



Guideline No.K-04 (201510)

# **K-04 Marine Incinerator**

Issued date: 20<sup>th</sup> October, 2015

© China Classification Society

## **Foreword**

This Guideline is a part of CCS Rules, which contains technical requirements, inspection and testing criteria related to classification and statutory survey of marine products.

This Guideline is published and updated by CCS and can be found through <http://www.ccs.org.cn>. Comments or suggestions can be sent by email to [ps@ccs.org.cn](mailto:ps@ccs.org.cn).

Historical versions and release date:

Main changes and effective date:

## **CONTENTS**

|                                           |   |
|-------------------------------------------|---|
| 1 Application .....                       | 4 |
| 2 Basis for approval and inspection ..... | 4 |
| 3 Plans and documents .....               | 4 |
| 4 Materials and components.....           | 5 |
| 5 Design and technical requirements ..... | 5 |
| 6 Type test .....                         | 6 |
| 7 Unit/batch inspection .....             | 6 |

## **Marine Incinerator**

### **1 Application**

1.1 This Guideline applies to type approval and inspection of incinerators with capacities up to 4,000 kW per unit..

1.2 This Guideline does not apply to systems on special incinerator ships, e.g. for burning industrial wastes such as chemicals, manufacturing residues, etc.

### **2 Basis for approval and inspection**

2.1 The following standards are the bases for the type approval and inspection of incinerators:

- (1) IMO MARPOL 73/78 Annex VI — *Regulations for the Prevention of Air Pollution from Ships*
- (2) RESOLUTION MEPC.244 (66) — *2014 Standard Specifications of Marine Incinerators*

### **3 Plans and documents**

3.1 The following plans and documents are to be submitted to CCS for approval:

- (1) Main product performance specification table, including at least the following:

- ① Maximum capacity: (kW or kcal/h)

Burning capacity of solid waste: (kg/h) (If any)

Burning capacity of sludge oil (l/h or kg/h) (If any)

- ② Emission standards:

O<sub>2</sub> Average in combustion chamber/zone;

CO Average in flue gas;

Soot number average;

Combustion chamber flue gas outlet temperature average;

Amount of unburned components in ashes;

- (2) Main plans include:

- ① General assembly plan;

- ② Plans of main parts/components;
  - ③ System schematic diagram/ schematic diagram of control box;
  - ④ Safety alarm and corresponding adjustment value;
- (3) Factory test/inspection program of product;
- (4) Type test program (if applicable).

3.2 The following plans and documents are to be submitted to CCS for information:

- (1) Production Instructions and manual operation instructions;
- (2) Nameplate.

#### **4 Materials and components**

Materials and components of products are to be controlled according to relevant requirements of the CCS Rules currently in effect.

4.1 The following purchased parts (if any) used for incinerators are to have quality certificate issued by the factory:

- (1) Fire resistant materials;
- (2) Ignition device (burning unit and safety device);

4.2 The following purchased parts (where applicable) used for incinerators are to have the marine product certificate issued by CCS

- (1) Electric control box
- (2) Blower

4.3 The following purchased parts (where applicable) used for incinerators are to have product certificate issued by CCS and quality certificate issued by the factory

- (1) Electromotor (less than 50 kW)
- (2) Cables

#### **5 Design and technical requirements**

5.1 Design, manufacture, performance, operation and tests of incinerators are to meet the requirements of IMO MEPC.244 (66) — 2014 *Standard Specifications of Marine Incinerators*.

**6 Type test**

## 6.1 Selection of typical samples

Type test is to be conducted to the first product of each type.

## 6.2 Type test items as specified in 6.2.

**Type test items****Table 6.2**

| No. | Test item                        | Requirement                                                                                    |
|-----|----------------------------------|------------------------------------------------------------------------------------------------|
| 1.  | Structural and visual inspection | Meeting the approved plans; conforming to the approved type                                    |
| 2.  | Operation test                   | Article 7.2 of MEPC.244 (66)                                                                   |
| 3.  | Test of safety protection device | Article 7.3 of MEPC.244 (66)                                                                   |
| 4.  | Sludge oil burning test          | Articles of 7.1, 4.1, 4.2 and 4.3 of MEPC.244 (66) and Articles A1.3, A1.4 and A1.5 of Annex A |
| 5.  | Solid waste burning test         | Articles of 7.1, 4.1, 4.2 and 4.3 of MEPC.244 (66) and Articles A1.3, A1.4 and A1.5 of Annex A |

**7 Unit/batch inspection**

7.1 Unit/batch inspection items after approval are specified in Table 7.1.

**Unit/batch inspection items after approval****Table 7.1**

| No. | Test item                              | Requirement                                                 |
|-----|----------------------------------------|-------------------------------------------------------------|
| 1   | Structural and visual inspection       | Meeting the approved plans; conforming to the approved type |
| 2   | Inspection of accessories and fittings | Meeting the approved plans; conforming to the approved type |
| 3   | Operation test                         | Article 7.2 of MEPC.244 (66)                                |
| 4   | Test of safety protection device       | Article 7.3 of MEPC.244 (66)                                |