

DETAILS OF WELDED SPHERICAL SPIGOT AND SOCKET JOINT

NOTES :

1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. FOR FABRICATION OF FITTINGS AND SPECIALS, PLAIN ENDED TRULY CIRCULAR PIPES SHALL BE USED.
3. EXTERNAL AND INTERNAL PROTECTION SHALL BE IN ACCORDANCE WITH GENERAL SPECIFICATION AND PARTICULAR SPECIFICATION FOR PIPES.

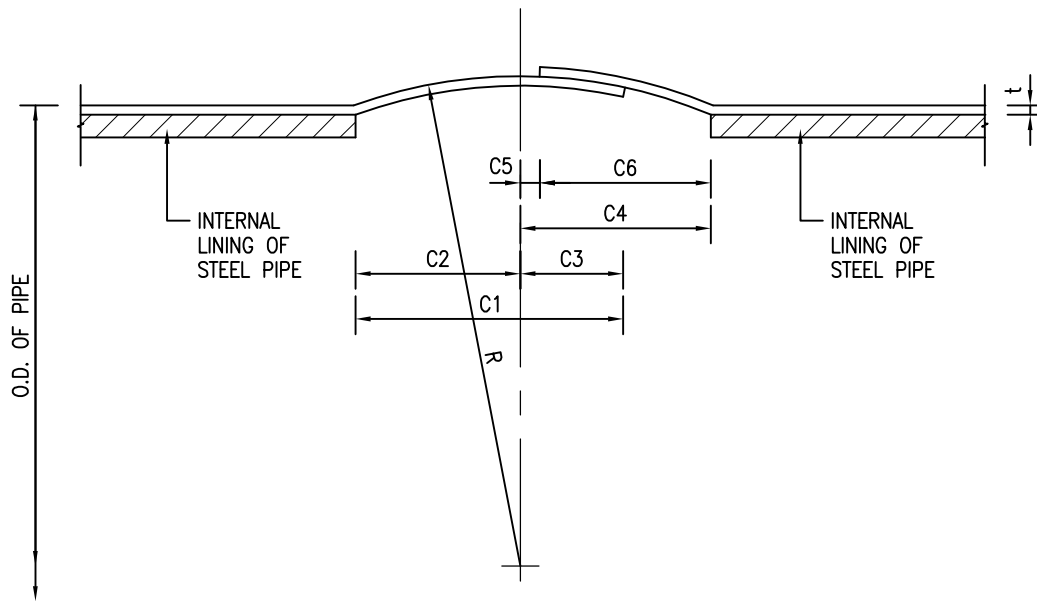
E	GENERAL REVISION	C.M. LEE	19/5/11
D	SCHEDULE OF DIMENSIONS FOR SPHERICAL SPIGOT AND SOCKET JOINTS, TYPICAL EXPANSION JOINT ADDED	W.K. CHIU	17/5/06
C	RE-FORMATTED TO CSWP	W.K. CHIU	5/9/03
B	GENERAL REVISION	W.K. CHIU	20/9/00
A	EXTERNAL PROTECTION AMENDED & SHEET 7, 8 AND 9 ADDED	K.W. CHAN	21/3/97
REF.	REVISION	APPROVED	DATE

STEEL PIPES AND SPECIALS



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Water Supplies Department

APPROVED	G.C. LEE AD/NW	DRAWING NO.	CSWP
DATE	9/6/92	WSD 1.21E	
SCALE	N.T.S.	(SHEET 1 OF 11)	



OUTSIDE DIAMETER (O.D.)	THICKNESS (t)	R	C1 (C2 + C3)	C2	C3	C4 (C5 + C6)	C5	C6
610	6.3	324	177	109	68	126	13	113
711	7.1	377	204	125	79	144	15	129
813	8.0	430	227	140	87	162	17	145
914	8.8	482	246	153	93	175	19	156
1016	10.0	537	284	174	110	200	21	179
1219	10.0	641	323	197	126	224	25	199
1422	11.0	746	372	226	146	258	30	228
1626	12.5	853	427	258	169	294	33	261
1829	12.5	954	446	273	173	311	35	276
2032	14.0	1059	488	300	188	328	37	291
2235	16.0	1165	534	330	204	347	39	308

