Orifice Flanges

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TENTATIVE
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ASME Codes and Standards
the slot shall admit the nut so that there is no interference with the joining of the flanges when bolted together without orifice plate.

10.3 Tapped Hole

As an alternative to para. 10.2, a tapped hole may be provided and the hex nut omitted when agreed on between the purchaser and the manufacturer.

11 FLANGE DIMENSIONS

Dimensions are listed in Tables 1, 2, 3, 4, and 5 for metric, and Tables I-1, I-2, I-3, I-4, and I-5, and Mandatory Appendix II for U.S. Customary.

12 FLANGE THREADS

Threaded flanges shall have an American National Standard taper pipe thread conforming to ASME B1.20.1.

(a) The thread shall be concentric with the axis of the flange. Variations in alignment shall not exceed 5 mm/m (0.06 in./ft).

(b) The flanges are made with counterbores at the back of the flange and the threads shall be chamfered to the diameter of the counterbore at an angle of approximately 45 deg with the axis of the thread to afford easy entrance in making a joint. The counterbore and chamfer shall be concentric with the thread.

(c) In order to permit the pipe to be inserted to the face of the flange, the threads should have full root diameters through to the face of the flange, or shall have a counterbore at the face of the flange.

(d) The gaging notch of the working gage shall come flush with the bottom of the chamfer in all threaded flanges and shall be considered as being the intersection of the chamfer cone and the pitch cone of the thread. This depth of chamfer is approximately equal to one-half the pitch of the thread.

(e) The maximum allowable thread variation is one turn large or small from the gaging notch.

13 TOLERANCES

Tolerances on all dimensions shall be as shown in ASME B16.5 except for those shown below.

13.1 Pressure Tap Location

Tolerance on location of center of pressure tap hole from flange face shall be

(a) ±0.5 mm (±0.02 in.) for flanges smaller than NPS 4
(b) ±0.8 mm (±0.03 in.) for flanges NPS 4 and larger

13.2 Bore Diameter

Bore diameter tolerance (welding neck flanges only) is ±0.5% of nominal value.

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1 See para. 9.2.