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Indian Standard

SPECIFICATION FOR CENTRIFUGALLY CAST (SPUN) IRON SPIGOT AND SOCKET SOIL, WASTE AND VENTILATING PIPES, FITTINGS AND ACCESSORIES

(Second Revision)

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Indian Standard

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Indian Standard

SPECIFICATION FOR CENTRIFUGALLY CAST (SPUN) IRON SPIGOT AND SOCKET SOIL, WASTE AND VENTILATING PIPES, FITTINGS AND ACCESSORIES

(Second Revision)

0. FOREWORD

0.1 This Indian Standard (Second Revision) was adopted by the Indian Standards Institution on 17 December 1984 after the draft finalized by the Pig Iron and Cast Iron Sectional Committee had been approved by the Structural and Metals Division Council.

0.2 This standard was first published in 1967 and was revised in 1970. While reviewing the standard in the light of the experience gained during the years, the committee decided to revise the standard. Following are the main modifications which have been made in this revision:

a) Amendment No. 1 issued earlier has been incorporated.
b) Requirements for hydrostatic test have been specified in terms of MPa in alignment with the adoption of SI units, both nationally and internationally.
c) Various clauses have been aligned with the other existing standards for uniformity.

0.3 For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with IS : 2-1960*. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

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1. SCOPE

1.1 This standard covers requirements for centrifugally cast (spun) iron spigot and socket soil, waste and ventilating pipes together with the details of the fittings and accessories. These pipes and fittings are suitable for use above ground only.

*Rules for rounding off numerical values (*revised*).

1.2 The fittings and accessories covered in this standard are normally manufactured by sand casting method.

2. SUPPLY OF MATERIAL

2.1 General requirements relating to supyly of material shall be as laid down in IS : 1387-1967*

3. MANUFACTURE

3.1 Cast iron used for the manufacture of pipes, fittings and accessories shall conform to any of the grade, as appropriate, specified in IS : 210-1978†.

3.2 The pipes and fittings shall be stripped with all precautions necessary to avoid warping or shrinking defects. The pipes and fittings shall be free from defects, other than any unavoidable surface imperfections which result from the method of manufacture and which do not affect the use of the fittings. By agreement between the purchaser and the manufacturer minor defects may be rectified.

3.3 The pipes and fittings shall be capable of being cut with the tools normally used for installation. In case of dispute they shall be considered as acceptable provided the hardness of the external unmachined suface of pipes does not exceed 230 HBS, when tested as per IS : 1500-1983‡.

3.4 In case of rubber joints, the spigot ends shall be suitably chamfered for smooth entry of pipe in the socket fitted with the rubber gasket.

4. HAMMER TEST

4.1 Each pipe, when tested for soundness by striking with a light hand hammer, shall emit a clear ringing sound.

5. HYDROSTATIC TEST

5.1 Ten percent pipes and fittings shall be tested hydrostatically at a pressure of 0·07 MPa (N/mm^2). These shall not show any sign of leakage, sweating or other defects of any kind.

5.2 The pressure shall be applied internally and shall be steadily maintained for a period of 15 seconds.

5.3 Test shall be carried out after the application of surface coating.

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*General requirements for the supply of metallurgical materials (*first revision*).
†Specification for grey iron castings (*third revision*).
‡Method for Brinell hardness test for metallic material (*second revision*).

6. SIZES AND MASS

6.1 The range of nominal diameter, DN, of pipes and fittings followed in this standard is as follow:

50, 75, 100 and 150 mm

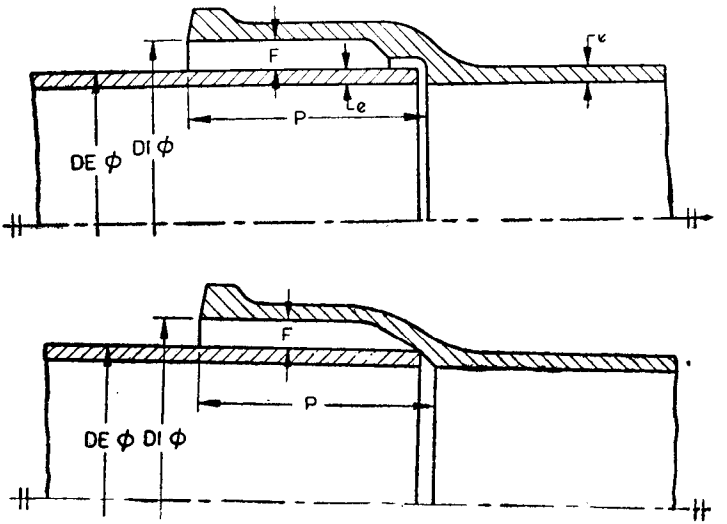
NOTE — Nominal diameter, DN, is a number used to classify pipes and corresponds approximately to their internal diameter.

6.2 Dimensions of socket and spigot of pipes for nominal diameter, as specified are given in Table 1.

6.3 Nominal thickness, dimensions and approximate mass of uncoated pipes and fittings are given in Table 2 to Table 22. Specific mass of cast iron is taken as 7·15 kg/dm³ for the purpose of calculation.

TABLE 1 DIMENSIONS OF SOCKETS AND SPIGOTS OF PIPES

All dimensions in millimetres.

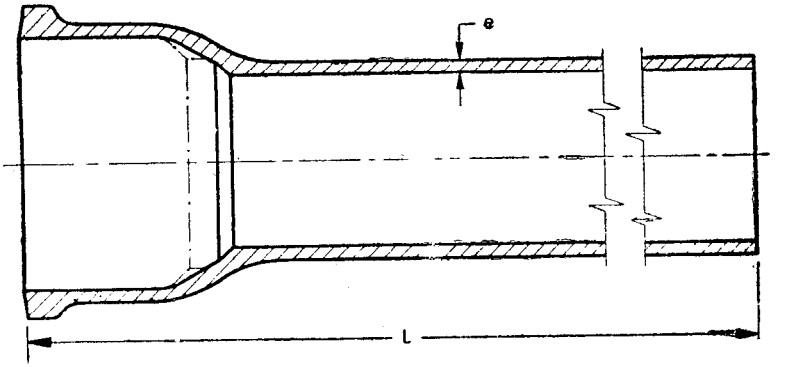


NOMINAL DIAMETER	BARREL		SOCKET		JOINT THICKNESS
DN	*e*	*DE*	*DI*	*P*	*F*
50	3·5	57	73	60	8·0
75	3·5	83	99	65	8·0
100	4·0	109	126	70	8·5
150	5·0	161	179	75	9·0

TABLE 2 APPROXIMATE MASS OF SOCKET AND SPIGOT PIPES

(*Clause* 6.3)

All dimensions in millimetres.

