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DRAFT AMENDMENT NO. 7**TO****IS 9523: 2000 DUCTILE IRON FITTINGS FOR PRESSURE PIPES FOR WATER, GAS AND SEWERAGE — SPECIFICATION***(First Revision)*

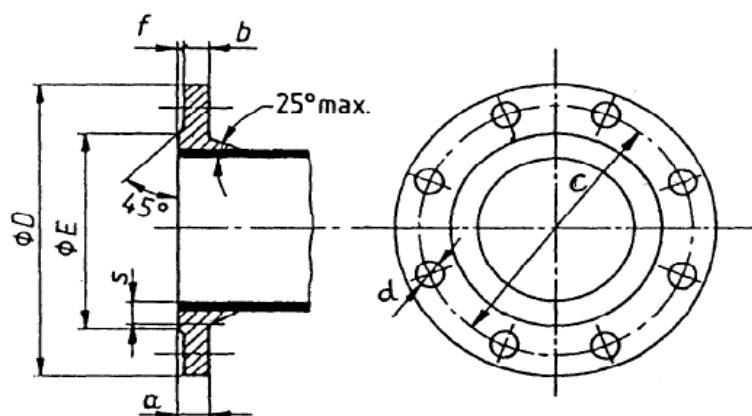
ICS 23.040.10; 23.040.40

Pig Iron and Cast Iron Sectional Committee,
MTD 06Last date for receipt of comment is
18 July 2024

(Page 5, Table 4, Page 6, Table 5, Page 7, Table 6 and Page 8, Table 7) - Add sizes for Flange dimension of DN 40, DN 50, DN 60 and DN 65 are added as Annex E:

Annex E

Dimensions of standard flange drilling for dimensions DN 40, DN 50, DN 60 and DN 65

**Table 35 Dimensions of standard flange drilling for dimensions DN 40, DN 50, DN 60 and DN 65**

Dimensions of Standard Flange Drilling for Flange Fittings- PN 10/PN16									
Nominal diameter	Dimensions						Holes		Bolt Size Metric
	DN	D	E	C	B	f	a	No.	
40	150	84	110	16	3	19	4	19	M 16
50	165	99	125	16	3	19	4	19	M 16
65	185	118	145	16	3	19	4	19	M 16
Dimensions of Standard Flange Drilling for Flange Fittings -PN 25/PN 40									

Nominal diameter	Dimensions						Holes		Bolt Size Metric
	DN	D	E	C	B	f	a	No.	
40	150	84	110	16	3	19	4	19	M 16
50	165	99	125	16	3	19	4	19	M 16
65	185	118	145	16	3	19	8	19	M 16

(Page 9, Table 12)

Substitute the existing heading for column (2) as under :

Allowable Difference Between Minor Axis and DE (minimum) in mm

for

Allowable Difference Between Minor Axis and DE, Min in mm

(Page 9, Clause 12.3.1)

Substitute the existing referred clauses as under :

Fittings shall be as far as possible circular internally and externally. The tolerance for out of roundness of **spigot ends** in the jointing zone for push-on-joint as given in Table 12 and for mechanical joint as given in Table 13.

for

Fittings shall be as far as possible circular internally and externally. The tolerance for out of roundness of the **socket and spigot ends** in the jointing zone for push-on-joint as given in Table 12 and for mechanical joint as given in Table 13.

(Page 9, Table 13) Substitute the existing referred clauses as under :

(Clause 12.3.1)

for

(Clauses 12.3.1 and 12.4.3)

(Page 9, Clause 12.4) Substitute

The tolerance on the wall thickness of fittings shall be as follows:

Type of castings	Wall thickness (mm)	Tolerance (mm)
Fittings	7 & Greater than 7	-(2.3+0.001 DN)

for

The tolerance on the wall thickness of fittings shall be as follows:

