilities and obligations of ILO, IMO and UNECE

- the UNECE will provide appropriate conference facilities for the group at the Palais des Nations in Geneva and will be responsible for the coordination, administration and organization of these meetings. It will also invite its experts to participate in this work. Through its own internal procedures and in line with the mandate provided (ECE/TRANS/WP.24/127, paragraphs 56-60), the UNECE Working Party on Intermodal Transport and Logistics (WP.24) will consider and possibly endorse the revised version of the Guidelines

(as proposed by the Group of Experts) to be published by the IMO and inform the ILO and the IMO accordingly;

- the ILO (in consultation with the secretariats of IMO and UNECE) will prepare the terms of reference, select, appoint and cover the costs of the consultant that will support the work of the Group of Experts. In addition, the ILO will cover the costs of any specialized services that might be required in relation to the design of the guidelines (refer to item 5 here below). It will also nominate its representatives at the Group of Experts. Through its own internal procedures, the ILO will endorse the revised version of the Guidelines (as proposed by the Group of Experts) to be published by the IMO and inform the UNECE and the IMO accordingly; and
- the IMO secretariat will send its representative(s) to the meeting of the Group of Experts. Through its own internal procedures, the IMO will consider and as appropriate, endorse the revised version of the Guidelines (as proposed by the Group of Experts) and inform the ILO and the UNECE accordingly. Following the endorsement of the said Guidelines by the ILO, the UNECE and its own organs, the IMO will be responsible for the timely publication of the English version of the said Guidelines.

5 Specialized services

For the preparation of revised version of the Guidelines, certain type of specialized services might be required (e.g. for the preparation of various graphics, figures, diagrams, the design/layout of the updated publication, etc.). Such services might be assigned to the consultant referred to above, who would be responsible to identify and recommend to the group the appropriate service provider(s). The consultant would be required to collaborate with such a service provider(s) during the process of the planning and preparations of the revised version of the Guidelines.

6 Cost of the participation in the meetings of the group of experts

The secretariats of the collaborating organizations (IMO, ILO and UNECE) would make their own arrangements regarding the cost of participation of their representatives at the meetings of the Group of Experts.

7 Working language

The working language of the group would be English. No interpretation during the meetings or translation of documents into other languages would be provided.

8 Meetings of the Group of Experts

The group is expected to meet every four months, or as it would be dictated by the progress of its work. Assuming that the group would be established during the second half of 2011, it is envisaged that the group would meet one time in 2011, three times in 2012 (i.e. in total four times).

ANNEX 5

DRAFT MSC CIRCULAR

INSPECTION PROGRAMMES FOR CARGO TRANSPORT UNITS CARRYING DANGEROUS GOODS

1 The Maritime Safety Committee, at its [ninetieth session (16 to 25 May 2012)], noted that Member Government reports, submitted in accordance with the format set out in Annex 1 to this circular, on inspections of cargo transport units (CTUs), as they are defined in chapter 1.2 of the IMDG Code, carrying dangerous goods for international transport by sea, could benefit by having guidance on how to conduct the inspections being reported. Inspection procedures and protocols may vary, depending on the specific type of CTU, on how it is presented for inspection (e.g. whether mounted on chassis or grounded), and on the need for additional precautions dependent upon the specific nature of the dangerous goods (e.g. radioactive, explosive, inhalation hazard).

2 The inspection guidance found in annex 2, while not in all cases definitive, is intended to provide Member Governments with adequate inspection guidelines and procedures to prompt substantial compliance with IMO standards and is applicable to all types of CTUs. Related circulars may be developed or updated to address peculiarities of specific types of CTUs and to provide greater detail on certain inspection items such as structural integrity (see resolution MSC.310(88)).

3 Noting that in those countries where regular inspection programmes have been implemented, a considerable improvement has been experienced in the general compliance with those standards, the Committee decided to offer inspection guidance to Member Governments to facilitate improvement to and implementation of inspection programmes. To avoid the diverting of dangerous goods to ports where inspections are not carried out, a regional approach should be taken.

4 To help identify areas of improvement to pertinent IMO standards, all Member Governments are requested to continue providing reports on inspections of cargo transport units. Assuming inspection procedures among Member Governments are comparable to the guidelines contained in annex 2, these reports provide an ability to justify and effect safety improvements without the need for an actual safety incident. To aid the Organization in evaluating the reports, Governments are invited to submit their reports in a structured manner, using the format given in annex 1, with at least the following information:

- .1 number of CTUs examined;
- .2 number of CTUs found with deficiencies; and
- .3 number of deficiencies relating to each inspection item as noted.

5 This circular supersedes MSC.1/Circ.1202.

ANNEX 1

REPORTS OF INSPECTION PROGRAMMES

Country _____

Item	Number	Percentage
Inspected CTUs (5.14)		
CTUs with deficiencies (5.14):		
<ul style="list-style-type: none"> - Total - Loaded/filled inside the country - Loaded/filled outside the country 		
Deficiencies (5.14):		
Documentation: (1.2)		
<ul style="list-style-type: none"> - Dangerous Goods Declaration - Container/Vehicle Packing Certificate 		
Placarding and marking of CTUs (1.2.3)		
Marking and labelling of packages (1.2.4)		
Packaging (inappropriate or damaged) (1.2.5)		
Portable tank or road tank vehicles not covered by CSC (inappropriate or damaged) (1.2.6)		
Stowage/securing inside the freight containers, vehicles and other CTUs (1.2.7)		
Segregation of cargo (1.2.8)		
Serious structural deficiencies (1.2.10)		
Tie down attachments of road tank vehicles (1.2.11)		

References in brackets are to paragraphs in annex 2.

ANNEX 2

GUIDELINES FOR THE IMPLEMENTATION OF THE INSPECTION OF CARGO TRANSPORT UNITS

1 General

1.1 The objective of these Guidelines is to assist in the implementation of a uniform and safe inspection programme for the inspection of cargo transport units (CTUs) carrying goods for international transport by sea, and to provide guidance relating to such inspections in accordance with applicable IMO documents, such as the IMDG Code, CSC and related recommendations.

1.2 Any inspection should be carried out in accordance with applicable IMO standards, such as the IMDG Code and the CSC. The following items should, at a minimum, be covered by the inspection programme and be checked for compliance with applicable standards; these items are succinctly captured in a flowchart found in the appendix to these Guidelines and in the chronological sequence of an actual inspection:

- .1 documentation;
- .2 International Convention for Safe Containers (CSC) Safety Approval Plate and plating in accordance the IMDG Code for portable tanks;
- .3 placarding and marking of CTUs;
- .4 marking and labelling of packages;
- .5 packaging (inappropriate or damaged);
- .6 portable tank or road tank vehicles not covered by CSC (inappropriate or damaged);
- .7 stowage/securing inside the freight containers, vehicles and other CTUs;
- .8 segregation of cargo;
- .9 Approved Continuous Examination Program (ACEP) or Periodic Examination Scheme (PES) label;
- .10 serious structural deficiencies (refer to resolution MSC.310(88)); and
- .11 tie-down attachments of road tank vehicles.

1.3 Definitions

- .1 *Door End Inspection* – A visual inspection of the contents of a CTU without breaking the plane of the door end.
- .2 *Safety Strap* – A strap attached to or secured around the locking bars of a CTU to minimize the free movement of the right side door when it is first opened.

- .3 *Tailgate Inspection* – An internal inspection of a CTU, that is limited to that interior volume of a CTU beginning at the door sill and ending at an imaginary plane established at the lesser of either the first meter of the container itself or the first tier of dunnage.

2 Targeting methodology and undeclared dangerous goods

2.1 Commensurate with available resources, Member Governments are encouraged to inspect a representative number of CTUs carrying dangerous goods by sea. CTUs should be targeted for inspection with consideration given to risk based principles. For example, Member Governments should focus their inspection resources on those shipments that have historically presented the greatest safety risk. Targeting criteria could also assist Member Governments in addressing dangerous goods being shipped in an undeclared manner.

2.2 The presence of undeclared dangerous goods should not be underestimated. Undeclared dangerous goods can occur when hazardous materials are placed within a CTU with no markings to indicate the presence of dangerous goods, and when required documents fail to declare the presence of dangerous goods or are missing altogether.

- .1 A targeted selection method should be used to identify general cargo CTUs with a higher probability of carrying undeclared hazardous materials. The inspection of general cargo transport units should complement those performed on CTUs with declared dangerous goods; and
- .2 Methods for tracking parties responsible for repeatedly violate dangerous goods shipping standards are encouraged.

2.3 Actions undertaken upon discovery of a CTU with a deficiency may include placing the cargo on hold, or putting the CTU out of service, and/or providing appropriate penalty actions against those responsible under the IMDG Code, CSC and/or applicable national legislation, as appropriate.

