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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 10833-2023

Replacing GB/T 10833-2015

Technical condition for marine sewage treatment system

船用生活污水处理系统技术条件

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Foreword

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part

1. Structure and Drafting Rules of Standardization Documents" Drafting. This document replaces GB/T 10833-2015 "Technical Conditions for Marine Domestic Sewage Treatment Equipment" and is consistent with GB/T 10833-2015. In addition to structural adjustments and editorial changes, the main technical changes are as follows:

---Added the terms and definitions of diluent, dilution compensation coefficient, total nitrogen, total phosphorus, and ammonia nitrogen (see 3.8, 3.11~3.14);

---Modified the requirements for effluent water quality indicators of domestic sewage treatment equipment (see 4.4,

4.2 of the 2015 version);

---Added general requirements for devices, including requirements for anti-corrosion, control, safety, protection, environment, sludge control and disposal, etc. (See 4.3.10, 4.8~4.12);

---Modified the effluent water quality inspection method and added that the presence of chloride ions in sewage should be considered when analyzing and testing chemical oxygen demand. The impact of test results (see 5.4.5,

5.5.4 of the 2015 version);

---Added requirements for gray water treatment (see 5.4.1);

---Added control box test items and corresponding test methods (see 5.7). Please note that some content in this document may be subject to patents. The publisher of this document assumes no responsibility for identifying patents. This document is proposed and coordinated by the National Marine Machinery Standardization Technical Committee (SAC/TC137). This document was drafted by: Research Institute No. 704 of China State Shipbuilding Corporation, and the Fifth Military Representative Office of Maritime Equipment Stationed in Shanghai. The main drafters of this document. Pan Siyu, Lin Wei,

Wang Guodong, Zhang Lei, Dong Siyuan, Shao Xiaohua, and Zhu Weiming. The previous versions of this document and the documents it replaces are as follows:

---First published as GB/T 10833-1989 in 1989, first revised in 2015;

---This is the second revision. Technical conditions of marine domestic sewage treatment system

1 Scope

GB/T 10833-2023 is the Chinese national standard on technical condition for marine sewage treatment system, in the field of shipbuilding and marine structures. The /T suffix marks it as a recommended standard: it is not compulsory by itself, but it becomes binding as soon as a contract, a tender or a customer specification calls it up - which in practice is how most foreign buyers meet it. It was issued on 6 August 2023 by the State Administration for Market Regulation; Standardization Administration of China, and has been in force since 1 March 2024. Classification: ICS 47.020.90, CCS U25. This page is published from the official record of the standard held by the Chinese standards administration: the identification, the dates, the classification and the issuing body are taken from there. The clause text, the tables and the numeric limits are in the document itself, which is delivered complete in English translation.

This document specifies the requirements, test methods, inspection rules and marking, protection, packaging and storage of marine sewage treatment systems. This document is applicable to the design, manufacturing, testing and acceptance of domestic sewage treatment systems for various types of ships and fixed or mobile working platforms on the water.

2 Normative reference documents

The contents of the following documents constitute essential provisions of this document through normative references in the text. Among them, the dated quotations For undated referenced documents, only the version corresponding to that date applies to this document; for undated referenced documents, the latest version (including all amendments) applies to this document.

GB/T 191 Packaging, storage and transportation pictorial mark

GB 3552-2018 Ship water pollutant emission control standards

GB/T 4208-2017 Shell protection level (IP code)

GB/T 6994 Definition and general provisions for ship electrical equipment GB/T 13306 Signage

GB/T 19804-2005 General dimensional tolerances and geometric tolerances of welded

structures GD22-2015 Guidelines for Type Approval Testing of Electrical and Electronic Products MARPOL Convention MEPC.227(64) Resolution. Effluent standards and performance test implementation guidelines for domestic sewage treatment equipment

3 Terms and definitions

The following terms and definitions apply to this document.

3.1 Domestic sewage There are four types of emissions from ships.

- a) Discharge and other waste from toilets and urinals of any type;
- b) Discharge from washbasins, bathtubs and drainage holes in medical offices (pharmacies, wards);
- c) Discharges from spaces containing live animals;
- d) Other wastewater mixed with the above effluents.

Note. The domestic sewage collected by the vacuum collection system is called vacuum black water, and the domestic sewage collected by the conventional gravity collection system is called gravity black water.

3.2 graywater Dishwashing water, kitchen sink water, shower water, laundry water, bathing water and face washing water discharged from the ship do not include cargo hold drainage and garbage.

Note. Depending on the degree of contamination, it is divided into kitchen gray water and washing gray water. Kitchen gray water is dishwashing water and kitchen sink water, including manual or automatic dishwashing and cooking Drainage of appliances; washing gray water includes shower water, laundry water, bath water, face wash water, etc. other than kitchen gray water.