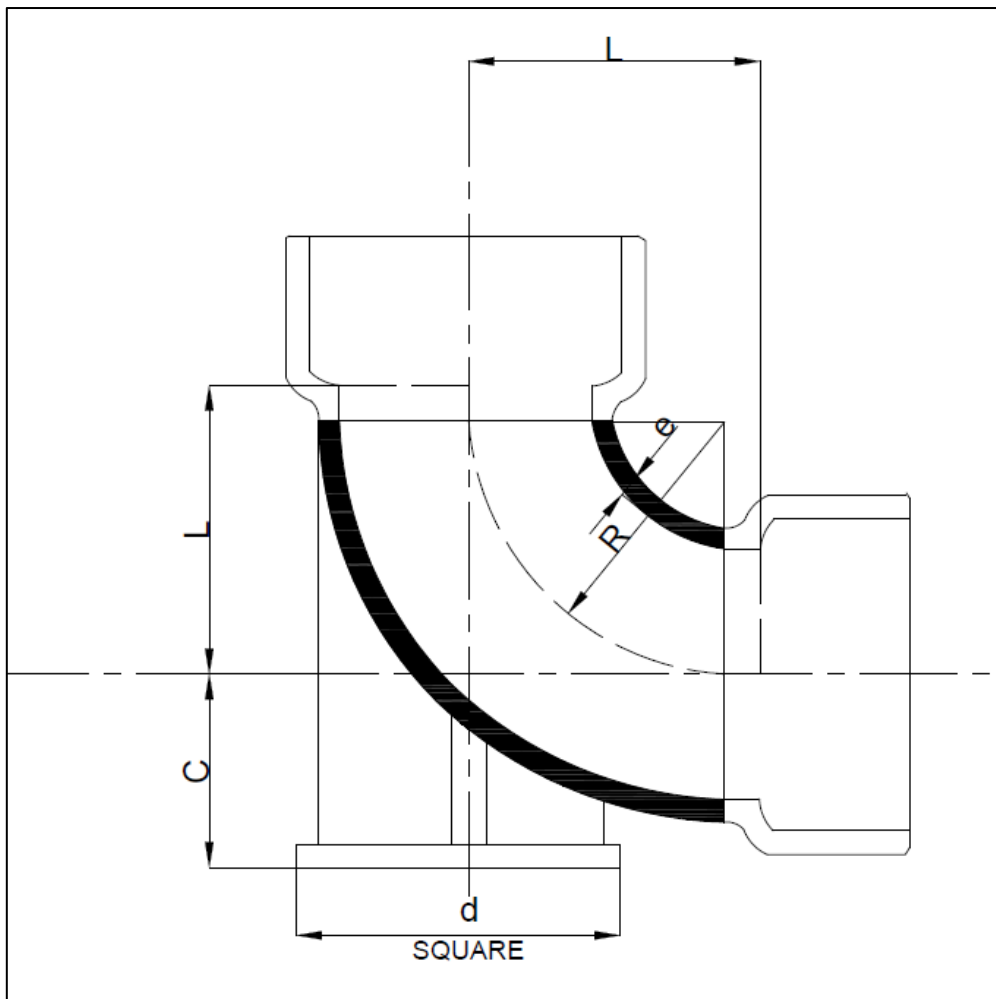
Type of castings	Wall thickness (mm)	Tolerance (mm)
Fittings	7, Greater than 7	-2.3, -(2.3+0.001 DN)

(Table 19, Page 13) Substitute the existing sketch with the following revised sketch:

Table 19 Duck foot Double Socket 90° Bend

(Clause 11.2 and 16)

All dimensions are in mm



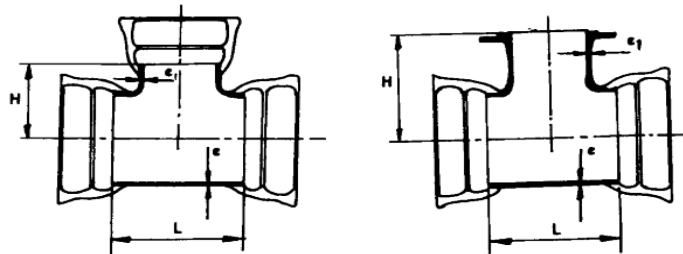
(Page 4, Clause 11 & Table 21 & Table 29)

Insert the below paragraph in Clause 11.

“Fitting of DN 40, DN 50, DN 60 and DN 65 or combination of these diameter with other diameters, may be manufactured for fixing of valves and appurtenances, provided they follow the requirements of this standard. The basic dimension of such fitting are given in table No.21 and 29 which are modified accordingly”.

Substitute the Table 21, Page 14 and Table 29, Page 21 with new table

Table-21 All Socket, Flanged On Double Socket Tees



NOTES

1 The figure is schematic.

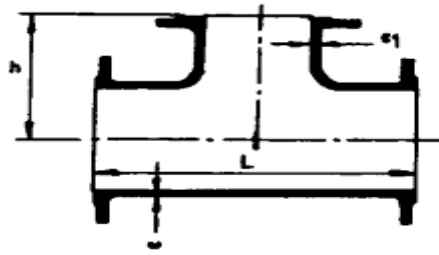
2 No value is specified for radius R but internal and external radius are equal.