3 General safety considerations

3.1 Given the safety and health risks CTUs present, all inspections should be conducted with caution.

- .1 CTU inspections should be carried out in safe areas. If it is necessary to carry out inspections in port areas, appropriate precautions should be taken to prevent persons being struck by vehicles.
- .2 Precautions must be taken to minimize risks associated with entry and potential exposure during inspections.
- .3 CTU inspections should not be carried out by individual inspectors, but by a team of at least two inspectors or in conjunction with a representative from the facility and/or carrier with custody of CTU.
- .4 While inspecting a CTU, inspectors shall be alert to any attempt by facility personnel to inadvertently move that CTU.

- .5 Inspectors should minimize the likelihood of slips, trips or falls especially while inspecting CTUs loaded on chassis or when climbing on to and walking along the tops of CTUs. Inspectors should follow applicable occupational safety regulations in order to view the CTU components (corner fittings, top side rails, roof, etc) otherwise not readily visible from the ground. Inspectors should not climb any CTU if it is stacked on top of another CTU.
- .6 Inspectors should observe caution when opening a CTU's doors as cargoes may have shifted and may be resting against the doors.
- .7 Inspectors should not open a CSC containers doors if that container is part of a stack. CSC Container doors are a structural part of a container and, if opened while stacked, may compromise the structural integrity of the container and stack.
- .8 Given possible interactions with hazardous materials, inspectors should not smoke while conducting inspections.
- .9 Inspectors should be aware of the potential hazards of the atmosphere inside CTUs. These may result from residues from previous cargo, spillage from damaged packages inside the CTUs, hazardous cargoes, decomposition products, reduced oxygen content, fumigants and fumigant residues.
- .10 Exposure through inadvertent ingestion, absorption, injection or inhalation of hazardous materials from a CTU may be harmful or fatal.
- .11 Exposure to radioactive materials may pose potential health risks. Inspectors should be aware of the commodities reportedly contained within the CTU and should be in possession of appropriate radiation monitoring equipment.

3.2 Inspectors should be familiar with procedures of response to hazardous material releases or exposures established by local authorities.

- .1 Inspectors should immediately egress from the exposure area and muster in a safe location upwind. This action is referred to as an emergency egress. The following, among others, are indications of possible exposure that should require immediate emergency egress:
 - .1 leaks, odors, or sounds (such as when compressed gas is released);
 - .2 atmospheric monitor or meter alarms;
 - .3 feelings of dizziness, light-headedness or shortness of breath; and
 - .4 unexpected chemical smells or dermal sensations such as burning.
- .2 Actions to be taken in an emergency egress include immediate notification to the facility so that response plans can be activated.
- .3 Inspectors should not re-enter any CTU until it has been determined that it is safe to do so.

- 3.3 Provisions should be in place for swift emergency medical treatment:
- .1 Chemical specific emergency response information should be available during inspections and consulted for appropriate initial decontamination in the event of exposure to a hazardous material. The inspector should be aware of appropriate emergency medical services such as hospitals, fire departments, first aid stations, and chemical decontamination stations.
- 3.4 Inspection controls should be established for specific hazards.
- .1 Shipments of radioactive materials, identified in section 2.7.2 of the IMDG Code, should be inspected taking into account the unique nature of the hazard. Radioactive materials shipped properly pose little risk of exposure and are required to be prepared in compliance with the same standards as all other hazardous material shipments. The inspection of radioactive materials should be done with extreme caution.
 - .2 CTUs, with toxic commodities bearing the labels of 2.3 or 6.1 or with "FUMIGANT" warning signs as per paragraph 5.5.2.3.2 of the IMDG Code, may be opened but should only be inspected visually without having the inspector cross the plane of the doorway if it has not been adequately ventilated.
 - .3 Even if Fumigant warning signs are not posted, inspectors should look for signs or indicators of fumigant having been applied to the CTU.

4 Conduct of inspections

- 4.1 CTU inspection preparation, assessment and opening procedures should be established.
- .1 Contact the facility and/or carrier with custody of CTUs to be inspected.
 - .2 Establish an inspection team communications plan. Reliable voice communications that take into account Administration and facility safety procedures.
 - .3 Identify CTUs for inspection and inform facility and/or carrier. A risk assessment methodology should be used to select CTUs posing the highest threat and consequence for non-compliance with regulations.
 - .4 Identify the contents of CTUs selected for inspection by obtaining and reviewing the dangerous goods transportation documents. A bill of lading or other descriptive document should be obtained for CTUs with general cargoes.
 - .5 Assemble personal protective equipment and needed inspection equipment:
 - .1 Personnel should wear hard hats, safety glasses, safety shoes, high visibility or reflective vests, and gloves, and properly calibrated hazardous condition sensing devices. As appropriate, inspectors should consider the use of additional personal protective equipment such as chemical protective clothing, air purifying respirators or

- emergency escape breathing apparatus to prevent inadvertent exposure to hazardous materials within the CTU.
- .2 Personnel should assemble a container inspection kit containing all required tools, references (including regulatory provisions for quick reference), and paperwork.
- .6 A safety brief should be conducted prior to the first inspection. The safety brief should cover the following:
- .1 operational risk assessment to determine if present and predicted conditions, such as weather and personnel readiness, allow for a safe operation;
 - .2 assignment of roles and responsibilities for all members of the inspection team. At least one member should be assigned safety duties to ensure that proper procedures are followed and to implement protocols in emergency situations;
 - .3 a review of personal protective equipment and its use;
 - .4 a review of safe work practices;
 - .5 a discussion of emergency egress situations, muster location, and other emergency protocols;
 - .6 known hazards that exist at the location where the inspection is to occur; and
 - .7 accidental exposure procedures.
- .7 Stage CTUs for inspection in a manner that will maximize natural ventilation and provide safety from existing traffic patterns, CTU handling operations and concentrations of CTUs scheduled for movement. Staging areas should have adequate lighting, and be away from water runoff drains and electrical outlets. As an additional precaution, when a CTU is on the chassis, place cones or park a vehicle, if available, immediately in front of the CTU to prevent a vehicle from connecting up to the chassis during the inspection.
- .8 Establish a safety watch and review safety procedures before starting the inspection:
- .1 discuss inspection activity with the safety watch;
 - .2 once the potential hazards of the commodities in the selected CTUs are known, these should be reviewed with the team;
 - .3 assess the staging area and discuss any unique aspects that may pose potential safety hazards. This should include identification of the safe egress routes; and
 - .4 the final step before beginning the inspections should be to conduct a second operational risk assessment to determine if conditions have changed from the previous assessment. When

appropriate, reassess safety procedures to reduce risk and, if unsure, seek guidance from a supervisor.

- .9 Conduct an external assessment, to include a complete walk-around, of selected CTUs to ensure safety of inspection personnel. Remain alert for indications of potential internal hazards such as cargo leaks or severe CTU damage. If any leaks are discovered, stop the inspection and initiate established response procedures.
- .10 For closed CTUs, it is highly encouraged to perform atmospheric monitoring before and continuously during the inspection cycle:
 - .1 Inspectors should not enter a CTU if tests indicate that the atmosphere in it is potentially hazardous until it is determined that it is safe to do so.
 - .2 When an inspector enters a CTU atmospheric measurements should be taken above the inspector's head near the top of the container, at head or breathing zone level, at waist level, and near the bottom of the container. After adequate ventilation, the oxygen level at the container door-end should equal ambient levels. Entry into the enclosed space of the container should only occur when the meter readings match those obtained for the ambient atmosphere. Under no circumstances should a tailgate inspection occur when door-end readings differ from normal ambient atmospheric readings or if combustible gas readings indicate a hazardous condition.
- .11 The use of a safety strap is encouraged. Exercise caution when opening closed freight containers. The safety strap will be secured to minimize the free movement of the right side door when it is first opened by crossing the vertical seam between both doors. This can reduce the risk of personal injury from shifted cargo. The safety strap, and other associated components such as ratcheted cargo tie downs, should have a minimum breaking strength of 1,800 kilograms. If the safety strap is made of synthetic material, it should not be elasticized, such as that found in shock cords.
- .12 For CTUs, an assessment of the doorend should be performed to identify shifted cargo. With the safety strap in place, carefully crack open the right door enough to determine if there is any danger from spilled or shifted cargo. A second inspector can do this by looking into the container standing to the left of the left door and at a safe distance:
 - .1 If cargo has shifted and poses a safety threat, notify the facility immediately so that it can be opened safely prior to continuing the inspection.
- .13 Ventilate the CTU. For CTUs other than those that have been fumigated or contain toxic materials, loosen the safety strap and ventilate the CTU by fully opening the doors for natural ventilation:
 - .1 To maximize natural ventilation, open the right and left doors a minimum of 180 degrees so that they are perpendicular to the

