



Steel butt-welding pipe fittings
Tees for use at full service pressure

DIN
2615
 Part 2

Formstücke zum Einschweißen; T-Stücke; voller Ausnutzungsgrad

This standard, together with DIN 2615 Part 1, May 1992 edition, supersedes DIN 2615, June 1964 edition.

In keeping with current practice in standards published by the International Organization for Standardization (ISO), a comma has been used throughout as the decimal marker.

Dimensions in mm

1 Field of application

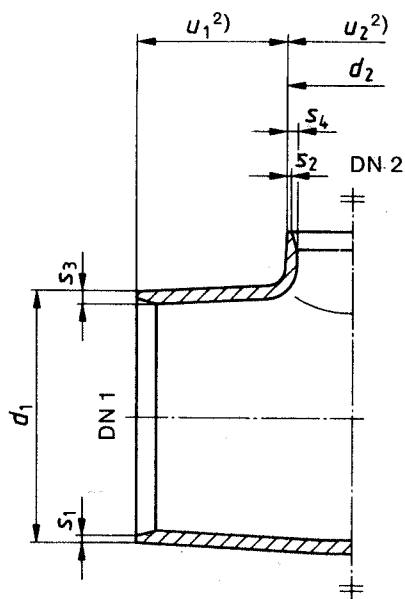
This standard specifies seamless and welded steel tees that are intended to be butt welded to pipes and that are rated for the same internal pressure as pipes having a wall thickness as specified in tables 1 to 5 (cf. clause 3).

2 Types and designation

Tees are not expected to conform to the designs illustrated here; compliance is only required in the case of the dimensions specified. The particular type (A or B) shall be up to the manufacturer.

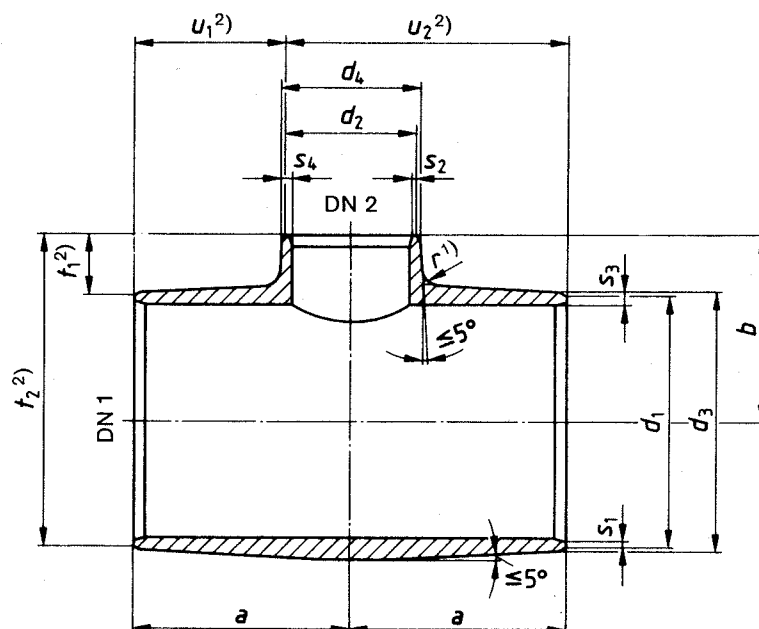
Type A

(see type B for other dimensions)



Type B

(with dimensions as illustrated for type A)



Designation of a seamless (S) tee in accordance with this standard (2), where $d_1 = 168,3$ mm, $s_1 = 4,5$ mm, $d_2 = 88,9$ mm, and $s_2 = 3,2$ mm, made from material belonging to material group F as in DIN 2609 (F):

Tee DIN 2615 – 2 – 168,3 × 4,5 – 88,9 × 3,2 S – F

For 1), see subclause 7.1.

For 2), see clause 4.

Continued on pages 2 to 15

18.3.06

3 Dimensions

Table 1: Dimensions of tees for wall thickness series 1*)

| Nominal size DN 1 | Out-side diameter d_1 | Wall thick-ness s_1 | Nominal size DN 2 | Out-side diameter d_2 | Wall thick-ness s_2 | Diameter d_3 1) | | Wall thick-ness s_3 | Diameter d_4 1) | | Wall thick-ness s_4 | a | b |
|----------------------|----------------------------|--------------------------|----------------------|----------------------------|--------------------------|-------------------|-------|--------------------------|-------------------|-------|--------------------------|-----|-----|
| | | | | | | min. | max. | | min. | max. | | | |
| 15 | 21,3 | 1,6 | 15 | 21,3 | 1,6 | 21,3 | 24,0 | 3,3 | 21,3 | 22,5 | 2,5 | 25 | 25 |
| | | | 10 | 17,2 | 1,6 | | 23,0 | 2,9 | 17,2 | 18,0 | 2,2 | | |
| 20 | 26,9 | 1,6 | 20 | 26,9 | 1,6 | 26,9 | 30,0 | 3,4 | 26,9 | 28,0 | 2,6 | 29 | 29 |
| | | | 15 | 21,3 | 1,6 | | 29,0 | 3,0 | 21,3 | 22,0 | 2,3 | | |
| | | | 10 | 17,2 | 1,6 | | 28,5 | 2,6 | 17,2 | 17,5 | 2,1 | | |
| 25 | 33,7 | 2,0 | 25 | 33,7 | 2,0 | 33,7 | 37,0 | 4,3 | 33,7 | 35,5 | 3,2 | 38 | 38 |
| | | | 20 | 26,9 | 1,6 | | 36,5 | 3,8 | 26,9 | 28,5 | 2,9 | | |
| | | | 15 | 21,3 | 1,6 | | 35,5 | 3,4 | 21,3 | 22,5 | 2,5 | | |
| 32 | 42,4 | 2,0 | 32 | 42,4 | 2,0 | 42,4 | 46,0 | 4,5 | 42,4 | 44,0 | 3,3 | 48 | 48 |
| | | | 25 | 33,7 | 2,0 | | 45,5 | 4,0 | 33,7 | 35,5 | 3,0 | | |
| | | | 20 | 26,9 | 1,6 | | 44,5 | 3,5 | 26,9 | 28,5 | 2,6 | | |
| | | | 15 | 21,3 | 1,6 | | 44,0 | 3,2 | 21,3 | 22,5 | 2,4 | | |
| 40 | 48,3 | 2,0 | 40 | 48,3 | 2,0 | 48,3 | 52,5 | 4,6 | 48,3 | 50,5 | 3,4 | 57 | 57 |
| | | | 32 | 42,4 | 2,0 | | 51,5 | 4,2 | 42,4 | 44,0 | 3,2 | | |
| | | | 25 | 33,7 | 2,0 | | 51,0 | 3,8 | 33,7 | 34,5 | 2,9 | | |
| | | | 20 | 26,9 | 1,6 | | 50,0 | 3,4 | 26,9 | 28,0 | 2,5 | | |
| 50 | 60,3 | 2,0 | 50 | 60,3 | 2,0 | 60,3 | 64,5 | 4,8 | 60,3 | 62,5 | 3,5 | 64 | 64 |
| | | | 40 | 48,3 | 2,0 | | 63,5 | 4,2 | 48,3 | 50,0 | 3,2 | | 60 |
| | | | 32 | 42,4 | 2,0 | | 63,0 | 4,0 | 42,4 | 43,5 | 3,0 | | 57 |
| | | | 25 | 33,7 | 2,0 | | 62,5 | 3,5 | 33,7 | 34,5 | 2,6 | | 51 |
| | | | 20 | 26,9 | 1,6 | | 62,0 | 3,2 | 26,9 | 28,0 | 2,4 | | 44 |
| 65 | 76,1 | 2,3 | 65 | 76,1 | 2,3 | 76,1 | 81,5 | 5,6 | 76,1 | 79,0 | 4,2 | 76 | 76 |
| | | | 50 | 60,3 | 2,0 | | 80,0 | 4,9 | 60,3 | 63,0 | 3,7 | | 70 |
| | | | 40 | 48,3 | 2,0 | | 79,0 | 4,5 | 48,3 | 50,0 | 3,3 | | 67 |
| | | | 32 | 42,4 | 2,0 | | 79,0 | 4,2 | 42,4 | 44,0 | 3,2 | | 64 |
| | | | 25 | 33,7 | 2,0 | | 78,0 | 3,8 | 33,7 | 34,5 | 2,9 | | 57 |
| 80 | 88,9 | 2,3 | 80 | 88,9 | 2,3 | 88,9 | 94,5 | 5,8 | 88,9 | 92,0 | 4,3 | 86 | 86 |
| | | | 65 | 76,1 | 2,3 | | 93,5 | 5,3 | 76,1 | 78,5 | 4,0 | | 83 |
| | | | 50 | 60,3 | 2,0 | | 92,5 | 4,7 | 60,3 | 62,5 | 3,5 | | 76 |
| | | | 40 | 48,3 | 2,0 | | 91,5 | 4,2 | 48,3 | 50,0 | 3,2 | | 73 |
| | | | 32 | 42,4 | 2,0 | | 91,5 | 4,0 | 42,4 | 43,5 | 3,0 | | 70 |
| 100 | 114,3 | 2,6 | 100 | 114,3 | 2,6 | 114,3 | 121,0 | 6,7 | 114,3 | 118,0 | 5,0 | 105 | 105 |
| | | | 80 | 88,9 | 2,3 | | 119,5 | 5,8 | 88,9 | 92,0 | 4,3 | | 98 |
| | | | 65 | 76,1 | 2,3 | | 118,5 | 5,5 | 76,1 | 78,5 | 4,1 | | 95 |
| | | | 50 | 60,3 | 2,0 | | 117,5 | 4,9 | 60,3 | 62,5 | 3,7 | | 89 |
| | | | 40 | 48,3 | 2,0 | | 117,0 | 4,5 | 48,3 | 50,0 | 3,3 | | 86 |
| 125 | 139,7 | 2,6 | 125 | 139,7 | 2,6 | 139,7 | 146,5 | 7,0 | 139,7 | 143,5 | 5,3 | 124 | 124 |
| | | | 100 | 114,3 | 2,6 | | 145,5 | 6,3 | 114,3 | 117,5 | 4,7 | | 117 |
| | | | 80 | 88,9 | 2,3 | | 144,0 | 5,6 | 88,9 | 91,5 | 4,2 | | 111 |
| | | | 65 | 76,1 | 2,3 | | 143,5 | 5,1 | 76,1 | 78,5 | 3,9 | | 108 |
| | | | 50 | 60,3 | 2,0 | | 142,5 | 4,7 | 60,3 | 62,5 | 3,5 | | 105 |
| 150 | 168,3 | 2,6 | 150 | 168,3 | 2,6 | 168,3 | 176,0 | 7,3 | 168,3 | 172,5 | 5,5 | 143 | 143 |
| | | | 125 | 139,7 | 2,6 | | 174,5 | 6,6 | 139,7 | 143,0 | 4,9 | | 137 |
| | | | 100 | 114,3 | 2,6 | | 173,5 | 5,9 | 114,3 | 117,0 | 4,5 | | 130 |
| | | | 80 | 88,9 | 2,3 | | 172,5 | 5,3 | 88,9 | 91,0 | 4,0 | | 124 |
| | | | 65 | 76,1 | 2,3 | | 171,5 | 4,9 | 76,1 | 78,0 | 3,7 | | 121 |
| 200 | 219,1 | 2,9 | 200 | 219,1 | 2,9 | 219,1 | 228,0 | 8,3 | 219,1 | 224,5 | 6,3 | 178 | 178 |
| | | | 150 | 168,3 | 2,6 | | 226,0 | 7,3 | 168,3 | 172,5 | 5,5 | | 168 |
| | | | 125 | 139,7 | 2,6 | | 225,0 | 6,6 | 139,7 | 143,0 | 5,0 | | 162 |
| | | | 100 | 114,3 | 2,6 | | 224,0 | 6,1 | 114,3 | 117,0 | 4,6 | | 156 |
| | | | 80 | 88,9 | 2,3 | | 223,0 | 5,5 | 88,9 | 91,5 | 4,1 | | 152 |

For 1), see subclause 7.2.