Nominal dia.		e	ei	L		H	
DN Body	dn Branch			Flange on double socket	All Socket	Flange on double socket	All Socket
mm	Mm	mm	mm	mm	mm	mm	mm
40	40	7	7	120	-	130	-
50	50	7	7	130	-	140	-
60	40	7	7	145	-	150	-
60	60	7	7	145	-	150	-
65	40	7	7	150	-	150	-
65	65	7	7	150	-	150	-
80	50	7	7	170	-	165	-
80	60	7	7	170	-	165	-
80	80	7	7	170	170	165	85
100	50	7.2	7	170	-	175	-
100	80	7.2	7	170	170	175	95
100	100	7.2	7.2	190	190	180	95
125	50	7.5	7	170	-	190	-
125	60	7.5	7	170	-	190	-
125	80	7.5	7	170	170	190	105
125	100	7.5	7.2	195	195	195	110
125	125	7.5	7.5	225	225	200	110
150	50	7.8	7	170	-	205	-
150	60	7.8	7	170	-	205	-
150	80	7.8	7	170	170	205	120
150	100	7.8	7.2	195	195	210	120
150	150	7.8	7.8	255	255	220	125
200	50	8.4	7	175	-	235	-
200	60	8.4	7	175	-	235	-
200	80	8.4	7	175	175	235	145
200	100	8.4	7.2	200	200	240	145
200	150	8.4	7.8	255	255	250	150
200	200	8.4	8.4	315	315	260	155
250	50	9	7	180	-	265	-
250	80	9	7	180	180	265	170
250	100	9	7.2	200	200	270	170
250	150	9	7.8	260	260	280	175
250	200	9	8.4	315	315	290	180
250	250	9	9	375	375	300	190
300	50	9.6	7	180	-	295	-
300	100	9.6	7.2	205	205	300	195
300	200	9.6	8.4	320	320	320	205
300	300	9.6	9.6	435	435	340	220
350	60	10.2	7	205	-	330	-
350	100	10.2	7.2	205	-	330	-
350	200	10.2	8.4	325	-	350	-

350	350	10.2	10.2	495	-	380	-
400	80	10.8	7.0	185	-	355	-
400	100	10.8	7.2	210	-	360	-
400	150	10.8	7.8	270	-	370	-
400	200	10.8	8.4	325	-	380	-
400	300	10.8	9.6	440	-	400	-
400	400	10.8	10.8	560	-	420	-

Nominal dia.		e	er	L		H	
DN Body	dn Branch			Branch Flange on double socket	All Socket	Flange on double socket	All Socket
mm	mm	mm	mm	mm	mm	mm	Mm
450	100	11.4	7.2	215	-	390	-
450	250	11.4	9.0	390	-	420	-
450	450	11.4	11.4	620	-	460	-
500	100	12.0	7.2	215	-	420	-
500	200	12.0	8.4	330	-	440	-
500	400	12.0	10.8	565	-	480	-
500	500	12.0	12.0	680	-	500	-
600	200	13.2	8.4	340	-	500	-
600	400	13.2	10.8	570	-	540	-
600	600	13.2	13.2	800	-	580	-
700	200	14.4	8.4	345	-	525	-
700	400	14.4	10.8	575	-	555	-
700	700	14.4	14.4	925	-	600	-
750	400	15.0	10.8	575	-	585	-
750	750	15.0	15.0	985	-	635	-
800	200	15.6	8.4	350	-	585	-
800	400	15.6	10.8	580	-	615	-
800	600	15.6	13.2	1045	-	645	-
800	800	15.6	15.6	1045	-	675	-
900	200	16.8	8.4	355	-	645	-
900	400	16.8	10.8	590	-	675	-
900	600	16.8	13.2	1170	-	705	-
900	900	16.8	16.8	1170	-	750	-
1000	200	18.0	8.4	360	-	705	-
1000	400	18.0	10.8	595	-	735	-
1000	600	18.0	13.2	1290	-	765	-
1000	1000	18.0	18.0	1290	-	825	-
1100	400	19.2	10.8	600	-	795	-
1100	600	19.2	13.2	830	-	825	-
1200	600	20.4	13.2	840	-	885	-
1200	800	20.4	15.6	1070	-	915	-
1200	1000	20.4	18.0	1300	-	945	-
1400	600	22.8	13.2	1030	-	980	-
1400	800	22.8	15.6	1260	-	1010	-
1400	1000	22.8	18.0	1495	-	1040	-
1600	600	25.2	13.2	1040	-	1090	-
1600	800	25.2	15.6	1275	-	1120	-
1600	1000	25.2	18.0	1505	-	1150	-
1600	1200	25.2	20.4	1740	-	1180	-

Table-29
ALL FLANGED TEES



NOTE 1 : The figure is schematic.

NOTE 2 : No value is specified for radius R but internal and external radius are equal.