SCHEDULE OF DIMENSIONS FOR
SPHERICAL SPIGOT AND SOCKET JOINTS
FOR STEEL PIPES

NOTES :

1. ALL DIMENSIONS ARE IN MILLIMETRES.

Cad Ref. : WSD012102-E.dwg

STEEL PIPES AND SPECIALS



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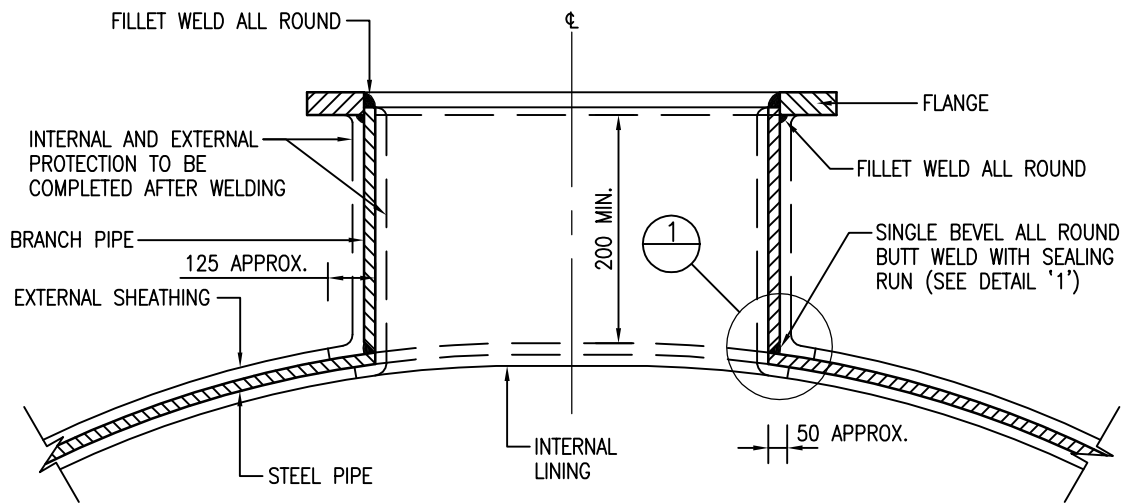
SCALE

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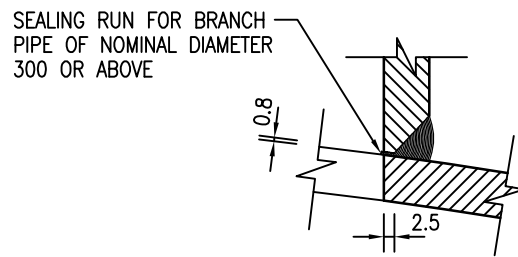
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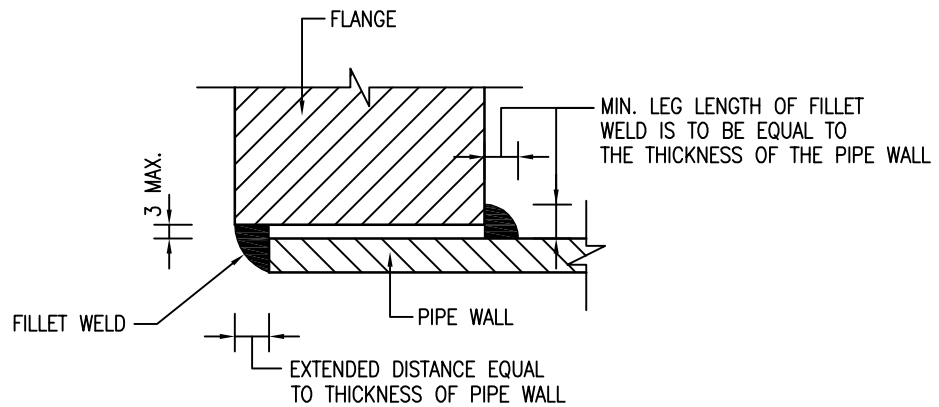
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DETAILS OF WELDED TEE TO AN ALREADY-LAID STEEL PIPE



