

Subject

Introduction of the outcomes of MEPC62

# **ClassNK**

## **Technical Information**

No. TEC-0872

Date 10 November 2011

To whom it may concern

A summary of the decisions taken at the sixty-second session of the Marine Environment Protection Committee (MEPC 62) held from 11 July 2011 to 15 July 2011 is provided below for your reference.

### 1. Adopted mandatory requirements

The main mandatory requirements adopted at this session are as follows.

- (1) Amendments to MARPOL Annex VI: Mandatory requirement of Energy Efficiency Design Index (EEDI) and Ship Efficiency Management Plan (SEEMP) (reference is made to the Attachment 1)

Amendments to MARPOL Annex VI making the Energy Efficiency Design Index (EEDI) and the Ship Efficiency Management Plan (SEEMP) mandatory were adopted, and will become effective from 1 January 2013.(refer to the item 5. below)

- (2) Amendments to MARPOL Annex IV: Discharge requirements of sewage treatment in Special Area (reference is made to the Attachment 2)

Amendments to MARPOL Annex IV, making the current requirements for passenger ships in special areas stricter and adding the Baltic Sea to the special areas were adopted, and will become effective from 1 January 2013.

Application date:

- New ships - Contract or Keel laid (in the absence of a building contract) : on or after 1 January 2016; or  
the delivery of which is two years or more after 1 January 2016
- Existing ships - On or after 1 January 2018

- (3) Amendments to MARPOL Annex V: Prohibition of the discharge of garbage from ships (reference is made to the Attachment 3)

Amendments to MARPOL Annex V including the prohibition of the discharge of garbage in principle, except for discharge of cleaning agents in the cargo hold into the sea so long as the substances are not harmful to the marine environment, and the duty to report the discharge of fishing gears to the state, etc. were adopted, and will become effective from 1 January 2013.

Application date:

- On or after 1 January 2013 (for new and existing ships)

(To be continued)

#### NOTES:

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- (4) Amendments to MARPOL Annex VI: New Emission Control Area in the United States Caribbean Sea area (reference is made to the Attachment 4)

Amendments to MARPOL Annex VI adding the region of Puerto Rico and US Virgin Islands to ECA (Emission Control Area) of NO<sub>x</sub>, SO<sub>x</sub> and PM (Particulate Matter) were adopted<sup>\*1)</sup>, and will become effective from 1 January 2013.

Application date:

- On or after 1 January 2014 (for new and existing ships)

Note\*1: Although the effective date of this amendment is 1 January 2013, regulatory measures of obligation to use low sulphur fuel oil can be exempted for 12 months from the designated date of ECA, the application date is on or after 1 January 2014. On the other hand, the requirements for NO<sub>x</sub> emissions in the United States Caribbean Sea area will commence after 1 January 2016, because NO<sub>x</sub> TierIII requirements specified in Regulation 13 of ANNEX VI will be applied in the ECA at that time.

## 2. Approved mandatory requirements

Mandatory requirements that are scheduled to be adopted at the next session MEPC63 (February 2012) were approved at MEPC62 as follows.

- (1) Amendments to NO<sub>x</sub> Technical Code to add a testing method for separate verification test for Selective Catalytic Reduction (SCR) and the Engine (refer to the item 6. below)
- (2) Amendments to MARPOL I, II, IV, V and VI to accept the requirements of MARPOL in relation to the Regional Reception Facilities through regional agreements for small Island Developing States<sup>\*2)</sup>.

Note\*2: Small island states in the Pacific, Caribbean, Indian Ocean etc. which are considered difficult to continuous development due to scarce population, resources etc.

## 3. International Convention for the Control and Management of Ships' Ballast Water and Sediments, 2004 (BWM Convention)

Ballast Water Management Systems (BWMS) specified in BWM Convention should be type approved by Administrations based on the relevant IMO Guideline. If active substances are used in BWMS to eliminate harmful aquatic organisms and bacteria, "Basic Approval" by the IMO to evaluate and approve active substances itself as first step, with "Final Approval" by IMO to evaluate and approve BWMS comprehensively as second step, and finally, "Type Approval" by Administrations is required.

(To be continued)

Regarding the requirement of "Entry into force" of the convention stipulates; "The Convention will enter into force twelve (12) month after ratification by thirty (30) States, representing thirty five percent (35%) of the world merchant shipping tonnage." The current ratification status is "Number of Contracting States: 30 (including Liberia; second largest share of the world's commercial tonnage, Marshall Islands; fourth largest share of the world's commercial tonnage, etc.), Percentage world tonnage: 26.44%" as of the end of September 2011.

(1) Approval of BWMS using active substances by IMO

Seven (7) BWMS using active substances newly obtained Basic Approval and two (2) obtained Final Approval at MEPC62. As a result, thirty four (34) BWMS using active substances have obtained Basic Approval and twenty (20) BWMS using active substances have obtained Final Approval. At this moment, seventeen (17) BWMS including those using active substances as well as not using active substances are type approved by Administrations, accordingly which can be installed onboard ships. (reference is made to the Attachment 5).

MEPC62 also approved the procedure for approving other methods of ballast water management to allow for selection of new treatment methods.

(2) Clarification for the application of BWMS

Application date of D-2 standard, i.e., installation of BWMS required onboard ships, is described in regulation B-3 of the BWM Convention.

IACS proposed an application scheme for ships described in regulation B-3.4 of the BWM Convention, i.e., a ship constructed in or after 2009, but before 2012, with a Ballast Water Capacity of 5,000 cubic metres or more. Having considered this proposal, MEPC62 agreed to add the phrase that ships constructed in or after 2009, but before 2012, with a Ballast Water Capacity of 5,000 cubic metres or more, are required to comply with the D-2 standard not later than the first intermediate or renewal survey, whichever occurs first, after the anniversary date of delivery of the ship in 2016 under regulation B-3.4, similar to IMO circular; BWM.2/Circ.29 in which the application scheme for ships under regulation B-3.1.1 and B-3.1.2 is specified. (reference is made to the Attachment 6)

4. Recycling of ships

A Diplomatic Conference in Hong Kong, the International Convention for the Safe and Environmentally Sound Recycling of Ships, 2009 (the Hong Kong Convention), adopted on 15 May 2009 and not yet entered into force, has been signed subject to ratification by France, the Netherlands, Italy, Turkey and Saint Kitts and Nevis but not yet ratified. The Convention will enter into force twenty four (24) months after it has been ratified by fifteen (15) states, representing forty (40) % of the world fleet, and with an annual ship recycling capacity of three (3) % of that fleet.

IMO is now under development of guidelines for survey and certification, and PSC etc.

(To be continued)

- (1) Further development of the "Guidelines for safe and environmentally sound ship recycling"  
At MEPC61, the "Guidelines for safe and environmentally sound ship recycling" and the "Guidelines for the development of the Ship Recycling Plan", for which progress had been made in Correspondence Group (CG), were discussed and the development of new "Guidelines on the authorization of ship recycling facilities" was begun. Further it was agreed to discuss these three (3) guidelines in CG with a view to adoption at MEPC62.

Only the "Guidelines for the development of the Ship Recycling Plan" were adopted at MEPC 62 and the other two (2) guidelines will be considered and adopted at MEPC63.

Meanwhile, the amendments to the "Guidelines for the development of the Inventory of Hazardous Materials" adding detailed testing methods for the analysis of the result of sampling were adopted. MEPC62 also recognized that the threshold values to be entered into the Inventory need to be reconsidered, and agreed to take these items under further consideration.

#### 5. Reduction of GHG emissions from ships

Under the Kyoto Protocol of United Nations Framework Convention on Climate Change (UNFCCC), Japan and Europe are responsible for reducing Global Greenhouse Gas (GHG) by 6% and 8% respectively between 2008 and 2012, with the goal of reducing global GHG emissions by 5% compared with 1990 levels. The Kyoto Protocol provides that the developing states are not responsible for reducing GHG emissions under the principal of "Common but differential responsibility (CBDR) \*3)". International shipping also does not fall under the provisions of Kyoto Protocol, although this remains under consideration at the IMO.

At 16<sup>th</sup> meeting of the Conference of the Parties (COP16) of UNFCCC held from 29 November to 10 December 2010 in Cancun, Mexico, the development of new framework of post Kyoto Protocol after 2013 was discussed following COP15.

At COP16, the "Cancun Agreement", including the establishment of the Green Climate Fund, a financing system for poorer states in order to assist the method of the reduction of GHG emissions, was adopted. However, many issues that were difficult to agree upon, such as the reduction of GHG emissions applicable to all of the member Governments, were to be continued to discuss at next conference.

As for the reduction of GHG emissions from international shipping, future roles of UNFCCC and IMO etc. were not agreed upon, due to the wide disagreements between developing states advocating the principle of CBDR and developed states.

At MEPC61, held in October 2010, draft text of the amendments of MARPOL Annex VI specifying the ship type and size of vessels to which Energy Efficiency Design Index (EEDI) and its reduction rates and schedules were developed, and maintenance of a Ship Efficiency Management Plan (SEEMP) onboard was made a mandatory requirement.

(To be continued)

However, consensus between developing and developed states with regards to the actual text of the proposed amendments to MARPOL ANNEX VI could not be achieved. In response to this, some of the states MARPOL Annex VI that promoted the amendments to MARPOL Annex VI requested the IMO to circulate the draft amendments to MARPOL Annex VI with a view to adoption at MEPC62, and the text of draft amendments were circulated as Circular letter No.3128, dated on 24 November 2010.

At MEPC62, amendments to MARPOL Annex VI making the Energy Efficiency Design Index (EEDI) and the Ship Efficiency Management Plan (SEEMP) mandatory were adopted, as listed above in item 1.(1).

Note\*3: CBDR

While addressing the problem of global warming problem is a common responsibility of all states around the world, but the burden of responsibility is to be differentiated because the majority of current GHG emissions to the atmosphere is attributable to the developed states.

(1) Mandatory requirement of Energy Efficiency Design Index (EEDI) and Ship Efficiency Management Plan (SEEMP)

MEPC62 adopted amendments to MARPOL Annex VI making the Energy Efficiency Design Index (EEDI) and the Ship Efficiency Management Plan (SEEMP) mandatory. Accordingly, EEDI will now be required for new ships and SEEMP is required to be kept onboard new and existing ships with a gross tonnage of 400 tons and above as shown below. In order to provide further assistance to developing states stipulations allowing for the extension of the requirements of EEDI for at most four (4) years were also implemented.

- EEDI requirements are applicable to the following new ships.

(i) For which the building contract is placed on or after 1 January 2013;

or

(ii) In the absence of a building contract, the keel of which is laid or which is at a similar stage of construction on or after 1 July 2013;

or

(iii) The delivery of which is on or after 1 July 2015.

(2) Agreed work plan and further discussion

For further improvement of technical and operational methods, a work plan for further development of the EEDI framework for ships, types and sizes, and propulsion systems not covered by the current EEDI requirements, as well as the development of remaining EEDI and SEEMP guidelines was also agreed upon. In addition, it was agreed that the second Intersessional Meeting of the Working Group on Energy Efficiency Measures for Ships will be held in January 2012. At the Intersessional Meeting, the following Guidelines will be discussed with a view to further improvement and finalization at MEPC 63.

(To be continued)

- Guidelines on the method of calculation of the EEDI for new ships
- Guidelines for the development of a SEEMP
- Guidelines on the survey and certification of the EEDI
- Guidelines for determining minimum propulsive power and speed to enable safe maneuvering in adverse weather conditions

#### 6. Amendments to the NOx Technical Code

Fitting Selective Catalytic Reduction (SCR) systems to marine diesel engines is an effective method to achieve future regulation of NOx emission value. The NOx technical Code, the technical standard which provides verification method for the compliance to NOx emission etc., stipulates that the verification test should be carried out on the condition that an engine and SCR are combined. However, it is difficult to carry out the verification test when the engine and SCR combined due to the large size of the SCR, the verification test method with an engines and SCR separate were discussed.

