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

**中华人民共和国国家标准**

GB/T 9121-2010

Replace GB/T 9121.1-9121.3-2000, GB/T 2508-1989

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**Loose plate steel pipe flanges with weld-on collar**

**平焊环板式松套钢制管法兰**

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## Foreword

The modification to series standards of GB/T 9112~9124—2010 *Steel Pipe Flange* adopts ASME B16.5—2009 *Pipe Flanges and Flanged Fittings (NPS 1/2~NPS 24)* and EN 1092-1:2007 *Flanges and Their Joints-Circular Flanges for Valves, Pipe Fittings and Accessories, PN Designated-Part 1: Steel Flange*. ASME B16.5—2009 is a complete standard about Class designated flanges, EN 1092-1:2007 is a complete standard about PN designated flanges. This series standards comprehensively adopt the above two standards, including relevant technical content about Class designated flanges and PN designated flanges. This series of standards consist of 13 standards. This standard is one of them.

The main differences between this standard and EN 1092-1:2007 standards are as follows:

——The format of this standard is different with and EN 1092-1:2007 standards;

——EN 1092-1:2007 standard excludes two nominal dimensions: DN 175 and DN 225. According to the operating requirements of Chinese users of marine flanges, this series standard add DN 175 and DN 225 that are only used for marine flanges for PN designated flanges.

This standard replaces GB/T 9121.1—2000 *Loose plate steel pipe flanges with weld-on collar with raised face* and GB/T 9120.2—2000 *Loose plate steel pipe flanges with male and female face*, GB/T 9120.3—2000 *Loose plate steel pipe flanges with tongue and groove face* and GB/T 2508-1989 *Marine combination pipe flanges, slip-on steel outer flanges, fillet weld-on steel inner flanges*, compared with original standard, the main changes are as follows:

——The original 3 standards of integral steel pipe flanges and the GB/T 2508-1989 are integrated into one standard;

——According to EN 1092-1:2007 standard, O-ring sealing type is added;

——According to EN 1092-1:2007 standard, dimension data of PN designated flanges are comprehensively modified;

——Two nominal dimensions: DN 175 and DN 225 that are only used for marine flanges are added to PN designated flanges

——Add the applicable range table of various sealing face types.

This standard was proposed by China Machinery Industry Federation.

The Standard is under the jurisdiction of the National Piping Accessories Standardization Technical Committee.

This standard is drafted by: China Productivity Center for Machinery (CPCFM), Zhejiang Chaoda Valve Co., Ltd., CNPC Huadong Engineering Corporation, Jiangsu Haida Pipe Fittings Group Company Ltd., Hebei Shengtian Group Baoyin High-Pressure Flange Pipe Fittings Co., Ltd, Bengbu Piping & Fitting Factory.

Main drafters of the Standard : Li Junying, Qiu Xiaolai, Feng Feng, Luo Fayuan, Li Jian, Li Baoyin and Wang Qingyao.

The issuances of previous versions of the standard replaced by this standard are as follows:

——GB/T 9121.1~9120.6—1988, GB/T 9121.1~3—2000;

——GB/T 2508—1989.

# Loose plate steel pipe flanges with weld-on collar

## 1 Scope

This standard specifies the types, dimensions, technical requirements and designation of the loose plate steel pipe flanges with weld-on ring collar whose nominal pressure is designated with PN.

This standard applies to the loose plate steel pipe flanges with weld-on collar whose nominal pressure is PN2.5-PN40.

## 2 Normative References

The articles contained in the following documents have become this standard when they are quoted herein. For the dated documents so quoted, all the modifications (excluding corrections) or revisions made thereafter shall not be applicable to this Standard. For the undated documents so quoted, the latest editions shall be applicable to this Standard.

GB/T 9112 Types and parameters for steel pipe flanges

GB/T 9124 Specification for steel pipe flanges

## 3 Type and dimension

**3.1** The sealing face types of the loose plate steel pipe flanges with weld-on collar designated with PN and the applicable nominal pressure and nominal dimension range are stipulated in Table 1.

**Table 1 The sealing face types of the loose plate steel pipe flanges with weld-on ring collar designated with PN and the applicable nominal pressure and nominal dimension range**

| Type of flange              | Nominal pressure |      |               |       |       |       |
|-----------------------------|------------------|------|---------------|-------|-------|-------|
|                             | PN 2.5           | PN 6 | PN 10         | PN 16 | PN 25 | PN 40 |
| Raised face (RF)            | DN 10 ~DN 600    |      |               |       |       |       |
| Male and female face (MF)   | —                |      | DN 10~DN 600  |       |       |       |
| Tongue and groove face (TG) | —                |      | DN 10~DN 600  |       |       |       |
| O-shaped groove face (OSG)  | —                |      | DN 10 ~DN 600 |       |       |       |



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