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ICS 23.040.60

CCS G 91

GB/T 29465-2023

Replacing GB/T 29465-2012

Flange of Floating Heat Exchangers

浮头式热交换器用法兰

Issued on: September 7, 2023

Implemented on: September 7, 2023

Issued by: State Administration for Market Regulation;

Standardization Administration of the People's Republic of China.

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Foreword

This Document was drafted as per the rules specified in GB/T 1.1-2020 *Directives for Standardization – Part 1: Rules for the Structure and Drafting of Standardizing Documents*.

This Document replaced GB/T 29465-2012 *Shell Flange-Rear Head End of Floating Heat Exchangers*. Compared with GB/T 29465-2012, the major technical changes of this Document area as follows besides the structural adjustments and editorial modifications:

- a) Add the shell cover flange (see Clause 1 of this Edition);
- b) Change the flange diameter specification of PN0.6MPa~2.5MPa; and increase to DN2600 (see Table 4 of this Edition; Table 3 of the 2012 Edition);
- c) Change the flange diameter specification of PN4.0MPa; and increase to DN2000 (see Table 4 of this Edition; Table 3 of the 2012 Edition);
- d) Change the flange diameter specification of PN6.4MPa; and increase to DN1200 (see Table 4 of this Edition; Table 3 of the 2012 Edition);
- e) Add the basic parameters of the shell flange-rear head end of the series with the inner diameter of the shell cover flange larger than the inner diameter of the shell flange-rear head end by 150mm, 200mm and 250mm (see Table 4 of this Edition);
- f) Add the structural type and basic parameters of the shell cover flange of the series with the inner diameter of the shell cover flange larger than the inner diameter of the shell flange-rear head end by 150mm, 200mm and 250mm (see 4.2 and Table 5 of this Edition).

Please note some contents of this Document may involve patents. The issuing agency of this Document shall not assume the responsibility to identify these patents.

This Document was proposed by and shall be under the jurisdiction of National Technical Committee on Boilers and Pressure Vessels of Standardization Administration of China (SAC/TC 262).

Drafting organizations of this Document: Shanghai Lanbin petrochemical Equipment Co., Ltd.; Sinopec Engineering Incorporation; Sinopec Guangzhou Engineering Co., Ltd.; Shenyang Institute of Special Equipment Inspection and Research; Sinopec Ningbo Engineering Co., Ltd.; Lanzhou LS Heavy Equipment Co., Ltd.; Sinopec Nanjing Engineering Co., Ltd.; China Special Equipment Inspection and Research Institute; Lanpec Technologies Limited; and Shanghai Blue Ocean Science-Innovation Testing Co., Ltd.

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Introduction

GB/T 29465 *Flanges of Floating Heat Exchangers* aims to standardize the types and basic parameters of flange of floating heat exchanger for the energy industry; fully considering the development trend of large-scale devices; taking into account the flange standards and construction levels of heat exchangers in China; and clarifying the applicable scope of parameters and their supporting dimensions.

This Document is of great significance to the realization of standardization, serialization, generalization and scale of flange of floating heat exchangers in China. For the standardization of flange types and basic parameters of large-volume and wide-ranging flange of floating heat exchangers, it can firstly promote product manufacturing standardization and improve design quality and efficiency; secondly, it can save tools, tooling, material consumption and backlog in manufacturing and use; finally, it is convenient for users to select, replace, repair and interchange products. In recent years, the construction of large-scale refining and chemical integration projects in China has entered a period of rapid development. The use of floating-heat exchangers, which are typical energy-consuming equipment of the installation, has increased significantly. The large-scale installation has pushed the structural size of the heat exchanger to a new height, and the large-scale demand for single equipment has become increasingly prominent. The construction and implementation of a large number of engineering projects have accumulated rich experience in the design, manufacturing and engineering application of flanges of floating heat exchangers. At the same time, GB/T151 *Heat Exchanger* has also been revised accordingly, forming for the first time a comprehensive product standard that comprehensively covers the typical structure of heat exchangers; and the applicable parameters have been significantly adjusted. For this reason, the flange of the floating heat exchanger needs to be revised to adapt to the development needs of the industry and standards.

This Document focuses on the large-scale development needs of flange of floating heat exchangers. Through research and analysis of product design, production, use and standardization, the types and basic parameters of flange of floating heat exchangers are greatly expanded. It promotes the efficient selection, construction, maintenance and exchange of such products; and has positive significance for implementing China's "energy saving and emission reduction" strategy and promoting "green design".

Flange of Floating Heat Exchangers

1 Scope

This Document specifies the type, code and basic parameters of the shell flange-rear head end and shell cover flange of floating heat exchangers.

This Document is applicable to carbon steel and low alloy steel flanges with a nominal pressure of 0.6 MPa~6.4 MPa, an operating temperature of -40 °C~450 °C, and a corrosion margin of no more than 3mm.

2 Normative References

The provisions in following documents become the essential provisions of this Document through reference in this Document. For the dated documents, only the versions with the dates indicated are applicable to this Document; for the undated documents, only the latest version (including all the amendments) is applicable to this Document.

GB/T 151 Heat exchanger

GB/T 29463 (all parts) Gaskets used in tube-shell heat exchangers

NB/T 47020-2012 Type and Specification for Pressure Vessel Flanges

NB/T 47023-2012 Welding neck flange

NB/T 47024 Nonmetallic gaskets

NB/T 47025 Spiral wound gaskets

NB/T 47026 Double-jacketed gaskets

NB/T 47027 Stud bolts & nuts for body flange

3 Terms and Definitions

For the purposes of this Document, the terms and definitions given in GB/T 151 apply.

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