At MEPC62, amendments to the NOx Technical Code which enable the verification test to be carried out with an engine and SCR separately were approved, and draft SCR Guidelines were adopted. During the discussion of the draft SCR Guidelines, the question of whether the on board confirmation test should be conducted for only an engine group represented by the parent engine or an individual one in cases where the engine and SCR are carried out separately. As a result it was agreed that the board confirmation test should be conducted only for an engine group in accordance Japan's proposal. The issue of whether continuous NOx monitoring is necessary for engines fitted with SCR, but not supported by most of the delegations. In order to further investigation of SCR reliability etc., it was agreed that this issue would be taken under continued consideration at the BLG Sub-Committee. Further, with regards IMO Circulars to notify NOx Approved Method<sup>\*4)</sup>, drafted by ClassNK, IACS noted that information such as the identification of ships and survey procedures, was not included in the IMO Circulars and could lead to the problem in the survey opportunity. In response to this, it was agreed to consider what requirements should be included in these IMO Circulars at BLG Sub-Committee. Further, it was agreed that the Circulars already issued are valid with the understanding that no problems have been found with the procedures.

Note\*4: Marine diesel engines with a power output of more than 5,000kW and a per cylinder displacement at or above 90 litres installed on ships constructed on or after 1 January 1990 but prior to 1 January 2000 are required to comply with Tier I emission limits using an Approved Method, provided that the Approved Method for that engine has been certified by an Administration.

A summary of the outcomes of MEPC62 is also available on the IMO web-site (<http://www.imo.org>).

(To be continued)

For any questions about the above, please contact:

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Attachment:

1. Mandatory requirement of EEDI and SEEMP (Resolution MEPC.203(62))
2. Discharge requirements of sewage treatment in Special Area (Resolution MEPC.200(62))
3. Prohibition of the discharge of garbage from ships (Resolution MEPC.201(62))
4. New Emission Control Area in Credential America (Resolution MEPC.202(62))
5. Status of BWMS approval
6. IMO circular for the clarification of the application of D-2 standard (BWM.2/Circ.29/Rev.1)

**ANNEX 19**

**RESOLUTION MEPC.203(62)**

**Adopted on 15 July 2011**

**AMENDMENTS TO THE ANNEX OF THE PROTOCOL OF 1997 TO AMEND THE  
INTERNATIONAL CONVENTION FOR THE PREVENTION OF POLLUTION FROM  
SHIPS, 1973, AS MODIFIED BY THE PROTOCOL OF 1978 RELATING THERETO**

**(Inclusion of regulations on energy efficiency for ships in MARPOL Annex VI)**

THE MARINE ENVIRONMENT PROTECTION COMMITTEE,

RECALLING Article 38(a) of the Convention on the International Maritime Organization concerning the functions of the Marine Environment Protection Committee (the Committee) conferred upon it by international conventions for the prevention and control of marine pollution,

NOTING article 16 of the International Convention for the Prevention of Pollution from Ships, 1973 (hereinafter referred to as the "1973 Convention"), article VI of the Protocol of 1978 relating to the International Convention for the Prevention of Pollution from Ships, 1973 (hereinafter referred to as the "1978 Protocol") and article 4 of the Protocol of 1997 to amend the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto (hereinafter referred to as the "1997 Protocol"), which together specify the amendment procedure of the 1997 Protocol and confer upon the appropriate body of the Organization the function of considering and adopting amendments to the 1973 Convention, as modified by the 1978 and 1997 Protocols,

NOTING ALSO that, by the 1997 Protocol, Annex VI entitled Regulations for the Prevention of Air Pollution from Ships was added to the 1973 Convention (hereinafter referred to as "Annex VI"),

NOTING FURTHER that the revised Annex VI was adopted by resolution MEPC.176(58) and entered into force on 1 July 2010,

RECOGNIZING that the amendments to Annex VI and inclusion of a new chapter 4 intend to improve energy efficiency for ships through a set of technical performance standards, which would result in reduction of emissions of any substances that originate from fuel oil and its combustion process, including those already controlled by Annex VI,

RECOGNIZING ALSO that adoption of the amendments to Annex VI in no way prejudices the negotiations held in other international fora, such as the United Nations Framework Convention on Climate Change (UNFCCC), nor affect the positions of the countries that participate in such negotiation,

HAVING CONSIDERED draft amendments to the revised Annex VI for inclusion of regulations on energy efficiency for ships,

1. ADOPTS, in accordance with article 16(2)(d) of the 1973 Convention, the amendments to Annex VI, the text of which is set out in the annex to the present resolution;



2. DETERMINES, in accordance with article 16(2)(f)(iii) of the 1973 Convention, that the amendments shall be deemed to have been accepted on 1 July 2012, unless prior to that date, not less than one third of the Parties or Parties the combined merchant fleets of which constitute not less than 50 per cent of the gross tonnage of the world's merchant fleet, have communicated to the Organization their objection to the amendments;

3. INVITES the Parties to note that, in accordance with article 16(2)(g)(ii) of the 1973 Convention, the said amendments shall enter into force on 1 January 2013 upon their acceptance in accordance with paragraph 2 above;

4. REQUESTS the Secretary-General, in conformity with article 16(2)(e) of the 1973 Convention, to transmit to all Parties to the 1973 Convention, as modified by the 1978 and 1997 Protocols, certified copies of the present resolution and the text of the amendments contained in the Annex;

5. REQUESTS FURTHER the Secretary-General to transmit to the Members of the Organization which are not Parties to the 1973 Convention, as modified by the 1978 and 1997 Protocols, copies of the present resolution and its Annex; and

6. INVITES the Parties to MARPOL Annex VI and other Member Governments to bring the amendments to MARPOL Annex VI to the attention of shipowners, ship operators, shipbuilders, ship designers, marine diesel engine and equipment manufacturers as well as any other interested groups.

ANNEX

**AMENDMENTS TO MARPOL ANNEX VI ON REGULATIONS FOR THE PREVENTION OF  
AIR POLLUTION FROM SHIPS BY INCLUSION OF NEW REGULATIONS ON  
ENERGY EFFICIENCY FOR SHIPS**

**CHAPTER 1**

**GENERAL**

**Regulation 1**

***Application***

1 The regulation is amended as follows:

"The provisions of this Annex shall apply to all ships, except where expressly provided otherwise in regulations 3, 5, 6, 13, 15, 16, 18, 19, 20, 21, 22 and 23 of this Annex."

**Regulation 2**

***Definitions***

2 Paragraph 21 is amended as follows:

"21 *Tanker* in relation to regulation 15 means an oil tanker as defined in regulation 1 of Annex I or a chemical tanker as defined in regulation 1 of Annex II of the present Convention."

3 The following is added at the end of regulation 2:

"For the purpose of chapter 4:

22 "Existing ship" means a ship which is not a new ship.

23 "New ship" means a ship:

.1 for which the building contract is placed on or after 1 January 2013;  
or

.2 in the absence of a building contract, the keel of which is laid or  
which is at a similar stage of construction on or after 1 July 2013;  
or

.3 the delivery of which is on or after 1 July 2015.

- 24 "Major Conversion" means in relation to chapter 4 a conversion of a ship:
- .1 which substantially alters the dimensions, carrying capacity or engine power of the ship; or
  - .2 which changes the type of the ship; or
  - .3 the intent of which in the opinion of the Administration is substantially to prolong the life of the ship; or
  - .4 which otherwise so alters the ship that, if it were a new ship, it would become subject to relevant provisions of the present Convention not applicable to it as an existing ship; or
  - .5 which substantially alters the energy efficiency of the ship and includes any modifications that could cause the ship to exceed the applicable required EEDI as set out in regulation 21.
- 25 "Bulk carrier" means a ship which is intended primarily to carry dry cargo in bulk, including such types as ore carriers as defined in SOLAS chapter XII, regulation 1, but excluding combination carriers.
- 26 "Gas carrier" means a cargo ship constructed or adapted and used for the carriage in bulk of any liquefied gas.
- 27 "Tanker" in relation to chapter 4 means an oil tanker as defined in MARPOL Annex I, regulation 1 or a chemical tanker or an NLS tanker as defined in MARPOL Annex II, regulation 1.
- 28 "Container ship" means a ship designed exclusively for the carriage of containers in holds and on deck.
- 29 "General cargo ship" means a ship with a multi-deck or single deck hull designed primarily for the carriage of general cargo. This definition excludes specialized dry cargo ships, which are not included in the calculation of reference lines for general cargo ships, namely livestock carrier, barge carrier, heavy load carrier, yacht carrier, nuclear fuel carrier.
- 30 "Refrigerated cargo carrier" means a ship designed exclusively for the carriage of refrigerated cargoes in holds.
- 31 "Combination carrier" means a ship designed to load 100% deadweight with both liquid and dry cargo in bulk.
- 32 "Passenger ship" means a ship which carries more than 12 passengers.
- 33 "Ro-ro cargo ship (vehicle carrier)" means a multi deck roll-on-roll-off cargo ship designed for the carriage of empty cars and trucks.
- 34 "Ro-ro cargo ship" means a ship designed for the carriage of roll-on-roll-off cargo transportation units.
- 35 "Ro-ro passenger ship" means a passenger ship with roll-on-roll-off cargo spaces.

36 "Attained EEDI" is the EEDI value achieved by an individual ship in accordance with regulation 20 of chapter 4.

37 "Required EEDI" is the maximum value of attained EEDI that is allowed by regulation 21 of chapter 4 for the specific ship type and size."

## CHAPTER 2

### SURVEY, CERTIFICATION AND MEANS OF CONTROL

#### Regulation 5

##### Surveys

4 Paragraph 1 is amended as follows:

"1 Every ship of 400 gross tonnage and above and every fixed and floating drilling rig and other platforms shall to ensure compliance with chapter 3 be subject to the surveys specified below:

- .1 An initial survey before the ship is put into service or before the certificate required under regulation 6 of this Annex is issued for the first time. This survey shall be such as to ensure that the equipment, systems, fittings, arrangements and material fully comply with the applicable requirements of chapter 3;
- .2 A renewal survey at intervals specified by the Administration, but not exceeding five years, except where regulation 9.2, 9.5, 9.6 or 9.7 of this Annex is applicable. The renewal survey shall be such as to ensure that the equipment, systems, fittings, arrangements and material fully comply with applicable requirements of chapter 3;
- .3 An intermediate survey within three months before or after the second anniversary date or within three months before or after the third anniversary date of the certificate which shall take the place of one of the annual surveys specified in paragraph 1.4 of this regulation. The intermediate survey shall be such as to ensure that the equipment and arrangements fully comply with the applicable requirements of chapter 3 and are in good working order. Such intermediate surveys shall be endorsed on the IAPP Certificate issued under regulation 6 or 7 of this Annex;
- .4 An annual survey within three months before or after each anniversary date of the certificate, including a general inspection of the equipment, systems, fittings, arrangements and material referred to in paragraph 1.1 of this regulation to ensure that they have been maintained in accordance with paragraph 5 of this regulation and that they remain satisfactory for the service for which the ship is intended. Such annual surveys shall be endorsed on the IAPP Certificate issued under regulation 6 or 7 of this Annex; and

- .5 An additional survey either general or partial, according to the circumstances, shall be made whenever any important repairs or renewals are made as prescribed in paragraph 5 of this regulation or after a repair resulting from investigations prescribed in paragraph 6 of this regulation. The survey shall be such as to ensure that the necessary repairs or renewals have been effectively made, that the material and workmanship of such repairs or renewals are in all respects satisfactory and that the ship complies in all respects with the requirements of chapter 3."

5 Paragraph 2 is amended as follows:

"2 In the case of ships of less than 400 gross tonnage, the Administration may establish appropriate measures in order to ensure that the applicable provisions of chapter 3 are complied with."