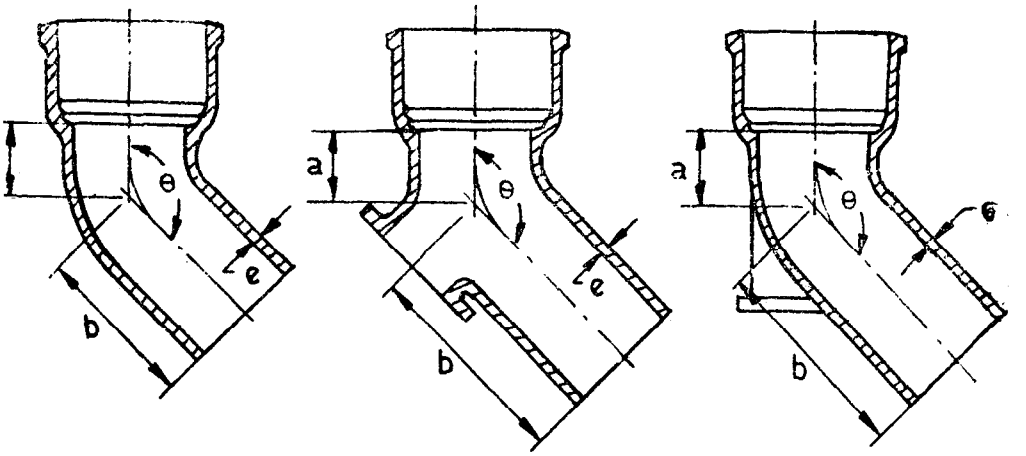


Nominal Diameter	Thickness	Approximate Mass Including Mass of Socket For Pipes of Length (L) in Metres				
DN	*e*	3·000 m (kg)	2·500 m (kg)	2·000 m (kg)	1·800 m (kg)	1·500 m (kg)
50	3·5	13·4	11·3	9·2	8·4	7·1
75	3·5	20	16·8	13·8	12·5	10·6
100	4·0	30	25·5	21	18·8	16
150	5·0	56	47	38·5	34·9	29·5

TABLE 3 BENDS WITH AND WITHOUT ACCESS DOORS

(*Clause* 6.3)

All dimensions in millimetres.



Plain Bend **With Back Access Door** **With Heel Rest**

Angle θ	Nominal Diameter *DN*	Dimensions			Approximate Mass of Bend, kg		
		e	*a*	*b*	Plain	With Door	With Heel Rest
92½°	50	3·5	65	123	1·5	1·8	1·7
	75	3·5	78	140	2·4	2·8	2·7
	100	4·0	91	157	3·8	4·4	4·3
	150	5.0	117	186	7·9	8·7	8·7
112½°	50	3·5	52	110	1·5	1·8	1·7
	75	3·5	61	123	2·3	2·7	2·6
	100	4·0	71	137	3·6	4·2	4·1
	150	5·0	90	158	7·3	8·1	8·1
135°	50	3·5	41	94	1·4	1·7	1·6
	75	3·5	47	104	2·1	2·5	2·4
	100	4·0	53	114	3·3	3·9	3·8
	150	5·0	65	129	6·5	7·3	7·3

NOTE 1 — For socket and spigot dimensions, *see* Table 1.

NOTE 2 — For details of access door, *see* Table 8. The centre of an access door when fitted, should be approximately symmetrical with the centre line of the fitting and as near the intersection of the two axes as possible.

NOTE 3 — Width of base plate of heel rest should be two-thirds of diameter. Thickness not less than 6 mm.

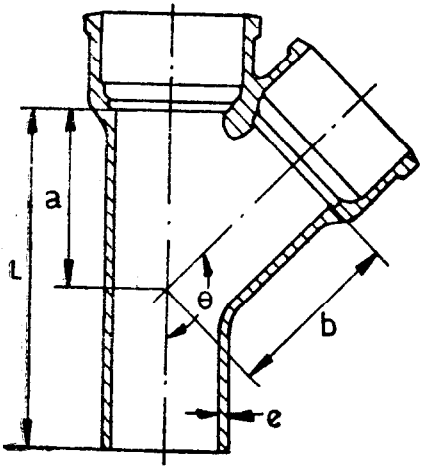
NOTE 4 — Thickness of web not less than 4 mm (from outside edge of the pipe).

NOTE 5 — In case of 135° bend to be supplied with door and heel rest, the dimension '*b*' of 92½° bend shall be applicabe.

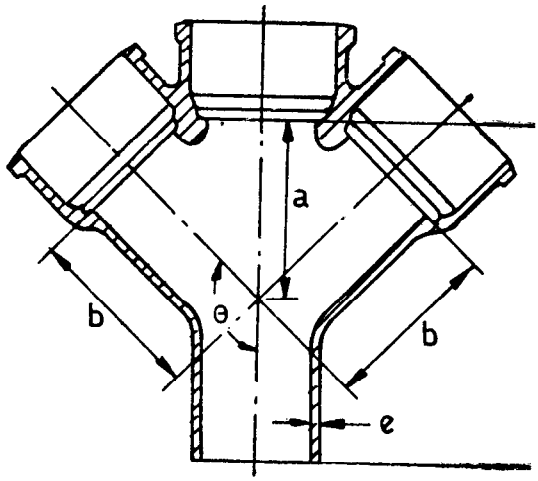
TABLE 4 EQUAL BRANCHES WITH AND WITHOUT ACCESS DOOR

(*Clause* 6.3)

All dimensions in millimetres.