*) As specified in ISO 4200.

(continued)

Table 1 (continued)

| Nominal size DN 1 | Outside diameter d_1 | Wall thickness s_1 | Nominal size DN 2 | Outside diameter d_2 | Wall thickness s_2 | Diameter d_3 1) | | Wall thickness s_3 | Diameter d_4 1) | | Wall thickness s_4 | a | b |
|----------------------|---------------------------|-------------------------|----------------------|---------------------------|-------------------------|-------------------|-------|-------------------------|-------------------|-------|-------------------------|-----|-----|
| | | | | | | min. | max. | | min. | max. | | | |
| 250 | 273,0 | 2,9 | 250 | 273,0 | 2,9 | 273,0 | 282,5 | 8,8 | 273,0 | 279,0 | 6,6 | 216 | 216 |
| | | | 200 | 219,1 | 2,9 | | 281,0 | 7,9 | 219,1 | 223,5 | 5,9 | | 203 |
| | | | 150 | 168,3 | 2,6 | | 279,5 | 7,0 | 168,3 | 172,0 | 5,3 | | 194 |
| | | | 125 | 139,7 | 2,6 | | 278,5 | 6,4 | 139,7 | 143,0 | 4,8 | | 191 |
| | | | 100 | 114,3 | 2,6 | | 277,5 | 5,8 | 114,3 | 116,5 | 4,3 | | 184 |
| 300 | 323,9 | 2,9 | 300 | 323,9 | 2,9 | 323,9 | 334,0 | 9,1 | 323,9 | 330,0 | 6,9 | 254 | 254 |
| | | | 250 | 273,0 | 2,9 | | 332,5 | 8,3 | 273,0 | 278,0 | 6,3 | | 241 |
| | | | 200 | 219,1 | 2,9 | | 331,0 | 7,5 | 219,1 | 223,0 | 5,6 | | 229 |
| | | | 150 | 168,3 | 2,6 | | 329,5 | 6,6 | 169,3 | 172,0 | 5,0 | | 219 |
| | | | 125 | 139,7 | 2,6 | | 329,0 | 6,2 | 139,7 | 142,5 | 4,6 | | 216 |
| 350 | 355,6 | 3,2 | 350 | 355,6 | 3,2 | 355,6 | 367,0 | 10,2 | 355,6 | 362,5 | 7,7 | 279 | 279 |
| | | | 300 | 323,9 | 2,9 | | 366,0 | 9,6 | 323,9 | 330,5 | 7,2 | | 270 |
| | | | 250 | 273,0 | 2,9 | | 364,5 | 8,8 | 273,0 | 279,0 | 6,6 | | 257 |
| | | | 200 | 219,1 | 2,9 | | 363,0 | 7,9 | 219,1 | 223,5 | 5,9 | | 248 |
| | | | 150 | 168,3 | 2,6 | | 361,5 | 7,1 | 168,3 | 172,5 | 5,3 | | 238 |
| 400 | 406,4 | 3,2 | 400 | 406,4 | 3,2 | 406,4 | 418,0 | 10,4 | 406,4 | 413,5 | 7,9 | 305 | 305 |
| | | | 350 | 355,6 | 3,2 | | 417,0 | 9,7 | 355,6 | 362,0 | 7,3 | | 305 |
| | | | 300 | 323,9 | 2,9 | | 416,0 | 9,3 | 323,9 | 330,0 | 7,0 | | 295 |
| | | | 250 | 273,0 | 2,9 | | 415,0 | 8,6 | 273,0 | 278,5 | 6,4 | | 283 |
| | | | 200 | 219,1 | 2,9 | | 413,5 | 7,7 | 219,1 | 223,5 | 5,7 | | 273 |
| | | | 150 | 168,3 | 2,6 | | 412,0 | 6,9 | 168,3 | 172,0 | 5,1 | | 264 |
| 450 | 457,0 | 4,0 | 450 | 457,0 | 4,0 | 457,0 | 471,0 | 12,7 | 457,0 | 465,5 | 9,6 | 343 | 343 |
| | | | 400 | 406,4 | 3,2 | | 468,5 | 11,1 | 406,4 | 415,5 | 8,3 | | 330 |
| | | | 350 | 355,6 | 3,2 | | 468,5 | 11,2 | 355,6 | 364,0 | 8,5 | | 330 |
| | | | 300 | 323,9 | 2,9 | | 467,5 | 10,6 | 323,9 | 332,0 | 8,0 | | 321 |
| | | | 250 | 273,0 | 2,9 | | 466,0 | 9,8 | 273,0 | 280,0 | 7,4 | | 308 |
| | | | 200 | 219,1 | 2,9 | | 464,5 | 8,9 | 219,1 | 225,0 | 6,7 | | 298 |
| 500 | 508,0 | 4,0 | 500 | 508,0 | 4,0 | 508,0 | 523,0 | 13,0 | 508,0 | 517,0 | 9,8 | 381 | 381 |
| | | | 450 | 457,0 | 4,0 | | 521,5 | 12,3 | 457,0 | 465,0 | 9,3 | | 368 |
| | | | 400 | 406,4 | 3,2 | | 520,0 | 11,7 | 406,4 | 415,0 | 8,7 | | 356 |
| | | | 350 | 355,6 | 3,2 | | 519,0 | 10,9 | 355,6 | 363,5 | 8,1 | | 356 |
| | | | 300 | 323,9 | 2,9 | | 518,0 | 10,4 | 323,9 | 331,5 | 7,8 | | 346 |
| | | | 250 | 273,0 | 2,9 | | 517,0 | 9,6 | 273,0 | 280,0 | 7,2 | | 333 |
| | | | 200 | 219,1 | 2,9 | | 515,0 | 8,7 | 219,1 | 225,0 | 6,5 | | 324 |
| 600 | 610,0 | 5,0 | 600 | 610,0 | 5,0 | 610,0 | 628,0 | 16,1 | 610,0 | 621,0 | 12,1 | 432 | 432 |
| | | | 500 | 508,0 | 4,0 | | 625,0 | 14,2 | 508,0 | 518,5 | 10,6 | | 432 |
| | | | 450 | 457,0 | 4,0 | | 624,5 | 13,9 | 457,0 | 467,5 | 10,4 | | 419 |
| | | | 400 | 406,4 | 3,2 | | 622,5 | 12,7 | 406,4 | 416,5 | 9,6 | | 406 |
| | | | 350 | 355,6 | 3,2 | | 621,5 | 12,3 | 355,6 | 365,5 | 9,3 | | 406 |
| | | | 300 | 323,9 | 2,9 | | 620,5 | 11,8 | 323,9 | 333,5 | 8,9 | | 397 |
| | | | 250 | 273,0 | 2,9 | | 619,0 | 11,0 | 273,0 | 281,5 | 8,2 | | 384 |
| 700 | 711,0 | 5,0 | 700 | 711,0 | 5,0 | 711,0 | 731,5 | 15,8 | 711,0 | 724,0 | 12,0 | 521 | 521 |
| | | | 600 | 610,0 | 5,0 | | 729,5 | 14,6 | 610,0 | 621,0 | 12,1 | | 508 |
| | | | 500 | 508,0 | 4,0 | | 727,0 | 13,4 | 508,0 | 519,5 | 11,1 | | 483 |
| | | | 450 | 457,0 | 4,0 | | 725,5 | 12,8 | 457,0 | 467,5 | 10,5 | | 470 |
| | | | 400 | 406,4 | 3,2 | | 724,5 | 12,1 | 406,4 | 417,5 | 9,9 | | 457 |
| | | | 350 | 355,6 | 3,2 | | 723,0 | 11,4 | 355,6 | 365,5 | 9,4 | | 457 |
| | | | 300 | 323,9 | 2,9 | | 722,0 | 11,0 | 323,9 | 334,0 | 9,0 | | 448 |
| 800 | 813,0 | 5,6 | 800 | 813,0 | 5,6 | 813,0 | 836,5 | 17,8 | 813,0 | 828,0 | 13,5 | 597 | 597 |
| | | | 700 | 711,0 | 5,0 | | 834,0 | 16,6 | 711,0 | 725,0 | 12,6 | | 572 |
| | | | 600 | 610,0 | 5,0 | | 831,5 | 15,4 | 610,0 | 622,5 | 12,8 | | 559 |
| | | | 500 | 508,0 | 4,0 | | 829,0 | 14,2 | 508,0 | 520,5 | 11,8 | | 533 |
| | | | 450 | 457,0 | 4,0 | | 828,0 | 13,5 | 457,0 | 468,5 | 11,2 | | 521 |
| | | | 400 | 406,4 | 3,2 | | 826,5 | 12,8 | 406,4 | 418,5 | 10,6 | | 508 |
| | | | 350 | 355,6 | 3,2 | | 825,0 | 12,1 | 355,6 | 366,5 | 9,9 | | 508 |

For 1), see subclause 7.2.

(continued)

Table 1 (concluded)

| Nominal size DN 1 | Out-side diameter d_1 | Wall thick-ness s_1 | Nominal size DN 2 | Out-side diameter d_2 | Wall thick-ness s_2 | Diameter d_3 1) | | Wall thick-ness s_3 | Diameter d_4 1) | | Wall thick-ness s_4 | a | b |
|----------------------|----------------------------|--------------------------|----------------------|----------------------------|--------------------------|-------------------|--------|--------------------------|-------------------|--------|--------------------------|-----|-----|
| | | | | | | min. | max. | | min. | max. | | | |
| 900 | 914,0 | 6,3 | 900 | 914,0 | 6,3 | 914,0 | 940,5 | 20,1 | 914,0 | 931,0 | 15,2 | 673 | 673 |
| | | | 800 | 813,0 | 5,6 | | 938,0 | 18,8 | 813,0 | 829,5 | 14,3 | | 648 |
| | | | 700 | 711,0 | 5,0 | | 936,0 | 17,7 | 711,0 | 727,0 | 13,4 | | 622 |
| | | | 600 | 610,0 | 5,0 | | 933,5 | 16,5 | 610,0 | 624,0 | 13,7 | | 610 |
| | | | 500 | 508,0 | 4,0 | | 931,0 | 15,2 | 508,0 | 522,0 | 12,6 | | 584 |
| | | | 450 | 457,0 | 4,0 | | 929,5 | 14,5 | 457,0 | 470,0 | 12,0 | | 572 |
| | | | 400 | 406,4 | 3,2 | | 928,0 | 13,8 | 406,4 | 420,0 | 11,4 | | 559 |
| 1000 | 1016,0 | 6,3 | 1000 | 1016,0 | 6,3 | 1016,0 | 1043,5 | 20,6 | 1016,0 | 1033,5 | 15,6 | 749 | 749 |
| | | | 900 | 914,0 | 6,3 | | 1041,5 | 19,5 | 914,0 | 930,0 | 14,8 | | 737 |
| | | | 800 | 813,0 | 5,6 | | 1039,5 | 18,4 | 813,0 | 828,5 | 14,0 | | 711 |
| | | | 700 | 711,0 | 5,0 | | 1037,0 | 17,3 | 711,0 | 726,0 | 13,1 | | 673 |
| | | | 600 | 610,0 | 5,0 | | 1034,5 | 16,1 | 610,0 | 623,5 | 13,4 | | 660 |
| | | | 500 | 508,0 | 4,0 | | 1032,0 | 14,8 | 508,0 | 521,5 | 12,3 | | 635 |
| | | | 450 | 457,0 | 4,0 | | 1031,0 | 14,2 | 457,0 | 469,5 | 11,8 | | 622 |
| 1200 | 1220,0 | 6,3 | 1200 | 1220,0 | 6,3 | 1220,0 | 1250,5 | 22,0 | 1220,0 | 1239,5 | 16,7 | 889 | 838 |
| | | | 1000 | 1016,0 | 6,3 | | 1246,5 | 20,1 | 1016,0 | 1033,0 | 15,2 | | 813 |
| | | | 900 | 914,0 | 6,3 | | 1244,5 | 19,0 | 914,0 | 929,0 | 14,4 | | 787 |
| | | | 800 | 813,0 | 5,6 | | 1242,5 | 18,0 | 813,0 | 828,0 | 13,6 | | 787 |
| | | | 700 | 711,0 | 5,0 | | 1240,0 | 16,9 | 711,0 | 725,5 | 12,8 | | 762 |
| | | | 600 | 610,0 | 5,0 | | 1238,0 | 15,8 | 610,0 | 623,0 | 13,1 | | 737 |

