

Guideline No.:K-01(201612)



# **K-01**

# **15PPM BILGE SEPARATORS**

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**Foreword:**

CCS Product Inspection and Testing Guideline (hereinafter referred to as this Guideline) contains the technical requirements, inspection and testing criteria related to classification and statutory survey of marine products to be applied for CCS approval/inspection.

This Guideline frees the users to adopt other test methods and requirements which are equivalent to or are stricter than this Guideline.

This Guideline is published and updated by CCS, and is released at <http://www.ccs.org.cn>. Your comments or suggestions are welcomed and may be sent to our email addressed [mp@ccs.org.cn](mailto:mp@ccs.org.cn).

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**Main changes:**

1. Converting the IMO Guidelines and Specifications for add-on equipment for upgrading resolution MEPC.60(33)-compliant oil filtering equipment, adopted by the Marine Environment Protection Committee by Resolution MEPC.205(62);
2. Adjusted the description of Article 4 “Plans and documents”;
3. Editorial changes and corrections.

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## **15PPM BILGE SEPARATORS**

### **1 Application**

1.1 This Guideline applies to the approval and inspection of the 15ppm bilge separators for the oily bilge water in engine room and ballast water in oil fuel tanks.

1.2 And the add-on equipment for upgrading resolution MEPC.60(33)-compliant oil filtering equipment.

### **2 Normative references**

2.1 For the purpose of this Guideline about 15ppm bilge separators, the following documents apply:

(1) Annex I of International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto;

(2) IMO Revised Guidelines and Specifications for Pollution Prevention Equipment for Machinery Space Bilges of Ships, adopted by the Marine Environment Protection Committee by Resolution MEPC.107(49).

2.2 For the purpose of this Guideline about add-on equipment, the following documents apply:

(1) IMO Guidelines and Specifications for add-on equipment for upgrading resolution MEPC.60(33)-compliant oil filtering equipment, adopted by the Marine Environment Protection Committee by Resolution MEPC.205(62).

### **3 Terms and definitions**

3.1 For the purpose of this Guideline:

(1) 15ppm bilge separator may include any combination of a separator, filter,coalescer or other means, and also a single unit designed to produce an effluent with oil content not exceeding 15ppm.

(2) Add-on equipment means that the add-on post-treatment equipment for resolution MEPC.60(33)-compliant oil filtering equipment in order to improve their capabilities of treating emulsified oil so that emulsion-breaking performance of oily bilge separators to be achieved by installation of add-on equipment could be equivalent to that of resolution MEPC.107(49)-compliant equipment.

(3) ppm means parts of oil per million parts of water by volume.

### **4 Plans and documents**

4.1 The following documents are to be submitted to CCS for approval:

- (1) main performance specifications, including rated capacity, discharge standard, the maximum working pressure, etc);
- (2) general assembly plan;
- (3) main components of the body, separator assembly, filter assembly, sampling arrangement, etc.;
- (4) schematic diagram;
- (5) type test program;
- (6) control box plan.

4.2 The following documents are to be submitted to CCS for information:

- (1) calculations for strength and performance (where necessary).
- (2) product instructions and nameplate.

## **5 Design requirements**

5.1 The product design and technical requirements of 15ppm bilge separators are to comply with MEPC.107(49) - Revised Guidelines and Specifications for Pollution Prevention Equipment for Machinery Space Bilges of Ships.

5.2 The product design and technical requirements of add-on equipment are to comply with MEPC.205 (62) –Guidelines and Specifications for add-on equipment for upgrading resolution MEPC.60 (33)-compliant oil filtering equipment.

## **6 Materials and components**

6.1 Materials and components are to comply with relevant requirements of CCS Rules.

6.2 The body (design pressure  $\geq 1.6$ MPa) is subject to approval of welding procedures in accordance with CCS Rules for Materials and Welding or other equivalent standards acceptable to CCS, and subject to strength test with a test pressure 1.5 times the design pressure. For the body of a vacuum bilge separator, the strength test is to be carried out with a pressure 1.5 times the design backwashing water pressure.

6.3 Electrical heater is to be fitted with an automatic temperature-control device.

## **7 Type test**

7.1 Selection of typical samples

7.1.1 15ppm bilge separators

Where a range of 15ppm bilge separators of the same design, but of different capacities, requires a certification, tests in two capacities within the range may be accepted in lieu of tests on each size, providing that the two tests actually performed are from the lowest quarter and highest quarter

of the range.

Where the capacity of intended application range is 1-5 m<sup>3</sup>, the sample may be taken each from 1-2m<sup>3</sup> (the lowest quarter) and from 4-5m<sup>3</sup> (the highest quarter) respectively for test.

#### 7.1.2 add-on equipment

Where a range of add-on equipment of the same design, but of different capacities, requires a certification, tests in two capacities within the range may be accepted in lieu of tests on each size, providing that the two tests actually performed are from the lowest and highest of the range.

#### 7.2 Type test items

7.2.1 Test items for 15ppm bilge separators, methods and technical index are to be in compliance with Part 1 of MEPC.107(49)– Test and performance specifications for type test approval of 15 ppm bilge separators.

7.2.2 Test items for add-on equipment, methods and technical index are to be in compliance with Part 1 of MEPC.205 (62)– Add-on equipment to be fitted to specific oil filtering equipment approved under resolution MEPC.60(33), or the Part 2 of MEPC.205(62)–Add-on equipment to be fitted to any oil filtering equipment.

### **8 Unit/batch inspection**

8.1 After type approval, the 15ppm bilge separators, add-on equipment are to be applied by the manufacturer for unit/batch inspection by CCS.

8.2 At least 5% of each batch/size of the products is to be sampled for operation test, tightness test, a simulation test for automatic and manual oil discharge. In addition, the product inspection and test reports submitted by the manufacturer are to be examined.

### **9 Others**

9.1 The product certificate/equivalent document for 15ppm bilge separators, add-on equipment as type approved is to be used together with a copy of type approval certificate in IMO format.