Single Branch



Double Branch

Angle θ	Nominal Diameter DN	Dimensions				Approximate Mass of Single Branch		Approximate Mass of Double Branch	
		e	l	a	b	Plain kg	With Door kg	Plain kg	With Door kg
92½°	50	3·5	176	38	38	2·3	2·6	3·0	3·2
	75	3·5	207	52	52	3·6	4·0	4·6	5·0
	100	4·0	238	66	66	5·7	6·3	7·2	78
	150	5·0	294	93	93	1·4	12·2	14·3	15·1
112½°	50	3·5	168	53	53	2·3	2·6	3·2	3·5
	75	3·5	200	72	72	3·7	4·1	4·9	5·3
	100	4·0	233	91	91	5·8	6·4	7·7	8·3
	150	5·0	293	130	130	12·0	12·8	15·4	16·2
135°	50	3·5	192	88	88	2·5	2·8	3·4	3·7
	75	3·5	233	119	119	4·1	4·5	5·3	5·7
	100	4·0	276	152	152	6·6	7·2	8·6	9·4
	150	5·0	355	216	216	14.0	14·8	17.2	18·0

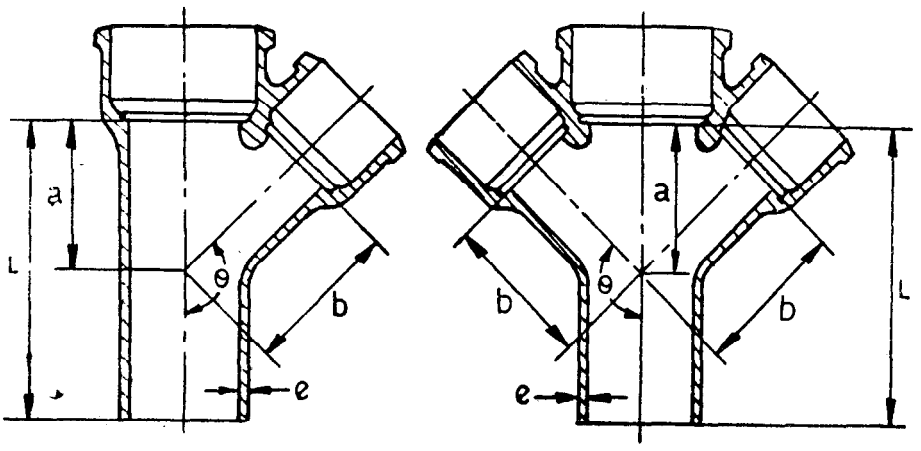
NOTE 1 — For socket and spigot dimensions, *see* Table 1.

NOTE 2 — For details of access door, *see* Table 8.

TABLE 5 UNEQUAL BRANCHES WITH AND WITHOUT ACCESS DOOR

(*Clause* 6.3)

All dimensions in millimetres.



Single Branch Double Branch

Angle θ	Nominal Diameter		Dimensions				Approximate Mass of Single Branch		Approximate Mass of Double Branch	
	Body *DN*	Branch Pipe *dn*	*e*	*l*	*a*	*b*	Plain kg	With Door kg	Plain kg	With Door kg
92½°	75	50	3·5	181	39	51	3·1	3·5	3·8	4·2
	100	50	3·5	190	40	63	4·2	4·8	4·8	5·4
	100	75	4·0	211	52	65	4·9	5·5	6·0	6·6
	150	100	5·0	242	67	92	9·1	9·9	10·5	11·3
112½°	75	50	3·5	175	60	69	3·1	3·6	3·9	4·4
	100	50	3·5	185	70	85	4·9	5·5	5·0	5·6
	100	75	4·0	208	80	89	5·0	5·8	6·2	7·0
	150	100	5·0	241	105	123	9·3	10·1	11·4	12·2
135°	75	50	3.5	197	101	106	3·3	3·7	4·0	4·4
	100	50	3·5	210	115	125	4·3	4·9	5·2	5·8
	100	75	4·0	239	133	139	5·5	6·1	6·4	7·0
	150	100	5·0	283	179	190	10·6	11·4	12·3	13·1

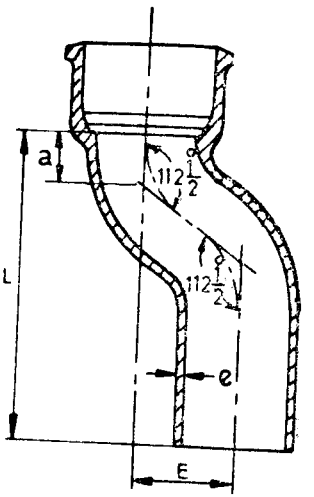
NOTE 1 — For socket and spigot dimensions *see* Table 1.

NOTE 2 — For details of access door, *see* Table 8.

TABLE 6 OFF SETS

(*Clause* 6.3)

All dimensions in millimetres.



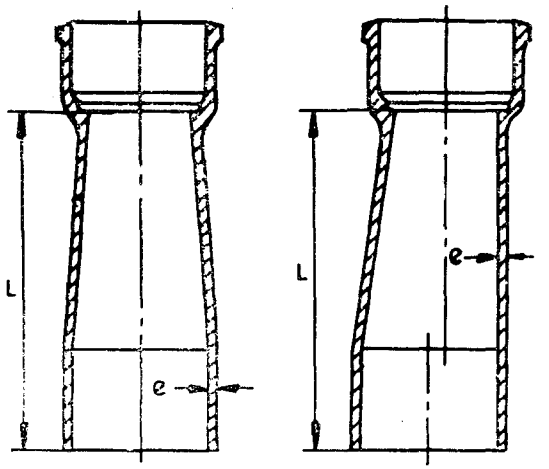
Offset	Nominal Diameter	Dimensions			Approximate Mass
E	*DN*	*a*	*e*	*l*	kg
75	50	40	3·5	200	1·8
	75	45	3·5	225	2·7
	100	55	4·0	250	4·3
	150	75	5·0	275	8·4
115	50	40	3·5	200	1·9
	75	45	3·5	225	2·9
	100	55	4 0	250	4·5
	150	75	5 0	290	8·8
150	50	40	3·5	200	2·0
	75	45	3·5	225	3·1
	100	55	4 0	250	4 8
	150	75	5·0	300	9·5

NOTE — For socket and spigot dimensions, *see* Table 1.

TABLE 7 TAPER

(*Clause* 6.3)

All dimensions in millimetres.



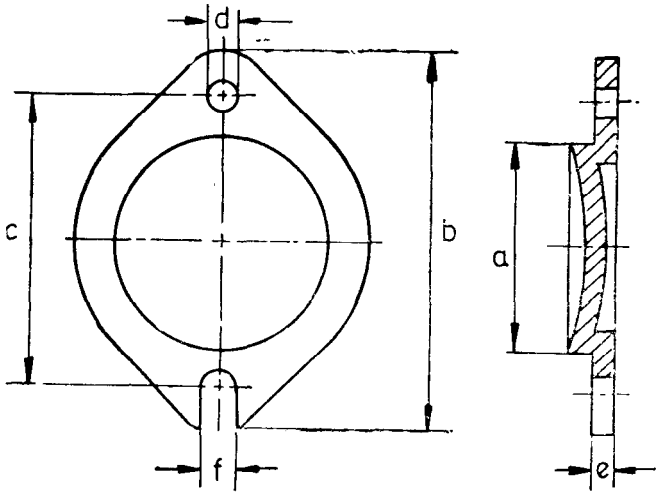
Nominal Diameter		Dimensions		Approximate Mass
Spigot *DN*	Socket *dn*	*e*	*l*	kg
75	50	3·5	200	1·9
100	50	4 0	200	2·3
100	75	4 0	200	2·9
150	100	5 0	200	4 8

NOTE — For socket and spigot dimensions, *see* Table 1.