For 1), see subclause 7.2.

Table 2: Dimensions of tees for wall thickness series 2*)

| Nominal size DN 1 | Out-side diameter d_1 | Wall thick-ness s_1 | Nominal size DN 2 | Out-side diameter d_2 | Wall thick-ness s_2 | Diameter d_3 1) | | Wall thick-ness s_3 | Diameter d_4 1) | | Wall thick-ness s_4 | a | b | |
|----------------------|----------------------------|--------------------------|----------------------|----------------------------|--------------------------|-------------------|-------|--------------------------|-------------------|-------|--------------------------|-----|------|-----|
| | | | | | | min. | max. | | min. | max. | | | | |
| 150 | 168,3 | 4,0 | 150 | 168,3 | 4,0 | 168,3 | 178,0 | 10,2 | 168,3 | 173,5 | 7,7 | 143 | 143 | |
| 200 | 219,1 | 4,5 | 200 | 219,1 | 4,5 | 219,1 | 231,0 | 11,8 | 219,1 | 225,5 | 8,9 | 178 | 178 | |
| | | | 150 | 168,3 | 4,0 | | 228,0 | 10,3 | | 168,3 | 174,0 | | 7,7 | 168 |
| 250 | 273,0 | 5,0 | 250 | 273,0 | 5,0 | 273,0 | 286,5 | 13,4 | 273,0 | 280,5 | 10,1 | 216 | 216 | |
| | | | 200 | 219,1 | 4,5 | | 284,0 | 11,9 | | 219,1 | 226,0 | | 8,9 | 203 |
| | | | 150 | 168,3 | 4,0 | | 281,5 | 10,5 | | 168,3 | 174,0 | | 7,9 | 194 |
| 300 | 323,9 | 5,6 | 300 | 323,9 | 5,6 | 323,9 | 339,5 | 15,2 | 323,9 | 332,5 | 11,4 | 254 | 254 | |
| | | | 250 | 273,0 | 5,0 | | 337,0 | 13,8 | | 273,0 | 281,0 | | 10,4 | 241 |
| | | | 200 | 219,1 | 4,5 | | 334,5 | 12,5 | | 219,1 | 226,5 | | 9,4 | 229 |
| | | | 150 | 168,3 | 4,0 | | 332,0 | 11,1 | | 168,3 | 175,0 | | 8,3 | 219 |
| 350 | 355,6 | 5,6 | 350 | 355,6 | 5,6 | 355,6 | 371,5 | 15,4 | 355,6 | 364,5 | 11,7 | 279 | 279 | |
| | | | 300 | 323,9 | 5,6 | | 370,0 | 14,7 | | 323,9 | 332,0 | | 11,1 | 270 |
| | | | 250 | 273,0 | 5,0 | | 368,0 | 13,5 | | 273,0 | 281,0 | | 10,2 | 257 |
| | | | 200 | 219,1 | 4,5 | | 365,5 | 12,1 | | 219,1 | 226,0 | | 9,1 | 248 |
| 150 | 168,3 | 4,0 | 363,5 | 10,7 | 168,3 | 174,5 | 8,1 | 238 | | | | | | |
| 400 | 406,4 | 6,3 | 400 | 406,4 | 6,3 | 406,4 | 424,5 | 17,5 | 406,4 | 417,0 | 13,1 | 305 | 305 | |
| | | | 350 | 355,6 | 5,6 | | 422,5 | 16,3 | | 355,6 | 366,0 | | 12,2 | 305 |
| | | | 300 | 323,9 | 5,6 | | 421,0 | 15,5 | | 323,9 | 333,0 | | 11,8 | 295 |
| | | | 250 | 273,0 | 5,0 | | 419,0 | 14,3 | | 273,0 | 282,0 | | 10,7 | 283 |
| | | | 200 | 219,1 | 4,5 | | 416,5 | 12,9 | | 219,1 | 227,0 | | 9,7 | 273 |
| | | | 150 | 168,3 | 4,0 | | 414,0 | 11,5 | | 168,3 | 175,5 | | 8,7 | 264 |

For 1), see subclause 7.2.

For *), see table 1.

(continued)

Table 2 (concluded)

| Nominal size DN 1 | Out-side diameter d_1 | Wall thick-ness s_1 | Nominal size DN 2 | Out-side diameter d_2 | Wall thick-ness s_2 | Diameter d_3 1) | | Wall thick-ness s_3 | Diameter d_4 1) | | Wall thick-ness s_4 | a | b |
|----------------------|----------------------------|--------------------------|----------------------|----------------------------|--------------------------|-------------------|--------|--------------------------|-------------------|--------|--------------------------|-----|-----|
| | | | | | | min. | max. | | min. | max. | | | |
| 450 | 457,0 | 6,3 | 450 | 457,0 | 6,3 | 457,0 | 476,0 | 17,9 | 457,0 | 468,0 | 13,5 | 343 | 343 |
| | | | 400 | 406,4 | 6,3 | | 473,5 | 16,7 | 406,4 | 415,5 | 12,6 | | 330 |
| | | | 350 | 355,6 | 5,6 | | 472,0 | 15,8 | 355,6 | 365,0 | 11,9 | | 330 |
| | | | 300 | 323,9 | 5,6 | | 471,0 | 15,1 | 323,9 | 332,5 | 11,3 | | 321 |
| | | | 250 | 273,0 | 5,0 | | 468,5 | 13,8 | 273,0 | 281,0 | 10,4 | | 308 |
| | | | 200 | 219,1 | 4,5 | | 466,5 | 12,6 | 219,1 | 226,5 | 9,5 | | 298 |
| 500 | 508,0 | 6,3 | 500 | 508,0 | 6,3 | 508,0 | 527,5 | 18,4 | 508,0 | 519,5 | 13,8 | 381 | 381 |
| | | | 450 | 457,0 | 6,3 | | 526,0 | 17,4 | 457,0 | 467,5 | 13,0 | | 368 |
| | | | 400 | 406,4 | 6,3 | | 524,0 | 16,3 | 406,4 | 415,5 | 12,3 | | 356 |
| | | | 350 | 355,6 | 5,6 | | 522,0 | 15,3 | 355,6 | 364,5 | 11,5 | | 356 |
| | | | 300 | 323,9 | 5,6 | | 521,0 | 14,6 | 323,9 | 332,0 | 11,0 | | 346 |
| | | | 250 | 273,0 | 5,0 | | 519,0 | 13,5 | 273,0 | 281,0 | 10,2 | | 333 |
| 200 | 219,1 | 4,5 | 517,0 | 12,3 | 219,1 | 226,5 | 9,3 | 324 | | | | | |
| 600 | 610,0 | 6,3 | 600 | 610,0 | 6,3 | 610,0 | 631,5 | 19,7 | 610,0 | 623,0 | 14,7 | 432 | 432 |
| | | | 500 | 508,0 | 6,3 | | 628,0 | 17,5 | 508,0 | 518,5 | 13,1 | | 432 |
| | | | 450 | 457,0 | 6,3 | | 626,5 | 16,6 | 457,0 | 466,0 | 12,5 | | 419 |
| | | | 400 | 406,4 | 6,3 | | 625,0 | 15,7 | 406,4 | 414,5 | 11,8 | | 406 |
| | | | 350 | 355,6 | 5,6 | | 623,0 | 14,6 | 355,6 | 363,5 | 11,1 | | 406 |
| | | | 300 | 323,9 | 5,6 | | 622,0 | 14,1 | 323,9 | 331,0 | 10,5 | | 397 |
| 250 | 273,0 | 5,0 | 620,5 | 13,0 | 273,0 | 280,0 | 9,8 | 384 | | | | | |
| 700 | 711,0 | 7,1 | 700 | 711,0 | 7,1 | 711,0 | 737,5 | 20,8 | 711,0 | 727,5 | 15,8 | 521 | 521 |
| | | | 600 | 610,0 | 6,3 | | 733,0 | 18,6 | 610,0 | 624,5 | 15,5 | | 508 |
| | | | 500 | 508,0 | 6,3 | | 731,0 | 17,6 | 508,0 | 521,0 | 14,6 | | 483 |
| | | | 450 | 457,0 | 6,3 | | 729,0 | 16,7 | 457,0 | 469,0 | 13,9 | | 470 |
| | | | 400 | 406,4 | 6,3 | | 727,5 | 15,9 | 406,4 | 417,0 | 13,3 | | 457 |
| | | | 350 | 355,6 | 5,6 | | 726,0 | 15,0 | 355,6 | 366,0 | 12,5 | | 457 |
| 300 | 323,9 | 5,6 | 724,5 | 14,4 | 323,9 | 333,5 | 11,9 | 448 | | | | | |
| 800 | 813,0 | 8,0 | 800 | 813,0 | 8,0 | 813,0 | 843,0 | 23,6 | 813,0 | 830,0 | 17,8 | 597 | 597 |
| | | | 700 | 711,0 | 7,1 | | 840,0 | 22,1 | 711,0 | 729,0 | 16,7 | | 572 |
| | | | 600 | 610,0 | 6,3 | | 835,5 | 19,9 | 610,0 | 626,5 | 16,6 | | 559 |
| | | | 500 | 508,0 | 6,3 | | 833,5 | 18,8 | 508,0 | 523,0 | 15,8 | | 533 |
| | | | 450 | 457,0 | 6,3 | | 832,0 | 18,0 | 457,0 | 470,5 | 15,1 | | 521 |
| | | | 400 | 406,4 | 6,3 | | 830,5 | 16,7 | 406,4 | 419,0 | 14,4 | | 508 |
| 350 | 355,6 | 5,6 | 828,0 | 16,1 | 355,6 | 368,0 | 13,4 | 508 | | | | | |
| 900 | 914,0 | 10,0 | 900 | 914,0 | 10,0 | 914,0 | 951,0 | 28,9 | 914,0 | 936,5 | 21,8 | 673 | 673 |
| | | | 800 | 813,0 | 8,0 | | 943,0 | 24,9 | 813,0 | 833,5 | 18,8 | | 648 |
| | | | 700 | 711,0 | 7,1 | | 940,0 | 23,6 | 711,0 | 731,5 | 17,8 | | 622 |
| | | | 600 | 610,0 | 6,3 | | 935,0 | 21,1 | 610,0 | 628,5 | 17,6 | | 610 |
| | | | 500 | 508,0 | 6,3 | | 937,5 | 22,3 | 508,0 | 528,0 | 18,7 | | 584 |
| | | | 450 | 457,0 | 6,3 | | 936,0 | 21,4 | 457,0 | 476,0 | 17,9 | | 572 |
| 400 | 406,4 | 6,3 | 934,0 | 20,6 | 406,4 | 424,0 | 17,3 | 559 | | | | | |
| 1000 | 1016,0 | 10,0 | 1000 | 1016,0 | 10,0 | 1016,0 | 1054,0 | 29,5 | 1016,0 | 1039,5 | 22,3 | 749 | 749 |
| | | | 900 | 914,0 | 10,0 | | 1051,0 | 27,9 | 914,0 | 935,0 | 21,1 | | 737 |
| | | | 800 | 813,0 | 8,0 | | 1047,5 | 26,3 | 813,0 | 835,5 | 19,9 | | 711 |
| | | | 700 | 711,0 | 7,1 | | 1045,5 | 25,1 | 711,0 | 734,0 | 19,0 | | 673 |
| | | | 600 | 610,0 | 6,3 | | 1040,0 | 22,4 | 610,0 | 630,0 | 18,7 | | 660 |
| | | | 500 | 508,0 | 6,3 | | 1038,5 | 21,7 | 508,0 | 527,0 | 18,2 | | 635 |
| 450 | 457,0 | 6,3 | 1037,0 | 20,9 | 457,0 | 475,0 | 17,5 | 622 | | | | | |
| 1200 | 1220,0 | 12,5 | 1200 | 1220,0 | 12,5 | 1220,0 | 1279,5 | 42,6 | 1220,0 | 1258,5 | 32,2 | 889 | 889 |
| | | | 1000 | 1016,0 | 10,0 | | 1260,5 | 33,4 | 1016,0 | 1045,5 | 25,2 | | 813 |
| | | | 900 | 914,0 | 10,0 | | 1260,0 | 33,1 | 914,0 | 943,0 | 25,0 | | 787 |
| | | | 800 | 813,0 | 8,0 | | 1253,5 | 29,8 | 813,0 | 841,0 | 22,5 | | 787 |
| | | | 700 | 711,0 | 7,1 | | 1251,0 | 28,6 | 711,0 | 739,0 | 21,6 | | 762 |
| | | | 600 | 610,0 | 6,3 | | 1246,5 | 26,1 | 610,0 | 636,0 | 21,9 | | 737 |