DETAIL '1'



DETAILS OF WELDED FLANGE FOR STEEL PIPE

NOTES :

1. ALL DIMENSIONS ARE IN MILLIMETRES.

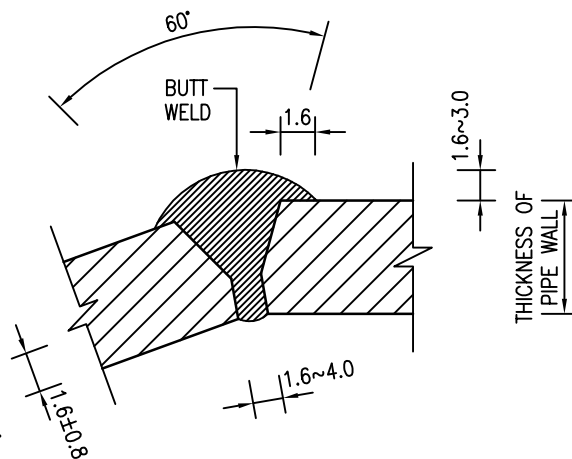
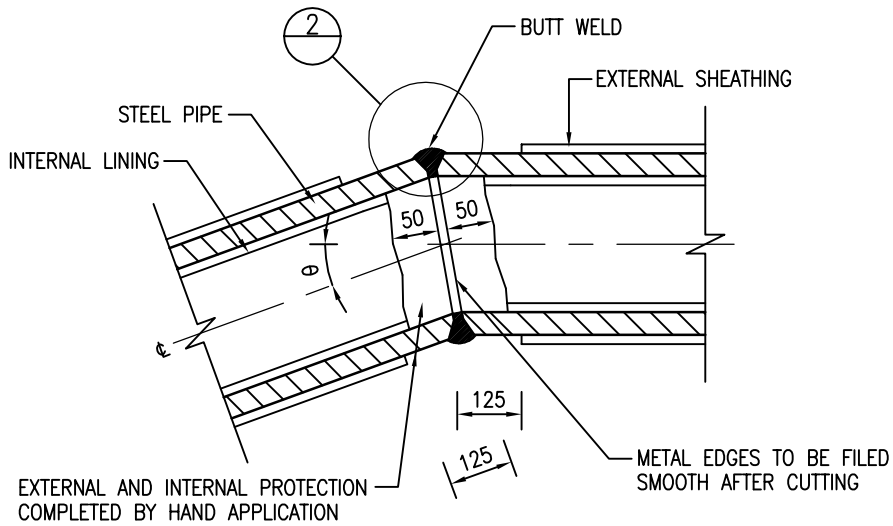
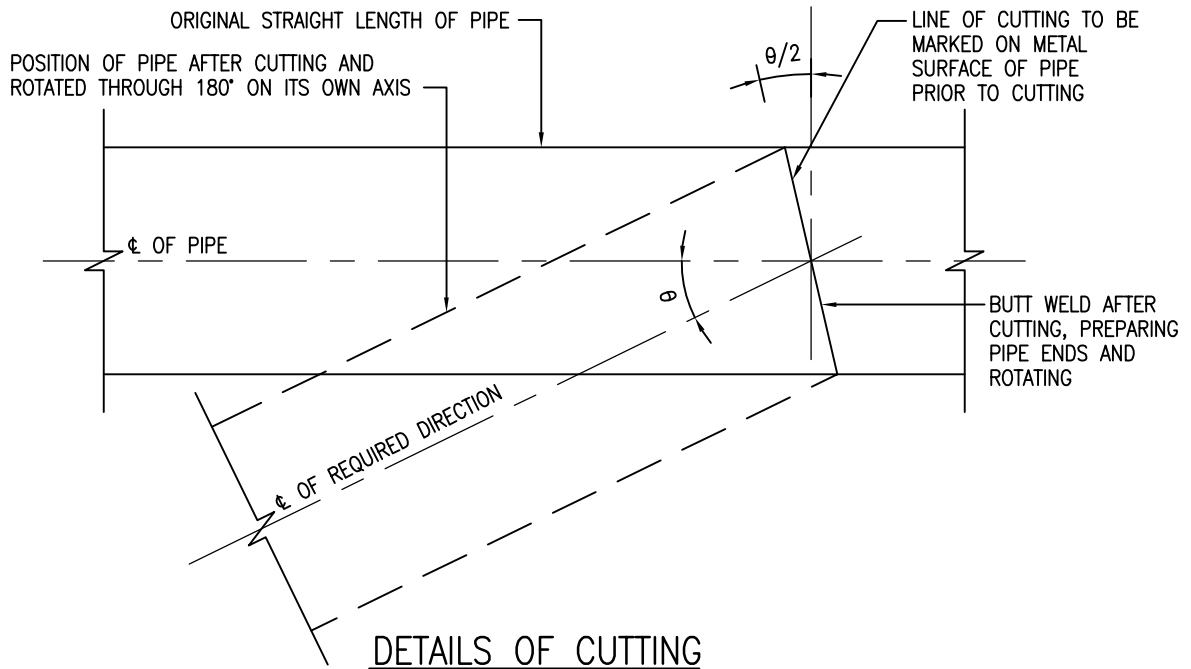
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- NOTES :
1. ALL DIMENSIONS ARE IN MILLIMETRES.