TABLE 8 ACCESS DOOR

(*Clause* 6.3)

All dimensions in millimetres.



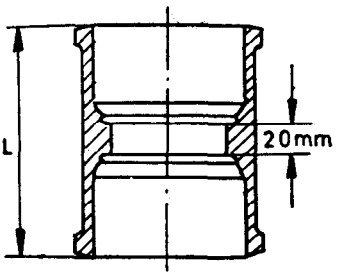
Nominal Diameter *DN*	Dimensions						Approximate Mass kg
	e	*a*	*b*	*c*	*d*	*f*	
50	6	35	73	55·0	8	8	0·11
75	6	55	93	75 0	8	8	0·22
100	6	75	133	105·0	12	12	0·35
150	6	95	153	125·0	12	12	0·63

Note — Screws shall be of brass or cadmium plated steel.

TABLE 9 COLLARS (DOUBLE SOCKET)

(*Clause* 6.3)

All dimensions in millimetres.



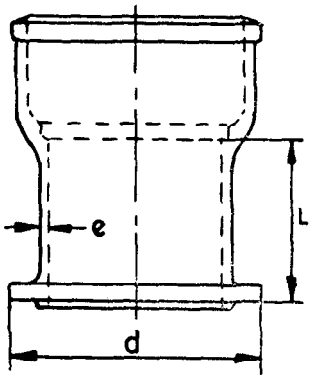
NOMINAL DIAMETER *DN*	*L*	APPROXIMATE MASS kg
50	140	1·6
75	150	2·3
100	160	3·4
150	170	6·4

NOTE — For socket and spigot dimensions, *see* Table 1.

TABLE 10 CONNECTORS (C.I. TO STONEWARE)

(*Clause* 6.3)

All dimensions in millimetres.



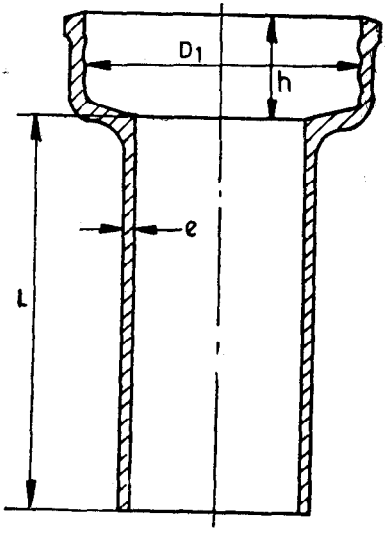
NOMINAL DIAMETER	DIMENSIONS			APPROXIMATE MASS kg
DN	*L*	*d*	*e*	
100	100	145	4·0	3·2
150	100	200	5·0	5·6

NOTE — For socket and spigot dimensions, *see* Table 1.

TABLE 11 CONNECTORS (STONEWARE TO C. I.)

(*Clause* 6.3)

All dimensions in millimetres.

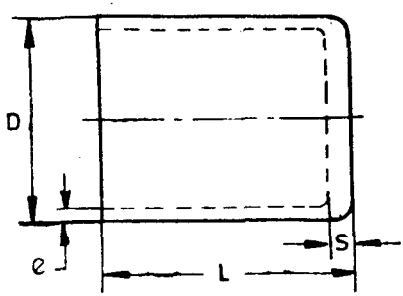


Nominal Diameter	Dimensions				Approximate Mass kg
DN	*e*	D_1	*h*	*L*	
100	4·0	160	60	230	4·7
150	5·0	220	70	270	9·4

TABLE 12 CONNECTORS — PLUG (STOPPER)

(*Clause* 6.3)

All dimensions in millimetres.



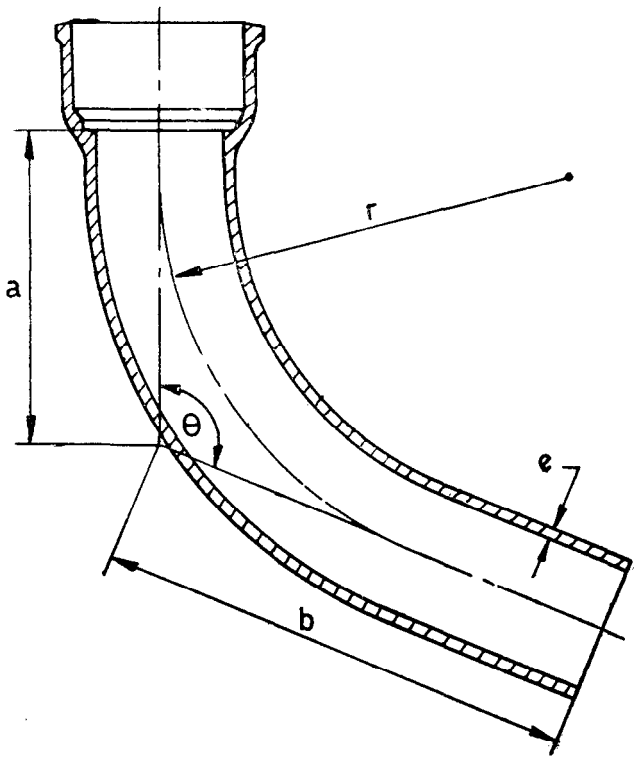
Nominal Diameter *DN*	Dimensions				Approximate Mass kg
	e	*S*	*D*	*L*	
50	3·5	7	57	75	0·5
75	3·5	7	83	80	0·7
100	4·0	8	109	85	1·4
150	5·0	8	161	90	2·8

NOTE — For tolerances on external diameter D, *see* **8.1**.

TABLE 13 LARGER RADIUS BENDS

(*Clause* 6.3)

All dimensions in millimetres.



