BRITISH STANDARD

BS ISO 13617:2001

Ships and marine technology — Shipboard incinerators — Requirements

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National foreword

This British Standard reproduces verbatim ISO 13617:2001 and implements it as the UK national standard.

The UK participation in its preparation was entrusted by Technical Committee SME/32, Ships and marine technology, to Subcommittee SME/32/3, Piping amd machinery, which has the responsibility to:

— aid enquirers to understand the text;

— present to the responsible international/European committee any enquiries on the interpretation, or proposals for change, and keep the UK interests informed;

— monitor related international and European developments and promulgate them in the UK.

A list of organizations represented on this subcommittee can be obtained on request to its secretary.

Cross-references

The British Standards which implement international publications referred to in this document may be found in the *BSI Catalogue* under the section entitled "International Standards Correspondence Index", or by using the "Search" facility of the *BSI Electronic Catalogue* or British Standards Online.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

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This British Standard, having been prepared under the direction of the Engineering Sector Policy and Strategy Committee, was published under the authority of the Standards Policy and Strategy Committee on 12 June 2002

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INTERNATIONAL STANDARD

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 3.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this International Standard may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 13617 was prepared by Technical Committee ISO/TC 8, *Ships and marine technology*, Subcommittee SC 3, *Piping and machinery*.

This second edition cancels and replaces the first edition (ISO 13617:1995). It was revised for continued consistency with International Maritime Organization provisions for shipboard incinerators.

Annexes A, B and D form a normative part of this International Standard. Annex C is for information only.

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Ships and marine technology — Shipboard incinerators — Requirements

1 Scope

This International Standard covers the design, manufacture, performance, operation, functioning and testing of incinerators intended to incinerate garbage and other shipboard wastes generated during the ship's normal service (i.e. maintenance, operational, domestic and cargo associated wastes).

This International Standard applies to incinerator plants with capacities up to 1 500 kW per unit.

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

It does not address the electrical supply to the unit, nor the foundation connections and stack connections.

This International Standard provides emission requirements in annex A, and fire protection requirements in annex B. Provisions for incinerators integrated with heat recovery units and provisions for flue gas temperatures are given in informative annex C and normative annex D, respectively.

This International Standard may involve hazardous materials, operations, and equipment. It does not purport to address all of the safety problems associated with its use. It is the responsibility of the user of this International Standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.

2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this International Standard. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies. Members of ISO and IEC maintain registers of currently valid International Standards.

International Maritime Organization, *International Convention on the Safety of Life at Sea, 1997 (SOLAS),* Chapter II-2, Regulations 3, 26, and 44.

International Maritime Organization, *International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto (MARPOL 73/78).*

IEC 92, *Electrical installations in ships*

IEC 60092-201:1980, *Electrical installations in ships — Part 201: System design — General*

IEC 60092-202:1994, *Electrical installations in ships — Part 202: System design — Protection*

IEC 60092-301:1980, *Electrical installations in ships — Part 301: Equipment — Generators and motors*

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IEC 60092-352:1997, *Electrical installations in ships — Part 352: Choice and installation of cables for low-voltage power systems*

IEC 60092-503:1975, *Electrical installations in ships — Part 503: Special features — A.C. supply systems with voltages in the range above 1 kV and up to and including 11 kV*

IEC 60529:2001, *Degrees of protection provided by enclosures (IP Code)*

3 Terms and definitions

For the purposes of this International Standard, the following terms and definitions apply.

3.1
cargo-associated waste
all materials which have become wastes as a result of use on board a ship for cargo stowage and handling, including, but not limited to, dunnage, shoring pallets, lining and packing materials, plywood, paper, cardboard, wire, and steel strapping

3.2
cargo residues
remnants of any cargo material on board that cannot be placed in proper cargo holds (loading excess and spillage) or which remains in cargo holds and elsewhere after unloading procedures are completed (unloading residual and spillage)

3.3
contaminated rags
rags that have been saturated with a substance defined as a harmful substance in certain annexes to MARPOL 73/78

3.4
domestic waste
all types of food wastes, sewage and wastes generated in the living spaces on board the ship

3.5
fishing gear
any physical device or part thereof or combination of items that may be placed on or in the water with the intended purpose of capturing, or controlling for subsequent capture, living marine or freshwater organisms

3.6
food wastes
any spoiled or unspoiled victual substances, such as fruits, vegetables, dairy products, poultry, meat products, food scraps, food particles, and all other materials contaminated by such wastes, generated aboard ship, principally in the galley and dining areas

3.7
garbage
all kinds of victual, domestic and operational waste excluding fresh fish and parts thereof, 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 certain annexes to MARPOL 73/78

3.8
incinerators
shipboard facilities for incinerating solid wastes approximating in composition to household waste and liquid wastes arising from the operation of the ship, e.g., domestic waste, cargo-associated waste, maintenance waste, operational waste, cargo residues, and fishing gear, etc.

NOTE These facilities may be designed to use or not to use the heat energy produced.

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3.9
maintenance waste
materials collected by the engine department and the deck department while maintaining and operating the vessel, such as soot, machinery deposits, scraped paint, deck sweeping, wiping wastes, oily rags, etc.

3.10
operational wastes
all cargo-associated wastes and maintenance waste (including ash and clinkers), and cargo residues defined as **garbage** (3.7)

3.11
oily rags
rags which have been saturated with oil as controlled in annex I to MARPOL 73/78

3.12
plastic
a solid material which contains, as an essential ingredient, one or more synthetic organic high polymers and which is formed (shaped) during either manufacture of the polymer or the fabrication into a finished product by heat and/or pressure

NOTE Plastics have material properties ranging from hard and brittle to soft and elastic. Plastics are used for a variety of marine purposes including, but not limited to, packaging (vapour-proof barriers, bottles, containers, liners), ship construction (fibreglass and laminated structures, siding, piping, insulation, flooring, carpets, fabrics, paints and finishes, adhesives, electrical and electronic components), disposable eating utensils and cups, bags, sheeting, floats, fishing nets, strapping bands, rope and line.

3.13
ship
a vessel of any type whatsoever operating in the marine environment and including hydrofoil boats, air-cushioned vehicles, and submersibles, floating craft and fixed or floating platforms

3.14
sludge oil
sludge from fuel and lubricating oil separators, waste lubricating oil from main and auxiliary machinery, waste oil from bilge water separators, drip-trays, etc.

3.15
waste
useless, unneeded or superfluous matter, which is to be discarded

4 General design requirements

4.1 Piping

Piping for fuel and sludge oil shall be constructed of seamless steel of adequate strength and to the satisfaction of the Administration. Short lengths of steel, or annealed copper nickel, nickel copper, or copper pipe and tubing may be used at the burners. The use of non-metallic materials for fuel lines is prohibited. Valves and fittings may be threaded in sizes up to and including 60 mm outer diameter, but threaded unions are not to be used on pressure lines in sizes 33 mm outer diameter and over.

4.2 Rotating parts

All rotating or moving mechanical and exposed electrical parts shall be protected by guards or shields against accidental contact by personnel in the vicinity of the incinerator.

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