For 1), see subclause 7.2.

Table 3: Dimensions of tees for wall thickness series 3*)

| Nominal size DN 1 | Outside diameter d_1 | Wall thickness s_1 | Nominal size DN 2 | Outside diameter d_2 | Wall thickness s_2 | Diameter d_3 1) | | Wall thickness s_3 | Diameter d_4 1) | | Wall thickness s_4 | a | b | | |
|----------------------|---------------------------|-------------------------|----------------------|---------------------------|-------------------------|-------------------|-------|-------------------------|-------------------|-------|-------------------------|-----|-------|------|-----|
| | | | | | | min. | max. | | min. | max. | | | | | |
| 15 | 21,3 | 2,0 | 15 | 21,3 | 2,0 | 21,3 | 24,5 | 4,0 | 21,3 | 22,5 | 3,0 | 25 | 25 | | |
| | | | 10 | 17,2 | 1,8 | | 23,5 | | 3,5 | 17,2 | | | | 18,5 | 2,6 |
| 20 | 26,9 | 2,3 | 20 | 26,9 | 2,3 | 26,9 | 30,5 | 4,7 | 26,9 | 28,5 | 3,5 | 29 | 29 | | |
| | | | 15 | 21,3 | 2,0 | | 29,5 | | 4,1 | 21,3 | | | | 22,5 | 3,1 |
| | | | 10 | 17,2 | 1,8 | | 29,0 | | 3,7 | 17,2 | | | | 18,5 | 2,7 |
| 25 | 33,7 | 2,6 | 25 | 33,7 | 2,6 | 33,7 | 38,0 | 5,4 | 33,7 | 35,5 | 4,0 | 38 | 38 | | |
| | | | 20 | 26,9 | 2,3 | | 36,5 | | 4,7 | 26,9 | | | | 28,5 | 3,5 |
| | | | 15 | 21,3 | 2,0 | | 36,0 | | 4,2 | 21,3 | | | | 23,0 | 3,2 |
| 32 | 42,4 | 2,6 | 32 | 42,4 | 2,6 | 42,4 | 47,0 | 5,6 | 42,4 | 44,5 | 4,2 | 48 | 48 | | |
| | | | 25 | 33,7 | 2,6 | | 45,5 | | 4,9 | 33,7 | | | | 35,0 | 3,7 |
| | | | 20 | 26,9 | 2,3 | | 45,0 | | 4,3 | 26,9 | | | | 28,0 | 3,3 |
| | | | 15 | 21,3 | 2,0 | | 44,0 | | 4,0 | 21,3 | | | | 22,5 | 3,0 |
| 40 | 48,3 | 2,6 | 40 | 48,3 | 2,6 | 48,3 | 53,0 | 5,7 | 48,3 | 50,5 | 4,2 | 57 | 57 | | |
| | | | 32 | 42,4 | 2,6 | | 52,5 | | 5,3 | 42,4 | | | | 44,0 | 4,0 |
| | | | 25 | 33,7 | 2,6 | | 51,0 | | 4,7 | 33,7 | | | | 34,5 | 3,5 |
| | | | 20 | 26,9 | 2,3 | | 50,5 | | 4,2 | 26,9 | | | | 28,0 | 3,2 |
| 50 | 60,3 | 2,9 | 50 | 60,3 | 2,9 | 60,3 | 66,0 | 6,5 | 60,3 | 63,0 | 4,9 | 64 | 64 | | |
| | | | 40 | 48,3 | 2,6 | | 64,5 | | 5,7 | 48,3 | | | 50,5 | 4,3 | 60 |
| | | | 32 | 42,4 | 2,6 | | 64,0 | | 5,4 | 42,4 | | | 44,0 | 4,0 | 57 |
| | | | 25 | 33,7 | 2,6 | | 63,0 | | 4,8 | 33,7 | | | 35,0 | 3,5 | 51 |
| | | | 20 | 26,9 | 2,3 | | 62,0 | | 4,3 | 26,9 | | | 28,0 | 3,3 | 44 |
| 65 | 76,1 | 2,9 | 65 | 76,1 | 2,9 | 76,1 | 82,0 | 6,7 | 76,1 | 79,0 | 5,0 | 76 | 76 | | |
| | | | 50 | 60,3 | 2,9 | | 80,5 | | 5,9 | 60,3 | | | 62,5 | 4,5 | 70 |
| | | | 40 | 48,3 | 2,6 | | 79,5 | | 5,4 | 48,3 | | | 50,0 | 4,0 | 67 |
| | | | 32 | 42,4 | 2,6 | | 79,0 | | 5,0 | 42,4 | | | 44,0 | 3,8 | 64 |
| | | | 25 | 33,7 | 2,6 | | 78,0 | | 4,6 | 33,7 | | | 34,5 | 3,4 | 57 |
| 80 | 88,9 | 3,2 | 80 | 88,9 | 3,2 | 88,9 | 95,5 | 7,5 | 88,9 | 92,5 | 5,6 | 86 | 86 | | |
| | | | 65 | 76,1 | 2,9 | | 94,5 | | 7,0 | 76,1 | | | 79,5 | 5,3 | 83 |
| | | | 50 | 60,3 | 2,9 | | 93,0 | | 6,2 | 60,3 | | | 62,5 | 4,6 | 76 |
| | | | 40 | 48,3 | 2,6 | | 92,0 | | 5,6 | 48,3 | | | 50,5 | 4,2 | 73 |
| | | | 32 | 42,4 | 2,6 | | 91,5 | | 5,3 | 42,4 | | | 44,0 | 3,9 | 70 |
| 100 | 114,3 | 3,6 | 100 | 114,3 | 3,6 | 114,3 | 122,5 | 8,7 | 114,3 | 118,5 | 6,5 | 105 | 105 | | |
| | | | 80 | 88,9 | 3,2 | | 120,5 | | 7,5 | 88,9 | | | 92,5 | 5,7 | 98 |
| | | | 65 | 76,1 | 2,9 | | 119,5 | | 7,1 | 76,1 | | | 79,5 | 5,3 | 95 |
| | | | 50 | 60,3 | 2,9 | | 118,0 | | 6,3 | 60,3 | | | 63,0 | 4,7 | 89 |
| | | | 40 | 48,3 | 2,6 | | 117,0 | | 5,8 | 48,3 | | | 50,5 | 4,3 | 86 |
| 125 | 139,7 | 4,0 | 125 | 139,7 | 4,0 | 139,7 | 149,0 | 9,8 | 139,7 | 144,5 | 7,3 | 124 | 124 | | |
| | | | 100 | 114,3 | 3,6 | | 147,0 | | 8,8 | 114,3 | | | 118,5 | 6,6 | 117 |
| | | | 80 | 88,9 | 3,2 | | 145,5 | | 7,8 | 88,9 | | | 92,5 | 5,8 | 111 |
| | | | 65 | 76,1 | 2,9 | | 114,5 | | 7,3 | 76,1 | | | 80,0 | 5,5 | 108 |
| | | | 50 | 60,3 | 2,9 | | 143,0 | | 6,6 | 60,3 | | | 63,0 | 4,9 | 105 |
| 150 | 168,3 | 4,5 | 150 | 168,3 | 4,5 | 168,3 | 179,0 | 11,2 | 168,3 | 174,0 | 8,5 | 143 | 143 | | |
| | | | 125 | 139,7 | 4,0 | | 177,0 | | 10,2 | 139,7 | | | 145,0 | 7,7 | 137 |
| | | | 100 | 114,3 | 3,6 | | 175,5 | | 9,1 | 114,3 | | | 119,0 | 6,9 | 130 |
| | | | 80 | 88,9 | 3,2 | | 173,5 | | 8,2 | 88,9 | | | 93,0 | 6,2 | 124 |
| | | | 65 | 76,1 | 2,9 | | 172,5 | | 7,7 | 76,1 | | | 80,5 | 5,7 | 121 |
| 200 | 219,1 | 6,3 | 200 | 219,1 | 6,3 | 219,1 | 234,5 | 15,9 | 219,1 | 227,5 | 11,9 | 178 | 178 | | |
| | | | 150 | 168,3 | 4,5 | | 228,5 | | 12,7 | 168,3 | | | 176,0 | 9,5 | 168 |
| | | | 125 | 139,7 | 4,0 | | 228,0 | | 12,3 | 139,7 | | | 148,0 | 9,3 | 162 |
| | | | 100 | 114,3 | 3,6 | | 226,5 | | 11,3 | 114,3 | | | 122,0 | 8,5 | 156 |
| | | | 80 | 88,9 | 3,2 | | 224,5 | | 10,3 | 88,9 | | | 96,0 | 7,7 | 152 |

For 1), see subclause 7.2.