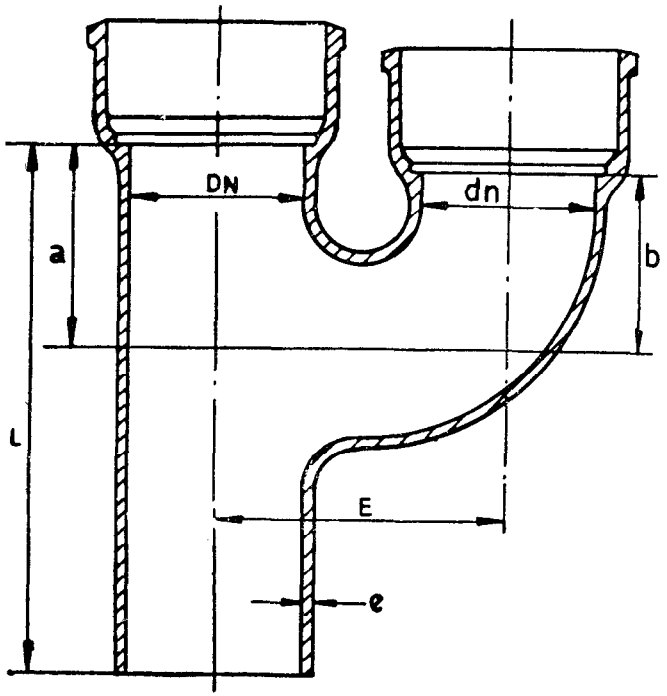
Angle	Nominal Diameter	Dimensions				Approximate Mass kg
θ	*DN*	*e*	*a*	*b*	*r*	
92½°	75	3·5	210	292	190	7·0
	100	4·0	222	305	205	8·2
	150	5.0	248	330	230	12·8
112½°	75	3·5	184	279	240	6·8
	100	4·0	190	292	250	8·0
	150	5·0	210	318	275	12·5
135°	75	3·5	159	260	325	6·6
	100	4·0	159	273	325	7·8
	150	5·0	159	298	325	12·0

NOTE — For socket and spigot dimensions, *see* Table 1.

TABLE 14 EQUAL AND UNEQUAL SINGLE PARALLEL BRANCHES

(*Clause* 6.3)

All dimensions in millimetres.



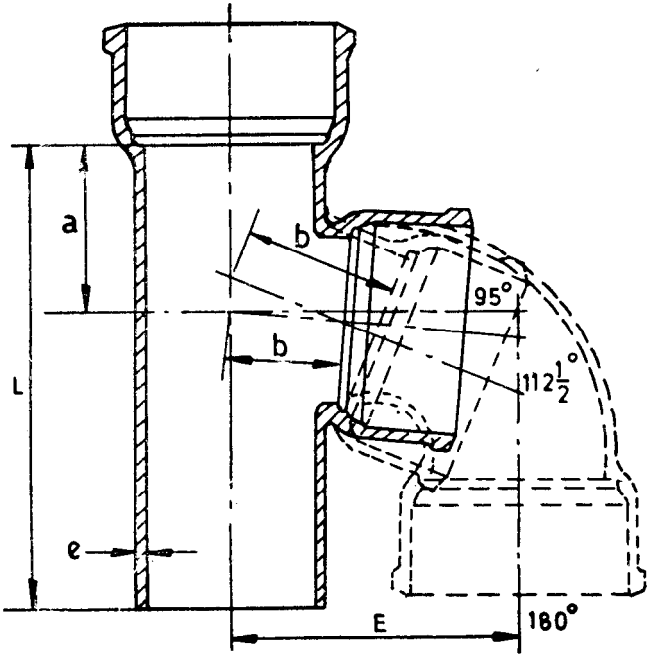
Nominal Diameter		Dimesnion s					Approximate Mass kg
Body *DN*	Branch *dn*	*e*	*L*	*E*	*a*	*b*	
100	100	4·0	280	167	116	102	7·5
100	50	4 0	240	140	89	90	6 0

NOTE — For socket and spigot dimensions, *see* Table 1.

TABLE 15 EQUAL AND UNEQUAL INVERTED BRANCHES SOCKET TYPE

(*Clause* 6.3)

All dimensions millimetres.



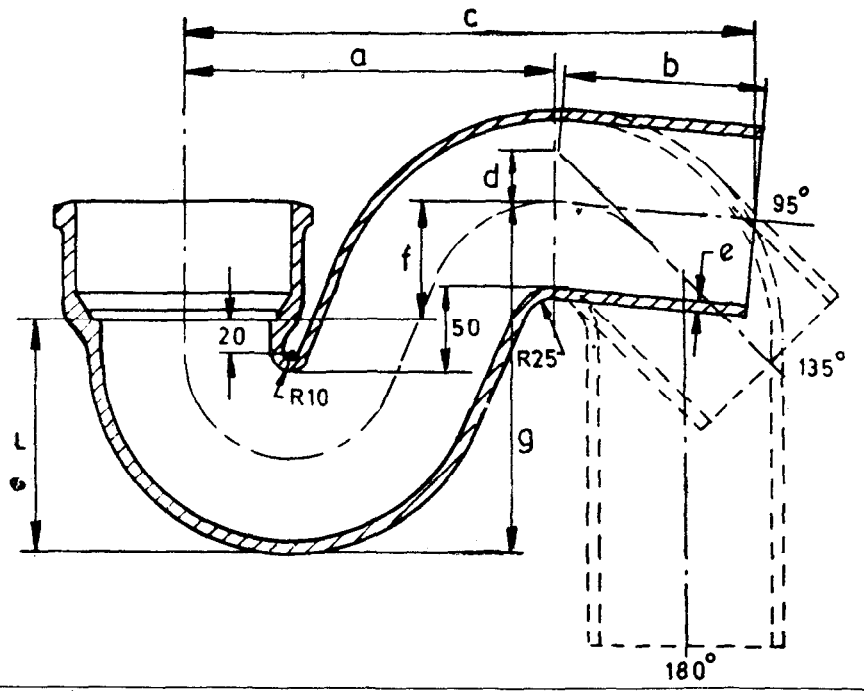
Angle θ	Nominal Diameter		Dimensions					Approximate Mass kg
	Body *DN*	Branches *dn*	*a*	*b*	*E*	*L*	*e*	
95°	50	50	70	38	—	192	3·5	2·4
	100	100	98	66	—	276	4·0	6·0
	100	50	70	63	—	210	4·0	4·4
112½°	50	50	61	53	—	192	3·5	2·4
	100	100	79	91	—	276	4·0	6·1
	100	50	54	85	—	210	4·0	4·5
180°	50	50	70	60	113	192	3 5	2·8
	100	100	98	102	167	276	4·0	6·5
	100	50	70	90	140	210	4·0	5·0

NOTE — For socket and spigot dimensions, *see* Table 1.

TABLE 16 TRAPS

(*Clause* 6.3)

All dimensions in millimetres.



