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

GB/T 18816-2014

Replacing GB/T 18816-2002

General specification for marine heat exchanger

船用热交换器通用技术条件

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Foreword

This standard was drafted in accordance with GB/T 1.1-2009 given rules. This standard replaces GB/T 18816-2002 "General technical conditions for marine heat exchangers." This standard and GB/T 18816-2002 phase Ratio, the main technical changes are as follows:

- Scope added "evaporator" (see Chapter 1, Chapter 1 of the 2002 edition);
- Modify the strength calculation method (see 32, 2002, version 3.2.);
- Modify the material requirements (see 33, 2002 version 3.3.);
- Increased head shape factor (see Table 3);
- Increasing the minimum thickness of the U-tube heat exchanger tube plate calculation method (see 3.2.5);
- Omega modified heat exchanger expansion joint opening width requirements (see 349, 2002 edition of 3.4.10.);
- Modify the setup requirements for temperature measuring device (see 3415, 3416, 2002 edition of 3.4.15, 3.4.16...);
- Butt welds modified cylinder counterpart wrong side requirements (see 353, 2002 edition of 3.5.3.);
- Modify the tube plate and pipe Expansion after the tube plate deformation punch volume requirement (3.8 4, 2002 edition of 3.8.4). The standard proposed by China State Shipbuilding Corporation. This standard by the National Marine Machinery Standardization Technical Committee (SAC/TC137) centralized. This standard drafting units. China Shipbuilding Technology and Economy Research Institute, Nantong Shipbuilding Machinery Manufacturing Co., Daye Surrey Seoul Heat Exchanger Co., Ltd. Hubei Difeng heat exchanger, auxiliary ships Factory Yingkou City, Shanxi Fenxi Heavy Industry Co., Ltd., Yingkou level Industry Technical College. The main drafters of this standard. Weihua Xing, Liu Shiwen, Gu Guiping, item Xiang Yong, Zhang Ping, Huang Tao, Fan Julan, Sun Meng. This standard replaces the standards previously issued as follows:
- GB/T 18816-2002. General technical conditions for marine heat exchangers

1 Scope

GB/T 18816-2014 is the Chinese national standard on general specification for marine heat exchanger, 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 13 December 2013 by the General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China; Standardization Administration of China, and has been in force since 1 June 2014. Classification: ICS 47.020.50, CCS U42. 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 standard specifies the requirements, test methods, inspection rules coolers, condensers, evaporators and heater heat exchangers such as marine, logos, Packaging and storage. This standard applies to design oil pressure is less than 2.5MPa, medium temperature does not exceed 350 °C, the fuel, hydraulic oil, oil, sea Design of water, fresh water, steam, air, ammonia, lithium bromide, R22 and R134a (or other refrigerants) and other heat exchangers, manufacture and acceptance.

2 Normative references

The following documents for the application of this document is essential. For dated references, only the dated version suitable for use herein Member. For undated references, the latest edition (including any amendments) applies to this document.

GB/T 700-2006 carbon structural steel

GB/T 711-2008 quality carbon structural steel plates and strips

GB 713-2008 boiler and pressure vessel steel plate

GB/T 1173-1995 cast aluminum

GB/T 1176-1987 Cast Copper Alloys conditions

GB/T 1348-2009 ductile iron castings

GB/T 1527-2006 Copper and copper alloy tube drawing

GB/T 1591-2008 High strength low alloy structural steel

GB/T 1800.1-2009 Geometrical product specifications (GPS) limits and fits - Part 1. Tolerances, deviations and fits basis

GB/T 2040-2008 Copper and copper alloy sheet

GB/T 2059-2008 Copper and copper alloy strip

GB/T 3191-2010 aluminum and aluminum alloy extruded bars

GB/T 3625-2007 heat exchangers and condensers with titanium and titanium alloy tube