- CTU sides, and ventilate the container for a minimum prescribed time.
- .2 For CTUs that have been fumigated, ensure that at least 24 hours have elapsed since the time of fumigation before opening the doors. Upon opening the doors, the fumigant and residues must be completely ventilated using natural ventilation or mechanical means prior to entry.
 - .3 Inspectors should be aware that residual hazards may remain in ventilated CTUs (see paragraph 3.1.8).
- .14 Conducting a tailgate inspection. The number of persons entering the CTU to conduct tailgate inspections should be limited to the minimum necessary. Exercise caution when trying to examine cargo forward of the doors; climbing on packages or dunnage is dangerous and should be avoided.
- 4.2 Procedures for internal inspections of a closed CTU should be established.
- .1 Normally, inspectors should not have a need to proceed beyond a door end inspection to complete their duties. An inspector should not enter an enclosed space within a CTU, if he or she does not feel it is safe. However, in situations that call for entry beyond the door end, the following steps should be adhered to:
 - .1 Determine the risk of conducting an internal inspection and assess access and egress routes. Examine the interior of the CTU at the door end and determine if the enclosed space has limited access or egress. If the nature of the cargo or loading procedure does not leave a direct or unobstructed egress path, the inspector should consider the CTU a confined space. If the inspector needs access to a cargo in a potential confined space to verify compliance, then the inspector should take appropriate measures to require de-vanning of the cargo to allow unrestricted access to it or utilize specialized remote viewing equipment. Never climb on packages containing dangerous goods, unless such an inspection is necessary and appropriate safety precautions have been taken.
 - .2 Ensure the CTU has been properly ventilated (see paragraphs 3.1.8 and 4.1.13.3).
 - .3 Continue to evaluate the interior of the space throughout the inspection. If at any time there is an obvious change to the interior environment or the inspector feels unsafe, the inspector should immediately egress from the container and re-evaluate the situation.
 - .4 Continuously monitor the internal atmosphere using sensing devices.
 - .5 Maintain readiness for emergency egress. Each inspector should be ready to immediately exit the CTU when changes in sensing devices indicate the presence of atmospheric hazards or if any of the symptoms identified in paragraph 3.2.1 are detected. In the event that the inspector becomes incapacitated and rescue

requires entry to be made into the CTU, emergency response personnel with the proper training and equipment should be used to effect the rescue.

4.3 Establish procedures for resealing a CTU. Procedures should be established for the replacement, recording and information sharing with facilities and carriers of seals that have been removed in the conduct of a container inspection. Such procedures shall conform with applicable national legislation and should take into account MSC-FAL.1/Circ.1 on Securing and Facilitating Global Trade*.

5 Items to check during an inspection

Checking documentation for compliance and to identify the hazards of a substance, material or article

5.1 The following documentation required by chapter 5.4 of the IMDG Code shall be checked for compliance with the code including being properly signed as required and in order to identify the hazards of the consignment (a substance, material or article):

- .1 dangerous goods transport document;
- .2 container/vehicle packing certificate;
- .3 documentation for tanks used to transport dangerous goods; and
- .4 other information and documentation, if provided.

5.2 The following information, at a minimum, for each dangerous substance, material or article offered for transport should be checked for compliance with section 5.4.1 of the IMDG Code:

- .1 UN number preceded by the letters "UN";
- .2 Proper Shipping Name; Proper Shipping Names that are assigned special provision 274 in column 6 of the dangerous goods list shall be supplemented with their technical or chemical group names as described in paragraph 3.1.2.8 of the IMDG Code;
- .3 primary hazard class or division of the goods;
- .4 subsidiary hazard class or division number(s); and packing group for the substance or article that may be preceded by "PG" if provided;
- .5 other applicable information required by section 5.4.1 of the IMDG Code; and

* MSC-FAL.1/Circ.1 provides information on the WCO's "SAFE Framework of Standards", which in its "Customs to Customs" pillar encourages the usage by Customs Authorities of advance electronic information as part of a risk-based cargo security strategy. Requirements on the use of high security mechanical seals, as part of a seal integrity programme for containers, form an important element of this pillar. One of these requirements is that if public or private officials remove a seal to inspect the container, they will install an acceptable replacement seal and note the particulars of the action, including the new seal number, in the cargo documentation.

- .6 proper certification or declaration required by paragraph 5.4.1.6 of the IMDG Code. In case of doubt, information should be checked whether the classification of the goods is consistent with the properties of the material as described in the Material Safety Data Sheet.

5.3 In addition, the information included in the container/vehicle packing certificate should be checked in order to confirm that the operation of packing or loading dangerous goods was appropriately carried out in accordance with IMDG Code, section 5.4.2.

5.4 If appropriate, in the case of documentation for tanks used to transport dangerous goods, the following should be checked:

- .1 the certificate mentioned in paragraph 4.2.1.8 of the IMDG Code, used to attest the suitability of portable tanks for sea transport;
- .2 the certificate mentioned in paragraph 6.8.3.1.3.2 of the IMDG Code, used to attest the suitability of road tanks used for sea transport of class 3-9 substances;
- .3 the certificate mentioned in paragraph 6.8.3.2.3.2 of the IMDG Code, used to attest the suitability of road tanks for the sea transport of class 2 substances (IMO type 6), non-refrigerated liquefied gases; and
- .4 the certificate mentioned in paragraph 6.8.3.3.3.2 of the IMDG Code, used to attest the suitability of road tanks for the sea transport of refrigerated liquefied gases (IMO type 8).

Checking Container Safety Convention (CSC) Safety Approval Plate, Tank, Road Tank and MEGC Identification Plate marking, and serious structural deficiencies of cargo transport units

5.5 The following items should be checked by the inspector:

- .1 Container Safety Convention (CSC) Safety Approval Plate and its validity:
 - .1 Approved Continuous Examination Program (ACEP); or
 - .2 Periodic Examination Scheme (PES) label;
- .2 serious structural deficiencies of frame elements including corner and intermediate fittings (refer to resolution MSC.310(88)) and, for portable tanks, the condition of tank accessories;
- .3 tie-down attachments of road tank vehicles;
- .4 with respect of tanks and MEGCs, the metal plate as described in chapter 6 of the IMDG Code, its validity and periodic inspection and test dates, where appropriate:
 - .1 the metal plate on portable tanks as described in paragraphs 6.7.2.20, 6.7.3.16, and 6.7.4.15;
 - .2 the metal plate on MEGCs as described in paragraph 6.7.5.13;

- .3 the metal plate on road tanks used for sea transport (IMO type 4) as described in paragraph 6.8.3.1.3.4;
- .4 the metal plate on road tanks used for sea transport (IMO type 6) as described in paragraph 6.8.3.2.3.4;
- .5 the metal plate on road tanks used for sea transport (IMO type 8) as described in paragraph 6.8.3.3.3.4; and
- .6 the metal plates on tanks may show markings required by other regulations.

Confirming the placarding and marking of CTUs

5.6 After identifying the hazards and classification of the goods, the inspector shall confirm a clear display of appropriate placards and marks on CTUs in compliance with the provision of chapter 5.3 of the Code.

- .1 A CTU containing dangerous goods or residues of dangerous goods should display placards clearly as follows:
 - .1 freight container, trailer or portable tank: one on each side and one on each end of unit;
 - .2 railway wagon: at least on each side;
 - .3 multiple-compartment tank containing more than one dangerous substance or their residue: along each side at the positions of the relevant compartments; and
 - .4 any other CTU: at least on both sides and on the back of the unit.
- .2 The Proper Shipping Name of contents shall be marked on at least both sides of:
 - .1 tank transport units containing dangerous goods;
 - .2 bulk containers containing dangerous goods; or
 - .3 any other CTU containing packaged dangerous goods of a single commodity for which no placard, UN Number or marine pollutant mark is required; and
- .3 The UN Number for the goods and, if required, other placarding and marking such as elevated temperature, marine pollutant, limited quantity and fumigation warning sign, as provided in IMDG Code, should be displayed.
- .4 In case of class 7, the transport index (TI) indicated on the placard should be verified by a measurement of the radiation level in accordance with paragraph 5.1.5.3 of the IMDG Code and/or by calculation (sum of TI of packages).

Confirming the marking and labelling of packages

5.7 Appropriate marking and labelling of packages included in the following items should be confirmed by the inspector:

- .1 Proper Shipping Name for the dangerous goods;
- .2 UN Number;
- .3 other special marking provision (e.g. marine pollutant mark); and
- .4 appropriate label; for class 7 the transport index (TI) on the label should be verified by a measurement of the radiation level in accordance with paragraph 5.1.5.3.