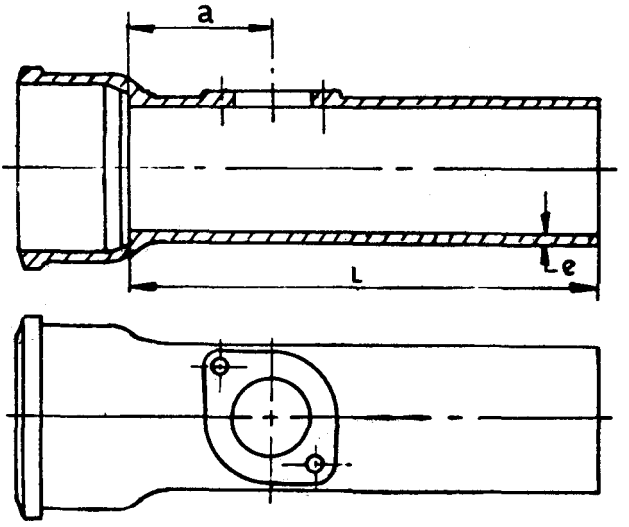
Angle θ	Nominal Diameter	Dimensions								Approximate Mass
	DN	*e*	*a*	*b*	*c*	*d*	*L*	*f*	*g*	kg
95°	50	3·5	137	99	236	—	86	47	133	2·1
	75	3·5	170	105	275	—	110	55	165	4·3
	100	4·0	214	116	330	—	135	71	206	7·0
	150	5·0	285	140	425	—	186	98	284	10·5
135°	50	3·5	137	131	228	21	86	47	133	2·1
	75	3·5	170	149	277	25	110	55	165	4·3
	100	4·0	214	175	338	32	135	71	206	7·0
	150	5·0	285	235	455	39	186	98	284	10·5
180°	50	3·5	137	125	189	—	86	47	133	2·1
	75	3·5	170	159	231	—	110	55	165	4·3
	100	4·0	214	184	291	—	135	71	206	7·0
	150	5·0	285	239	387	—	186	98	284	10·5

NOTE — For socket and spigot dimensions, *see* Table 1.

TABLE 17 STRAIGHT INSPECTION PIECE

(*Clause* 6.3)

All dimensions in millimetres.



Nominal Diameter	Dimensions			Approximate Mass kg
DN	*a*	*e*	*L*	
50	70	3·5	238	2·8
75	80	3·5	272	4·0
100	100	4·0	292	6·4
150	135	5·0	338	13·0

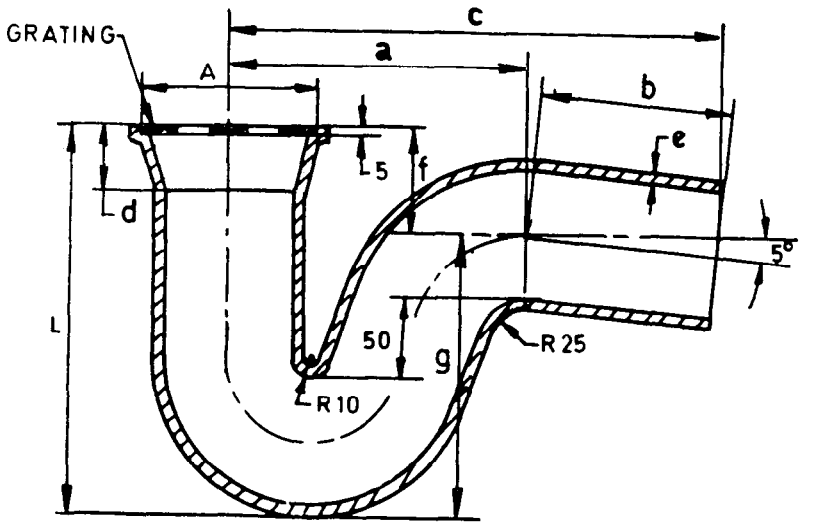
Note 1 — For socket and spigot dimensions, *see* Table 1.

Note 2 — For details of access door, *see* Table 8.

TABLE 18 FLOOR TRAP

(*Clause* 6.3)

All dimensions in millimetres.



Nominal Diameter *DN*	Dimensions									Approximate Mass kg
	A	*a*	*b*	*c*	*d*	*e*	*f*	*g*	*L*	
50	100	137	99	236	30	3·5	45	133	175	2·5
75	100	170	105	275	40	3·5	60	165	225	4·8
100	200	214	116	330	60	4 0	90	206	296	7·5

NOTE 1 — For socket and spigot dimensions, *see* Table 1.

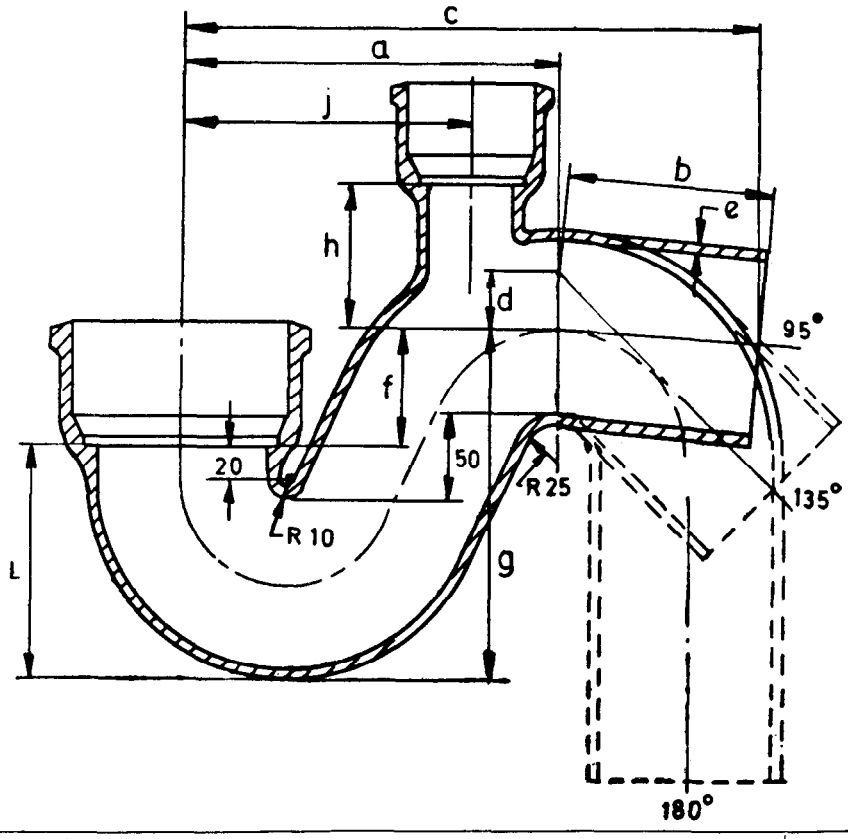
NOTE 2 — Gratings may be hinged or screwed down.