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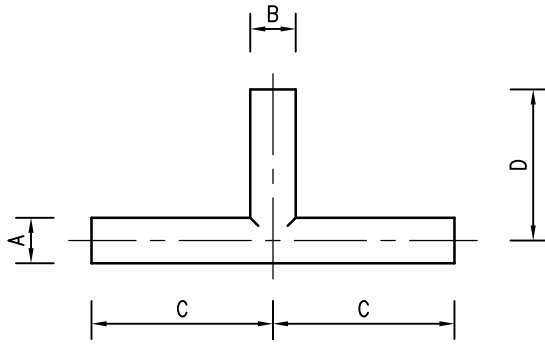
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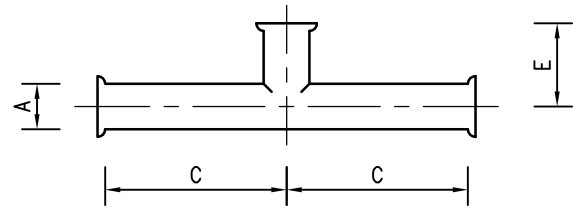
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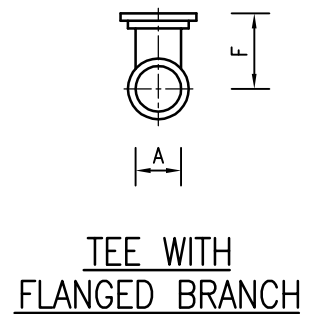


PLAIN END TEE FOR
SLIP-ON TYPE COUPLING AND
BUTT WELDED JOINT



SPHERICAL SPIGOT AND
SOCKET JOINT TEE FOR WELDING

BARREL		BRANCH			
OUTSIDE DIAMETER (O.D.) A	MINIMUM C	OUTSIDE DIAMETER (O.D.) B	D	E	F
			0.5 TIMES O.D. OF BARREL 'A' PLUS		
60.3	240	60.3	200	100	100
88.9	250	88.9	200	100	110
114.3	270	114.3	200	100	130
168.3	290	168.3	200	110	140
219.1	370	219.1	250	110	150
273.0	410	273.0	250	130	160
323.9	450	323.9	250	130	180
355.6	530	355.6	300	150	200
406.4	600	406.4	300	150	230
457 TO 711	1.5 TIMES O.D. OF BRANCH 'B' OR 0.5 TIMES O.D. OF BARREL 'A' WHICHEVER IS THE GREATER	457 TO 711	300	230	300
762 TO 914		762 TO 914	380	300	300
1016 TO 2235		1016 TO 2235	380	380	380



SCHEDULE OF DIMENSIONS FOR TEES

NOTES :

1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. ALL TEES SHALL COMPLY WITH THE LATEST REVISION OF BS EN 10224.
3. DIMENSION 'C' FOR A TEE SHALL BE DETERMINED ON SITE BY THE ENGINEER AND SHALL NOT BE LESS THAN THE SPECIFIED MINIMUM VALUE FOR THE CORRESPONDING OUTSIDE DIAMETER OF BARREL 'A'.