For *), see table 1.

(continued)

Table 3 (continued)

| Nominal size DN 1 | Out-side diameter d_1 | Wall thick-ness s_1 | Nominal size DN 2 | Out-side diameter d_2 | Wall thick-ness s_2 | Diameter d_3 1) | | Wall thick-ness s_3 | Diameter d_4 1) | | Wall thick-ness s_4 | a | b |
|----------------------|----------------------------|--------------------------|----------------------|----------------------------|--------------------------|-------------------|-------|--------------------------|-------------------|-------|--------------------------|-----|-----|
| | | | | | | min. | max. | | min. | max. | | | |
| 250 | 273,0 | 6,3 | 250 | 273,0 | 6,3 | 273,0 | 289,0 | 16,2 | 273,0 | 282,0 | 12,2 | 216 | 216 |
| | | | 200 | 219,1 | 6,3 | | 285,5 | 14,4 | 219,1 | 225,5 | 10,9 | | 203 |
| | | | 150 | 168,3 | 4,5 | | 282,5 | 12,7 | 168,3 | 176,0 | 9,5 | | 194 |
| | | | 125 | 139,7 | 4,0 | | 281,0 | 11,7 | 139,7 | 147,0 | 8,8 | | 191 |
| | | | 100 | 114,3 | 3,6 | | 279,0 | 10,7 | 114,3 | 121,0 | 8,1 | | 184 |
| 300 | 323,9 | 7,1 | 300 | 323,9 | 7,1 | 323,9 | 342,0 | 18,5 | 323,9 | 334,0 | 13,9 | 254 | 254 |
| | | | 250 | 273,0 | 6,3 | | 339,5 | 17,0 | 273,0 | 282,5 | 12,8 | | 241 |
| | | | 200 | 219,1 | 6,3 | | 336,0 | 15,1 | 219,1 | 226,5 | 11,3 | | 229 |
| | | | 150 | 168,3 | 4,5 | | 333,5 | 13,5 | 168,3 | 177,0 | 10,2 | | 219 |
| | | | 125 | 139,7 | 4,0 | | 331,5 | 12,3 | 139,7 | 148,0 | 9,3 | | 216 |
| 350 | 355,6 | 8,0 | 350 | 355,6 | 8,0 | 355,6 | 376,0 | 20,9 | 355,6 | 367,0 | 15,7 | 279 | 279 |
| | | | 300 | 323,9 | 7,1 | | 373,5 | 19,3 | 323,9 | 335,0 | 14,5 | | 270 |
| | | | 250 | 273,0 | 6,3 | | 371,5 | 18,3 | 273,0 | 284,5 | 13,7 | | 257 |
| | | | 200 | 219,1 | 6,3 | | 368,0 | 16,2 | 219,1 | 228,0 | 12,2 | | 248 |
| | | | 150 | 168,3 | 4,5 | | 365,0 | 14,5 | 168,3 | 178,5 | 11,0 | | 238 |
| 400 | 406,4 | 8,8 | 400 | 406,4 | 8,8 | 406,4 | 432,5 | 25,4 | 406,4 | 422,0 | 19,1 | 305 | 305 |
| | | | 350 | 355,6 | 8,0 | | 426,5 | 21,5 | 355,6 | 368,0 | 16,1 | | 305 |
| | | | 300 | 323,9 | 7,1 | | 425,0 | 20,7 | 323,9 | 337,0 | 15,5 | | 295 |
| | | | 250 | 273,0 | 6,3 | | 422,5 | 19,2 | 273,0 | 285,5 | 14,4 | | 283 |
| | | | 200 | 219,1 | 6,3 | | 419,0 | 17,1 | 219,1 | 229,0 | 12,9 | | 273 |
| | | | 150 | 168,3 | 4,5 | | 416,0 | 15,4 | 168,3 | 179,5 | 11,5 | | 264 |
| 450 | 457,0 | 10,0 | 450 | 457,0 | 10,0 | 457,0 | 488,5 | 30,3 | 457,0 | 476,0 | 22,7 | 343 | 343 |
| | | | 400 | 406,4 | 8,8 | | 481,0 | 25,0 | 406,4 | 421,5 | 18,9 | | 330 |
| | | | 350 | 355,6 | 8,0 | | 477,5 | 23,2 | 355,6 | 370,1 | 17,4 | | 330 |
| | | | 300 | 323,9 | 7,1 | | 476,0 | 22,4 | 323,9 | 339,0 | 16,8 | | 321 |
| | | | 250 | 273,0 | 6,3 | | 473,5 | 20,8 | 273,0 | 288,0 | 15,7 | | 308 |
| | | | 200 | 219,1 | 6,3 | | 470,0 | 18,7 | 219,1 | 231,0 | 14,1 | | 298 |
| 500 | 508,0 | 11,0 | 500 | 508,0 | 11,0 | 508,0 | 543,0 | 33,3 | 508,0 | 528,5 | 25,0 | 381 | 381 |
| | | | 450 | 457,0 | 10,0 | | 535,0 | 28,0 | 457,0 | 474,0 | 21,0 | | 368 |
| | | | 400 | 406,4 | 8,8 | | 532,5 | 26,6 | 406,4 | 424,0 | 20,0 | | 356 |
| | | | 350 | 355,6 | 8,0 | | 529,0 | 24,5 | 355,6 | 372,0 | 18,4 | | 356 |
| | | | 300 | 323,9 | 7,1 | | 527,5 | 23,7 | 323,9 | 341,0 | 17,8 | | 346 |
| | | | 250 | 273,0 | 6,3 | | 525,0 | 22,2 | 273,0 | 289,5 | 16,7 | | 333 |
| | | | 200 | 219,1 | 6,3 | | 521,0 | 20,0 | 219,1 | 233,0 | 15,0 | | 324 |
| 600 | 610,0 | 12,5 | 600 | 610,0 | 12,5 | 628,5 | 638,0 | 37,8 | 617,5 | 627,0 | 28,3 | 432 | 432 |
| | | | 500 | 508,0 | 11,0 | 639,0 | 30,9 | 508,0 | 526,5 | 23,2 | 432 | | |
| | | | 450 | 457,0 | 10,0 | 637,0 | 29,6 | 457,0 | 476,0 | 22,2 | 419 | | |
| | | | 400 | 406,4 | 8,8 | 634,5 | 28,3 | 406,4 | 426,0 | 21,3 | 406 | | |
| | | | 350 | 355,6 | 8,0 | 631,0 | 26,2 | 355,6 | 374,0 | 19,7 | 406 | | |
| | | | 300 | 323,9 | 7,1 | 629,5 | 25,4 | 323,9 | 343,0 | 19,1 | 397 | | |
| | | | 250 | 273,0 | 6,3 | 627,0 | 23,9 | 273,0 | 291,5 | 17,9 | 384 | | |
| 700 | 711,0 | 12,5 | 700 | 711,0 | 12,5 | 728,5 | 740,0 | 34,0 | 717,5 | 728,0 | 25,6 | 521 | 521 |
| | | | 600 | 610,0 | 12,5 | 746,5 | 30,8 | 610,0 | 630,5 | 25,9 | 508 | | |
| | | | 500 | 508,0 | 11,0 | 742,0 | 28,5 | 508,0 | 528,0 | 24,0 | 483 | | |
| | | | 450 | 457,0 | 10,0 | 740,0 | 27,4 | 457,0 | 477,5 | 23,1 | 470 | | |
| | | | 400 | 406,4 | 8,8 | 737,5 | 26,3 | 406,4 | 427,5 | 22,2 | 457 | | |
| | | | 350 | 355,6 | 8,0 | 734,0 | 24,4 | 355,6 | 375,5 | 20,6 | 457 | | |
| | | | 300 | 323,9 | 7,1 | 732,5 | 23,8 | 323,9 | 344,5 | 20,0 | 448 | | |

For 1), see subclause 7.2.

(continued)

Table 3 (concluded)

| Nominal size DN 1 | Out-side diameter d_1 | Wall thick-ness s_1 | Nominal size DN 2 | Out-side diameter d_2 | Wall thick-ness s_2 | Diameter d_3 1) | | Wall thick-ness s_3 | Diameter d_4 1) | | Wall thick-ness s_4 | a | b |
|----------------------|----------------------------|--------------------------|----------------------|----------------------------|--------------------------|-------------------|--------|--------------------------|-------------------|-------|--------------------------|-----|-----|
| | | | | | | min. | max. | | min. | max. | | | |
| 800 | 813,0 | 12,5 | 800 | 813,0 | 12,5 | 828,5 | 841,0 | 33,6 | 817,5 | 830,0 | 25,3 | 597 | 597 |
| | | | 700 | 711,0 | 12,5 | 813,0 | 851,0 | 32,1 | 711,0 | 733,5 | 24,2 | | 572 |
| | | | 600 | 610,0 | 12,5 | | 846,0 | 29,5 | 610,0 | 628,5 | 24,9 | | 559 |
| | | | 500 | 508,0 | 11,0 | | 842,0 | 27,5 | 508,0 | 526,5 | 23,2 | | 533 |
| | | | 450 | 457,0 | 10,0 | | 840,0 | 26,4 | 457,0 | 476,0 | 22,2 | | 521 |
| | | | 400 | 406,4 | 8,8 | | 838,0 | 25,4 | 406,4 | 426,0 | 21,4 | | 508 |
| | | | 350 | 355,6 | 8,0 | | 834,5 | 23,7 | 355,6 | 374,5 | 19,9 | | 508 |
| 900 | 914,0 | 12,5 | 900 | 914,0 | 12,5 | 914,0 | 959,5 | 36,1 | 914,0 | 942,0 | 27,3 | 673 | 673 |
| | | | 800 | 813,0 | 12,5 | | 953,5 | 32,8 | 813,0 | 836,5 | 24,7 | | 648 |
| | | | 700 | 711,0 | 12,5 | | 949,5 | 30,9 | 711,0 | 731,5 | 23,3 | | 622 |
| | | | 600 | 610,0 | 12,5 | | 944,5 | 28,3 | 610,0 | 627,0 | 23,9 | | 610 |
| | | | 500 | 508,0 | 11,0 | | 941,0 | 26,5 | 508,0 | 525,0 | 22,3 | | 584 |
| | | | 450 | 457,0 | 10,0 | | 939,0 | 25,5 | 457,0 | 474,5 | 21,5 | | 572 |
| | | | 400 | 406,4 | 8,8 | | 937,5 | 24,6 | 406,4 | 425,0 | 20,7 | | 559 |
| 1000 | 1016,0 | 12,5 | 1000 | 1016,0 | 12,5 | 1016,0 | 1060,0 | 35,1 | 1016,0 | 430,0 | 26,5 | 749 | 749 |
| | | | 900 | 914,0 | 12,5 | | 1056,0 | 33,0 | 914,0 | 938,0 | 24,9 | | 737 |
| | | | 800 | 813,0 | 12,5 | | 1052,5 | 31,2 | 813,0 | 834,0 | 23,5 | | 711 |
| | | | 700 | 711,0 | 12,5 | | 1049,5 | 29,8 | 711,0 | 730,0 | 22,5 | | 673 |
| | | | 600 | 610,0 | 12,5 | | 1045,0 | 27,5 | 610,0 | 625,5 | 23,2 | | 660 |
| | | | 500 | 508,0 | 11,0 | | 1041,5 | 25,7 | 508,0 | 524,0 | 21,6 | | 635 |
| | | | 450 | 457,0 | 10,0 | | 1040,0 | 24,9 | 457,0 | 473,5 | 20,9 | | 622 |

For 1), see subclause 7.2.

