

HG

**CHEMICAL INDUSTRY STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

HG/T 20634-2009

Bolting for use with steel pipe flanges (Class designated)

钢制管法兰用紧固件(Class系列)

(English Translation)

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1 Scope

This Standard specifies style, dimension, material, mark, technical requirements and application provisions for boltings of steel pipe flange (Class designated).

This Standard is applicable to boltings of steel pipe flange of HG/T 20615 and HG/T 20623, which include hexagon head bolting, isometric studs, full thread studs and nut.

2 Normative References

The articles contained in the following documents become part of 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.

3.1 Types of boltings

Types of bolting for use with steel pipe flange are hexagon head boltings, full-thread studs, I-shape hexagon nuts, and special nuts.

3.2 Hexagon boltings

3.2.1

Type and dimension of hexagon head boltings shall comply with the requirements of GB/T 5782 and GB/T 5785. The end of the hexagon head boltings shall use the chamfer side, as shown in figure 3.2.1, and bolting chamfer shall comply with the provisions in GB/T 2.

Figure 3.2.1 Hexagon bolting

3.3.3 Specification and material of full-thread studs shall be in accordance with Table 3.3.3.

3.4 Nuts

3.4.1

The type of nuts matching with hexagon boltings shall meet the requirements of GB/T 6170, as shown in Figure 3.4.1.

3.4.2

The type and dimension of nuts matching with full-thread bolting (special nut for pipe flange) shall be complied with provisions in figure 3.4.1 and 3.4.2. Other requirements shall be complied with provisions in GB/T 6170.

4 Materials

4.0.1

Material of bolting used for steel pipe flanges is divided into high-strength, medium-strength and low-strength material according to table 4.0.1.

4.0.2

Working pressure and range of temperature of the bolting material shall comply with Table 5.0.3 of this Standard.

4.0.3

Material and mechanical property of commercial grade bolting shall meet the provisions in GB/T 3098.1, GB/T 3098.2, GB/T 3098.6 and GB/T 3098.15.

4.0.4 Chemical composition, heat treatment and mechanical property of the special grade bolting

shall meet the requirements of Table 4.0.4. Mechanical property of the sample shall be cut along the rolling direction on the roughcast after a specified heat treatment. Cutting position of sample.

4.0.5 The roughcast of full-thread studs shall be performed for mechanical performance by batch.

The roughcast of special-use nuts shall be performed for hardness test by batch.

5 Use of Boltings

5.0.1

The use of commodity-grade hexagon boltings and type I hexagon nuts shall meet the following requirements.

5.0.2

Besides 5.0.1, special-grade full-thread boltings and special nuts shall be used.

5.0.3

The bolting working pressure and temperature range shall comply with the provisions of Table 5.0.3.

5.0.8

The mass of the nuts shall be in accordance with Table 5.0.8.

5.0.9

The use of gaskets shall be in accordance with the provisions of Annex A of this Standard.

5.0.10

The selection of insulation flange bolting shall be in accordance with the provisions of Annex B of this Standard.

6 Dimension Tolerance

6.0.1

The dimension tolerance and surface defects of commodity-grade boltings shall meet the requirements of relevant bolting national standards.

6.0.2

Professional-grade Bolting.

7 Surface Treatment

Alloy-steel boltings shall be treated with bluing.

8 Inspection

8.0.1

The delivery inspection of commodity-grade boltings shall be in accordance with corresponding national standard requirements.

8.0.2

The delivery inspection of professional-grade boltings shall be done in batches. The maximum batch quantity for studs is 3000 pieces, and the maximum batch quantity for nuts is

5000 pieces.

8.0.3

The professional-grade boltings shall be sampled and inspected in batches after heat treatment, and shall comply with requirements in Table 4.0.4 of this Standard.

8.0.4

The full-thread studs with nominal pressure greater than Class600 (PN100) shall be individually inspected for magnetic-particle-inspection in accordance with JB/T 4730, and shall comply with Grade II requirements.

9.0.1 The dimension, appearance, performance examination, acceptance, and packaging of

boltings shall comply with the GB/T 90.1 and GB/T 90.2 provisions.

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