Nominal dia.		e	e_1	L	H
DN Body	dn Branch				
Mm	mm	mm	mm	mm	mm
40	40	7.0	7.0	280	140
50	50	7.0	7.0	300	150
60	40	7.0	7.0	300	130
60	60	7.0	7.0	320	160
65	65	7.0	7.0	330	165
80	40	7.0	7.0	330	165
80	60	7.0	7.0	330	165
80	80	7.0	7.0	330	165
100	40	7.2	7.0	360	175
100	60	7.2	7.0	360	175
100	80	7.2	7.0	360	175
100	100	7.2	7.2	360	180
125	40	7.5	7.0	400	190
125	60	7.5	7.0	400	190
125	80	7.5	7.0	400	190
125	100	7.5	7.2	400	195
125	125	7.5	7.5	400	200
150	40	7.8	7.0	440	205
150	60	7.8	7.0	440	205
150	80	7.8	7.0	440	205
150	100	7.8	7.2	440	210
150	125	7.8	7.5	440	215
150	150	7.8	7.8	440	220
200	40	8.4	7.0	520	235
200	60	8.4	7.0	520	235
200	80	8.4	7.0	520	235
200	100	8.4	7.2	520	240
200	150	8.4	7.8	520	250
200	200	8.4	8.4	520	260
250	60	9.0	7.0	700	275
250	100	9.0	7.2	700	275
250	200	9.0	8.4	700	325
250	250	9.0	9.0	700	350
300	60	9.6	7.0	800	300
300	100	9.6	7.2	800	300
300	200	9.6	8.4	800	350

300	300	9.6	9.6	800	400
350	60	10.2	7.0	850	325
350	100	10.2	7.2	850	325
350	200	10.2	8.4	850	325
350	350	10.2	10.2	850	425
400	100	10.8	7.2	900	350
400	200	10.8	8.4	900	350
400	400	10.8	10.8	900	450

Nominal dia.		<i>e</i>	<i>e_l</i>	<i>L</i>	<i>H</i>
DN Body	dn Branch				
Mm	mm	mm	mm	mm	Mm
450	100	11.4	7.2	950	375
450	200	11.4	8.4	950	375
450	450	11.4	11.4	950	475
500	100	12.0	7.2	1000	400
500	200	12.0	8.4	1000	400
500	400	12.0	10.8	1000	500
500	500	12.0	12.0	1000	500
600	200	13.2	8.4	1100	450
600	400	13.2	10.8	1100	550
600	600	13.2	13.2	1100	550
700	200	14.4	8.4	650	525
700	400	14.4	10.4	870	555
700	700	14.4	14.4	1200	600
750	200	15	8.4	670	555
750	400	15	10.8	890	585
750	750	15	15.0	1275	640
800	200	15.6	8.4	690	585
800	400	15.6	10.8	910	615
800	600	15.6	13.2	1350	645
800	800	15.6	15.6	1350	675
900	200	16.8	8.4	730	645
900	400	16.8	10.8	950	675
900	600	16.8	13.2	1500	705
900	900	16.8	16.8	1500	750
1000	200	18.0	8.4	770	705
1000	400	18.0	10.8	990	735
1000	600	18.0	13.2	1650	765
1000	1000	18.0	18.0	1650	825
1100	400	19.2	10.8	980	795
1100	600	19.2	13.2	1210	825
1200	600	20.4	13.2	1240	885
1200	800	20.4	15.6	1470	915
1200	1000	20.4	18.0	1700	945
1400	600	22.8	13.2	1550	980
1400	800	22.8	15.6	1760	1010
1400	1000	22.8	18.0	2015	1040
1600	600	25.2	13.2	1600	1090
1600	800	25.2	15.6	1835	1120
1600	1000	25.2	18.0	2065	1150

1600	1200	25.2	20.4	2300	1180
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Note: PN10 and PN16 are the preferred flange. PN 25 and PN 40 flanges are supplied when specified.

(Page 23, Table 30)

Double Flanged Concentric Tapers of DN 40, DN 50, DN 60 and DN 65 size and its combination with other sizes are added:

DN	dn	e1	e2	L
50	40	7.0	7.0	150
60	50	7.0	7.0	160
65	50	7.0	7.0	200
80	60	7.0	7.0	200
80	65	7.0	7.0	200

(Page 26, Annexure- B Clause B-1.1 (i))

Substitute

Ordinary Portland Cement as per IS 269 or Portland slag cement as per IS 455 to be used.

for

Portland Cement (as per IS 269 or IS 455) mortar lining perform rather well and have an expected life of approximately 50 years in soft water with moderate amount of aggressive CO₂ and when pH is within 6 and 9 . Longer service life can be obtained by increasing the mortar lining thickness.

Justification:

Reference of service life in the standard should be avoided.

MTD 6