Table 4: Dimensions of tees for wall thickness series 4*)

| Nominal size DN 1 | Outside diameter d_1 | Wall thickness s_1 | Nominal size DN 2 | Outside diameter d_2 | Wall thickness s_2 | Diameter d_3 1) | | Wall thickness s_3 | Diameter d_4 1) | | Wall thickness s_4 | a | b |
|----------------------|---------------------------|-------------------------|--------------------------------|--|---------------------------------|-------------------|---|--------------------------------------|--|--|-------------------------------------|-----|---------------------------------|
| | | | | | | min. | max. | | min. | max. | | | |
| 15 | 21,3 | 3,2 | 15 10 | 21,3 17,2 | 3,2 2,9 | 21,3 | 25,5 24,0 | 5,9 5,1 | 21,3 17,2 | 22,5 17,5 | 4,5 3,9 | 25 | 25 |
| 20 | 26,9 | 3,2 | 20 15 10 | 26,9 21,3 17,2 | 3,2 3,2 2,9 | 26,9 | 31,5 29,5 28,5 | 6,4 5,3 4,7 | 26,9 21,3 17,2 | 29,0 22,0 17,5 | 4,8 4,0 3,5 | 29 | 29 |
| 25 | 33,7 | 3,2 | 25 20 15 | 33,7 26,9 21,3 | 3,2 3,2 3,2 | 33,7 | 38,5 37,0 36,0 | 6,4 5,5 4,9 | 33,7 26,9 21,3 | 35,5 27,5 21,5 | 4,8 4,1 3,7 | 38 | 38 |
| 32 | 42,4 | 3,6 | 32 25 20 15 | 42,4 33,7 26,9 21,3 | 3,6 3,2 3,2 3,2 | 42,4 | 48,0 46,5 45,0 44,0 | 7,3 6,4 5,7 5,0 | 42,4 33,7 26,9 21,3 | 45,0 35,5 28,0 21,5 | 5,5 4,8 4,2 3,8 | 48 | 48 |
| 40 | 48,3 | 4,0 | 40 32 25 20 | 48,3 42,4 33,7 26,9 | 4,0 3,6 3,2 3,2 | 48,3 | 54,5 53,5 52,0 51,0 | 8,1 7,5 6,7 5,9 | 48,3 42,4 33,7 26,9 | 51,0 45,0 36,0 28,5 | 6,2 5,7 5,0 4,5 | 57 | 57 |
| 50 | 60,3 | 4,5 | 50 40 32 25 20 | 60,3 48,3 42,4 33,7 26,9 | 4,5 4,0 3,6 3,2 3,2 | 60,3 | 67,5 65,5 65,0 63,5 62,5 | 9,3 8,2 7,7 6,9 6,4 | 60,3 48,3 42,4 33,7 26,9 | 63,5 51,0 45,5 36,5 29,0 | 7,0 6,2 5,8 5,1 4,8 | 64 | 64 60 57 51 44 |
| 65 | 76,1 | 5,0 | 65 50 40 32 25 | 76,1 60,3 48,3 42,4 33,7 | 5,0 4,5 4,0 3,6 3,2 | 76,1 | 84,5 82,5 80,5 80,0 78,5 | 10,5 9,3 8,3 7,9 7,2 | 76,1 60,3 48,3 42,4 33,7 | 80,0 63,5 51,0 45,5 37,0 | 7,9 7,0 6,3 5,9 5,4 | 76 | 76 70 67 64 57 |
| 80 | 88,9 | 5,6 | 80 65 50 40 32 | 88,9 76,1 60,3 48,3 42,4 | 5,6 5,0 4,5 4,0 3,6 | 88,9 | 98,5 97,0 94,5 93,0 92,5 | 11,9 11,0 9,7 8,8 8,3 | 88,9 76,1 60,3 48,3 42,4 | 93,5 80,5 64,0 52,0 46,2 | 8,9 8,2 7,3 6,5 6,3 | 86 | 86 83 76 73 70 |
| 100 | 114,3 | 6,3 | 100 80 65 50 40 | 114,3 88,9 76,1 60,3 48,3 | 6,3 5,6 5,0 4,5 4,0 | 114,3 | 126,0 122,5 121,0 119,0 117,5 | 13,9 12,0 11,1 9,9 9,1 | 114,3 88,9 76,1 60,3 48,3 | 120,0 93,5 80,5 64,5 52,5 | 10,5 9,0 8,3 7,4 6,9 | 105 | 105 98 95 89 86 |
| 125 | 139,7 | 6,3 | 125 100 80 65 50 | 139,7 114,3 88,9 76,1 60,3 | 6,3 6,3 5,6 5,0 4,5 | 139,7 | 152,0 149,0 146,5 145,5 143,5 | 14,3 12,6 11,2 10,4 9,5 | 139,7 114,3 88,9 76,1 60,3 | 146,0 118,5 92,5 80,0 64,0 | 10,7 9,5 8,3 7,8 7,1 | 124 | 124 117 111 108 105 |
| 150 | 168,3 | 7,1 | 150 125 100 80 65 | 168,3 139,7 114,3 88,9 76,1 | 7,1 6,3 6,3 5,6 5,0 | 168,3 | 184,5 180,0 177,5 174,5 173,5 | 17,4 14,9 13,3 11,8 11,1 | 168,3 139,7 114,3 88,9 76,1 | 177,0 146,5 119,0 93,0 80,5 | 13,1 11,2 9,9 8,8 8,2 | 143 | 143 137 130 124 121 |
| 200 | 219,1 | 8,0 | 200 150 125 100 80 | 219,1 168,3 139,7 114,3 88,9 | 8,0 7,1 6,3 6,3 5,6 | 219,1 | 240,5 232,0 229,5 227,0 224,5 | 21,3 16,6 15,1 13,6 12,2 | 219,1 168,3 139,7 114,3 88,9 | 231,0 176,0 147,0 119,5 94,0 | 16,0 12,5 11,3 10,2 9,1 | 178 | 178 168 162 156 152 |

For 1), see subclause 7.2
For *) , see table 1.

Table 4 (concluded)

| Nominal size DN 1 | Out-side diameter d_1 | Wall thick-ness s_1 | Nominal size DN 2 | Out-side diameter d_2 | Wall thick-ness s_2 | Diameter d_3 1) | | Wall thick-ness s_3 | Diameter d_4 1) | | Wall thick-ness s_4 | a | b |
|----------------------|----------------------------|--------------------------|----------------------|----------------------------|--------------------------|-------------------|-------|--------------------------|-------------------|-------|--------------------------|-----|-----|
| | | | | | | min. | max. | | min. | max. | | | |
| 250 | 273,0 | 8,8 | 250 | 273,0 | 8,8 | 273,0 | 298,0 | 24,6 | 273,0 | 287,5 | 18,5 | 216 | 216 |
| | | | 200 | 219,1 | 8,0 | | 289,5 | 19,3 | 219,1 | 228,5 | 14,5 | | 203 |
| | | | 150 | 168,3 | 7,1 | | 285,0 | 16,9 | 168,3 | 176,5 | 12,7 | | 194 |
| | | | 125 | 139,7 | 6,3 | | 282,0 | 15,3 | 139,7 | 147,0 | 11,5 | | 191 |
| | | | 100 | 114,3 | 6,3 | | 280,0 | 13,9 | 114,3 | 120,0 | 10,5 | | 184 |
| 300 | 323,9 | 10,0 | 300 | 323,9 | 10,0 | 323,9 | 353,5 | 28,8 | 323,9 | 341,0 | 21,6 | 254 | 254 |
| | | | 250 | 273,0 | 8,8 | | 344,0 | 22,9 | 273,0 | 285,5 | 17,3 | | 241 |
| | | | 200 | 219,1 | 8,0 | | 340,0 | 20,6 | 219,1 | 230,0 | 15,5 | | 229 |
| | | | 150 | 168,3 | 7,1 | | 336,0 | 18,2 | 168,3 | 178,0 | 13,7 | | 219 |
| | | | 125 | 139,7 | 6,3 | | 333,0 | 16,7 | 139,7 | 149,0 | 12,6 | | 216 |
| 350 | 355,6 | 11,0 | 350 | 355,6 | 11,0 | 355,6 | 388,0 | 31,5 | 355,6 | 374,5 | 23,7 | 279 | 279 |
| | | | 300 | 323,9 | 10,0 | | 379,5 | 26,3 | 323,9 | 338,5 | 19,8 | | 270 |
| | | | 250 | 273,0 | 8,8 | | 376,0 | 24,2 | 273,0 | 287,5 | 18,3 | | 257 |
| | | | 200 | 219,1 | 8,0 | | 371,5 | 21,7 | 219,1 | 231,5 | 16,3 | | 248 |
| | | | 150 | 168,3 | 7,1 | | 367,5 | 19,2 | 168,3 | 179,5 | 14,4 | | 238 |
| 400 | 406,4 | 12,5 | 400 | 406,4 | 12,5 | 422,5 | 429,0 | 33,1 | 413,0 | 419,0 | 24,9 | 305 | 305 |
| | | | 350 | 355,6 | 11,0 | 406,4 | 433,0 | 29,6 | 355,6 | 372,5 | 22,3 | | 305 |
| | | | 300 | 323,9 | 10,0 | | 431,0 | 28,2 | 323,9 | 341,0 | 21,1 | | 295 |
| | | | 250 | 273,0 | 8,8 | | 427,5 | 26,2 | 273,0 | 290,0 | 19,7 | | 283 |
| | | | 200 | 219,1 | 8,0 | | 423,0 | 23,7 | 219,1 | 234,0 | 17,7 | | 273 |
| | | | 150 | 168,3 | 7,1 | | 418,5 | 21,0 | 168,3 | 182,0 | 15,8 | | 264 |
| 450 | 457,0 | 14,2 | 476,5 | 483,5 | 38,5 | 465,0 | 472,0 | 28,9 | 343 | | | | |
| 450 | 457,0 | 14,2 | 450 | 457,0 | 14,2 | 457,0 | 492,0 | 36,3 | 406,4 | 492,0 | 27,3 | 343 | 330 |
| | | | 350 | 355,6 | 11,0 | | 483,5 | 31,5 | 355,6 | 375,0 | 23,7 | | 330 |
| | | | 300 | 323,9 | 10,0 | | 482,0 | 30,4 | 323,9 | 344,0 | 22,7 | | 321 |
| | | | 250 | 273,0 | 8,8 | | 478,5 | 28,6 | 273,0 | 293,0 | 21,4 | | 308 |
| | | | 200 | 219,1 | 8,0 | | 474,0 | 25,9 | 219,1 | 237,0 | 19,4 | | 298 |
| 500 | 508,0 | 16,0 | 500 | 508,0 | 16,0 | 530,0 | 538,0 | 43,4 | 517,0 | 525,0 | 32,6 | 381 | 381 |
| | | | 450 | 457,0 | 14,2 | 508,0 | 549,0 | 41,7 | 457,0 | 483,5 | 31,3 | | 368 |
| | | | 400 | 406,4 | 12,5 | | 539,0 | 36,1 | 406,4 | 429,0 | 27,1 | | 356 |
| | | | 350 | 355,6 | 11,0 | | 535,0 | 33,6 | 355,6 | 377,5 | 25,1 | | 356 |
| | | | 300 | 323,9 | 10,0 | | 533,0 | 32,5 | 323,9 | 346,5 | 24,3 | | 346 |
| | | | 250 | 273,0 | 8,8 | | 530,5 | 31,1 | 273,0 | 296,5 | 23,3 | | 333 |
| 200 | 219,1 | 8,0 | 525,5 | 28,3 | 219,1 | 240,5 | 21,3 | 324 | | | | | |
| 600 | 610,0 | 17,5 | 600 | 610,0 | 17,5 | 643,5 | 653,0 | 56,2 | 627,0 | 636,5 | 42,2 | 432 | 432 |
| | | | 500 | 508,0 | 16,0 | 610,0 | 650,5 | 43,2 | 508,0 | 533,0 | 32,5 | | 432 |
| | | | 450 | 457,0 | 14,2 | | 644,0 | 39,5 | 457,0 | 480,5 | 29,7 | | 419 |
| | | | 400 | 406,4 | 12,5 | | 641,5 | 37,9 | 406,4 | 431,0 | 28,5 | | 406 |
| | | | 350 | 355,6 | 11,0 | | 637,0 | 35,3 | 355,6 | 380,0 | 26,5 | | 406 |
| | | | 300 | 323,9 | 10,0 | | 635,0 | 34,2 | 323,9 | 349,0 | 25,7 | | 397 |
| | | | 250 | 273,0 | 8,8 | | 631,5 | 32,3 | 273,0 | 298,0 | 24,2 | | 384 |

For 1), see subclause 7.2.