Confirming the condition of packaging

5.8 The following items shall be checked by the inspector:

- .1 the type of packaging is permitted for the goods according to the applicable packing instruction of the dangerous goods list;
- .2 the packing is of a design type approved as required by paragraph 4.1.1.3 of the IMDG Code;
- .3 the approved packing group(s) of the design type (X,Y or Z) are consistent with the packing group of the goods (I, II or III);
- .4 single packagings used for liquids are approved for liquids;
- .5 for plastic drums and jerricans, plastic inner receptacles of IBC, check that the five years period of use is not exceeded;
- .6 for rigid IBCs check that the periods of inspections as required in paragraph 4.1.2.2.1 of the IMDG Code are not exceeded; and
- .7 the packages are sound and without serious damages; the inspecting authority should develop guidelines for the distinction between simple defects and serious damages. (Simple defects, e.g. traces of use, are insignificant under safety aspects and have no effects on the legally prescribed performance level of the package.).

Confirming the condition of the stowage/securing inside CTUs

5.9 The following items should be checked by the inspector:

- .1 the mass of the cargo is evenly distributed over the floor; heavy packages are sufficiently supported;
- .2 the centre of gravity is close to the mid-length of the CTU;
- .3 where appropriate, void spaces are filled with dunnage, cardboard, air bags or other suitable material to ensure a minimum likelihood of movement of packages/cargo during transport;

- .4 the cargo is secured against movement towards the door;
- .5 if the cargo is secured by blocking or lashing: the securing material is of appropriate strength and lashings are sufficiently tensioned; and
- .6 packing should comply with IMO/ILO/UNECE Guidelines for Packing Cargo Transport Units, as amended, and/or appropriate national legislation.

Confirmation of the segregation of dangerous goods inside CTUs

5.10 The following items should be checked by the inspector:

- .1 the segregation table in paragraph 7.2.1.16 of the IMDG Code has been applied correctly for the hazard classes and subsidiary risks;
- .2 specific segregation requirements as indicated in column 16 of the dangerous goods list have been complied with;
- .3 specific segregation requirements for the different compatibility groups of class 1 have been complied with; and
- .4 segregation requirements in relation to foodstuffs have been observed.

Control actions for deficiencies

5.11 Establish a process for issuing deficiency reports placing a CTU out of service or cargo on hold and/or appropriate penalty actions.

General procedures

- .1 Issuing a deficiency report that details the non-compliance and describes the required corrective actions. For discrepancies that are quickly corrected, the inspector should note official records as such.
- .2 Mark the CTU so it is evident that the CTU has been taken out of service and/or cargo placed on hold. The marking should be sufficiently visible on more than one side of the CTU. While the marking should not be permanent in nature, it should not be easily removable. The use of a large sticker may be appropriate.
- .3 Immediately notify the facility and/or carrier having actual custody of the deficient CTU or cargo and ensure prompt notification is made to the CTU owner or agent.

Serious structural deficiencies

- .4 If a CSC container is determined to be seriously structurally deficient or has not been examined as required, the inspector should place the container out of service.
- .5 Clear detention statements should be used. The following sample text may be appropriate for both the deficiency report and marking for a seriously structurally deficient container: "Prior to reloading or reuse in international transportation, this container must be re-inspected for compliance in

accordance with the procedures prescribed by [*insert appropriate legal authority*]".

Cargo deficiencies

- .6 Cargo that fails to conform to the provisions of the IMDG Code should be placed on hold.
- .7 The nature of the discrepancy should help determine who should correct it.
- .8 If a discrepancy involves the cargo's package, label or other specification when the shipment was originally offered and accepted for transportation, the original shipper or freight forwarder shall be held accountable. The inspector should avoid taking action against the vessel, carrier, or waterfront facility simply because they are the most accessible party.

Road tank vehicle tie-down deficiencies

- .9 Road tank vehicles that fail to conform to the provisions of the IMDG Code should be placed on hold.

5.12 Establish a procedure to monitor cargo placed on hold.

5.13 Establish follow-up procedures for CSC containers with serious structural deficiencies taken out of service.

- .1 A CSC container removed from service due to serious structural deficiencies should be repaired and re-inspected in accordance with the owner's prescribed programme. Prior to returning a CSC container to service, the owner should notify the inspector in writing that the CSC container has been brought back into compliance per the CSC or other applicable standard.
- .2 In situations where there is an unwillingness to repair a CSC container back to applicable standards, the container owner may remove the damaged container from international service and providing such proof to the inspector.
- .3 The removal of markings referenced in paragraph 5.11.2 should only be authorized by the inspector.

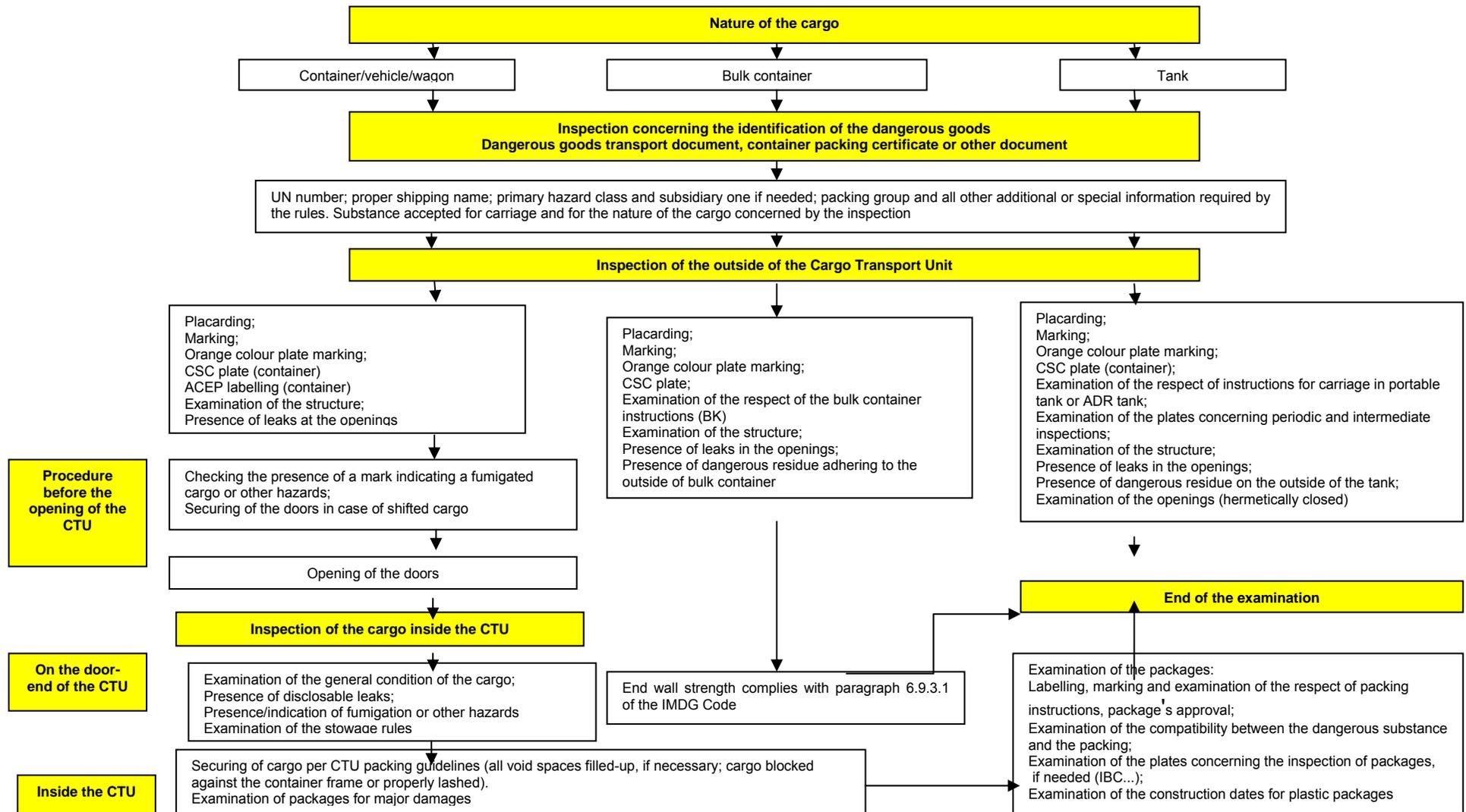
Inspection and recording of the results of the inspection and deficiencies record

5.14 Inspection results and deficiencies should be recorded and archived to allow for the completion of the report requested under paragraph 4 of this circular.

Flowchart summarizing the inspection of cargo transport units

5.15 The flowchart in the appendix identifies a general inspection sequence and takes into account different types of CTUs. It is intended as a job aid for inspectors.