6 A new paragraph 4 is added after existing paragraph 3 as follows:

"4 Ships to which chapter 4 applies shall also be subject to the surveys specified below, taking into account Guidelines adopted by the Organization<sup>1</sup>:

- .1 An initial survey before a new ship is put in service and before the International Energy Efficiency Certificate is issued. The survey shall verify that the ship's attained EEDI is in accordance with the requirements in chapter 4, and that the SEEMP required by regulation 22 is on board;
- .2 A general or partial survey, according to the circumstances, after a major conversion of a ship to which this regulation applies. The survey shall ensure that the attained EEDI is recalculated as necessary and meets the requirement of regulation 21, with the reduction factor applicable to the ship type and size of the converted ship in the phase corresponding to the date of contract or keel laying or delivery determined for the original ship in accordance with regulation 2.23;
- .3 In cases where the major conversion of a new or existing ship is so extensive that the ship is regarded by the Administration as a newly constructed ship, the Administration shall determine the necessity of an initial survey on attained EEDI. Such a survey, if determined necessary, shall ensure that the attained EEDI is calculated and meets the requirement of regulation 21, with the reduction factor applicable corresponding to the ship type and size of the converted ship at the date of the contract of the conversion, or in the absence of a contract, the commencement date of the conversion. The survey shall also verify that the SEEMP required by regulation 22 is on board; and
- .4 For existing ships, the verification of the requirement to have a SEEMP on board according to regulation 22 shall take place at the first intermediate or renewal survey identified in paragraph 1 of this regulation, whichever is the first, on or after 1 January 2013."

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<sup>1</sup> Refer to Guidelines on Survey and Certification of the Energy Efficiency Design Index.

7 Paragraph 4 is renumbered paragraph 5.

8 Paragraph 5 is renumbered paragraph 6.

## **Regulation 6**

### ***Issue or endorsement of a Certificate***

9 The heading is amended as follows:

***"Issue or endorsement of Certificates"***

10 The following sub-heading is added at the beginning of the regulation:

"International Air Pollution Prevention Certificate"

11 Paragraph 2 is amended as follows:

"2 A ship constructed before the date Annex VI enters into force for that particular ship's Administration, shall be issued with an International Air Pollution Prevention Certificate in accordance with paragraph 1 of this regulation no later than the first scheduled dry-docking after the date of such entry into force, but in no case later than three years after this date."

12 The following is added at the end of the regulation:

"International Energy Efficiency Certificate

4 An International Energy Efficiency Certificate for the ship shall be issued after a survey in accordance with the provisions of regulation 5.4 to any ship of 400 gross tonnage and above before that ship may engage in voyages to ports or offshore terminals under the jurisdiction of other Parties.

5 The certificate shall be issued or endorsed either by the Administration or any organization duly authorized by it<sup>2</sup>. In every case, the Administration assumes full responsibility for the certificate."

## **Regulation 7**

### ***Issue of a Certificate by another Party***

13 Paragraph 1 is amended as follows:

"1 A Party may, at the request of the Administration, cause a ship to be surveyed and, if satisfied that the applicable provisions of this Annex are complied with, shall issue or authorize the issuance of an International Air Pollution Prevention Certificate or an International Energy Efficiency Certificate to the ship,

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<sup>2</sup> Refer to the Guidelines for the authorization of organizations acting on behalf of the Administration, adopted by the Organization by resolution A.739(18), as may be amended by the Organization, and the Specifications on the survey and certification functions of recognized organizations acting on behalf of the Administration, adopted by the Organization by resolution A.789(19), as may be amended by the Organization.

and where appropriate, endorse or authorize the endorsement of such certificates on the ship, in accordance with this Annex."

14 Paragraph 4 is amended as follows:

"4 No International Air Pollution Prevention Certificate or International Energy Efficiency Certificate shall be issued to a ship which is entitled to fly the flag of a State which is not a Party."

## **Regulation 8**

### ***Form of Certificate***

15 The heading is amended as follows:

***"Form of Certificates"***

16 The following subheading is added, and the existing regulation is renumbered as paragraph 1:

"International Air Pollution Prevention Certificate"

17 The following new paragraph 2 is added at the end of the regulation:

"International Energy Efficiency Certificate

2 The International Energy Efficiency Certificate shall be drawn up in a form corresponding to the model given in appendix VIII to this Annex and shall be at least in English, French or Spanish. If an official language of the issuing Party is also used, this shall prevail in case of a dispute or discrepancy."

## **Regulation 9**

### ***Duration and Validity of Certificate***

18 The heading is amended as follows:

***"Duration and Validity of Certificates"***

19 The following subheading is added at the beginning of the regulation:

"International Air Pollution Prevention Certificate"

20 The following is added at the end of the regulation:

"International Energy Efficiency Certificate

10 The International Energy Efficiency Certificate shall be valid throughout the life of the ship subject to the provisions of paragraph 11 below.

11 An International Energy Efficiency Certificate issued under this Annex shall cease to be valid in any of the following cases:

- .1 if the ship is withdrawn from service or if a new certificate is issued following major conversion of the ship; or
- .2 upon transfer of the ship to the flag of another State. A new certificate shall only be issued when the Government issuing the new certificate is fully satisfied that the ship is in compliance with the requirements of chapter 4. In the case of a transfer between Parties, if requested within three months after the transfer has taken place, the Government of the Party whose flag the ship was formerly entitled to fly shall, as soon as possible, transmit to the Administration copies of the certificate carried by the ship before the transfer and, if available, copies of the relevant survey reports."

## **Regulation 10**

### ***Port State Control on Operational Requirements***

21 A new paragraph 5 is added at the end of the regulation as follows:

"5 In relation to chapter 4, any port State inspection shall be limited to verifying, when appropriate, that there is a valid International Energy Efficiency Certificate on board, in accordance with article 5 of the Convention."

22 A new chapter 4 is added at the end of the Annex as follows:

## **"CHAPTER 4**

### **REGULATIONS ON ENERGY EFFICIENCY FOR SHIPS**

## **Regulation 19**

### ***Application***

- 1 This chapter shall apply to all ships of 400 gross tonnage and above.
- 2 The provisions of this chapter shall not apply to:
  - .1 ships solely engaged in voyages within waters subject to the sovereignty or jurisdiction of the State the flag of which the ship is entitled to fly. However, each Party should ensure, by the adoption of appropriate measures, that such ships are constructed and act in a manner consistent with chapter 4, so far as is reasonable and practicable.
- 3 Regulation 20 and regulation 21 shall not apply to ships which have diesel-electric propulsion, turbine propulsion or hybrid propulsion systems.
- 4 Notwithstanding the provisions of paragraph 1 of this regulation, the Administration may waive the requirement for a ship of 400 gross tonnage and above from complying with regulation 20 and regulation 21.



5 The provision of paragraph 4 of this regulation shall not apply to ships of 400 gross tonnage and above:

- .1 for which the building contract is placed on or after 1 January 2017;  
or
- .2 in the absence of a building contract, the keel of which is laid or which is at a similar stage of construction on or after 1 July 2017;  
or
- .3 the delivery of which is on or after 1 July 2019; or
- .4 in cases of a major conversion of a new or existing ship, as defined in regulation 2.24, on or after 1 January 2017, and in which regulation 5.4.2 and regulation 5.4.3 of chapter 2 apply.

6 The Administration of a Party to the present Convention which allows application of paragraph 4, or suspends, withdraws or declines the application of that paragraph, to a ship entitled to fly its flag shall forthwith communicate to the Organization for circulation to the Parties to the present Protocol particulars thereof, for their information.

## **Regulation 20**

### ***Attained Energy Efficiency Design Index (Attained EEDI)***

1 The attained EEDI shall be calculated for:

- .1 each new ship;
- .2 each new ship which has undergone a major conversion; and
- .3 each new or existing ship which has undergone a major conversion, that is so extensive that the ship is regarded by the Administration as a newly constructed ship

which falls into one or more of the categories in regulations 2.25 to 2.35. The attained EEDI shall be specific to each ship and shall indicate the estimated performance of the ship in terms of energy efficiency, and be accompanied by the EEDI technical file that contains the information necessary for the calculation of the attained EEDI and that shows the process of calculation. The attained EEDI shall be verified, based on the EEDI technical file, either by the Administration or by any organization<sup>3</sup> duly authorized by it.

2 The attained EEDI shall be calculated taking into account guidelines<sup>4</sup> developed by the Organization.

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<sup>3</sup> Refer to the Guidelines for the authorization of organizations acting on behalf of the Administration, adopted by the Organization by resolution A.739(18), as may be amended by the Organization, and the Specifications on the survey and certification functions of recognized organizations acting on behalf of the Administration, adopted by the Organization by resolution A.789(19), as may be amended by the Organization.

<sup>4</sup> Guidelines on the method of calculation of the Energy Efficiency Design Index for new ships.

## Regulation 21

### Required EEDI

- 1 For each:
- .1 new ship;
  - .2 new ship which has undergone a major conversion; and
  - .3 new or existing ship which has undergone a major conversion that is so extensive that the ship is regarded by the Administration as a newly constructed ship

which falls into one of the categories defined in regulation 2.25 to 2.31 and to which this chapter is applicable, the attained EEDI shall be as follows:

$$\text{Attained EEDI} \leq \text{Required EEDI} = (1-X/100) \times \text{Reference line value}$$

where X is the reduction factor specified in Table 1 for the required EEDI compared to the EEDI Reference line.

2 For each new and existing ship that has undergone a major conversion which is so extensive that the ship is regarded by the Administration as a newly constructed ship, the attained EEDI shall be calculated and meet the requirement of paragraph 21.1 with the reduction factor applicable corresponding to the ship type and size of the converted ship at the date of the contract of the conversion, or in the absence of a contract, the commencement date of the conversion.

**Table 1. Reduction factors (in percentage) for the EEDI relative to the EEDI Reference line**

Ship Type	Size	Phase 0 1 Jan 2013 – 31 Dec 2014	Phase 1 1 Jan 2015 – 31 Dec 2019	Phase 2 1 Jan 2020 – 31 Dec 2024	Phase 3 1 Jan 2025 and onwards
Bulk carrier	20,000 DWT and above	0	10	20	30
	10,000 – 20,000 DWT	n/a	0-10*	0-20*	0-30*
Gas carrier	10,000 DWT and above	0	10	20	30
	2,000 – 10,000 DWT	n/a	0-10*	0-20*	0-30*
Tanker	20,000 DWT and above	0	10	20	30
	4,000 – 20,000 DWT	n/a	0-10*	0-20*	0-30*
Container ship	15,000 DWT and above	0	10	20	30
	10,000 – 15,000 DWT	n/a	0-10*	0-20*	0-30*

Ship Type	Size	Phase 0 1 Jan 2013 – 31 Dec 2014	Phase 1 1 Jan 2015 – 31 Dec 2019	Phase 2 1 Jan 2020 – 31 Dec 2024	Phase 3 1 Jan 2025 and onwards
General Cargo ships	15,000 DWT and above	0	10	15	30
	3,000 – 15,000 DWT	n/a	0-10*	0-15*	0-30*
Refrigerated cargo carrier	5,000 DWT and above	0	10	15	30
	3,000 – 5,000 DWT	n/a	0-10*	0-15*	0-30*
Combination carrier	20,000 DWT and above	0	10	20	30
	4,000 – 20,000 DWT	n/a	0-10*	0-20*	0-30*

\* Reduction factor to be linearly interpolated between the two values dependent upon vessel size. The lower value of the reduction factor is to be applied to the smaller ship size.

n/a means that no required EEDI applies.

3 The Reference line values shall be calculated as follows:

$$\text{Reference line value} = a \times b^{-c}$$

where a, b and c are the parameters given in Table 2.

**Table 2. Parameters for determination of reference values for the different ship types**

Ship type defined in regulation 2	a	b	c
2.25 Bulk carrier	961.79	DWT of the ship	0.477
2.26 Gas carrier	1120.00	DWT of the ship	0.456
2.27 Tanker	1218.80	DWT of the ship	0.488
2.28 Container ship	174.22	DWT of the ship	0.201
2.29 General cargo ship	107.48	DWT of the ship	0.216
2.30 Refrigerated cargo carrier	227.01	DWT of the ship	0.244
2.31 Combination carrier	1219.00	DWT of the ship	0.488

4 If the design of a ship allows it to fall into more than one of the above ship type definitions, the required EEDI for the ship shall be the most stringent (the lowest) required EEDI.