Table 5: Dimensions of tees for wall thickness series 5*)

| Nominal size DN 1 | Outside diameter d_1 | Wall thickness s_1 | Nominal size DN 2 | Outside diameter d_2 | Wall thickness s_2 | Diameter d_3 1) | | Wall thickness s_3 | Diameter d_4 1) | | Wall thickness s_4 | a | b |
|----------------------|---------------------------|-------------------------|----------------------|---------------------------|-------------------------|-------------------|-------|-------------------------|-------------------|-------|-------------------------|-----|-----|
| | | | | | | min. | max. | | min. | max. | | | |
| 15 | 21,3 | 4,0 | 15 | 21,3 | 4,0 | 21,3 | 27,0 | 7,8 | 21,3 | 23,5 | 5,8 | 25 | 25 |
| 20 | 26,9 | 4,0 | 20 | 26,9 | 4,0 | 26,9 | 33,5 | 8,5 | 26,9 | 30,0 | 6,4 | 29 | 29 |
| | | | 15 | 21,3 | 4,0 | | 30,0 | 6,3 | 21,3 | 21,5 | 4,8 | | |
| 25 | 33,7 | 4,0 | 25 | 33,7 | 4,0 | 33,7 | 39,0 | 7,7 | 33,7 | 36,0 | 5,7 | 38 | 38 |
| | | | 20 | 26,9 | 4,0 | | 37,0 | 6,6 | 26,9 | 27,5 | 4,9 | | |
| | | | 15 | 21,3 | 4,0 | | 36,5 | 6,2 | 21,3 | 21,5 | 4,6 | | |
| 32 | 42,4 | 4,0 | 32 | 42,4 | 4,0 | 42,4 | 48,5 | 8,0 | 42,4 | 45,0 | 5,9 | 48 | 48 |
| | | | 25 | 33,7 | 4,0 | | 46,5 | 6,9 | 33,7 | 35,0 | 5,1 | | |
| | | | 20 | 26,9 | 4,0 | | 45,0 | 6,2 | 26,9 | 27,0 | 4,6 | | |
| | | | 15 | 21,3 | 4,0 | | 45,0 | 6,2 | 21,3 | 21,5 | 4,6 | | |
| 40 | 48,3 | 5,0 | 40 | 48,3 | 5,0 | 48,3 | 55,5 | 9,8 | 48,3 | 51,0 | 7,4 | 57 | 57 |
| | | | 32 | 42,5 | 4,0 | | 53,0 | 8,3 | 42,4 | 45,5 | 6,3 | | |
| | | | 25 | 33,7 | 4,0 | | 52,0 | 8,1 | 33,7 | 36,5 | 6,1 | | |
| | | | 20 | 26,9 | 4,0 | | 51,0 | 7,2 | 26,9 | 28,5 | 5,4 | | |
| 50 | 60,3 | 5,6 | 50 | 60,3 | 5,6 | 60,3 | 68,5 | 11,2 | 60,3 | 64,0 | 8,3 | 64 | 64 |
| | | | 40 | 48,3 | 5,0 | | 66,5 | 9,8 | 48,3 | 51,0 | 7,4 | | 60 |
| | | | 32 | 42,4 | 4,0 | | 65,5 | 9,4 | 42,4 | 46,5 | 7,1 | | 57 |
| | | | 25 | 33,7 | 4,0 | | 63,5 | 8,3 | 33,7 | 36,5 | 6,2 | | 51 |
| | | | 20 | 26,9 | 4,0 | | 62,5 | 7,8 | 26,9 | 29,0 | 5,8 | | 44 |
| 65 | 76,1 | 7,1 | 65 | 76,1 | 7,1 | 76,1 | 88,5 | 15,1 | 76,1 | 81,5 | 11,3 | 76 | 76 |
| | | | 50 | 60,3 | 5,6 | | 84,0 | 12,7 | 60,3 | 66,0 | 9,5 | | 70 |
| | | | 40 | 48,3 | 5,0 | | 81,5 | 11,3 | 48,3 | 53,0 | 8,5 | | 67 |
| | | | 32 | 42,4 | 4,0 | | 81,0 | 11,1 | 42,4 | 49,0 | 8,2 | | 64 |
| | | | 25 | 33,7 | 4,0 | | 80,0 | 10,2 | 33,7 | 39,0 | 7,7 | | 57 |
| 80 | 88,9 | 8,0 | 80 | 88,9 | 8,0 | 88,9 | 104,5 | 17,9 | 88,9 | 96,5 | 13,5 | 86 | 86 |
| | | | 65 | 76,1 | 7,1 | | 99,0 | 14,9 | 76,1 | 81,5 | 11,2 | | 83 |
| | | | 50 | 60,3 | 5,6 | | 96,5 | 13,6 | 60,3 | 67,0 | 10,2 | | 76 |
| | | | 40 | 48,3 | 5,0 | | 94,0 | 12,1 | 48,3 | 54,0 | 9,1 | | 73 |
| | | | 32 | 42,4 | 4,0 | | 94,0 | 12,0 | 42,4 | 50,0 | 8,9 | | 70 |
| 100 | 114,3 | 8,8 | 100 | 114,3 | 8,8 | 114,3 | 134,5 | 21,6 | 114,3 | 125,0 | 16,2 | 105 | 105 |
| | | | 80 | 88,9 | 8,0 | | 124,5 | 15,9 | 88,9 | 94,0 | 12,0 | | 98 |
| | | | 65 | 76,1 | 7,1 | | 122,5 | 14,7 | 76,1 | 81,5 | 11,1 | | 95 |
| | | | 50 | 60,3 | 5,6 | | 120,5 | 13,6 | 60,3 | 67,0 | 10,2 | | 89 |
| | | | 40 | 48,3 | 5,0 | | 118,5 | 12,3 | 48,3 | 54,5 | 9,3 | | 86 |
| 125 | 139,7 | 10,0 | 125 | 139,7 | 10,0 | 139,7 | 150,5 | 22,7 | 139,7 | 145,0 | 17,1 | 124 | 124 |
| | | | 100 | 114,3 | 8,8 | | 153,5 | 19,2 | 114,3 | 122,0 | 14,4 | | 117 |
| | | | 80 | 88,9 | 8,0 | | 149,0 | 16,7 | 88,9 | 95,0 | 12,6 | | 111 |
| | | | 65 | 76,1 | 7,1 | | 147,0 | 15,7 | 76,1 | 82,5 | 11,8 | | 108 |
| | | | 50 | 60,3 | 5,6 | | 145,0 | 14,4 | 60,3 | 68,0 | 10,7 | | 105 |
| 150 | 168,3 | 11,0 | 150 | 168,3 | 11,0 | 168,3 | 182,5 | 28,2 | 168,3 | 175,5 | 21,3 | 143 | 143 |
| | | | 125 | 139,7 | 10,0 | | 184,5 | 21,9 | 139,7 | 148,5 | 16,5 | | 137 |
| | | | 100 | 114,3 | 8,8 | | 181,0 | 19,8 | 114,3 | 122,5 | 14,9 | | 130 |
| | | | 80 | 88,9 | 8,0 | | 177,0 | 17,5 | 88,9 | 96,0 | 13,0 | | 124 |
| | | | 65 | 76,1 | 7,1 | | 175,0 | 16,5 | 76,1 | 83,5 | 12,3 | | 121 |
| 200 | 219,1 | 12,5 | 200 | 219,1 | 12,5 | 234,5 | 238,0 | 30,2 | 224,0 | 229,0 | 22,6 | 178 | 178 |
| | | | 150 | 168,3 | 11,0 | 219,1 | 237,0 | 24,6 | 168,3 | 178,5 | 18,4 | | 168 |
| | | | 125 | 139,7 | 10,0 | | 233,5 | 22,4 | 139,7 | 149,0 | 16,8 | | 162 |
| | | | 100 | 114,3 | 8,8 | | 230,0 | 20,6 | 114,3 | 123,5 | 15,4 | | 156 |
| | | | 80 | 88,9 | 8,0 | | 226,0 | 18,3 | 88,9 | 97,0 | 13,7 | | 152 |

For 1), see subclause 7.2.

For *) , see table 1.