**APPENDIX
INSPECTION FLOWCHART
Inspection of Cargo Transport Units carrying dangerous goods for international transport by sea**



ANNEX 6

PROPOSED BIENNIAL AGENDA FOR THE 2012-2013 BIENNIUM IN SMART TERMS*

SUB-COMMITTEE ON DANGEROUS GOODS, SOLID CARGOES AND CONTAINERS (DSC)					
PLANNED OUTPUTS 2012-2013 (resolution A.....(27))		Parent organ(s)	Coordinating organ(s)	Involved organ(s)	Target completion year
Number **	Description				
5.2.2.9	Amendment to SOLAS to mandate enclosed space entry and rescue drills	MSC	DSC	BLG [STW]	2012
5.2.3	Guidance for Approved Continuous Examination Programmes	MSC	DSC		2013
5.2.3	Measures to prevent loss of containers	MSC	DSC	DE, SLF and STW	2013
5.2.3.1	Amendments to the International Convention for Safe Containers, 1972 and associated circulars	MSC	DSC		2011 2013
5.2.3.4	Amendments 02-13 to the IMSBC Code and supplements including evaluation of properties of solid bulk cargoes	MSC/MEPC	DSC		2012
5.2.3.4	Amendments 37-14 (36-12) to the IMDG Code and supplements, including harmonization of the IMDG Code with the UN Recommendations on the transport of dangerous goods	MSC	DSC		2013
5.2.3.5	Harmonization of the IMDG Code with the UN Recommendations on the Transport of Dangerous Goods	MSC	DSC		Ongoing

* Items printed in bold have been selected for the draft provisional agenda for DSC 17, as shown in annex 2. Struck-out text indicates proposed deletions and shaded text indicates proposed changes. Deleted outputs will be maintained in the report on the status of planned outputs.

** Numbers refer to the planned outputs for the 2010-2011 biennium. New output numbers will be assigned by the Council in due course.

SUB-COMMITTEE ON DANGEROUS GOODS, SOLID CARGOES AND CONTAINERS (DSC)					
PLANNED OUTPUTS 2012-2013 (resolution A....(27))		Parent organ(s)	Coordinating organ(s)	Involved organ(s)	Target completion year
Number	Description				
5.2.3.6	Stowage of water-reactive materials	MSC	DSC	FP	2011 2013
5.2.3.12	Guidance on protective clothing	MSC	DSC		2013
5.2.3.14	Review Revision of the Guidelines for packing of cargo transport units	MSC	DSC		2013
5.2.3.16	Installation of equipment for detection of radioactive sources or radioactive contaminated objects in ports	MSC	DSC		2011
5.3.1.4	Consideration for the efficacy of Container Inspection Programme	MSC	DSC		2011
12.3.1 12.1.2.2	Casualty incident reports and analysis	MSC	FSI	DSC	Ongoing
12.3.1.3	Reports on incidents involving dangerous goods or marine pollutants in packaged form on board ships or in port areas	MEPC	DSC		Ongoing
2.0.1	Development of criteria for the evaluation of environmentally hazardous solid bulk cargoes in relation to the revised MARPOL Annex V	MEPC	DSC		2012

ANNEX 7

DRAFT PROVISIONAL AGENDA FOR DSC 17

- Opening of the session and election of Chairman and Vice-Chairman for 2012
- 1 Adoption of the agenda
 - 2 Decisions of other IMO bodies
 - 3 Amendment 37-14 to the IMDG Code and supplements, including harmonization with the UN Recommendations on the transport of dangerous goods
 - 4 Amendment 02-13 to the IMSBC Code and supplements
 - 5 Amendments to SOLAS to mandate enclosed space entry and rescue drills
 - 6 Revision of the Guidelines for packing of cargo transport units
 - 7 Development of measures to prevent loss of containers
 - 8 Development of guidance for Approved Continuous Examination Programmes
 - 9 Development of criteria for the evaluation of environmentally hazardous solid bulk cargoes in relation to the revised MARPOL Annex V
 - 10 Amendments to the International Convention for Safe Containers, 1972, and associated circulars
 - 11 Stowage of water-reactive materials
 - 12 Guidance on protective clothing
 - 13 Casualty and incident reports and analysis
 - 14 Biennial agenda and provisional agenda for DSC 18
 - 15 Election of Chairman and Vice-Chairman for 2013
 - 16 Any other business
 - 17 Report to the Maritime Safety Committee

ANNEX 8

REPORT ON THE STATUS OF PLANNED OUTPUTS*

SUB-COMMITTEE ON DANGEROUS GOODS, SOLID CARGOES AND CONTAINERS								
Planned output number in HLA Plan for 2010-2011	Description	Target completion date	Parent organ(s)	Coordinating organ(s)	Associated organ(s)	Status of output for Year 1	Status of output for Year 2	References
1.1.2.1	Cooperation with IAEA	Continuous	MSC	DSC		Ongoing	Ongoing	
1.1.2.3	Policy input or guidance to or on: Development of carriage of class 7 radioactive materials	Continuous	MSC	DSC		Ongoing	Ongoing	
1.1.2.3	Policy input or guidance to or on: Facilitation of the shipment of class 7 radioactive materials	Continuous	FAL	DSC		Ongoing	Ongoing	
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	Continuous	MSC	DSC		Ongoing	Ongoing	DSC 16/15, section 3
5.2.1.25	Revision of the Recommendations for entering enclosed spaces aboard ships	2010	MSC	DSC	BLG, FP, STW	Completed	Completed	DSC 15/18, section 10

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

SUB-COMMITTEE ON DANGEROUS GOODS, SOLID CARGOES AND CONTAINERS								
Planned output number in HLA Plan for 2010-2011	Description	Target completion date	Parent organ(s)	Coordinating organ(s)	Associated organ(s)	Status of output for Year 1	Status of output for Year 2	References
5.2.2	Amendment to SOLAS to mandate enclosed space entry and rescue drills	2012	MSC	DSC	BLG	In progress	In progress	DSC 16/15, section 3
5.2.3.1	Amendments to the International Convention for safe containers, 1972 and associated circulars	2012	MSC	DSC		In progress	In progress	DSC 16/15, section 10
5.2.3.3	Amendments to the IMSBC Code, including evaluation of properties of solid bulk cargoes	Continuous	MSC MEPC	DSC		Ongoing	Completed	DSC 16/15, section 12
5.2.3.5	Harmonization of the IMDG Code with the UN Recommendations on the transport of dangerous goods	Continuous	MSC	DSC		Ongoing	ongoing	DSC 16/15, section 12
5.2.3.6	Stowage of water-reactive materials	2011	MSC	DSC	FP	In progress	In progress	DSC 16/15, section 6
5.2.3.8	Revision of the Code of safe practice for ships carrying timber cargoes	2010	MSC	DSC		Completed	Comments provided to A 27	DSC 16/15, section 14
5.2.3.12	Guidance on protective clothing	2010	MSC	DSC		Postponed*	In progress	DSC 16/15, section 14
5.2.3.14	Review of the Guidelines for packing of cargo transport units	2011	MSC	DSC		In progress	In progress	DSC 16/15, section 7

* Output moved to the Committee's proposed biennial agenda for 2012-2013. Refer to annex 1.

SUB-COMMITTEE ON DANGEROUS GOODS, SOLID CARGOES AND CONTAINERS								
Planned output number in HLA Plan for 2010-2011	Description	Target completion date	Parent organ(s)	Coordinating organ(s)	Associated organ(s)	Status of output for Year 1	Status of output for Year 2	References
5.2.3.16	Installation of equipment for detection of radioactive sources or radioactive contaminated objects in ports	2011	MSC	DSC		In progress	Completed	DSC 16/15, section 9
5.3.1.4	Consideration for the efficacy of container inspection programme	2011	MSC	DSC		In progress	Completed	DSC 16/15, section 8
12.3.1 12.1.2.2	Casualty analysis	Continuous	MSC	FSI	DSC	Ongoing	Ongoing	DSC 16/15, section 5
12.3.1.3	Reports on incidents involving dangerous goods or marine pollutants in packaged form on board ships or in port areas	Continuous	MEPC	DSC		Ongoing	Ongoing	DSC 16/15, section 5

ANNEX 9

PROPOSED MODIFICATIONS TO THE DRAFT CODE OF SAFE PRACTICE FOR SHIPS CARRYING TIMBER DECK CARGOES, 2011 (2011 TDC CODE)

(Note: modifications to annex 9 to document MSC 89/25/Add.1 are provided. Final text will be prepared by the Secretariat after the meeting, including further editorial changes.)