5 For each ship to which this regulation applies, the installed propulsion power shall not be less than the propulsion power needed to maintain the manoeuvrability of the ship under adverse conditions as defined in the guidelines to be developed by the Organization.

6 At the beginning of Phase 1 and at the midpoint of Phase 2, the Organization shall review the status of technological developments and, if proven necessary, amend the time periods, the EEDI reference line parameters for relevant ship types and reduction rates set out in this regulation.

## Regulation 22

### ***Ship Energy Efficiency Management Plan (SEEMP)***

1 Each ship shall keep on board a ship specific Ship Energy Efficiency Management Plan (SEEMP). This may form part of the ship's Safety Management System (SMS).

2 The SEEMP shall be developed taking into account guidelines adopted by the Organization.

## Regulation 23

### ***Promotion of technical co-operation and transfer of technology relating to the improvement of energy efficiency of ships***

1 Administrations shall, in co-operation with the Organization and other international bodies, promote and provide, as appropriate, support directly or through the Organization to States, especially developing States, that request technical assistance.

2 The Administration of a Party shall co-operate actively with other Parties, subject to its national laws, regulations and policies, to promote the development and transfer of technology and exchange of information to States which request technical assistance, particularly developing States, in respect of the implementation of measures to fulfil the requirements of chapter 4 of this annex, in particular regulations 19.4 to 19.6."

23 A new appendix VIII is added at the end of the Annex as follows:

### **"APPENDIX VIII**

#### **Form of International Energy Efficiency (IEE) Certificate**

#### **INTERNATIONAL ENERGY EFFICIENCY CERTIFICATE**

Issued under the provisions of the Protocol of 1997, as amended by resolution MEPC.203(62), to amend the International Convention for the Prevention of Pollution by Ships, 1973, as modified by the Protocol of 1978 related thereto (hereinafter referred to as "the Convention") under the authority of the Government of:

.....  
(Full designation of the Party)

by .....  
(Full designation of the competent person or organization  
authorized under the provisions of the Convention)

**Particulars of ship<sup>5</sup>**

Name of ship .....

Distinctive number or letters .....

Port of registry .....

Gross tonnage .....

IMO Number<sup>6</sup> .....

**THIS IS TO CERTIFY:**

- 1 That the ship has been surveyed in accordance with regulation 5.4 of Annex VI of the Convention; and
- 2 That the survey shows that the ship complies with the applicable requirements in regulation 20, regulation 21 and regulation 22.

Completion date of survey on which this Certificate is based: ..... (dd/mm/yyyy)

Issued at .....  
(Place of issue of certificate)

(dd/mm/yyyy): .....  
(Date of issue) (Signature of duly authorized official issuing the certificate)

(Seal or stamp of the authority, as appropriate)

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<sup>5</sup> Alternatively, the particulars of the ship may be placed horizontally in boxes.

<sup>6</sup> In accordance with IMO ship identification number scheme, adopted by the Organization by resolution A.600(15).

**Supplement to the International Energy Efficiency Certificate  
(IEE Certificate)**

**RECORD OF CONSTRUCTION RELATING TO ENERGY EFFICIENCY**

Notes:	
1	This Record shall be permanently attached to the IEE Certificate. The IEE Certificate shall be available on board the ship at all times.
2	The Record shall be at least in English, French or Spanish. If an official language of the issuing Party is also used, this shall prevail in case of a dispute or discrepancy.
3	Entries in boxes shall be made by inserting either: a cross (x) for the answers "yes" and "applicable"; or a dash (-) for the answers "no" and "not applicable", as appropriate.
4	Unless otherwise stated, regulations mentioned in this Record refer to regulations in Annex VI of the Convention, and resolutions or circulars refer to those adopted by the International Maritime Organization.

**1 Particulars of ship**

- 1.1 Name of ship .....
- 1.2 IMO number .....
- 1.3 Date of building contract .....
- 1.4 Gross tonnage .....
- 1.5 Deadweight .....
- 1.6 Type of ship\* .....

**2 Propulsion system**

- 2.1 Diesel propulsion .....
- 2.2 Diesel-electric propulsion .....
- 2.3 Turbine propulsion .....
- 2.4 Hybrid propulsion .....
- 2.5 Propulsion system other than any of the above .....

\* Insert ship type in accordance with definitions specified in regulation 2. Ships falling into more than one of the ship types defined in regulation 2 should be considered as being the ship type with the most stringent (the lowest) required EEDI. If ship does not fall into the ship types defined in regulation 2, insert "Ship other than any of the ship type defined in regulation 2".

**3 Attained Energy Efficiency Design Index (EEDI)**

3.1 The Attained EEDI in accordance with regulation 20.1 is calculated based on the information contained in the EEDI technical file which also shows the process of calculating the Attained EEDI. ....

The Attained EEDI is: ..... grams-CO<sub>2</sub>/tonne-mile

3.2 The Attained EEDI is not calculated as:

3.2.1 the ship is exempt under regulation 20.1 as it is not a new ship as defined in regulation 2.23 .....

3.2.2 the type of propulsion system is exempt in accordance with regulation 19.3 .....

3.2.3 the requirement of regulation 20 is waived by the ship's Administration in accordance with regulation 19.4 .....

3.2.4 the type of ship is exempt in accordance with regulation 20.1 .....

**4 Required EEDI**

4.1 Required EEDI is: ..... grams-CO<sub>2</sub>/tonne-mile

4.2 The required EEDI is not applicable as:

4.2.1 the ship is exempt under regulation 21.1 as it is not a new ship as defined in regulation 2.23 .....

4.2.2 the type of propulsion system is exempt in accordance with regulation 19.3 .....

4.2.3 the requirement of regulation 21 is waived by the ship's Administration in accordance with regulation 19.4 .....

4.2.4 the type of ship is exempt in accordance with regulation 21.1 .....

4.2.5 the ship's capacity is below the minimum capacity threshold in Table 1 of regulation 21.2 .....

**5 Ship Energy Efficiency Management Plan**

5.1 The ship is provided with a Ship Energy Efficiency Management Plan (SEEMP) in compliance with regulation 22 .....

**6 EEDI technical file**

6.1 The IEE Certificate is accompanied by the EEDI technical file in compliance with regulation 20.1 .....

6.2 The EEDI technical file identification/verification number .....

6.3 The EEDI technical file verification date .....

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

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

(dd/mm/yyyy): .....  
(Date of issue) (Signature of duly authorized official  
issuing the Record)

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

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**ANNEX 12**

**RESOLUTION MEPC.200(62)**

**Adopted on 15 July 2011**

**AMENDMENTS TO THE ANNEX OF THE PROTOCOL OF 1978 RELATING TO  
THE INTERNATIONAL CONVENTION FOR THE PREVENTION OF  
POLLUTION FROM SHIPS, 1973**

**(Special Area Provisions and the Designation of the Baltic Sea as a Special Area under  
MARPOL Annex IV)**

THE MARINE ENVIRONMENT PROTECTION COMMITTEE,

RECALLING article 38(a) of the Convention on the International Maritime Organization concerning the functions of the Marine Environment Protection Committee (the Committee) conferred upon it by international conventions for the prevention and control of marine pollution,

NOTING article 16 of the International Convention for the Prevention of Pollution from Ships, 1973 (hereinafter referred to as the "1973 Convention") and article VI of the Protocol of 1978 relating to the International Convention for the Prevention of Pollution from Ships, 1973 (hereinafter referred to as the "1978 Protocol") which together specify the amendment procedure of the 1978 Protocol and confer upon the appropriate body of the Organization the function of considering and adopting amendments to the 1973 Convention, as modified by the 1978 Protocol (MARPOL 73/78),

HAVING CONSIDERED draft amendments to Annex IV of MARPOL 73/78,

1. ADOPTS, in accordance with article 16(2)(d) of the 1973 Convention, the amendments to Annex IV of MARPOL 73/78, the text of which is set out at annex to the present resolution;
2. DETERMINES, in accordance with article 16(2)(f)(iii) of the 1973 Convention, that the amendments shall be deemed to have been accepted on 1 July 2012 unless, prior to that date, not less than one third of the Parties or Parties the combined merchant fleets of which constitute not less than 50 per cent of the gross tonnage of the world's merchant fleet, have communicated to the Organization their objection to the amendments;
3. INVITES the Parties to note that, in accordance with article 16(2)(g)(ii) of the 1973 Convention, the said amendments shall enter into force on 1 January 2013 upon their acceptance in accordance with paragraph 2 above;
4. REQUESTS the Secretary-General, in conformity with article 16(2)(e) of the 1973 Convention, to transmit to all Parties to MARPOL 73/78 certified copies of the present resolution and the text of the amendments contained in the Annex;
5. REQUESTS FURTHER the Secretary-General to transmit to the Members of the Organization which are not Parties to MARPOL 73/78 copies of the present resolution and its Annex.

ANNEX

**AMENDMENTS TO MARPOL ANNEX IV**

1 *New paragraphs 5bis, 7bis, and 7ter are added to regulation 1:*

"5bis *Special area* means a sea area where for recognized technical reasons in relation to its oceanographical and ecological condition and to the particular character of its traffic the adoption of special mandatory methods for the prevention of sea pollution by sewage is required.

The special areas are:

- .1 the Baltic Sea area as defined in regulation 1.11.2 of Annex I; and
- .2 any other sea area designated by the Organization in accordance with criteria and procedures for designation of special areas with respect to prevention of pollution by sewage<sup>1</sup>.

7bis *A passenger* means every person other than:

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

7ter *A passenger ship* means a ship which carries more than twelve passengers.

For the application of regulation 11.3, a *new passenger ship* is a passenger ship:

- .1 for which the building contract is placed, or in the absence of a building contract, the keel of which is laid, or which is in a similar stage of construction, on or after 1 January 2016; or
- .2 the delivery of which is two years or more after 1 January 2016.

*An existing passenger ship* is a passenger ship which is not a new passenger ship."

2 *New paragraph 2 is added to regulation 9:*

"2 By derogation from paragraph 1, every passenger ship which, in accordance with regulation 2, is required to comply with the provisions of this Annex, and for which regulation 11.3 applies while in a special area, shall be equipped with one of the following sewage systems:

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<sup>1</sup> Refer to Assembly resolution A.927(22), Guidelines for the designation of special areas under MARPOL 73/78 and guidelines for the identification and designation of particularly sensitive sea areas.

- .1 a sewage treatment plant which shall be of a type approved by the Administration, taking into account the standards and test methods developed by the Organization,<sup>2</sup> or
- .2 a holding tank of the capacity to the satisfaction of the Administration for the retention of all sewage, having regard to the operation of the ship, the number of persons on board and other relevant factors. The holding tank shall be constructed to the satisfaction of the Administration and shall have a means to indicate visually the amount of its contents."

3 *Regulation 11 is replaced by the following:*

**Regulation 11**

*Discharge of sewage*

"A *Discharge of sewage from ships other than passenger ships in all areas and discharge of sewage from passenger ships outside special areas*

1 Subject to the provisions of regulation 3 of this Annex, the discharge of sewage into the sea is prohibited, except when:

- .1 the ship is discharging comminuted and disinfected sewage using a system approved by the Administration in accordance with regulation 9.1.2 of this Annex at a distance of more than 3 nautical miles from the nearest land, or sewage which is not comminuted or disinfected at a distance of more than 12 nautical miles from the nearest land, provided that, in any case, the sewage that has been stored in holding tanks, or sewage originating from spaces containing living animals, shall not be discharged instantaneously but at a moderate rate when the ship is *en route* and proceeding at not less than 4 knots; the rate of discharge shall be approved by the Administration based upon standards developed by the Organization<sup>3</sup>; or
- .2 the ship has in operation an approved sewage treatment plant which has been certified by the Administration to meet the operational requirements referred to in regulation 9.1.1 of this Annex, and the effluent shall not produce visible floating solids nor cause discoloration of the surrounding water.

2 The provisions of paragraph 1 shall not apply to ships operating in the waters under the jurisdiction of a State and visiting ships from other States while they are in these waters and are discharging sewage in accordance with such less stringent requirements as may be imposed by such State.