NOTE 3 — Hinges shall be of galvanized iron.

TABLE 19 TRAPS WITH VENT

(*Clause* 6.3)

All dimensions in millimetres.



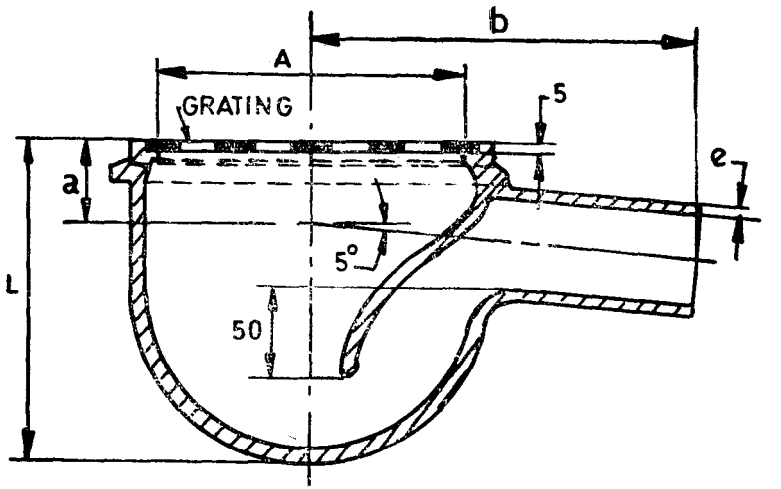
Angle θ	Diameter		Dimensions										Approximate Mass kg
	Body *DN*	Vent *dn*	*a*	*b*	*c*	*d*	*e*	*L*	*f*	*h*	*j*	*g*	
95°	100	50	214	116	330	—	4·0	135	71	80	165	206	7·8
135°	100	50	214	175	338	32	4·0	135	71	80	165	206	7·8
180°	100	50	214	184	291	—	4·0	135	71	80	165	206	7·8

NOTE — For socket spigot dimensions, *see* Table 1.

TABLE 20 FLOOR TRAP (NAHANI)

(*Clause* 6.3)

All dimensions in millimetres.

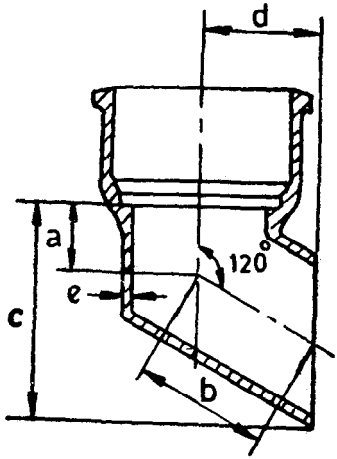


NOMINAL DIAMETER *DN*	DIMENSIONS					APPROXIMATE MASS kg
	L	*A*	*a*	*b*	*e*	
50	175	165	45	205	4·0	5·50
75	225	165	60	215	4·0	6·50

TABLE 21 SHOE BENDS

(*Clause* 6.3)

All dimensions in millimetres.



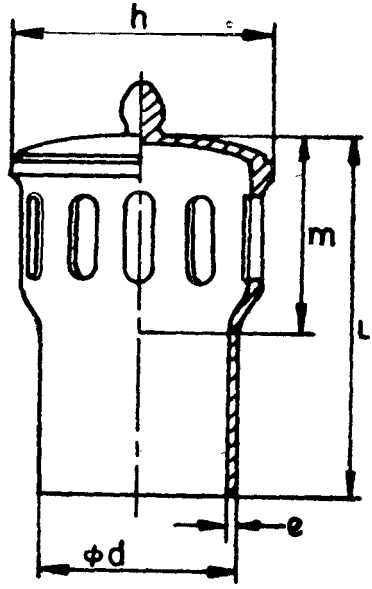
Nominal Diameter *DN*	Dimensions					Approximate Mass kg
	a	*b*	*c*	*d*	*e*	
50	36	66	100	54	3·5	1·4
75	38	75	117	64	3·5	2·0
100	52	92	161	80	4·0	2·8
150	55	123	200	105	5·0	4·5

NOTE — For socket and spigot dimensions, *see* Table 1.

TABLE 22 COWL

(*Clause* 6.3)

All dimensions in millimetres.



NOMINAL DIAMETER *DN*	DIMENSIONS					APPROXIMATE MASS kg
	e	*m*	*d*	*L*	*h*	
50	3·5	90	57	160	90	1·0
75	3·5	95	82	175	115	1·5
100	4·0	110	109	200	145	2·7
150	5·0	110	161	210	195	5·8

7. TOLERANCES

7.1 Tolerances on external diameter of the barrel, internal diameter of the socket and the depth of the socket shall be as follows: (*see* figure of Table 1)

	Dimensions	*Nominal Diameter DN* (mm)	*Tolerance for Lead Joint* (mm)	*Tolerance for Rubber Joint* (mm)
i)	External diameter of barrel, DE	50, 75	±3·0	+ 3·0 − 0
		100	±3·5	+ 3·5 − 0
		150	±4·0	+ 4·0 − 0
ii)	Internal diameter of socket, DI	All diameters	±3·0	+ 3·0 − 0
iii)	Depth of socket, P	All diameters	±10	± 10

7.1.1 The maximum and minimum jointing space resulting from these tolerances shall be such that the jointing of the pipes and fittings is not adversely affected.

7.2 The tolerance on length of pipes shall be ±20 mm.

7.3 The tolerances on dimensions of fittings shall be as given below:

Type of Casting	*Dimension*	*Tolerance* mm
Bend pipes	*a*	+ 25 − 10
	b	+ 20 − 10
Branches with equal branch pipes	*a*	+ 25 − 10
	b	+ 25 − 10
Branches with unequal branch pipes	*L*	+ 30 − 20
S shape casting	*L*	+ 50 − 10
Taper collars	*L*	+ 25 − 10
Others	*L*	+ 20 − 10

7.4 Tolerance on wall thickness shall be limited to −15 percent. No limits for plus tolerance is specified.

7.5 Tolerances for dimension other than those specified above, shall be as specified in IS: 5519-1979*.

7.6 Tolerance on mass shall be limited to −10 percent. No limit for plus tolerance is specified.

8. COATING

8.1 Each pipe and fitting shall be coated in accordance with **8.1.1** to **8.1.5**.

8.1.1 Coating shall not be applied to any pipe or fitting unless its surface is clean, dry and free from rust.

8.1.2 Unless otherwise agreed to between the purchaser and the manufacturers, all pipes and fittings shall be coated externally and internally with the same material. Pipes and fittings shall be dipped in a bath containing uniformally heated composition having tar or other suitable base.

