

RESOLUTION MEPC.284.(70)  
(Adopted on 28 October 2016)  
AMENDMENTS TO THE 2012 GUIDELINES ON IMPLEMENTATION OF EFFLUENT  
STANDARDS AND PERFORMANCE TESTS FOR SEWAGE TREATMENT PLANTS  
(RESOLUTION MEPC.227(64))

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**ANNEX 20**

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**AMENDMENTS TO THE 2012 GUIDELINES ON IMPLEMENTATION OF EFFLUENT  
STANDARDS AND PERFORMANCE TESTS FOR SEWAGE TREATMENT PLANTS  
(RESOLUTION MEPC.227(64))**

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 the international conventions for the prevention and control of marine pollution from ships,

NOTING resolution MEPC.227(64), by which it adopted the *2012 Guidelines on implementation of effluent standards and performance tests for sewage treatment plants* (2012 Guidelines),

NOTING ALSO resolution MEPC.274(69), by which it adopted amendments to MARPOL Annex IV concerning the Baltic Sea Special Area and the Form of the International Sewage Pollution Prevention Certificate, which are expected to enter into force on 1 September 2017,

NOTING FURTHER resolution MEPC.275(69), by which it established the date on which the discharge requirements of regulation 11.3 of MARPOL Annex IV in respect of the Baltic Sea Special Area shall take effect,

RECOGNIZING the need to align the relevant provisions of the 2012 Guidelines with the above-mentioned amendments to MARPOL Annex IV and the effective date of the Baltic Sea Special Area,

HAVING CONSIDERED, at its seventieth session, proposed amendments to the 2012 Guidelines,

- 1 ADOPTS amendments to the *2012 Guidelines on implementation of effluent standards and performance tests for sewage treatment plants*, the text of which is set out in the annex to the present resolution;
- 2 RECOMMENDS Governments to apply the 2012 Guidelines, as amended, during testing and type approval of sewage treatment plants;
- 3 AGREES to keep the 2012 Guidelines, as amended, under review in light of experience gained with their application.

## ANNEX

### AMENDMENTS TO THE 2012 GUIDELINES ON IMPLEMENTATION OF EFFLUENT STANDARDS AND PERFORMANCE TESTS FOR SEWAGE TREATMENT PLANTS

#### Table of content

1 The words "ANNEX Form of Certificate of Type Approval for Sewage Treatment Plants and appendix" is replaced by the following:

"Annex 1 – FORM OF CERTIFICATE OF TYPE APPROVAL FOR SEWAGE TREATMENT PLANTS AND APPENDIX (MEETING RESOLUTION MEPC.227(64), INCLUDING PARAGRAPH 4.2 OF THE ANNEX TO THIS RESOLUTION)

Annex 2 – FORM OF CERTIFICATE OF TYPE APPROVAL FOR SEWAGE TREATMENT PLANTS AND APPENDIX (MEETING RESOLUTION MEPC.227(64), EXCEPT FOR PARAGRAPH 4.2 OF THE ANNEX TO THIS RESOLUTION)

#### 1 – Introduction

2 A new paragraph 1.1.3 is added as follows:

"1.1.3 MEPC 69 adopted resolution MEPC. 274(69) amending regulations 1 and 11 of MARPOL Annex IV concerning the Baltic Sea Special Area as well as the appendix to MARPOL Annex IV concerning the Form of the International Sewage Pollution Prevention."

3 A new subparagraph 1.2.2.3 is added as follows:

".3 the phrase "installed on or after 1 January 2016" means:

- .1 installations on board ships the keels of which are laid or which are at a similar stage of construction on or after 1 January 2016; and
- .2 for other ships, installations with a contractual delivery date to the ship on or after 1 January 2016 or, in the absence of a contractual delivery date, the actual delivery of the equipment to the ship on or after 1 January 2016."