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<sup>2</sup> Refer to the [draft 2012] Guidelines on Implementation of Effluent Standards and Performance Tests for Sewage Treatment Plants adopted by the Marine Environment Protection Committee of the Organization by [resolution MEPC....].

<sup>3</sup> Refer to the Recommendation on standards for the rate of discharge of untreated sewage from ships adopted by the Marine Environmental Protection Committee of the Organization by resolution MEPC.157(55).

*B Discharge of sewage from passenger ships within a special area*

3 Subject to the provisions of regulation 3 of this Annex, the discharge of sewage from a passenger ship within a special area shall be prohibited:

- a) for new passenger ships on, or after 1 January 2016, subject to regulation 12*bis*, subparagraph 2; and
- b) for existing passenger ships on, or after 1 January 2018, subject to regulation 12*bis*, subparagraph 2,

except when the following conditions are satisfied:

the ship has in operation an approved sewage treatment plant which has been certified by the Administration to meet the operational requirements referred to in regulation 9.2.1 of this Annex, and the effluent shall not produce visible floating solids nor cause discoloration of the surrounding water.

*C General requirements*

4 When the sewage is mixed with wastes or waste water covered by other Annexes of MARPOL, the requirements of those Annexes shall be complied with in addition to the requirements of this Annex."

4 *New regulation 12bis is added as follows:*

**"12bis Reception facilities for passenger ships in Special Areas**

.1 Each Party, the coastline of which borders a special area, undertakes to ensure that:

- .1 facilities for the reception of sewage are provided in ports and terminals which are in a special area and which are used by passenger ships;
- .2 the facilities are adequate to meet the needs of those passenger ships; and
- .3 the facilities are operated so as not to cause undue delay to those passenger ships.

.2 The Government of each Party concerned shall notify the Organization of the measures taken pursuant to subparagraph .1 of this regulation. Upon receipt of sufficient notifications in accordance with subparagraph .1 the Organization shall establish a date from which the requirements of regulation 11.3 in respect of the area in question shall take effect. The Organization shall notify all Parties of the date so established no less than twelve months in advance of that date. Until the date so established, ships while navigating in the special area shall comply with the requirements of regulation 11.1 of this Annex."

**AMENDMENTS TO THE  
FORM OF INTERNATIONAL SEWAGE POLLUTION PREVENTION CERTIFICATE**

1 *The following text is added under the heading "Particulars of ship":*

Type of ship for the application of regulation 11.3:<sup>\*</sup>

New/Existing passenger ship

Ship other than a passenger ship

2 *Amend paragraph <sup>\*</sup>1.1. to read as follows:*

<sup>\*</sup>1.1. Description of the sewage treatment plant:

Type of sewage treatment plant .....

Name of manufacturer .....

The sewage treatment plant is certified by the Administration to meet the effluent standards as provided for in resolution MEPC.2(VI).

The sewage treatment plant is certified by the Administration to meet the effluent standards as provided for in resolution MEPC.159(55).

The sewage treatment plant is certified by the Administration to meet the effluent standards as provided for in [resolution MEPC....].<sup>§</sup>

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\* Delete as appropriate.

§ The number of the MEPC resolution will be inserted when the standards have been adopted by the MEPC at a future session.

**ANNEX 13**

**RESOLUTION MEPC.201(62)**

**Adopted on 15 July 2011**

**AMENDMENTS TO THE ANNEX OF THE PROTOCOL OF 1978 RELATING TO  
THE INTERNATIONAL CONVENTION FOR THE PREVENTION OF  
POLLUTION FROM SHIPS, 1973**

**(Revised MARPOL Annex V)**

THE MARINE ENVIRONMENT PROTECTION COMMITTEE,

RECALLING article 38(a) of the Convention on the International Maritime Organization concerning the functions of the Marine Environment Protection Committee (the Committee) conferred upon it by international conventions for the prevention and control of marine pollution,

NOTING article 16 of the International Convention for the Prevention of Pollution from Ships, 1973 (hereinafter referred to as the "1973 Convention") and article VI of the Protocol of 1978 relating to the International Convention for the Prevention of Pollution from Ships, 1973 (hereinafter referred to as the "1978 Protocol") which together specify the amendment procedure of the 1978 Protocol and confer upon the appropriate body of the Organization the function of considering and adopting amendments to the 1973 Convention, as modified by the 1978 Protocol (MARPOL 73/78),

HAVING CONSIDERED draft amendments to Annex V of MARPOL 73/78,

1. ADOPTS, in accordance with article 16(2)(d) of the 1973 Convention, the amendments to Annex V of MARPOL 73/78, the text of which is set out at annex to the present resolution;
2. DETERMINES, in accordance with article 16(2)(f)(iii) of the 1973 Convention, that the amendments shall be deemed to have been accepted on 1 July 2012 unless, prior to that date, not less than one third of the Parties or Parties the combined merchant fleets of which constitute not less than 50 per cent of the gross tonnage of the world's merchant fleet, have communicated to the Organization their objection to the amendments;
3. INVITES the Parties to note that, in accordance with article 16(2)(g)(ii) of the 1973 Convention, the said amendments shall enter into force on 1 January 2013 upon their acceptance in accordance with paragraph 2 above;
4. REQUESTS the Secretary-General, in conformity with article 16(2)(e) of the 1973 Convention, to transmit to all Parties to MARPOL 73/78 certified copies of the present resolution and the text of the amendments contained in the Annex;
5. REQUESTS FURTHER the Secretary-General to transmit to the Members of the Organization which are not Parties to MARPOL 73/78 copies of the present resolution and its Annex.

ANNEX

**REVISED MARPOL ANNEX V**

**REGULATIONS FOR THE PREVENTION OF POLLUTION BY GARBAGE FROM SHIPS**

**Regulation 1**

*Definitions*

For the purposes of this Annex:

- 1 *Animal carcasses* means the bodies of any animals that are carried on board as cargo and that die or are euthanized during the voyage.
- 2 *Cargo residues* means the remnants of any cargo which are not covered by other Annexes to the present Convention and which remain on the deck or in holds following loading or unloading, including loading and unloading excess or spillage, whether in wet or dry condition or entrained in wash water but does not include cargo dust remaining on the deck after sweeping or dust on the external surfaces of the ship.
- 3 *Cooking oil* means any type of edible oil or animal fat used or intended to be used for the preparation or cooking of food, but does not include the food itself that is prepared using these oils.
- 4 *Domestic wastes* means all types of wastes not covered by other Annexes that are generated in the accommodation spaces on board the ship. Domestic wastes does not include grey water.
- 5 *En route* means that the ship is underway at sea on a course or courses, including deviation from the shortest direct route, which as far as practicable for navigational purposes, will cause any discharge to be spread over as great an area of the sea as is reasonable and practicable.
- 6 *Fishing gear* means any physical device or part thereof or combination of items that may be placed on or in the water or on the sea-bed with the intended purpose of capturing, or controlling for subsequent capture or harvesting, marine or fresh water organisms.
- 7 *Fixed or floating platforms* means fixed or floating structures located at sea which are engaged in the exploration, exploitation or associated offshore processing of sea-bed mineral resources.
- 8 *Food wastes* means any spoiled or unspoiled food substances and includes fruits, vegetables, dairy products, poultry, meat products and food scraps generated aboard ship.
- 9 *Garbage* means all kinds of food wastes, domestic wastes and operational wastes, all plastics, cargo residues, cooking oil, fishing gear, and animal carcasses generated during the normal operation of the ship and liable to be disposed of continuously or periodically except those substances which are defined or listed in other Annexes to the present Convention. Garbage does not include fresh fish and parts thereof generated as a result of fishing activities undertaken during the voyage, or as a result of aquaculture activities which involve the transport of fish

including shellfish for placement in the aquaculture facility and the transport of harvested fish including shellfish from such facilities to shore for processing.

- 10 *Incinerator ashes* means ash and clinkers resulting from shipboard incinerators used for the incineration of garbage.
- 11 *Nearest land.* The term "from the nearest land" means from the baseline from which the territorial sea of the territory in question is established in accordance with international law, except that, for the purposes of the present Annex, "from the nearest land" off the north-eastern coast of Australia shall mean from a line drawn from a point on the coast of Australia in:
- latitude 11°00' S, longitude 142°08' E  
to a point in latitude 10°35' S, longitude 141°55' E,  
thence to a point latitude 10°00' S, longitude 142°00' E,  
thence to a point latitude 09°10' S, longitude 143°52' E,  
thence to a point latitude 09°00' S, longitude 144°30' E,  
thence to a point latitude 10°41' S, longitude 145°00' E,  
thence to a point latitude 13°00' S, longitude 145°00' E,  
thence to a point latitude 15°00' S, longitude 146°00' E,  
thence to a point latitude 17°30' S, longitude 147°00' E,  
thence to a point latitude 21°00' S, longitude 152°55' E,  
thence to a point latitude 24°30' S, longitude 154°00' E,  
thence to a point on the coast of Australia in  
latitude 24°42' S, longitude 153°15' E.
- 12 *Operational wastes* means all solid wastes (including slurries) not covered by other Annexes that are collected on board during normal maintenance or operations of a ship, or used for cargo stowage and handling. Operational wastes also includes cleaning agents and additives contained in cargo hold and external wash water. Operational wastes does not include grey water, bilge water, or other similar discharges essential to the operation of a ship, taking into account the guidelines developed by the Organization.
- 13 *Plastic* means a solid material which contains as an essential ingredient one or more high molecular mass polymers and which is formed (shaped) during either manufacture of the polymer or the fabrication into a finished product by heat and/or pressure. Plastics have material properties ranging from hard and brittle to soft and elastic. For the purposes of this annex, "all plastics" means all garbage that consists of or includes plastic in any form, including synthetic ropes, synthetic fishing nets, plastic garbage bags and incinerator ashes from plastic products.
- 14 *Special area* means a sea area where for recognized technical reasons in relation to its oceanographic and ecological condition and to the particular character of its traffic the adoption of special mandatory methods for the prevention of sea pollution by garbage is required.

For the purposes of this Annex the special areas are the Mediterranean Sea area, the Baltic Sea area, the Black Sea area, the Red Sea area, the Gulfs area, the North Sea area, the Antarctic area and the Wider Caribbean Region, which are defined as follows:

- .1 The Mediterranean Sea area means the Mediterranean Sea proper including the gulfs and seas therein with the boundary between the Mediterranean and the Black Sea constituted by the 41° N parallel and bounded to the west by the Straits of Gibraltar at the meridian 5°36' W.



- .2 The Baltic Sea area means the Baltic Sea proper with the Gulf of Bothnia and the Gulf of Finland and the entrance to the Baltic Sea bounded by the parallel of the Skaw in the Skagerrak at 57° 44.8' N.
- .3 The Black Sea area means the Black Sea proper with the boundary between the Mediterranean and the Black Sea constituted by the parallel 41° N.
- .4 The Red Sea area means the Red Sea proper including the Gulfs of Suez and Aqaba bounded at the south by the rhumb line between Ras si Ane (12° 28.5' N, 43° 19.6' E) and Husn Murad (12° 40.4' N, 43° 30.2' E).
- .5 The Gulfs area means the sea area located north-west of the rhumb line between Ras al Hadd (22° 30' N, 59° 48' E) and Ras al Fasteh (25° 04' N, 61° 25' E).
- .6 The North Sea area means the North Sea proper including seas therein with the boundary between:
  - .1 the North Sea southwards of latitude 62° N and eastwards of longitude 4° W;
  - .2 the Skagerrak, the southern limit of which is determined east of the Skaw by latitude 57° 44.8' N; and
  - .3 the English Channel and its approaches eastwards of longitude 5° W and northwards of latitude 48° 30' N.
- .7 The Antarctic area means the sea area south of latitude 60° S.
- .8 The Wider Caribbean Region means the Gulf of Mexico and Caribbean Sea proper including the bays and seas therein and that portion of the Atlantic Ocean within the boundary constituted by the 30° N parallel from Florida eastward to 77°30' W meridian, thence a rhumb line to the intersection of 20° N parallel and 59° W meridian, thence a rhumb line to the intersection of 7°20' N parallel and 50° W meridian, thence a rhumb line drawn southwesterly to the eastern boundary of French Guiana.

