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

GB/T 12224-2015

Replacing GB/T 12224-2005

General requirements for industrial steel valves

钢制阀门 一般要求

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Foreword

This Standard is drafted in accordance with the rules given in GB/T 1.1-2009.

This Standard replaces GB/T 12224-2005 "General requirements for industrial steel valves". Compared with GB/T 12224-2005, the main technical changes except editorial modifications are as follows:

- MODIFY the method for determining "pressure-temperature rated values";
- ADD the relevant materials of pressure-bearing members;
- PUT the requirements for special pressure level valves into the text; pressure-bearing members of Class series valves;
- ADD the pressure rated values of Class series valves;
- ADD the requirements for defined pressure level valves;
- ADD the diameter and depth of socket weld holes;
- ADD the content of butt-welded ends;
- ADD the pressure level of PN series valves;
- ADD the grouping of the materials of pressure-bearing members of PN series valves;
- ADD the pressure-temperature rated values of the materials of pressure-bearing members of PN series valve;
- ADD the minimum wall thickness of the housing of PN series valve;
- ADD the minimum wall thickness of the socket welded and threaded end of PN series valve;
- ADD Annex A Requirements for defined pressure level valves;
- ADD Annex B Basic formulas for minimum wall thickness;
- ADD Annex D.4 Method for determining intermediate rated values;
- ADD Annex D.5 Maximum rated values.

This Standard was proposed by China Machinery Industry Federation.

This Standard shall be under the jurisdiction of National Technical Committee on Valves of Standardization Administration of China (SAC/TC 188).

Responsible drafting organizations of this Standard: Hefei General Machinery Research Institute, CNNC Sufa Technology Industry Co., Ltd., Wuhan Boiler Group Valve Co., Ltd.

Participating drafting organizations of this Standard: Anhui Tunxi High Pressure Valve Co., Ltd., Henan Kaifeng High Pressure Valve Co., Ltd., Zhejiang Petrochemical Valve Co., Ltd., Wuzhou Valve Co., Ltd., Shenyang Shengshi High and Medium Pressure Valve Co., Ltd.,

Shanghai Liangdong Valve Factory Co., Ltd., Shanghai Navc Valve Co., Ltd., Shanghai Kaiweixi Valve Co., Ltd., Quality Inspection Center of Pump and Valve Products of Zhejiang Province, Baoyi Group Co., Ltd., Shandong Yidu Valve Co., Ltd., Henan Gaoshan Valve Co., Ltd., Hubei Hongcheng General Machinery Co., Ltd.

Main drafters of this Standard: Gao Bingshen, Chen Jianping, Lu Zhaozheng, Cao Yuehua, Lu Huancheng, Li Baosheng, Zheng Zuhui, Liu Xiaoying, Qiu Fukang, Yang Heng, Liang Jinlian, Lin Meimei, Zhang Xiaozhong, Liu Minghua, Yang Quanqing, Wang Hongyun, Hao Weisha.

The previous released versions replaced by this Standard are as follows:

1 Scope

This Standard specifies the pressure-temperature rated values, materials, design requirements, inspection and test, markings of steel valves, and requirements for special pressure level valves and defined pressure level valves.

This Standard applies to flanged, threaded and welded valves, as well as clipon valves and valves for single flange installation, of which the pressurebearing members are made using the materials given in Table 1A and Table 1B; the valve body is made by casting, forged rolling, rolling and assemblingwelding. This Standard includes valves of which the nominal pressure is Class series and PN series. The range of steel valve parameters to which this Standard applicable is:

which Class4500 only applies to welded valves; the pressure level of PN series valves is PN2.5 ~ PN400;

pressure level is not greater than Class2500;

to special pressure level and defined pressure level valves;

f) Flanged valves have no intermediate pressure rated values.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies. GB/T 7306.1 Pipe threads with 55 degree thread angle where pressure-tight joints are made on the threads - Part 1: Parallel internal and taper external threads GB/T 7306.

3 Pressure-temperature rated values

3.1 General

3.1.1 Pressure-temperature rated values

For Class series valves, the pressure-temperature rated values of standard pressure level shall comply with the requirements of Table 2-1A ~ Table 2-28A, and the pressure-temperature rated values of special pressure level shall comply with the requirements of Table 2-1B ~ Table 2-28B.

For PN series valves, the pressure-temperature rated values of standard pressure level shall comply with the requirements of Table 2-29A ~ Table 2-71A, and the pressure-temperature rated values of special pressure level shall comply with the requirements of Table 2-29B ~ Table 2-71B. The pressure-temperature rated values of standard pressure level that are not specified in Table 2-29A ~ Table 2-71A may be in accordance with the requirements of GB/T 9124-2010.

The pressure-temperature rated values of defined pressure level valves do not exceed the value calculated according to Annex A.

3.1.2 Standard pressure level valves

Valves that meet the requirements of this Standard, except those that meet the requirements of Clause 8 for special pressure level valves and requirements of Annex A for defined pressure level valves, are designated as standard pressure level valves, of which the pressure-temperature rated values comply with the requirements of 3.1.1.

3.1.3 Special pressure level valves

Valves that meet the requirements of 3.1.

3.1.4 Defined pressure level valves

3.1.5 Intermediate rated value valves

Class series welded or threaded valves, standard pressure level Class400 flanged valves, which can be linearly interpolated to determine the intermediate rated values between the rated temperature or the rated pressure listed in the table as specified in 6.1.5. However, for flanged valves of other pressure levels, linear interpolation is not allowed to be used to determine the nominal pressure level.

3.1.6 Assembled-and-welded members

Valves assembled-and-welded in whole or in part with castings, forgings, bars, plates or tubes shall meet the following requirements:

such as welding of seat blocks, seat rings, lifting lugs and auxiliary joints.

3.2 Rated temperature