4 Paragraph 1.2.3 is replaced by the following:

"1.2.3 The requirements of these Guidelines, including those in section 4.2, will apply to sewage treatment plants on:

- .1 new passenger ships<sup>1</sup> when operating in Baltic Sea Special Area and intending to discharge treated sewage effluent into the sea on or after 1 June 2019;

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<sup>1</sup> 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 similar stage of construction, on or after 1 June 2019; or
- .2 the delivery of which is on or after 1 June 2021.

- .2 existing passenger ships, other than those specified in sub-paragraph .3 below, when operating in Baltic Sea Special Area and intending to discharge treated sewage effluent into the sea on or after 1 June 2021; and
- .3 1 June 2023 for existing passenger ships en route directly to or from a port located outside Baltic Sea Special Area and to or from a port located east of longitude 28° 10' E within the special area that do not make any other port calls within the special area and intending to discharge treated sewage effluent into the sea."

## 2 – Definitions

- 5 Paragraph 2.1 is replaced by the following:

"2.1 Annex IV – the revised Annex IV of the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the 1978 and 1997 Protocols (MARPOL), as amended by resolutions MEPC.115(51), MEPC.200(62) MEPC.216(63), MEPC.246(66), MEPC.265(68) and MEPC.274(69)."

## 4 – Technical specification

- 6 Paragraphs 4.4 and 4.5 are deleted.

## 5 – Testing considerations

- 7 The last sentence of paragraph 5.4.2 is replaced by the following:

"The forms of the Certificate of Type Approval and its appendix are set out in the annexes 1 and 2 to these Guidelines."

## **Annex – FORM OF CERTIFICATE OF TYPE APPROVAL FOR SEWAGE TREATMENT PLANTS AND APPENDIX**

- 8 The existing annex is renumbered as annex 1 and the title is replaced with the following:

### Annex 1

"FORM OF CERTIFICATE OF TYPE APPROVAL FOR SEWAGE TREATMENT PLANTS AND APPENDIX (MEETING RESOLUTION MEPC.227(64), INCLUDING PARAGRAPH 4.2 OF THE ANNEX TO THIS RESOLUTION)"

- 9 The first paragraph is replaced with the following:

"This is to certify that the sewage treatment plant, type....., having a designed hydraulic loading of ..... cubic metres per day, (m<sup>3</sup>/day), an organic loading of ..... kg per day biochemical oxygen demand without nitrification (BOD5 without nitrification) and of the design shown on drawings Nos. ....manufactured by ..... has been examined and satisfactorily tested in accordance with the International Maritime Organization resolution MEPC.227(64) (including paragraph 4.2) to meet the operational requirements referred to in regulations 9.1.1 and 9.2.1 of MARPOL Annex IV, as amended."

10 The mark "\*\*\*" after .7 and its associated footnote are deleted.

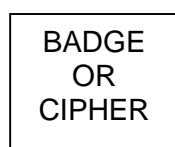
11 In the "APPENDIX TO CERTIFICATE OF TYPE APPROVAL SEWAGE TREATMENT PLANTS", the marks "\*" on the following entries are deleted:

"Total nitrogen influent quality.....mg/l as nitrogen\*  
Total phosphorus influent quality.....mg/l as phosphorus\*

12 A new annex 2 is added as follows:

Annex 2

FORM OF CERTIFICATE OF TYPE APPROVAL FOR SEWAGE TREATMENT PLANTS  
AND APPENDIX (MEETING RESOLUTION MEPC.227(64), EXCEPT FOR  
PARAGRAPH 4.2 OF THE ANNEX TO THIS RESOLUTION)



NAME OF ADMINISTRATION

**CERTIFICATE OF TYPE APPROVAL  
FOR SEWAGE TREATMENT PLANTS**

This is to certify that the sewage treatment plant, type .....,  
having a designed hydraulic loading of ..... cubic metres per day, (m<sup>3</sup>/day), an organic  
loading of ..... kg per day biochemical oxygen demand without nitrification (BOD<sub>5</sub> without  
nitrification) and of the design shown on drawings Nos. ....  
manufactured by .....  
has been examined and satisfactorily tested in accordance with the International Maritime  
Organization resolution MEPC.227(64) (except for paragraph 4.2) to meet the operational  
requirements referred to in regulations 9.1.1 of MARPOL Annex IV, as amended.