## **Regulation 2**

### *Application*

Unless expressly provided otherwise, the provisions of this Annex shall apply to all ships.

## **Regulation 3**

### *General prohibition on discharge of garbage into the sea*

- 1 Discharge of all garbage into the sea is prohibited, except as provided otherwise in regulations 4, 5, 6 and 7 of this Annex.
- 2 Except as provided in regulation 7 of this Annex, discharge into the sea of all plastics, including but not limited to synthetic ropes, synthetic fishing nets, plastic garbage bags and incinerator ashes from plastic products is prohibited.
- 3 Except as provided in regulation 7 of this Annex, the discharge into the sea of cooking oil is prohibited.

#### **Regulation 4**

##### *Discharge of garbage outside special areas*

1 Subject to the provisions of regulations 5, 6, and 7 of this Annex, discharge of the following garbage into the sea outside special areas shall only be permitted while the ship is en route and as far as practicable from the nearest land, but in any case not less than:

- .1 3 nautical miles from the nearest land for food wastes which have been passed through a comminuter or grinder. Such comminuted or ground food wastes shall be capable of passing through a screen with openings no greater than 25 mm.
- .2 12 nautical miles from the nearest land for food wastes that have not been treated in accordance with subparagraph .1 above.
- .3 12 nautical miles from the nearest land for cargo residues that cannot be recovered using commonly available methods for unloading. These cargo residues shall not contain any substances classified as harmful to the marine environment, taking into account guidelines developed by the Organization.
- .4 For animal carcasses, discharge shall occur as far from the nearest land as possible, taking into account the guidelines developed by the Organization.

2 Cleaning agents or additives contained in cargo hold, deck and external surfaces wash water may be discharged into the sea, but these substances must not be harmful to the marine environment, taking into account guidelines developed by the Organization.

3 When garbage is mixed with or contaminated by other substances prohibited from discharge or having different discharge requirements, the more stringent requirements shall apply.

#### **Regulation 5**

##### *Special requirements for discharge of garbage from fixed or floating platforms*

1 Subject to the provisions of paragraph 2 of this regulation, the discharge into the sea of any garbage is prohibited from fixed or floating platforms and from all other ships when alongside or within 500 m of such platforms.

2 Food wastes may be discharged into the sea from fixed or floating platforms located more than 12 nautical miles from the nearest land and from all other ships when alongside or within 500 m of such platforms, but only when the wastes have been passed through a comminuter or grinder. Such comminuted or ground food wastes shall be capable of passing through a screen with openings no greater than 25 mm.

#### **Regulation 6**

##### *Discharge of garbage within special areas*

1 Discharge of the following garbage into the sea within special areas shall only be permitted while the ship is en route and as follows:

- .1 Discharge into the sea of food wastes as far as practicable from the nearest land, but not less than 12 nautical miles from the nearest land or the nearest ice shelf. Food wastes shall be comminuted or ground and shall be capable

of passing through a screen with openings no greater than 25 mm. Food wastes shall not be contaminated by any other garbage type. Discharge of introduced avian products, including poultry and poultry parts, is not permitted in the Antarctic area unless it has been treated to be made sterile.

.2 Discharge of cargo residues that cannot be recovered using commonly available methods for unloading, where all the following conditions are satisfied:

.1 Cargo residues, cleaning agents or additives, contained in hold washing water do not include any substances classified as harmful to the marine environment, taking into account guidelines developed by the Organization;

.2 Both the port of departure and the next port of destination are within the special area and the ship will not transit outside the special area between those ports;

.3 No adequate reception facilities are available at those ports taking into account guidelines developed by the Organization; and

.4 Where the conditions of subparagraphs 2.1, 2.2 and 2.3 of this paragraph have been fulfilled, discharge of cargo hold washing water containing residues shall be made as far as practicable from the nearest land or the nearest ice shelf and not less than 12 nautical miles from the nearest land or the nearest ice shelf.

2 Cleaning agents or additives contained in deck and external surfaces wash water may be discharged into the sea, but only if these substances are not harmful to the marine environment, taking into account guidelines developed by the Organization.

3 The following rules (in addition to the rules in paragraph 1 of this regulation) apply with respect to the Antarctic area:

.1 Each Party at whose ports ships depart en route to or arrive from the Antarctic area undertakes to ensure that as soon as practicable adequate facilities are provided for the reception of all garbage from all ships, without causing undue delay, and according to the needs of the ships using them.

.2 Each Party shall ensure that all ships entitled to fly its flag, before entering the Antarctic area, have sufficient capacity on board for the retention of all garbage, while operating in the area and have concluded arrangements to discharge such garbage at a reception facility after leaving the area.

4 When garbage is mixed with or contaminated by other substances prohibited from discharge or having different discharge requirements, the more stringent requirements shall apply.

**Regulation 7**  
*Exceptions*

- 1 Regulations 3, 4, 5 and 6 of this Annex shall not apply to:
  - .1 The discharge of garbage from a ship necessary for the purpose of securing the safety of a ship and those on board or saving life at sea; or
  - .2 The accidental loss of garbage resulting from damage to a ship or its equipment, provided that all reasonable precautions have been taken before and after the occurrence of the damage, to prevent or minimize the accidental loss; or
  - .3 The accidental loss of fishing gear from a ship provided that all reasonable precautions have been taken to prevent such loss; or
  - .4 The discharge of fishing gear from a ship for the protection of the marine environment or for the safety of that ship or its crew.
- 2 Exception of *en route*:
  - .1 The *en route* requirements of regulations 4 and 6 shall not apply to the discharge of food wastes where it is clear the retention on board of these food wastes presents an imminent health risk to the people on board.

**Regulation 8**  
*Reception facilities*

- 1 Each Party undertakes to ensure the provision of adequate facilities at ports and terminals for the reception of garbage without causing undue delay to ships, and according to the needs of the ships using them.
- 2 Each Party shall notify the Organization for transmission to the Contracting Parties concerned of all cases where the facilities provided under this regulation are alleged to be inadequate.
- 3 Reception facilities within special areas
  - .1 Each Party, the coastline of which borders a special area, undertakes to ensure that as soon as possible, in all ports and terminals within the special area, adequate reception facilities are provided, taking into account the needs of ships operating in these areas.
  - .2 Each Party concerned shall notify the Organization of the measures taken pursuant to subparagraph 3.1 of this regulation. Upon receipt of sufficient notifications the Organization shall establish a date from which the requirements of regulation 6 of this Annex in respect of the area in question are to take effect. The Organization shall notify all Parties of the date so established no less than twelve months in advance of that date. Until the date so established, ships that are navigating in a special area shall comply with the requirements of regulation 4 of this Annex as regards discharges outside special areas.

## **Regulation 9**

### *Port State control on operational requirements<sup>1</sup>*

1 A ship when in a port or an offshore terminal of another Party is subject to inspection by officers duly authorized by such Party concerning operational requirements under this Annex, where there are clear grounds for believing that the master or crew are not familiar with essential shipboard procedures relating to the prevention of pollution by garbage.

2 In the circumstances given in paragraph 1 of this regulation, the Party shall take such steps as will ensure that the ship shall not sail until the situation has been brought to order in accordance with the requirements of this Annex.

3 Procedures relating to the port State control prescribed in article 5 of the present Convention shall apply to this regulation.

4 Nothing in this regulation shall be construed to limit the rights and obligations of a Party carrying out control over operational requirements specifically provided for in the present Convention.

## **Regulation 10**

### *Placards, garbage management plans<sup>2</sup> and garbage record-keeping*

1 .1 Every ship of 12 m or more in length overall and fixed or floating platforms shall display placards which notify the crew and passengers of the discharge requirements of regulations 3, 4, 5 and 6 of this Annex, as applicable.

.2 The placards shall be written in the working language of the ship's crew and, for ships engaged in voyages to ports or offshore terminals under the jurisdiction of other Parties to the Convention, shall also be in English, French or Spanish.

2 Every ship of 100 gross tonnage and above, and every ship which is certified to carry 15 or more persons, and fixed or floating platforms shall carry a garbage management plan which the crew shall follow. This plan shall provide written procedures for minimizing, collecting, storing, processing and disposing of garbage, including the use of the equipment on board. It shall also designate the person or persons in charge of carrying out the plan. Such a plan shall be based on the guidelines developed by the Organization<sup>2</sup> and written in the working language of the crew.

3 Every ship of 400 gross tonnage and above and every ship which is certified to carry 15 or more persons engaged in voyages to ports or offshore terminals under the jurisdiction of another Party to the Convention and every fixed or floating platform shall be provided with a Garbage Record Book. The Garbage Record Book, whether as a part of the ship's official log-book or otherwise, shall be in the form specified in the appendix to this Annex:

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<sup>1</sup> Refer to the Procedures for port State control adopted by the Organization by resolution A.787(19) and amended by A.882(21); see IMO sales publication IA650E.

<sup>2</sup> Refer to the Guidelines for the development of garbage management plans adopted by the Marine Environment Protection Committee of the Organization by resolution MEPC.71(38); see MEPC/Circ.317 and IMO sales publication IA656E.

- .1 Each discharge into the sea or to a reception facility, or a completed incineration, shall be promptly recorded in the Garbage Record Book and signed for on the date of the discharge or incineration by the officer in charge. Each completed page of the Garbage Record Book shall be signed by the master of the ship. The entries in the Garbage Record Book shall be at least in English, French or Spanish. Where the entries are also made in an official language of the State whose flag the ship is entitled to fly, the entries in that language shall prevail in case of a dispute or discrepancy;
  - .2 The entry for each discharge or incineration shall include date and time, position of the ship, category of the garbage and the estimated amount discharged or incinerated;
  - .3 The Garbage Record Book shall be kept on board the ship or the fixed or floating platform, and in such a place as to be readily available for inspection at all reasonable times. This document shall be preserved for a period of at least two years from the date of the last entry made in it;
  - .4 In the event of any discharge or accidental loss referred to in regulation 7 of this Annex an entry shall be made in the Garbage Record Book, or in the case of any ship of less than 400 gross tonnage, an entry shall be made in the ship's official log-book, of the location, circumstances of, and the reasons for the discharge or loss, details of the items discharged or lost, and the reasonable precautions taken to prevent or minimize such discharge or accidental loss.
- 4 The Administration may waive the requirements for Garbage Record Books for:
- .1 Any ship engaged on voyages of one (1) hour or less in duration which is certified to carry 15 or more persons; or
  - .2 Fixed or floating platforms.
- 5 The competent authority of the Government of a Party to the Convention may inspect the Garbage Record Books or ship's official log-book on board any ship to which this regulation applies while the ship is in its ports or offshore terminals and may make a copy of any entry in those books, and may require the master of the ship to certify that the copy is a true copy of such an entry. Any copy so made, which has been certified by the master of the ship as a true copy of an entry in the ship's Garbage Record Book or ship's official log-book, shall be admissible in any judicial proceedings as evidence of the facts stated in the entry. The inspection of a Garbage Record Book or ship's official log-book and the taking of a certified copy by the competent authority under this paragraph shall be performed as expeditiously as possible without causing the ship to be unduly delayed.
- 6 The accidental loss or discharge of fishing gear as provided for in regulations 7.1.3 and 7.1.3*bis* which poses a significant threat to the marine environment or navigation shall be reported to the State whose flag the ship is entitled to fly, and, where the loss or discharge occurs within waters subject to the jurisdiction of a coastal State, also to that coastal State.

**APPENDIX**  
**FORM OF GARBAGE RECORD BOOK**

Name of ship: \_\_\_\_\_

Distinctive number or letters: \_\_\_\_\_

IMO No.: \_\_\_\_\_

Period: \_\_\_\_\_ From: \_\_\_\_\_ To: \_\_\_\_\_

### **1 Introduction**

In accordance with regulation 10 of Annex V of the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 (MARPOL), a record is to be kept of each discharge operation or completed incineration. This includes discharges into the sea, to reception facilities, or to other ships, as well as the accidental loss of garbage.