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STEEL PIPES AND SPECIALS



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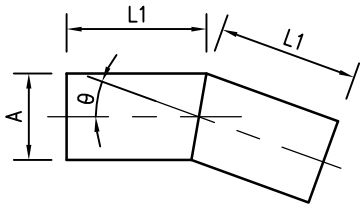
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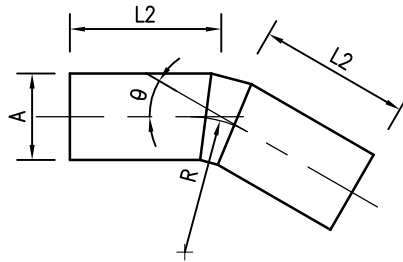
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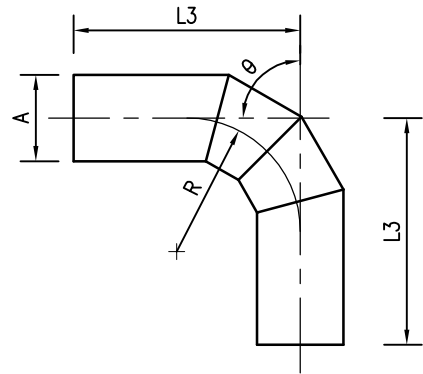
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GUSSETED BEND
TYPE 1



GUSSETED BEND
TYPE 2



GUSSETED BEND
TYPE 3


OUTSIDE DIAMETER (O.D.) OF PIPE 'A'	TYPE 1	TYPE 2				TYPE 3	
	θ NOT MORE THAN 30°	θ OVER 30° TO 45°		θ OVER 45° TO 60°		θ OVER 60° TO 90°	
	MINIMUM L1	MINIMUM R	MINIMUM L2	MINIMUM R	MINIMUM L2	MINIMUM R	MINIMUM L3
114.3	175	1.5 TIMES O.D. OF PIPE	200	1.5 TIMES O.D. OF PIPE	250	1.5 TIMES O.D. OF PIPE	300
139.7	200		250		250		350
168.3	225		300		300		400
219.1	300		350		400		500
273	375		450		500		650
323.9	375		450		500		700
355.6	450		550		600		800
406.4	450		600		600		850
457	450		600		600		850
508	450		600		600		850
559	450		650	600	850		
610	550		750	750	1000		
660	550		750	750	1000		
711	550		800	750	1100		
762	600		850	850	1100		
813	600		850	850	1200		
864	600		850	850	1200		
914	600		900	900	1300		
1016	750		1100	1100	1500		
1219	850		1200	1200	1700		
1422	850	1300	1300	1900			
1626	900	1400	1400	2100			
1829	900	1500	1500	2200			
2032	1000	1600	1600	2500			
2235	1000	1700	1700	2600			

SCHEDULE OF DIMENSIONS FOR GUSSETED BENDS

NOTES :

1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. ALL GUSSETED BENDS SHALL COMPLY WITH THE LATEST REVISION OF BS EN 10224.
3. THE DIMENSIONS OF GUSSETED BENDS SHALL BE DETERMINED ON SITE BY THE ENGINEER AND SHALL NOT BE LESS THAN THE SPECIFIED MINIMUM DIMENSION FOR THE CORRESPONDING TYPE OF GUSSETED BEND AND OUTSIDE DIAMETER OF PIPE 'A'.