The tests on the sewage treatment plant were carried out  
ashore at\* .....  
on board at\* .....  
and completed on .....

The sewage treatment plant was tested and produced an effluent which, on analysis, produces:

- .1 a geometric mean of no more than 100 thermotolerant coliforms/100 ml;
- .2 a geometric mean of total suspended solids of 35 Qi/Qe mg/l if tested ashore  
or the maximum total suspended solids not exceeding (35 plus x) Qi/Qe mg/l  
for the ambient water used for flushing purposes if tested on board;
- .3 a geometric mean of 5-day biochemical oxygen demand without nitrification  
(BOD<sub>5</sub> without nitrification) of no more than 25 Qi/Qe mg/l;
- .4 a geometric mean of chemical oxygen demand (COD) of no more than  
125 Qi/Qe mg/l; and
- .5 pH between 6 and 8.5.

The Administration confirms that the sewage treatment plant can operate at angles of  
inclination of 22.5° in any plane from the normal operating position.

\* Delete as appropriate.

Details of the tests and the results obtained are shown on the appendix to this Certificate.

A plate or durable label containing data of the manufacturer's name, type and serial numbers, hydraulic loading and date of manufacture should be fitted on each sewage treatment plant.

A copy of this certificate should be carried on board any ship equipped with the above described sewage treatment plant.

Official stamp \_\_\_\_\_ Signed \_\_\_\_\_

Administration of \_\_\_\_\_

Dated this \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_\_

**APPENDIX TO  
CERTIFICATE OF TYPE APPROVAL FOR SEWAGE TREATMENT PLANTS**

BADGE  
OR  
CIPHER

Test results and details of tests conducted on samples from the sewage treatment plant in accordance with resolution MEPC.227(64), as amended, (exception for section 4.2):

Sewage treatment plant, Type \_\_\_\_\_

Manufactured by \_\_\_\_\_

Organization conducting the test \_\_\_\_\_

Designed hydraulic loading .....m<sup>3</sup>/day

Designed organic loading ..... kg/day BOD

Number of effluent samples tested \_\_\_\_\_

Number of influent samples tested \_\_\_\_\_

Total suspended solids influent quality .....mg/l

BOD<sub>5</sub> without nitrification influent quality .....mg/l

Maximum hydraulic loading ..... m<sup>3</sup>/day

Minimum hydraulic loading ..... m<sup>3</sup>/day

Average hydraulic loading (Qi) ..... m<sup>3</sup>/day

Effluent flow (Qe)..... m<sup>3</sup>/day

Dilution compensation factor (Qi/Qe).....

Geometric mean of total suspended solids .....mg/l

Geometric mean of the thermotolerant coliform count..... coliforms/100 ml

Geometric mean of BOD<sub>5</sub> without nitrification ..... mg/l

Geometric mean of COD .....mg/l

Maximum pH: \_\_\_\_\_

Minimum pH:.....

Type of disinfectant used .....

If Chlorine - residual Chlorine:

Maximum ..... mg/l

Minimum ..... mg/l

Geometric Mean ..... mg/l

Was the sewage treatment plant tested with:

Fresh water flushing? ..... Yes/No\*

Salt water flushing? ..... Yes/No\*

Fresh and salt water flushing? ..... Yes/No\*

Grey water added? ..... Yes – proportion: /No\*

Was the sewage treatment plant tested against the environmental conditions specified in section 5.9 of resolution MEPC.227(64):

Temperature ..... Yes/No\*

Humidity ..... Yes/No\*

Inclination ..... Yes/No\*

Vibration ..... Yes/No\*

Reliability of Electrical and Electronic Equipment ..... Yes/No\*

Limitations and the conditions of operation are imposed:

Salinity .....

Temperature .....

Humidity .....

Inclination.....

Vibration .....

Results of other parameters tested .....

Official stamp

Signed .....

Administration of .....

Dated this ..... day of..... 20.....

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\* Delete as appropriate."

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