### **2 Garbage and garbage management**

*Garbage* means all kinds of food wastes, domestic wastes and operational wastes, all plastics, cargo residues, cooking oil, fishing gear, and animal carcasses generated during the normal operation of the ship and liable to be disposed of continuously or periodically except those substances which are defined or listed in other Annexes to the present Convention. Garbage does not include fresh fish and parts thereof generated as a result of fishing activities undertaken during the voyage, or as a result of aquaculture activities which involve the transport of fish including shellfish for placement in the aquaculture facility and the transport of harvested fish including shellfish from such facilities to shore for processing.

The Guidelines for the Implementation of Annex V of MARPOL<sup>3</sup> should also be referred to for relevant information.

### **3 Description of the garbage**

Garbage is to be grouped into categories for the purposes of the Garbage Record Book (or ship's official log-book) as follows:

- A      Plastics
- B      Food wastes
- C      Domestic Wastes
- D      Cooking Oil
- E      Incinerator ashes
- F      Operational wastes

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<sup>3</sup> Refer to the Guidelines for the Implementation of Annex V of MARPOL 73/78, as amended by resolutions.

- G Cargo residues
- H Animal Carcass(es)
- I Fishing Gear<sup>4</sup>

#### **4 Entries in the Garbage Record Book**

4.1 Entries in the Garbage Record Book shall be made on each of the following occasions:

4.1.1 When garbage is discharged to a reception facility<sup>5</sup> ashore or to other ships:

- .1 Date and time of discharge
- .2 Port or facility, or name of ship
- .3 Categories of garbage discharged
- .4 Estimated amount discharged for each category in cubic metres
- .5 Signature of officer in charge of the operation.

4.1.2 When garbage is incinerated:

- .1 Date and time of start and stop of incineration
- .2 Position of the ship (latitude and longitude) at the start and stop of incineration
- .3 Categories of garbage incinerated
- .4 Estimated amount incinerated in cubic metres
- .5 Signature of the officer in charge of the operation.

4.1.3 When garbage is discharged into the sea in accordance with regulations 4, 5 or 6 of Annex V of MARPOL:

- .1 Date and time of discharge
- .2 Position of the ship (latitude and longitude). Note: for cargo residue discharges, include discharge start and stop positions.
- .3 Category of garbage discharged
- .4 Estimated amount discharged for each category in cubic metres
- .5 Signature of the officer in charge of the operation.

4.1.4 Accidental or other exceptional discharges or loss of garbage into the sea, including in accordance with regulation 7 of Annex V of MARPOL:

- .1 Date and time of occurrence
- .2 Port or position of the ship at time of occurrence (latitude, longitude and water depth if known)
- .3 Categories of garbage discharged or lost
- .4 Estimated amount for each category in cubic metres
- .5 The reason for the discharge or loss and general remarks.

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<sup>4</sup> Refer to Guidelines to be developed by the Organization.

<sup>5</sup> Ship's masters should obtain from the operator of the reception facilities, which includes barges and trucks, a receipt or certificate specifying the estimated amount of garbage transferred. The receipts or certificates must be kept together with the Garbage Record Book.



4.2 Amount of garbage

The amount of garbage on board should be estimated in cubic metres, if possible separately according to category. The Garbage Record Book contains many references to estimated amount of garbage. It is recognized that the accuracy of estimating amounts of garbage is left to interpretation. Volume estimates will differ before and after processing. Some processing procedures may not allow for a usable estimate of volume, e.g., the continuous processing of food waste. Such factors should be taken into consideration when making and interpreting entries made in a record.

**RECORD OF GARBAGE DISCHARGES**

Ship's name: \_\_\_\_\_

Distinctive No., or letters: \_\_\_\_\_

IMO No.: \_\_\_\_\_

Garbage categories:

- A. Plastics
- B. Food wastes
- C. Domestic wastes (e.g., paper products, rags, glass, metal, bottles, crockery, etc.)
- D. Cooking oil
- E. Incinerator Ashes
- F. Operational wastes
- G. Cargo residues
- H. Animal Carcass(es)
- I. Fishing gear

**NEW TABLE LAYOUT AS BELOW:**

Date/ Time	Position of the Ship/Remarks (e.g., accidental loss)	Category	Estimated Amount Discharged or Incinerated	To Sea	To Reception Facility	Incineration	Certification/ Signature

Master's signature: \_\_\_\_\_ Date: \_\_\_\_\_

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**ANNEX 14**

**RESOLUTION MEPC.202(62)**

**Adopted on 15 July 2011**

**AMENDMENTS TO THE ANNEX OF THE PROTOCOL OF 1997 TO AMEND THE  
INTERNATIONAL CONVENTION FOR THE PREVENTION OF POLLUTION FROM  
SHIPS, 1973, AS MODIFIED BY THE PROTOCOL OF 1978 RELATING THERETO**

**(Designation of the United States Caribbean Sea Emission Control Area and  
exemption of certain ships operating in the North American Emission Control Area  
and the United States Caribbean Sea Emission Control Area  
under regulations 13 and 14 and Appendix VII of MARPOL Annex VI)**

THE MARINE ENVIRONMENT PROTECTION COMMITTEE,

RECALLING Article 38(a) of the Convention on the International Maritime Organization concerning the functions of the Marine Environment Protection Committee (the Committee) conferred upon it by international conventions for the prevention and control of marine pollution,

NOTING article 16 of the International Convention for the Prevention of Pollution from Ships, 1973 (hereinafter referred to as the "1973 Convention"), article VI of the Protocol of 1978 relating to the International Convention for the Prevention of Pollution from Ships, 1973 (hereinafter referred to as the "1978 Protocol") and article 4 of the Protocol of 1997 to amend the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto (hereinafter referred to as the "1997 Protocol"), which together specify the amendment procedure of the 1997 Protocol and confer upon the appropriate body of the Organization the function of considering and adopting amendments to the 1973 Convention, as modified by the 1978 and 1997 Protocols,

NOTING ALSO that, by the 1997 Protocol, Annex VI entitled Regulations for the Prevention of Air Pollution from Ships was added to the 1973 Convention (hereinafter referred to as "Annex VI"),

NOTING FURTHER that the revised Annex VI was adopted by resolution MEPC.176(58) and entered into force on 1 July 2010,

HAVING CONSIDERED draft amendments to the revised Annex VI,

1. ADOPTS, in accordance with article 16(2)(d) of the 1973 Convention, the amendments to Annex VI, the text of which is set out at annex to the present resolution;
2. DETERMINES, in accordance with article 16(2)(f)(iii) of the 1973 Convention, that the amendments shall be deemed to have been accepted on 1 July 2012, unless prior to that date, not less than one third of the Parties or Parties the combined merchant fleets of which constitute not less than 50 per cent of the gross tonnage of the world's merchant fleet, have communicated to the Organization their objection to the amendments;
3. INVITES the Parties to note that, in accordance with article 16(2)(g)(ii) of the 1973 Convention, the said amendments shall enter into force on 1 January 2013 upon their acceptance in accordance with paragraph 2 above;

4. REQUESTS the Secretary-General, in conformity with article 16(2)(e) of the 1973 Convention, to transmit to all Parties to the 1973 Convention, as modified by the 1978 and 1997 Protocols, certified copies of the present resolution and the text of the amendments contained in the Annex;

5. REQUESTS FURTHER the Secretary-General to transmit to the Members of the Organization which are not Parties to the 1973 Convention, as modified by the 1978 and 1997 Protocols, copies of the present resolution and its Annex.

ANNEX

**AMENDMENTS TO REGULATIONS 13 AND 14 AND APPENDIX VII  
OF THE REVISED MARPOL ANNEX VI**

1 Paragraph 6 of regulation 13 is replaced by the following:

- "6 For the purpose of this regulation, emission control areas shall be:
- .1 the North American area, which means the area described by the coordinates provided in Appendix VII to this Annex;
  - .2 the United States Caribbean Sea area, which means the area described by the coordinates provided in Appendix VII to this Annex; and
  - .3 any other sea area, including any port area, designated by the Organization in accordance with the criteria and procedures set forth in Appendix III to this Annex."

2 Paragraph 7.3 of regulation 13 is amended to read as follows:

"7.3 With regard to a marine diesel engine with a power output of more than 5,000 kW and a per cylinder displacement at or above 90 litres installed on a ship constructed on or after 1 January 1990 but prior to 1 January 2000, the International Air Pollution Prevention Certificate shall, for a marine diesel engine to which paragraph 7.1 of this regulation applies, indicate that either an approved method has been applied pursuant to paragraph 7.1.1 of this regulation or the engine has been certified pursuant to paragraph 7.1.2 of this regulation or that an approved method does not yet exist or is not yet commercially available as described in paragraph 7.2 of this regulation."

3 Paragraph 3 of regulation 14 is replaced by the following:

- "3 For the purpose of this regulation, emission control areas shall include:
- .1 the Baltic Sea area as defined in regulation 1.11.2 of Annex I and the North Sea area as defined in regulation 1.12.6 of Annex V;
  - .2 the North American area as described by the coordinates provided in Appendix VII to this Annex;
  - .3 the United States Caribbean Sea area as described by the coordinates provided in Appendix VII to this Annex; and
  - .4 any other sea area, including any port area, designated by the Organization in accordance with the criteria and procedures set forth in Appendix III to this Annex."

- 4 A new subparagraph 4 is added to paragraph 4 of regulation 14 to read as follows:
- "4 Prior to 1 January 2020, the sulphur content of fuel oil referred to in paragraph 4 of this regulation shall not apply to ships operating in the North American area or the United States Caribbean Sea area defined in paragraph 3, built on or before 1 August 2011 that are powered by propulsion boilers that were not originally designed for continued operation on marine distillate fuel or natural gas."
- 5 Paragraph 7 of regulation 14 is replaced by the following:
- "7 During the first twelve months immediately following entry into force of an amendment designating a specific emission control area under paragraph 3 of this regulation, ships operating in that emission control area are exempt from the requirements in paragraphs 4 and 6 of this regulation and from the requirements of paragraph 5 of this regulation insofar as they relate to paragraph 4 of this regulation<sup>1</sup>."

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<sup>1</sup> The 12 month exemption provided by paragraph 7 will apply for the North American emission control area until 1 August 2012.

The 12 month exemption provided by paragraph 7 will apply for the United States Caribbean Sea emission control area until 1 January 2014.