(continued)

Table 5 (concluded)

| Nominal size DN 1 | Outside diameter d_1 | Wall thickness s_1 | Nominal size DN 2 | Outside diameter d_2 | Wall thickness s_2 | Diameter d_3 1) | | Wall thickness s_3 | Diameter d_4 1) | | Wall thickness s_4 | a | b |
|----------------------|---------------------------|-------------------------|----------------------|---------------------------|-------------------------|-------------------|-------|-------------------------|-------------------|-------|-------------------------|-----|-----|
| | | | | | | min. | max. | | min. | max. | | | |
| 250 | 273,0 | 14,2 | 250 | 273,0 | 14,2 | 292,0 | 296,5 | 36,0 | 280,0 | 286,0 | 27,0 | 216 | 216 |
| | | | 200 | 219,1 | 12,5 | 273,0 | 297,5 | 30,2 | 219,1 | 234,0 | 22,7 | | 203 |
| | | | 150 | 168,3 | 11,0 | | 290,0 | 25,8 | 168,3 | 180,5 | 19,4 | | 194 |
| | | | 125 | 139,7 | 10,0 | | 286,0 | 23,5 | 139,7 | 150,5 | 17,7 | | 191 |
| 100 | 114,3 | 8,8 | 283,0 | 21,9 | 114,3 | | 125,5 | 16,5 | 184 | | | | |
| 300 | 323,9 | 16,0 | 300 | 323,9 | 16,0 | 346,0 | 351,0 | 41,1 | 332,0 | 339,0 | 30,9 | 254 | 254 |
| | | | 250 | 273,0 | 14,2 | 323,9 | 341,5 | 35,0 | 273,0 | 283,0 | 26,3 | | 241 |
| | | | 200 | 219,1 | 12,5 | | 346,5 | 31,2 | 219,1 | 235,0 | 23,4 | | 229 |
| | | | 150 | 168,3 | 11,0 | | 340,5 | 27,8 | 168,3 | 183,0 | 20,8 | | 219 |
| 125 | 139,7 | 10,0 | 336,5 | 25,5 | 139,7 | | 153,0 | 19,1 | 216 | | | | |
| 350 | 355,6 | 17,5 | 350 | 355,6 | 17,5 | 379,5 | 385,5 | 44,9 | 365,0 | 372,0 | 33,7 | 279 | 279 |
| | | | 300 | 323,9 | 16,0 | 355,6 | 373,0 | 39,3 | 332,5 | 337,5 | 29,5 | | 270 |
| | | | 250 | 273,0 | 14,2 | | 384,0 | 36,3 | 273,0 | 292,5 | 27,3 | | 257 |
| | | | 200 | 219,1 | 12,5 | | 378,0 | 32,8 | 219,1 | 237,0 | 24,7 | | 248 |
| 150 | 168,3 | 11,0 | 372,0 | 29,3 | 168,3 | | 185,0 | 21,9 | 238 | | | | |
| 400 | 406,4 | 20,0 | 400 | 406,4 | 20,0 | 440,0 | 447,0 | 56,8 | 422,0 | 430,0 | 42,6 | 305 | 305 |
| | | | 350 | 355,6 | 17,5 | 406,4 | 425,5 | 44,5 | 366,0 | 371,5 | 33,4 | | 305 |
| | | | 300 | 323,9 | 16,0 | | 427,5 | 43,2 | 323,9 | 338,5 | 32,5 | | 295 |
| | | | 250 | 273,0 | 14,2 | | 436,0 | 39,7 | 273,0 | 296,5 | 29,7 | | 283 |
| 200 | 219,1 | 12,5 | 429,5 | 36,1 | 219,1 | | 241,5 | 27,1 | 273 | | | | |
| 450 | 457,0 | 22,2 | 450 | 457,0 | 22,2 | 497,0 | 505,0 | 65,4 | 475,0 | 485,5 | 49,1 | 343 | 343 |
| | | | 400 | 406,4 | 20,0 | 457,0 | 482,0 | 52,5 | 420,0 | 462,0 | 39,4 | | 330 |
| | | | 350 | 355,6 | 17,5 | | 480,0 | 46,4 | 355,6 | 371,5 | 35,0 | | 330 |
| | | | 300 | 323,9 | 16,0 | | 492,0 | 45,3 | 323,9 | 351,5 | 33,9 | | 321 |
| 250 | 273,0 | 14,2 | 487,0 | 42,4 | 273,0 | | 300,5 | 31,9 | 308 | | | | |
| 500 | 508,0 | 25,0 | 500 | 508,0 | 25,0 | 554,0 | 562,5 | 74,2 | 530,0 | 540,5 | 55,8 | 381 | 381 |
| | | | 450 | 457,0 | 22,2 | 508,0 | 536,5 | 59,4 | 472,5 | 480,0 | 44,6 | | 368 |
| | | | 400 | 406,4 | 20,0 | | 528,0 | 52,1 | 419,5 | 426,0 | 39,1 | | 356 |
| | | | 350 | 355,6 | 17,5 | | 546,5 | 50,7 | 355,6 | 387,0 | 38,1 | | 356 |
| 300 | 323,9 | 16,0 | 544,0 | 49,3 | 323,9 | | 356,5 | 37,1 | 346 | | | | |
| 500 | 508,0 | 25,0 | 250 | 273,0 | 14,2 | 508,0 | 539,5 | 46,4 | 273,0 | 305,5 | 34,9 | 381 | 333 |
| | | | 200 | 219,1 | 12,5 | | 532,5 | 42,6 | 219,1 | 250,0 | 32,0 | | 324 |

For 1), see subclause 7.2.

Table 6: Dimensions for alternative designs (cf. subclause 7.3)

| Wall thickness series | Nominal size DN 1 | Outside diameter d_1 | Wall thickness s_1 | Nominal size DN 2 | Outside diameter d_2 | Wall thickness s_2 | Diameter d_3 | Wall thickness s_3 | Diameter d_4 | Wall thickness s_4 | a | b |
|-----------------------|-------------------|------------------------|----------------------|-------------------|-------------------------|----------------------|-------------------------|----------------------|-------------------------|----------------------|-------------------|-------------------|
| 3 | 600 | 610,0 | 12,5 | 600 | 610,0 | 12,5 | 610,0 | 51,4 | 610,0 | 51,4 | 432 | 432 |
| | 700 | 711,0 | 12,5 | 700 | 711,0 | 12,5 | 711,0 | 39,1 | 711,0 | 32,6 | 521 | 521 |
| | 800 | 813,0 | 12,5 | 800 | 813,0 | 12,5 | 813,0 | 35,5 | 813,0 | 31,3 | 597 | 597 |
| 4 | 400 | 406,4 | 12,5 | 400 | 406,4 | 12,5 | 457,0 | 43,2 | 406,4 | 24,5 | 305 | 305 |
| | 450 | 457,0 | 14,2 | 450 | 457,0 | 14,2 | 508,0 | 45,4 | 457,0 | 31,9 | 343 | 343 |
| | 500 | 508,0 | 16,0 | 500 | 508,0 | 16,0 | 558,0 | 46,9 | 508,0 | 41,1 | 381 | 381 |
| | 600 | 610,0 | 17,5 | 600 | 610,0 | 17,5 | 610,0 | 57,1 | 610,0 | 57,1 | 432 | 432 |
| 5 | 200 | 219,1 | 12,5 | 200 | 219,1 | 12,5 | 219,1 | 34,3 | 219,1 | 33,8 | 178 | 178 |
| | 250 | 273,0 | 14,2 | 250 | 273,0 | 14,2 | 323,9 | 45,4 | 273,0 | 34,5 | 216 | 216 |
| | 300 | 323,9 | 16,0 | 300 | 323,9 | 16,0 | 323,9 | 45,7 | 323,9 | 45,0 | 254 | 254 |
| | 350 | 355,6 | 17,5 | 350 300 | 355,6 323,9 | 17,5 16,0 | 406,4 406,4 | 48,8 48,8 | 355,6 323,9 | 46,4 28,0 | 279 279 | 279 270 |
| | 400 | 406,4 | 20,0 | 400 350 | 406,4 355,6 | 20,0 17,5 | 406,4 406,4 | 53,7 49,7 | 406,4 355,6 | 53,5 49,7 | 305 305 | 305 305 |
| | 450 | 457,0 | 22,2 | 450 400 | 457,0 406,4 | 22,2 20,0 | 457,0 457,0 | 59,4 52,6 | 457,0 406,4 | 59,4 52,6 | 343 343 | 343 330 |
| | 500 | 508,0 | 25,0 | 500 450 400 | 508,0 457,0 406,4 | 25,0 22,2 20,0 | 508,0 508,0 508,0 | 66,3 59,4 53,1 | 508,0 457,0 406,4 | 66,3 59,4 53,1 | 381 381 381 | 381 368 356 |

4 Tolerances

Table 7: Lower limit deviations for wall thickness

| Nominal size DN | Nominal wall thickness | Lower limit deviations ¹⁾ |
|-----------------|------------------------|--------------------------------------|
| ≤ 600 | All sizes | - 12,5% |
| > 600 | ≤ 10,0 | - 0,35 mm |
| | > 10,0 | - 0,50 mm |

¹⁾ Dimensions s_1 and s_2 may be exceeded by the values specified in DIN 2609.

Dimensions a and b shall be calculated based on the following equations:

$$a = \frac{u_1 + u_2}{2}$$

$$b = \frac{l_1 + l_2}{2}$$

Table 8: Limit deviations for dimensions a and b

| Nominal size DN | a | b |
|-----------------|-------|-------|
| 15 to 200 | ± 2,0 | ± 2,0 |
| 250 to 700 | ± 3,0 | ± 3,0 |
| ≥ 800 | ± 5,0 | ± 5,0 |

5 Design assumptions

The wall thicknesses s_3 and s_4 have been specified so that the fittings can accommodate the same pressure as the connecting pipes with wall thicknesses s_1 and s_2 (cf. tables 1 to 5), in accordance with *Technische Regeln für Dampfkessel* (Code of practice for steam boilers) TRD 301. They also account for the fact that tees may be of either type A or B (cf. figure in clause 2), or produced under the conditions described in clause 7.

The following assumptions have also been made:

- lower limit deviations for the wall thickness of pipes and tees as given in table 7;
- identical material;
- identical welding factor for longitudinal welds;
- identical outside diameters;
- no allowance for corrosion.

The loadbearing cross-sectional areas have been multiplied by a factor of 0,9 to account for the radii between run and branch resulting from the manufacturing process.

The wall thicknesses s_3 and s_4 specified in tables 1 to 5 account for the fact that tees may be of type A, where the thickness is increased on the inside only, or B, where the thickness may be increased on both the inside and outside (cf. table 6 for alternative design dimensions).

6 Other wall thicknesses

Tees may be ordered with wall thicknesses that lie between the values specified here for series 1 through 5, in which case s_3 and s_4 shall be taken from the next highest series or be otherwise verified as being suitable.

7 Design requirements

7.1 Transition between run and branch

The transition between run and branch shall be produced to have a radius, r , not less than the value of s_1 , and be large enough so that the straight portion of the run has a length not less than the value of s_1 or s_2 (as measured between the end of the radius and the welding end).

The above requirement may be disregarded in the case of tees produced by forging or drilling, and of drop forged tees of type B where, despite provision of the smallest possible value of r (i.e. equal to s_1), the manufacturing process necessitates a shorter distance between end of radius and welding end.

7.2 Dimensions d_3 and d_4

Dimensions d_3 and d_4 specified in tables 1 to 5 are design values, it being permitted to select the actual value from within the range given. Depending on the manufacturing process used, however, the maximum values may be exceeded, provided the clear inside diameter is not exceeded and all other relevant requirements are complied with, the clear inside diameter being expressed as $(d_3 - 2 \cdot s_3)$ or $(d_4 - 2 \cdot s_4)$, using the values specified in the tables.

7.3 Alternative design

Tees may be produced with an alternative design having the dimensions specified in table 6. These dimensions deviate significantly from those of tables 1 to 5, and have been specified to permit the use of existing tools.

7.4 Welding end preparation

Where required, the inside of welding ends may be bevelled to an angle of 15° to 18°, or the outside to an angle of 27° to 30°, relative to the fitting axis.

8 Technical delivery conditions

See DIN 2609 for technical delivery conditions for tees as covered here.

Standards and other documents referred to

- DIN 2609 Steel butt-welding pipe fittings; technical delivery conditions
DIN 2615 Part 1 Steel butt-welding pipe fittings; tees with reduced pressure factor
ISO 4200 : 1991 Plain end steel tubes, welded and seamless; general tables of dimensions and masses per unit length
TRD 301 *Zylinderschalen unter innerem Überdruck* (Cylindrical shells subject to internal pressure)*)

Previous edition

DIN 2615: 06.64.

Amendments

In comparison with the June 1964 edition of DIN 2615, the specifications have been revised and updated and are now covered in DIN 2615 Parts 1 and 2.

International Patent Classification

F 16 L 41/02

*) Obtainable from *Deutsches Informationszentrum für Technische Regeln (DITR)* im DIN, D-10772 Berlin.