8.1.3 The coating material shall set rapidly with good adherence and shall not scale off.

8.1.4 In all cases where the coating material has a tar or similar base, it shall be smooth, tenacious and hard enough not to flow when exposed o a temperature of 65°C but not so brittle at a temperature of 0°C as to tchip off when scribed lightly with a penknife.

8.1.5 In the case of pipes and fittings, which are imperfectly coated or where coating does not set or conform to the qualities specified in **8.1.1** to **8.1.4**, the coating shall be removed and the pipes or fitting recoated.

9. MARKING

9.1 Each pipe and fitting shall have cast, stamped or indelibly painted on it the following:

a) Manufacturer's name, initials or identification mark;
b) The nominal diameter;
c) The last two digits of the year of manufacture; and
d) Any other mark required by the purchaser.

*Deviations for untoleranced dimensions and mass of grey iron castings (*first revision*).

9.2 Any other mark required by the purchaser may be painted on.

9.3 The pipes and fittings may also be marked with the ISI Certification Mark.

NOTE — The use of the ISI Certification Mark is governed by the provisions of the Indian Standards Institutions (Certification Marks) Act and the Rules and Regulations made thereunder. Presence of this mark on products covered by an Indian Standard conveys the assurance that they have been produced to comply with the requirements of that standard, under a well-defined system of inspection, testing and quality control during production. This system which is devised and supervised by ISI and operated by the producer, has the further safeguard that the products are actually marketed are continuously checked by ISI for conformity to that standard. Details of condition, under which a licence for the use of the ISI Certification Mark may be granted to manufacturers or processors, may be obtained from the Indian Standards Institution.

(*Continued from page* 2)

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AMENDMENT NO. 1 MARCH 1988

TO

IS : 3989 - 1984 SPECIFICATION FOR CENTRIFUGALLY CAST (SPUN) IRON SPIGOT AND SOCKET SOIL, WASTE AND VENTILATING PIPES, FITTINGS AND ACCESSORIES

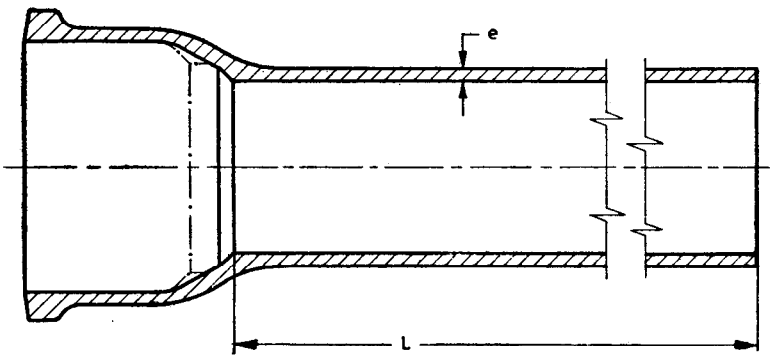
(Second Revision)

(*Page* 6, *Table* 2) — Substitute the following for the existing table:

TABLE 2 LENGTH AND NOMINAL MASS OF SOCKET AND SPIGOT PIPES

(*Clause* 6.3)

All dimensions in millimetres.



Nominal Diameter	Thickness	Nominal Mass in kgm Including Mass of Socket for Pipes of Length (L) in Metres					
DN	*e*	3·00	2·50	2·00	1·80	1·50	1·00
50	3·5	13·4	11·3	9·2	8·4	7·1	5·0
75	3·5	20·0	16·8	13·8	12·5	10·6	7·4
100	4·0	30·0	25·5	21·0	18·8	16·0	11·2
150	4·0	56·0	47·0	38·5	34·9	29·5	21·0

NOTE — Pipes of intermediate lengths may be obtained by cutting a longer pipe.

(SMDC 9)

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AMENDMENT NO. 2 MAY 1994
TO
IS 3989 : 1984 SPECIFICATION FOR CENTRIFUGALLY CAST (SPUN) IRON SPIGOT AND SOCKET SOIL, WASTE AND VENTILATING PIPES, FITTINGS AND ACCESSORIES

(Second Revision)

(*Page* 28, *clause* **7.5**) — Substitute the following for the existing clause:

'**7.5** Untoleranced dimensions given in the standard are for guidance only.'

(MTD 6)

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AMENDMENT NO. 3 JUNE 2001
TO
IS 3989 : 1984 SPECIFICATION FOR CENTRIFUGALLY CAST (SPUN) IRON SPIGOT AND SOCKET SOIL, WASTE AND VENTILATING PIPES, FITTINGS AND ACCESSORIES

(Second Revision)

(*Page* 4, *clause* **3.1**) — Substitute the following for the existing clause:

'**3.1** The metal used for the manufacturing of casting shall conform to the appropriate grades as specified in IS 210:1993† or IS 1865:1991§ .

(*Page* 4, *footnotes*) — Insert the following footnote at the end:

'§Iron castings with spheroidal or nodular graphite.

(*Page* 4, *clause* **3.3**) — Insert a new clause after **3.3:**

'**3.3.1** In case hardness is higher than 230 HBS, a destructive test shall be carried out for observing the fracture which shall be grey (without chilling effect).'

(*Page* 4, *clause* **3.4**) — Insert the following new clause after **3.4:**

'**3.5** Beads may be provided to the fittings. Dimensions of the bead are at the discretion of manufacturer.'

[*Page* 6, *Table* 2, (*see also Amendment No.* 1)] — Add the following notes:

'NOTE 2 — Double socketed pipes may also be supplied for the following sizes:

Nominal Diameter	*Approximate Mass (in kg) for Double Socketed Pipe of Length (L) in Metres*	
DN	3.000 m	1.800 m
75	24	17
100	34	21
150	58	29

NOTE 3 — Cut lengths of size 300, 450, 600 and 900 mm may be supplied.

NOTE 4 — Subject to agreement between supplier and purchaser, pipes of length are metre to three meters may also be supplied.

NOTE 5 — Mass of the barrel shall be calculated on cut lengths on proportionate basis.

(MTD 6)

Reprography Unit, BIS, New Delhi, India