6 Appendix VII is amended as follows:

**"Appendix VII  
Emission Control Areas  
(regulation 13.6 and regulation 14.3)**

- .1 The boundaries of emission control areas designated under regulations 13.6 and 14.3, other than the Baltic Sea and the North Sea areas, are set forth in this appendix.
- .2 (Existing text for the North American area)
- .3 The United States Caribbean Sea area includes:
  - .1 the sea area located off the Atlantic and Caribbean coasts of the Commonwealth of Puerto Rico and the United States Virgin Islands, enclosed by geodesic lines connecting the following coordinates:

POINT	LATITUDE	LONGITUDE			
1	17° 18' 37" N.	67° 32' 14" W.	28	18° 22' 22" N.	64° 38' 23" W.
2	19° 11' 14" N.	67° 26' 45" W.	29	18° 21' 57" N.	64° 40' 60" W.
3	19° 30' 28" N.	65° 16' 48" W.	30	18° 21' 51" N.	64° 40' 15" W.
4	19° 12' 25" N.	65° 6' 8" W.	31	18° 21' 22" N.	64° 38' 16" W.
5	18° 45' 13" N.	65° 0' 22" W.	32	18° 20' 39" N.	64° 38' 33" W.
6	18° 41' 14" N.	64° 59' 33" W.	33	18° 19' 15" N.	64° 38' 14" W.
7	18° 29' 22" N.	64° 53' 51" W.	34	18° 19' 7" N.	64° 38' 16" W.
8	18° 27' 35" N.	64° 53' 22" W.	35	18° 17' 23" N.	64° 39' 38" W.
9	18° 25' 21" N.	64° 52' 39" W.	36	18° 16' 43" N.	64° 39' 41" W.
10	18° 24' 30" N.	64° 52' 19" W.	37	18° 11' 33" N.	64° 38' 58" W.
11	18° 23' 51" N.	64° 51' 50" W.	38	18° 3' 2" N.	64° 38' 3" W.
12	18° 23' 42" N.	64° 51' 23" W.	39	18° 2' 56" N.	64° 29' 35" W.
13	18° 23' 36" N.	64° 50' 17" W.	40	18° 2' 51" N.	64° 27' 2" W.
14	18° 23' 48" N.	64° 49' 41" W.	41	18° 2' 30" N.	64° 21' 8" W.
15	18° 24' 11" N.	64° 49' 0" W.	42	18° 2' 31" N.	64° 20' 8" W.
16	18° 24' 28" N.	64° 47' 57" W.	43	18° 2' 3" N.	64° 15' 57" W.
17	18° 24' 18" N.	64° 47' 1" W.	44	18° 0' 12" N.	64° 2' 29" W.
18	18° 23' 13" N.	64° 46' 37" W.	45	17° 59' 58" N.	64° 1' 4" W.
19	18° 22' 37" N.	64° 45' 20" W.	46	17° 58' 47" N.	63° 57' 1" W.
20	18° 22' 39" N.	64° 44' 42" W.	47	17° 57' 51" N.	63° 53' 54" W.
21	18° 22' 42" N.	64° 44' 36" W.	48	17° 56' 38" N.	63° 53' 21" W.
22	18° 22' 37" N.	64° 44' 24" W.	49	17° 39' 40" N.	63° 54' 53" W.
23	18° 22' 39" N.	64° 43' 42" W.	50	17° 37' 8" N.	63° 55' 10" W.
24	18° 22' 30" N.	64° 43' 36" W.	51	17° 30' 21" N.	63° 55' 56" W.
25	18° 22' 25" N.	64° 42' 58" W.	52	17° 11' 36" N.	63° 57' 57" W.
26	18° 22' 26" N.	64° 42' 28" W.	53	17° 4' 60" N.	63° 58' 41" W.
27	18° 22' 15" N.	64° 42' 3" W.	54	16° 59' 49" N.	63° 59' 18" W.
			55	17° 18' 37" N.	67° 32' 14" W.

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**Status of BWMS approval**

BWMS Manufacture	BWMS Name	Country	Process	Approval of Active Substances G9		Approval of BWMS G8
				Basic Approval	Final Approval	Country
Alfa-Laval Tumba AG	PureBallast	Sweden	Filtration + UV/TiO2	Approved	Approved	Norway
Ocean Saver AS	OceanSaver	Norway	Filtration + Cavitation + Deoxygenation + Electrolysis	Approved	Approved	Norway
TECHCROSS INC	Electro-Clean	Korea	Electrolysis	Approved	Approved	Korea
Hitachi Plant Technologies, Ltd.	Clear Ballast	Japan	Pre-coagulant(enhanced flocculation)+Filtration	Approved	Approved	Japan
Mitsui Engineering & Shipbuilding Co.,LTD.	Special Pipe Ballast Water Management System combined with Ozone treatment	Japan	Filtration + Ozonation + Cavitation	Approved	Approved	Japan
JFE Engineering Corporation	JFE-BWMS	Japan	Filtration + Chlorination + venturi	Approved	Approved	Japan
RWO	CleanBallast (Ectosys)	Sweden	Filtration+Electrolysis	Approved	Approved	Germany
Resource Ballast Technologies Pty	Resource Ballast Technologies System	South Africa	Cavitation + Electrolysis + Ozonation + Filtration	Approved	Approved	South Africa
PANASIA CO., LTD.	GloEn-Patrol	Korea	Filtration + UV	Approved	Approved	Korea
NK CO., LTD.,	NK O3 Blue Ballast System	Korea	Ozonation	Approved	Approved	Korea
Hamworthy Greenship B.V.	Greenship's Ballast Water Management System	Netherlands	Hydrocyclone + Electrolysis	Approved	Approved	
Ecochlor Inc.	Ecochlor Ballast Water Treatment System	Germany	Filtration + Chlorine dioxide	Approved	Approved	
China Ocean Shipping (Group)Company & Tsinghua University	Blue Ocean Shield Ballast Water Management System	China	Hydrocyclone + Filtration + UV	Approved		
HHI	HHI BWMS (EcoBallast)	Korea	Filtration + UV	Approved	Approved	
Aquaworx ATC	AquaTriComb Ballast Water treatment system	Germany	Filtration + UV	Approved		
Siemens	SiCURE BWMS	Germany	Filtration + Electrolysis	Approved		
Sunrui CFCC	BalClor BWMS	China	Filtration + Electrolysis	Approved	Approved	China

BWMS Manufacture	BWMS Name	Country	Process	Approval of Active Substances G9		Approval of BWMS G8
				Basic Approval	Final Approval	Country
DESMI Ocean Guard A/S	DESMI Ocean Guard BWMS	Denmark	Filtration + Ozone + Cavitation+UV	Approved		
21 <sup>st</sup> Century Shipbuilding Co., Ltd.	ARA Ballast	Korea	Filter + UV + Plasma	Approved	Approved	
HHI	HHI BWMS "HiBallast"	Korea	Filtration+Electrolysis	Approved	<u>Approved</u>	
Kwang San Co., Ltd.	KS BWMS "En-Ballast"	Korea	Filtration+Electrolysis	Approved		
Qingdao Headway Technology Co., Ltd.	OceanGuard BWMS	China	Filter + Electro catalysis + Ultrasonic	Approved	Approved	China
China Ocean Shipping (Group) Company	Blue Ocean Shield	China	Filtration+UV	Approved	N.A.	China
Severn Trent DeNora	Severn Trent DeNora BalPure® BWMS	Germany	Filtration+Electrolysis	Approved	Approved	
Hamann AG*	SEDNA system	Germany	Hydrocyclone + Filtration + Peraclean Ocean	Approved	Approved	Germany
Techwin Eco Co., Ltd.	Purimar System	Korea	Filtration+Electrolysis	Approved	<u>Approved</u>	
AQUA Eng. Co., Ltd.	AquaStar System	Korea	Filtration+Electrolysis	Approved		
Kuraray Co., Ltd	Kuraray BWMS	Japan	Filtration + Kuraray AS ( calcium hypochlorite ) + Kuraray NS ( sodium sulfite (neutralizing agent) )	Approved		
ERMA FIRST	ERMA FIRST Ballast Water Management System	Germany	Filtration + Hydrocyclone + Electrolysis	<u>Approved</u>		
Envirotech and Consultancy Pte. Ltd.	BlueSeas Ballast Water Management System	Singapore	Filtration+Electrolysis	<u>Approved</u>		
Katayama Chemical, Inc.	Ballast Water Management System with PERACLEAN® OCEAN (SKY-SYSTEM®)	Japan	Filtration+ acetic acid / hydrogen peroxide	<u>Approved</u>		
JFE Engineering Corporation	JFE Ballast Ace BallastWater Management System that makes use of NEO-CHLOP MARINE™	Japan	Filtration+Chemical Injection	<u>Approved</u>		
GEA Westfalia Separator Group GmbH	GEA Westfalia Separator BallastMaster Ballast Water Management System	Germany	Filtration+ sodium hypochlorite	<u>Approved</u>		



BWMS Manufacture	BWMS Name	Country	Process	Approval of Active Substances G9		Approval of BWMS G8
				Basic Approval	Final Approval	Country
Envirotech and Consultancy Pte. Ltd.	BlueWorld Ballast Water Management System	Singapore	Filtration + sodium hypochlorite	<u>Approved</u>		
Samsung Heavy Industries Co., Ltd.	SHI Ballast Water Management System (Neo-Purimar™)	Korea	Filtration + sodium hypochlorite	<u>Approved</u>		

(Underlined systems were approved at MEPC62)

\* BWMS “SEDNA system” manufactured by Hamann AG has been withdrawn from the market and is no longer available.

(For reference)

BWMS that not using active substances that have been approved Administrations in accordance with G8 guidelines

BWMS Manufacture	BWMS Name	Country	Process	Approval of Active Substances G9		Approval of BWMS G8
				Basic Approval	Final Approval	Country
OptiMarine AS	OptiMar Ballast Systems	Norway	Filtration + UV			Norway
NEI Treatment System	Venturi Oxygen Stripping	USA	Deoxygenation + Cavitation			Liberia
Hyde Marine Inc.	Hyde GURDIAN™	USA	Filtration + UV			UK
Wuxi Brightsky Electronic Co., Ltd.,	BSKY™ BWMS	China	Filtration + UV			China

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BWM.2/Circ.29/Rev.1  
26 September 2011

**INTERNATIONAL CONVENTION FOR THE CONTROL AND MANAGEMENT  
OF SHIPS' BALLAST WATER AND SEDIMENTS, 2004**

**Clarification regarding the application dates contained in regulation B-3  
of the BWM Convention**

1 The Marine Environment Protection Committee, at its sixty-first session (27 September to 1 October 2010), approved the amendments to BWM.2/Circ.19 regarding the clarification on the application dates of the ballast water performance standard contained in regulation B-3.1 of the BWM Convention.

2 In considering further clarification on the application schedule of the D-2 standard with regard to ships described in regulation B-3.4, the Marine Environment Protection Committee, at its sixty-second session (11 to 15 July 2011), agreed to add new explanatory text relevant to such ships to Circular BWM.2/Circ.29 and to disseminate the expanded circular as BWM.2/Circ.29/Rev.1. The expanded clarification is set out in the annex.

3 Member Governments are invited to bring this circular to the attention of all parties concerned.

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## ANNEX

### CLARIFICATION REGARDING THE APPLICATION DATES CONTAINED IN REGULATION B-3 OF THE BWM CONVENTION

1 Regulation B-3.1 of the Ballast Water Management Convention provides:

"A ship constructed before 2009:

- .1 with a ballast water capacity of between 1,500 and 5,000 cubic metres, inclusive, shall conduct ballast water management that at least meets the standard described in regulation D-1 or regulation D-2 until 2014, after which time it shall at least meet the standard described in regulation D-2;
- .2 with a ballast water capacity of less than 1,500 or greater than 5,000 cubic metres shall conduct ballast water management that at least meets the standard described in regulation D-1 or regulation D-2 until 2016, after which time it shall at least meet the standard described in regulation D-2."

2 Regulation B-3.2 of the Ballast Water Management Convention provides:

"A ship to which paragraph 1 applies shall comply with paragraph 1 not later than the first intermediate or renewal survey, whichever occurs first, after the anniversary date of delivery of the ship in the year of compliance with the standard applicable to the ship."

3 The "anniversary date of delivery of the ship in the year of compliance" specified in regulation B-3.2, refers to years 2014 and 2016 indicated in regulation B-3.1. Consequently, ships with a ballast water capacity between 1,500 m<sup>3</sup> and 5,000 m<sup>3</sup>, inclusive, are required to comply with the D-2 standard not later than the first intermediate or renewal survey, whichever occurs first, after the anniversary date of delivery of the ship in 2014 under regulation B-3.1.1; and ships with a ballast water capacity of less than 1,500 or greater than 5,000 m<sup>3</sup> are required to comply with D-2 standard not later than the first intermediate or renewal survey, whichever occurs first, after the anniversary date of delivery of the ship in 2016 under regulation B-3.1.2.

4 Regulation B-3.4 of the BWM Convention provides:

"A ship constructed in or after 2009, but before 2012, with a ballast water capacity of 5,000 cubic metres or more shall conduct ballast water management in accordance with paragraph 1.2."

5 For purposes of implementation, regulation B-3.4 should be interpreted such that ships constructed during or after 2009, but before 2012, with a ballast water capacity of 5,000 cubic metres or more would be required to comply with the D-2 standard not later than the first intermediate or renewal survey, whichever occurs first, after the anniversary date of delivery of the ship in 2016.