PART A – OPERATIONAL REQUIREMENTS

CHAPTER 1 – GENERAL

1 In paragraph 1.3.1 (Definitions), in the end of section "General expressions", the following new definition is inserted as subparagraph .9 and subparagraph numbers are renumbered accordingly.

"Restricted sea area means any sea area in which the weather can be forecast for the entire sea voyage or shelter can be found during the voyage."

CHAPTER 2 – GENERAL RECOMMENDATIONS ON STOWAGE AND SECURING OF TIMBER DECK CARGOES

2 Paragraph 2.4.2 is replaced by the following:

"2.4.2 A ship carrying timber deck cargo should continue to comply with applicable damage stability requirements (e.g. SOLAS II-1/4.1 or Load Lines regulation 27, as appropriate) and, additionally, the 2008 Intact Stability Code (2008 IS Code)⁽¹⁾, particularly the timber deck cargo requirements. Since excessive GM values induce large accelerations, GM should preferably not exceed 3% of the breadth of the vessel, as indicated in 3.7.5 of the 2008 IS Code."

3 Paragraph 2.5 is replaced by the following:

"2.5.1 Ships assigned and making use of their timber load line should follow relevant regulations of the applicable Load Lines Convention for stowage and securing of timber as prescribed in the ship's Cargo Securing Manual. Special attention should be paid to the requirements concerning the breadth of the stow and voids in the stow (Load Lines, regulation 44). When timber load lines are utilized the timber is to be stowed as close as possible to the ship's sides with any gaps not to exceed a mean of 4% of the breadth of the ship.

2.5.2 It should be noted that not all the diagrams provided in this Code assume that timber load lines are being utilised, thus the cargo may not be shown as complying with Load Lines regulation 44."

4 The following new paragraph 2.8.14 is added:

"2.8.14 Noting the particular arrangements of a ship loaded with timber deck cargo, pilot boarding arrangements should be carefully considered (see also SOLAS regulation V/23)."

5 Figures 2.3 to 2.6 are replaced by the following:

"

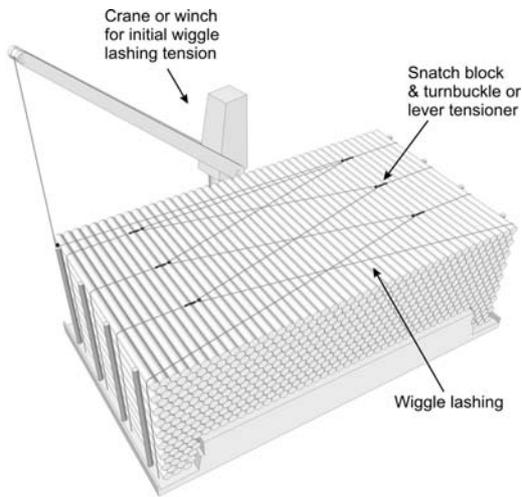


Figure 2.3. Example of wobble lashings

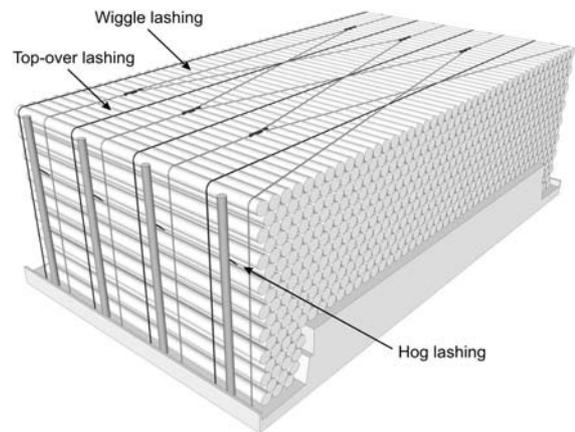


Figure 2.4. Example of an arrangement with hog, top-over and wobble lashings*

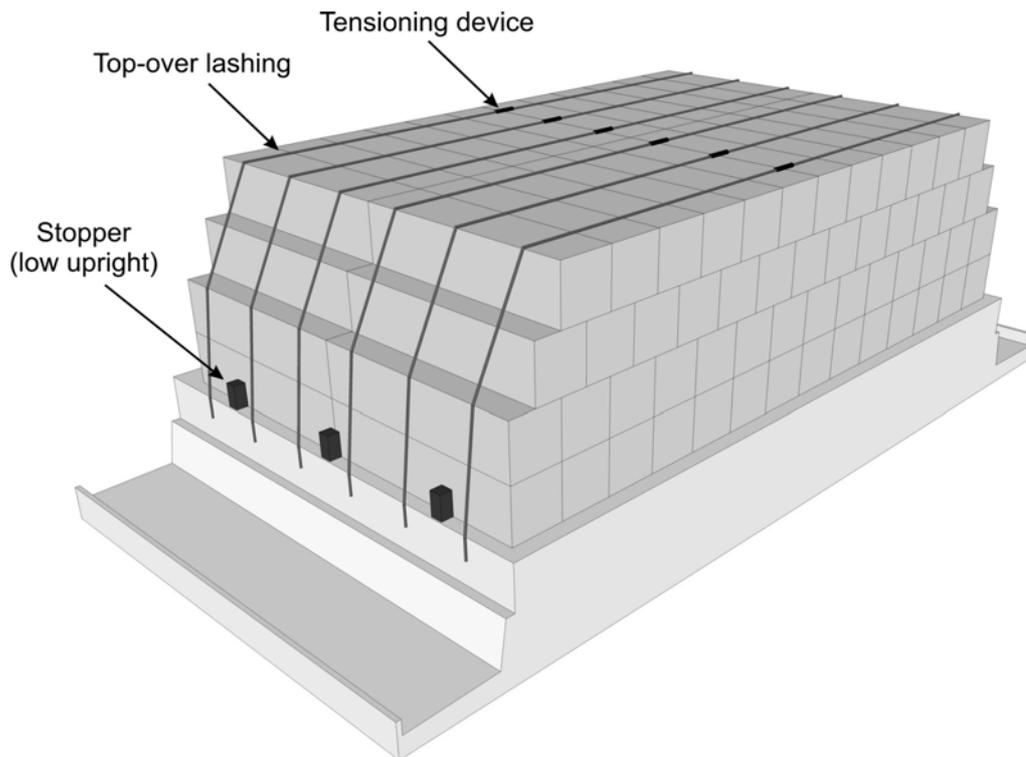


Figure 2.5. Example of an arrangement with top-over lashings and stoppers*

* Notwithstanding the guidance provided in these diagrams, compliance with the relevant timber Load Lines provisions is required, when applicable.

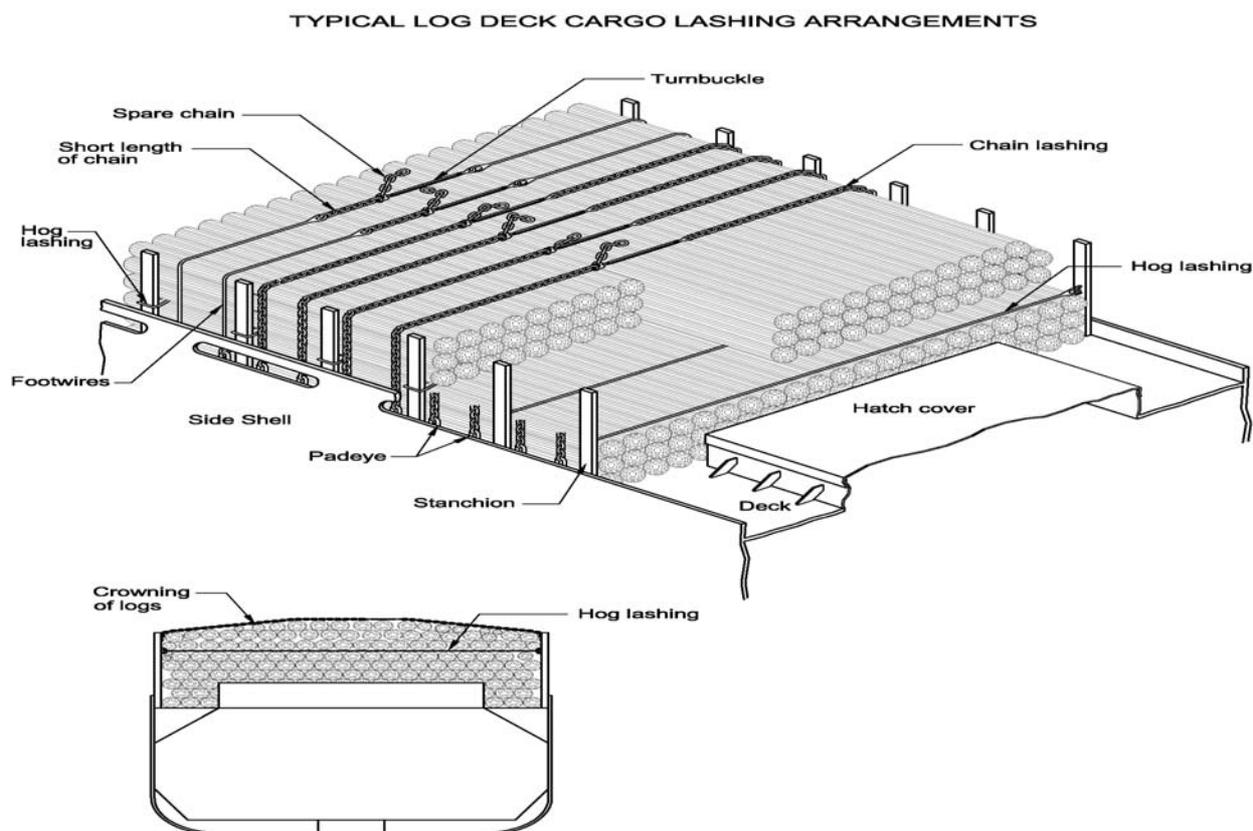


Figure 2.6. Example of chain top over lashings for a log cargo"

