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

GB/T 17241.2-2024

Replacing GB/T 17241.1-1998

Cast iron pipe flanges - Part 2: Class designated

铸铁管法兰 第2部分：Class系列

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Foreword

This document is in accordance with the provisions of GB/T 1:1-2020 "Guidelines for standardization work Part 1: Structure and drafting rules for standardization documents" Drafting: This document is Part 2 of GB/T 17241 "Cast Iron Pipe Flanges": GB/T 17241 has been published in the following parts:

--- Part 1: PN series;

--- Part 2: Class series: This document partially replaces GB/T 17241:1-1998 "Types of cast iron pipe flanges", GB/T 17241:2-1998 "Types of cast iron pipe flanges" GB/T 17241:3-1998 "Cast Iron Pipe Flange with Neck Thread", GB/T 17241:4-1998 "Cast Iron Pipe Flange with Neck Slip-On and Neck Socket Welding Pipe flange", GB/T 17241:5-1998 "Tube end flange with loose sleeve cast iron pipe flange", GB/T 17241:6-2008 "Integral cast iron flange" The Class series cast iron pipe flange content of GB/T 17241:7-1998 "Technical conditions for cast iron pipe flanges" series standards is consistent with the original document In addition to structural adjustments and editorial changes, the main technical changes are as follows:

- a) The original nominal pressure level identification is changed, such as changing the pressure level of the PN identification to the pressure level of the Class identification (see 4:1, Chapter 3 of GB/T 17241:1-1998);
- b) Added dimension series and pressure grades, and added three pressure grades of grey cast iron: Class 25, Class 125, and Class 250 The types and sizes of pipe flanges, as well as the types and sizes of ductile iron pipe flanges of two pressure levels, Class 150 and

Class 300: Dimensions (see 4:1);

c) The malleable cast iron material grades (see Table 1 of GB/T 17241:7-1998) have been deleted;

d) Deleted grey cast iron materials HT300 and HT350 (see Table 1 of GB/T 17241:7-1998);

e) Added ductile iron materials QT400-18, QT450-10, QT450-18 and QT500-7 (see Table 20), deleted ductile iron material QT600-3 (see Table 1 of GB/T 17241:7-1998);

f) Added the selection principles of flange pressure temperature ratings and the requirements for flange use under extreme temperatures (see 6:2);

g) Changed the flange size tolerance requirements (see 6:3, Chapter 4 of GB/T 17241:7-1998);

h) The flange sealing surface roughness requirements have been changed (see 6:4, 5:2 of GB/T 17241:7-1998);

i) Added requirements for flange supporting products (bolts and gaskets) (see 6:5 and 6:6);

j) Added requirements for flange processing and manufacturing (see 6:7): Please note that some of the contents of this document may involve patents: The issuing organization of this document does not assume the responsibility for identifying patents: This document was proposed by the China Machinery Industry Federation: This document is under the jurisdiction of the National Technical Committee for Standardization of Pipeline Accessories (SAC/TC237): This document was drafted by: China Machinery Productivity Promotion Center Co., Ltd., Meide Group Co., Ltd., Xinxing Casting and Tube Co., Ltd., Liaoning Aiweier Metal Forming Technology Co., Ltd., Anhui Tongfa Equipment Co., Ltd., Anhui Outaiqi Smart Water Technology Co., Ltd., Shanxi Tianbao Group Co., Ltd., Hebei Jianzhi Casting Group Co., Ltd., Bonaswei Valve Co., Ltd., Gaoan Lux Machinery Co., Ltd., Jiangyin Jintong Petrochemical Equipment Co., Ltd: The main drafters of this document are: Ren Yanqing, Feng Feng, Li Xiaoqin, Zuo Chao, Zhou Zhanhu, Jiao Xiangjing, Wang Jingyu, Wang Ronghui, Ai Chenguang, Hu Dawei, Wang Daoqun, Yao Minghua, Lu Xiaobin, and Wang Xiaojuan: The previous versions of this document and the documents it replaces are as follows:

---First published in:1998 as GB/T 17241:2-1998;

1 Scope

GB/T 17241.2-2024 is the Chinese national standard on cast iron pipe flanges - part 2: class designated, in the field of fluid systems and general-purpose components. 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 25 April 2024 by the State

Administration for Market Regulation; Standardization Administration of China, and has been in force since 1 November 2024. Classification: ICS 23.040.60, CCS J15. 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 types and parameters, types and dimensions, technical requirements, pressure tests, inspections, and other requirements of the Class series cast iron pipe flanges and flange covers: Inspection and acceptance, marking and labeling, and supply requirements: This document is applicable to gray cast iron and ductile iron, nominal pressure Class 25~Class 300, nominal size DN25~ DN1200 (NPS1~NPS48) cast iron pipe flange and flange cover:

2 Normative references

The contents of the following documents constitute the essential clauses of this document through normative references in this document: For referenced documents without a date, only the version corresponding to that date applies to this document; for referenced documents without a date, the latest version (including all amendments) applies to This document: GB/T 152:

3 Terms and definitions

The terms and definitions defined in GB/T 1047 and GB/T 1048 apply to this document:

4 Fasteners - Countersunk holes for hexagonal head bolts and hexagonal nuts

GB/T 1047 Definition and selection of nominal sizes of piping components

GB/T 1048 Definition and selection of nominal pressure of pipeline components

GB/T 1348 Ductile iron castings

GB/T 9439 Grey iron castings

GB/T 12716 60° Sealing Pipe Thread