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

GB/T 14383-2021

Replacing GB/T 14383-2008

Forged fittings - Socket welding and threaded

锻制承插焊和螺纹管件

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1 Scope

China's national standard for forged socket welding and threaded pipe fittings - the elbows, tees, couplings, caps, unions and crosses used on small bore high pressure pipework in power stations, refineries, chemical plant and process systems generally. Small bore lines carry a disproportionate share of the failures in a piping system: they are numerous, they are often supported badly, they are subjected to vibration and to being stood on, and the fitting is where the wall is thickest and the stress concentration is highest. It specifies the dimensions, the materials, the technical requirements, the test methods, the inspection rules, and the marking, packaging, transport and storage of forged socket welding and threaded fittings. Being forged rather than cast is the point: the material has a worked

structure with no porosity and no cast defects, which is what allows the fitting to be rated at the pressure of the pipe it joins. The requirements cover the pressure classes and the corresponding wall thicknesses, the materials and their composition and mechanical properties, the dimensions of the socket and of the thread and their tolerances - which are the whole of the interchangeability of the product - the surface condition and the permitted defects, the heat treatment, and the non-destructive examination where the class requires it. The socket geometry deserves particular attention: the gap that must be left between the pipe end and the bottom of the socket exists so that the weld is not restrained as it cools, and a fitting whose socket depth is out of tolerance produces a joint that cracks. Issued on 9 March 2021 and in force since 1 October 2021, it replaces GB/T 14383-2008. Amendment 1, GB/T 14383-2021/XG1-2025, was issued on 30 June 2025 and forms part of the same document.

This standard specifies the varieties and codes of forged socket welding and threaded pipe fittings, pressure grades, special connection forms, pipe sizes, and within the order Capacity, shape, dimensions and tolerances, materials, manufacturing, heat treatment, inspection and testing, marking, surface protection and packaging, and product quality certificates Requirements. This standard applies to piping systems whose nominal size is less than or equal to DN 100, the pressure class (Class) is 2 000, 3 000, 6 000 and 000 steel material forged socket welding and threaded pipe fittings.

2 Normative references

The following documents are indispensable for the application of this document. For dated reference documents, only the dated version applies to this article Pieces. For undated reference documents, the latest version (including all amendments) is applicable to this document. GB/T The allowable deviation of the chemical composition of the finished product of 222 steel

GB/T 223 (all parts) Steel and alloy chemical analysis methods

GB/T 226 Steel Macrostructure and Defect Inspection Method

GB/T 228.1 Tensile test of metallic materials Part

3 Variety and code

The varieties and codes of pipe fittings are shown in Table 1.

4 Pressure rating

The pressure class (Class) of socket welded pipe fittings is 3 000, 6 000 or 9 000, the pressure rating of threaded pipe fittings is 2 000, 3 000 or 000. The pressure rating of this standard is only related to the corresponding steel pipe wall thickness (see Appendix A),

and the corresponding relationship between the two is shown in Table 2.

2 The relationship between the pressure rating of the pipe fittings and the corresponding steel pipe wall thickness

5 Special connection form

5.1 The pipe fittings can be made into the end connection form of socket welding and thread combination. For the end connection form of this combination, it should be compared according to Table 2. The end of the low pressure grade determines the pressure grade of the pipe fitting.

5.2 With the agreement of the supplier and the demander, pipe fittings with other thread forms or other connection forms can be made; in addition, the pipe fittings should comply with other terms Provisions.

6 Take over size

6.1 See Appendix A for the dimensions of steel pipes connected with pipe fittings. The outer diameter of the steel pipe is divided into two series, I and II, and the outer diameter of I series is recommended. Elected When using the II series outer diameter, you should add II in the order content, and the manufacturer should determine the socket hole and the flow hole according to the II series outer diameter; in addition, The remaining dimensions of the pipe fittings should meet the requirements of this standard.

6.2 The outer diameter of II series is not suitable for threaded pipe fittings.

7 Order content

The purchaser shall provide all the information required for the purchase of goods in the order. This information shall include but not limited to the following.

---Variety or code (including special connection form requirements);

---Material grade;

---Pressure Level;

---Nominal size (the outer diameter of series I does not need to be added, and the outer diameter of series II should be marked with II) or thread size code; thread sub-sections should also be marked with length Degree type code;

---No. of this standard;

---Number of pieces;

---Additional requirements (see Appendix B) or supplementary regulations required.

8.1 Shape and size

8.1.1 After the forged fillet of the end flange of the socket welded pipe fitting is processed by the end plane, the required welding plane width and the required welding The gap before connection is shown in Figure 1.

8.2 Tolerance

8.2.1 Tolerances should meet the requirements of Table 11.

8.2.2 The socket aperture and the flow aperture of the socket welded pipe fittings shall be coaxial, and the coaxiality tolerance shall be

0.8 mm. The two opposite sockets should be the same Shaft, its coaxiality tolerance is

8.2.3 The axis of the socket hole diameter and the flow hole diameter of the socket welded pipe fittings shall be coincident, and the maximum allowable value of its straightness is.200 mm within 1 mm. The flow aperture of threaded pipe fittings should coincide with the axis of the thread, and the maximum allowable value of its straightness is.200 mm within 1 mm.

8.3 End flange The end flanges of elbows, tees and crosses in socket welding and threaded pipe fittings should be as shown in Figure 2, Figure 4 or Figure 5.

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This standard is in accordance with GB/T Drafting of the rules given in 1.1-2009. This standard replaces GB/T 14383-2008 "Forged Socket Welding and Threaded Pipe Fittings", with GB/T Compared with 14383-2008, except for editability In addition to the modification, the main technical changes are as follows:

---The variety of pipe fittings has been added (see Table 1);

---Added the eccentricity requirements for eccentric reducing pipe fittings (see 8.4.3);