CHAPTER 4 – PHYSICAL PROPERTIES OF TIMBER CARGOES

6 Paragraph 4.6 is replaced by the following:

"4.6 During cold weather conditions ice may form from sea spray and the stability may be affected as the ice can add weight rapidly. The increase in weight due to icing should be considered in accordance with section 6.2 of the 2008 IS Code. The increases given in section 6.3 of that Code for fishing vessels may be considered to be suitable also for timber cargoes, particularly for small ships. Any increase in weight due to water absorption should be considered before calculating the increase due to the weight of ice."

PART B – DESIGN OF CARGO SECURING ARRANGEMENTS

CHAPTER 5 – DESIGN PRINCIPLES

7 At the end of the chapeau to chapter 5 (Design principles), the following new sentence is added:

"Details of such alternatives should be included in the ship's Cargo Securing Manual."

- 8 Paragraph 5.4.1 is replaced by the following:

"5.4.1 The round wood deck cargo should be supported by uprights and secured throughout its length by independent top-over or loop lashings spaced not more than 1.5 m apart."

CHAPTER 6 – ALTERNATIVE DESIGN PRINCIPLES

- 9 The chapeau to chapter 6 (Alternative design principles) is replaced by the following:

"This chapter permits the development (and use) of new designs and securing arrangements, by providing functional based requirements on the securing of timber deck cargoes, which may be used as an alternative to the requirements in chapter 5 for ships of less than 24 metres in beam and for designers considering alternative technologies in cargo securing. Any design risk assessment should be agreed with the Administration before being used. When chapter 6 is applied, operational risk assessments should be included within the ship's safety management system."

- 10 At the end of paragraph 6.5.31, the following new sentence is added:

"If friction only is to be used, information on the maximum heel angle assumed should be included in the Cargo Securing Manual."

CHAPTER 7 – UPRIGHTS

- 11 Paragraph 7.2 is replaced by the following:

"7.2 Uprights should be designed for the forces they have to take up according to the formulas in this section. The connection of uprights to the deck or hatch is to be to the satisfaction of the Administration. The design of high uprights especially should be such that the deflection is limited. Uprights may be complemented by different lashing arrangements."

- 12 In paragraph 7.3, the following footnote is inserted at the end of the formula of $CM_{bending2}$:

"The factor 0.6 in the formula above is used for considering both rolling and sliding movement of round wood and has been determined through practical tests. It should not be confused with the dynamic friction factor referred to in paragraph 4.2.6."

- 13 Tables 7.1 to 7.3 (Required bending resistance for uprights), together with introductory descriptions above those tables, are deleted.

ANNEX A – GUIDANCE IN DEVELOPING PROCEDURES AND CHECKLISTS

- 14 Paragraph A.2.11 is replaced by the following:

"A.2.11 Obstructions, such as lashings or securing points, in the access way of escape routes or operational spaces and to safety equipment, fire fighting equipment or sounding pipes should be avoided. Where they are unavoidable they should be clearly marked."

15 Paragraph A.2.12 is replaced by the following:

"A.2.12 Instructions on how to calculate the GM of the vessel will be provided in the approved stability manual and these instructions should be followed to determine the GM of the ship. An approximation of the metacentric height (GM) may be obtained (when safe to do so) from the rolling period or static list at a late stage of loading. Rolling or static list may be initiated by quick or slow (as appropriate) shifting of cargo with the deck cranes or lowering cargo bundles onto other deck cargo at one side of the ship."

ANNEX B – SAMPLES OF STOWAGE AND SECURING ARRANGEMENTS

B.4 Example Calculation – Uprights for packages of sawn wood

16 In the section of "Cargo properties", RS is replaced by the following:

"RS = 3.5 kN/m = Racking Strength per timber package in kN/m"

B.5 Example Calculation – Uprights for round wood

17 In the section of "Cargo properties", μ_{static} is replaced by the following:

" μ_{static} = 0.35 = Coefficient of static friction between the timber deck cargo and the ship's deck/hatch cover"

18 In the section of "Bending moment in uprights", the calculation of $CM_{bending2}$ and $M_{bending}$ are replaced, respectively, by the following:

$$"CM_{bending2} = \frac{7}{3 \cdot 1.8 \cdot 42} \cdot (10500 \cdot (4.6 - 0.6 \cdot 0.35 \cdot 9.81) + 770 + 220) = 854 \text{ kNm}"$$

$$"M_{bending} \geq 88\% \cdot 1.35 \cdot \max(CM_{bending1}, CM_{bending2}) = 0.88 \cdot 1.35 \cdot 854 = 1015 \text{ kNm}"$$

19 The section of "Suitable dimensions for uprights" is replaced by the following:

"With MSL taken as 50% of the MBL for steel with the ultimate strength 360 MPa (N/mm^2), the required bending resistance, W , can be calculated as:

$$W = \frac{M_{bending}}{50\% \text{ of } 360MPa} = \frac{1015 \cdot 10^6}{180} = 5639 \cdot 10^3 \text{ mm}^3 = 5639 \text{ cm}^3$$

Thus, uprights made from either HE 600 B profiles or a cylindrical profile with an outer diameter of 610 mm and a wall thickness of 24.6 mm are suitable (see section B.7)."

20 In the section of "Strength in hog lashings", the calculation of MSL is replaced by the following:

$$"MSL \geq \frac{M_{bending}}{2 \cdot h \cdot n_{hog}} = \frac{1015}{2 \cdot 5.2 \cdot 2} = 49 \text{ kN} \approx 4.9 \text{ ton}"$$

ANNEX D

21 Annex D is replaced by the following:

"REFERENCES

- (1) **SOLAS** – Chapter VI, regulation 5, paragraph 1
- (2) **ISM Code** – Part A, paragraph 1.1.2
- (3) **IMDG Code** – Part 1, chapter 1.2, paragraph 1.2.1 (Definitions)
- (4) **SOLAS** – Chapter VI, regulation 2 (Cargo information)
- (5) **ISM Code** – Part A, paragraph 7
- (6) **Load Lines, 1966** – Annex I, chapter II, regulation 16
- (7) **SOLAS** – Chapter II-1, part B-1, regulation 5-1 (Stability information)
- (8) **2008 IS Code** – Part A, section 3.3 (Cargo ships carrying timber deck cargoes)
- (9) **2008 IS Code** – Part B, section 3.6 (Stability booklet)
- (10) **2008 IS Code** – Part B, section 3.7 (Operational measures for ships carrying timber deck cargoes)
- (11) **2008 IS Code** – Part B, paragraph 3.7.5
- (12) **MEPC.127(53)** – Development of Ballast Water Management Plans
- (13) **Load Lines Convention, 1966** – Annex I, chapter IV, regulation 44 (Stowage)
- (14) **Load Lines Convention, 1966** – Annex I, chapter IV, regulation 45 (Computation for freeboard)
- (15) **SOLAS** – Chapter V, regulation 22 (Navigational bridge visibility)
- (16) **ISM Code** – Part A, paragraph 6.6
- (17) **ILO Convention No.152** – Convention Concerning Occupational Safety and Health in Dock Work
- (18) **Load Lines Convention, 1966** – Annex I, chapter II, regulation 25 (Protection of the crew)
- (19) **Load Lines Convention, 1966** – Annex I, chapter IV, regulation 44 (Stowage)
- (20) **CSS Code** – Annex 13, section 4 (Strength of securing equipment)
- (21) **ISM Code** – Part A, paragraph 7

- (22) **STCW Code** – Section A, chapter VIII/2, part 2 (Voyage planning)
- (23) **SOLAS** – Chapter V, regulation 34 (Safe navigation)
- (24) **CSS Code** – Chapter 6 (Actions which may be taken in heavy weather)
- (25) **MCS/Circ.1228** – Revised guidance to the master for avoiding dangerous situations in adverse weather and sea conditions
- (26) **SOLAS** – Chapter VI, regulation 5, paragraph 2
- (27) **MSC/Circ.745** – Guidelines for the preparation of the Cargo Securing Manual
- (28) **SOLAS** – Chapter V, regulation 31 (Danger messages)
- (29) **ILO Convention No.27** – Marking of weight (packages transported by vessels) Convention, 1929."

ANNEX 10

STATEMENT BY THE DELEGATION OF CHILE ON CARGO OF CLASS 9 (UN 3077)

(Proposal with regard to paragraph 4.27 of document DSC 16/WP.1)

The delegation of Chile, after welcoming the documents submitted, requested that the proposal by Australia should be analysed in such a way that the working group would first clarify whether all cargoes in class 9 (UN 3077) must be classified in Group B of the International Maritime Solid Bulk Cargoes Code (IMSBC Code), then proceed to the proposal to add a supplementary schedule. That proposal enjoyed significant support in plenary, and the working group was therefore requested to take account of the proposal by Chile, as given below:

"We welcome the document submitted by the distinguished delegation of Australia, which seems very interesting. For this reason, and given that Chile is a country that is concerned about and respectful of the environment and that exports a considerable volume of solid bulk cargoes, we have convened a group that is representative of the national industry, several members of which are present here, to analyse this and other proposals under this agenda item.

In particular, with respect to the issue under consultation, we believe that analysis of the Australian proposal should begin with paragraph 14.2 of document DSC 16/4/83, insofar as before a decision is taken as to whether to include a supplementary schedule, it is necessary to clarify whether a cargo in class 9 under UN 3077 (environmentally hazardous substance) must be classified in Group B of the IMSBC Code, consisting of "cargoes which possess a chemical hazard which could give rise to a dangerous situation on a ship".

I would suggest, Madam Chairman, that we proceed in this manner in the interests of time, since if the plenary takes the view that it is not the case that all cargoes in class 9 must be classified in Group B, a supplementary schedule would make no sense and, therefore, the procedures that currently exist in the IMSBC Code, on the basis of self-classification, would be maintained.

With regard to the Australian proposal, which invites clarification as to whether solid bulk cargoes in class 9 must be classified in Group B, our delegation considers that the following points should be taken into account.

Bulk cargoes are normally not simple mixtures or substances, but are often described as complex natural materials with various chemical properties, characterized by solubility and limited bioavailability. As a result, and applying the classification rules of the Global Harmonized System (GHS), grouping bulk substances into a single class would be scientifically incorrect, since it would always be presumed that all products in class 9 under UN 3077 are chemically hazardous.

Furthermore, in maritime transport practice, products are handled on the basis of self-classification of the material transported and through the development and distribution of Marine Safety Data Sheets (MSDS), which has been customary practice in the industry.

Undoubtedly, establishing preventive measures for packaged substances in class 9 is simpler. However, establishing such measures for the loading, transporting and unloading of solid bulk cargoes in class 9 is much more complex. We therefore take the view that the proposal by the Australian delegation for a supplementary schedule is premature, and at the same time believe that there is no urgent need for one as long as the provisions of the IMDG Code are combined with those of the IMSBC Code. The correspondence group on classification criteria for materials hazardous only in bulk also took the view that environmentally hazardous substances would be addressed at a later stage under a separate regulatory system (DSC 16/4/13, paragraph 4.5)."

The above statement was made in relation to consideration of the classification procedure. Subsequently, in working group, our delegation made another statement in relation to the evaluation of classification criteria for environmentally hazardous solid bulk cargoes, which is reflected in document DSC 16/WP.3.

ANNEX 11

STATEMENT BY THE DELEGATION OF PERU ON CARRIAGE OF FISHMEAL CARGO

The delegation of Peru would like to express its appreciation to the delegation of Germany for its submission of document DSC 16/4 and its proposal for a new schedule for fishmeal, Group C. However, the delegation of Peru, in its capacity as the main exporter of fishmeal worldwide over recent decades, would like to state the following.

Peru exports fishmeal as a cargo in Group B in accordance with the criteria of the IMSBC Code, with whose provisions it fully complies. According to the International Fishmeal and Fish Oil Organisation (IFFO), which represents 70 per cent of the worldwide fishmeal industry, no incidents have been recorded over the last 15 years in the transport of this product.

Peru takes the view that the criteria proposed by Germany to describe cargo in Group C could lead to a portion of a cargo that is currently transported as Group B being classified in Group C, by relaxing safety conditions for its transport but potentially causing an increase in antioxidant concentrations, without due consideration of the effects that such changes could have both on transport safety and on the quality of the material.

While sharing the point of view that it is necessary to rectify any lack of consistency that may have been detected in the regulations, the delegation of Peru considers that any change must be the result of a careful analysis with the participation of the main countries involved in international transport of fishmeal. In short, for Peru, preparation of a new schedule for fishmeal, Group C, in the IMSBC Code is a question not of drafting but of substance.

ANNEX 12

STATEMENT BY THE DELEGATION OF CHILE ON THE OUTCOME OF THE WORKING GROUP REGARDING CLASSIFICATION CRITERIA FOR SUBSTANCES HARMFUL TO THE MARINE ENVIRONMENT

1 The delegation of Chile stated that they agreed to the first two criteria of the joint paper: environmental acute 1 and environmental chronic 1 and chronic 2 as they were in line with the classification criteria set out in Chapter 2.9 and in line the classification criteria for "packaged goods". However, as Chile deemed that it was not possible to assess the consequences of the proposed human health criteria for bulk solids, they believed that it was pre-mature to include the other criteria. This was due to technical issues related to assessing the proposed toxicity, ecotoxicity end points and specially the assessments of bioavailability, biodegradation and bio-accumulation of metal bearing materials as stated below:

- .1 technically, to assess the tox and ecotox hazards of complex metal bearing materials it is important to recognize that bulk solids are often complex materials with variable chemical composition (stones, ores and concentrates). The metals in these complex materials often have limited bio-availability (due to e.g. inclusions of hazardous substances in mineral matrix). Simple mixture rules can therefore not be applied to these materials. The existing and future recommendations - on the assessment of metals and metal bearing substances - from the UN Committee of Experts on Globally Harmonized System of Classification and Labelling of Chemicals need to be taken into consideration by this Working Group;
- .2 if the Working Group decides to include the use of long term chronic human health criteria (Carcinogenicity, Genotoxicity, Reproductive toxicity, and STOT) we would like to stress that this is already a very difficult assessment for simple substances and their implementation to complex bulk cargoes will be even more challenging;
- .3 the proposal from the Netherlands and Norway to consider inorganic solids as non-biodegradable and bio-accumulative is not in line with scientific evidence and would induce a huge discrepancy between the assessment of organic and inorganic materials; and
- .4 on the contrary, this was because inorganic substances are natural elements and all life forms have evolved with metals and therefore, the "non biodegradable" and "bioaccumulation" criteria should not a-priori be assigned to all inorganic substances.

2 Therefore, the delegation of Chile included the human health criteria currently proposed. The position of Chile was supported by a number of delegations.

ANNEX 13

STATEMENT BY THE DELEGATION OF IACS ON SURVEY AND CERTIFICATION REGIME FOR IMSBC CODE

As a preface to this intervention, IACS notes that the Organization has confirmed that it does not wish to develop a survey and certification regime for this mandatory instrument, however, IACS wishes to take the opportunity to provide the Sub-Committee with the following piece of general advice.

It is noted that a number of the proposals for additional cargoes to be added to the schedules of the IMSBC Code include some provisions that it appears, at this time, are not clearly and unambiguously explained in terms of there being appropriate specifications or performance standards.

One such example is the reference in document DSC 16/4/1 that proposes "Only ships fitted with appropriate systems for removal and discharge of transporting water shall load iron sand as slurry". Our question would be "what is such a system and how effective does it need to be?" A further example is in document DSC 16/4/24, which proposes clinker ash "shall be carried by a ship fitted with closed type cargo handling system such as cement carriers". Is there an international standard or specification for such closed type cargo handling systems?

IMO mandatory instruments need to refer to specific unambiguous provisions. IACS would urge the Sub-Committee to take this into account in further considering proposals for changes or additions to the schedules.

Further, if these are submissions are to go direct to the E&T Group, we would ask that the Group be instructed to ensure provisions are not included unless they have specific specifications or standards.