Cad Ref. : WSD012106-E.dwg

STEEL PIPES AND SPECIALS	 水務署 Water Supplies Department		
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NOMINAL SIZE OF PIPE	OUTSIDE DIAMETER OF PIPE	MINIMUM NOMINAL WALL THICKNESS
50	60.3	2.9
80	88.9	3.2
100	114.3	5.0
150	168.3	5.0
200	219.1	5.4
250	273	5.4
300	323.9	5.4
400	406.4	6.3
450	457	6.3
500	508	6.3
600	610	6.3
700	711	7.1

NOMINAL SIZE OF PIPE	OUTSIDE DIAMETER OF PIPE	MINIMUM NOMINAL WALL THICKNESS
800	813	8.0
900	914	8.8
1000	1016	10.0
1200	1219	10.0
1400	1422	11.0
1600	1626	12.5
1800	1829	12.5
2000	2032	14.2
2200	2235	16.0

NOMINAL SIZES AND DIMENSIONS OF PIPES
TO BE USED FOR FABRICATION OF SPECIALS

OUTSIDE DIAMETER OF PIPE OR SPECIAL	MINIMUM THICKNESS OF CEMENT MORTAR	TOLERANCE
UP TO & INCLUDING 323.9	6	+2, -0
OVER 323.9 UP TO & INCLUDING 610	7	+2, -0
OVER 610 UP TO & INCLUDING 1219	9	+2, -0
OVER 1219 UP TO & INCLUDING 2235	12	+3, -0

OUTSIDE DIAMETER OF PIPE OR SPECIAL	MINIMUM THICKNESS OF CONCRETE	TOLERANCE
UP TO & INCLUDING 168.3	6	+3, -0
OVER 168.3 UP TO & INCLUDING 323.9	10	+3, -0
OVER 323.9 UP TO & INCLUDING 610	13	+3, -0
OVER 610 UP TO & INCLUDING 1219	19	+6, -0
OVER 1219 UP TO & INCLUDING 2235	25	+6, -0

INTERNAL CEMENT MORTAR LINING

INTERNAL CONCRETE LINING

OUTSIDE DIAMETER OF PIPE	MINIMUM THICKNESS OF LINING
UP TO & INCLUDING 323.9	1.5
OVER 323.9 UP TO & INCLUDING 610	3.0
OVER 610 UP TO & INCLUDING 914	4.5
OVER 914 UP TO & INCLUDING 2235	6.0

OUTSIDE DIAMETER OF PIPE	MINIMUM THICKNESS OF SHEATHING
88.9 & UP TO & INCLUDING 168.3	3.0
OVER 168.3 UP TO & INCLUDING 323.9	4.5
OVER 323.9 UP TO & INCLUDING 2235	6.0

INTERNAL BITUMEN LINING

EXTERNAL BITUMEN SHEATHING

THICKNESS OF LININGS AND COATINGS

NOTES :

1. ALL DIMENSIONS ARE IN MILLIMETRES.

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STEEL PIPES AND SPECIALS



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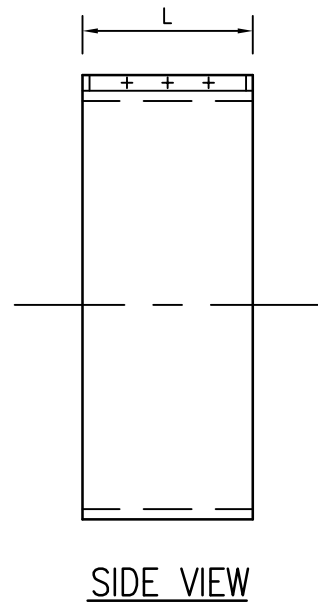
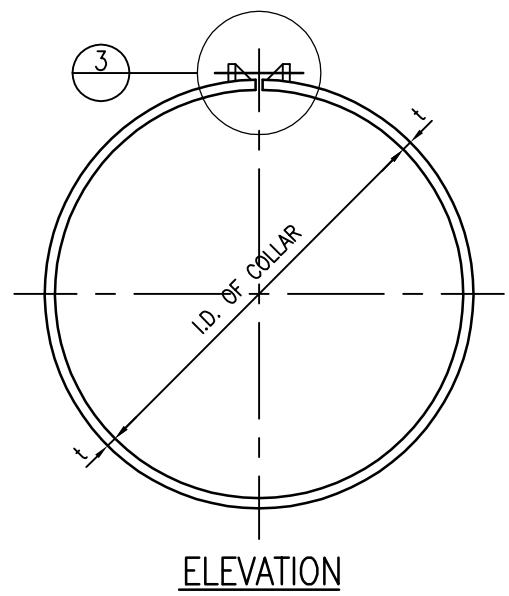
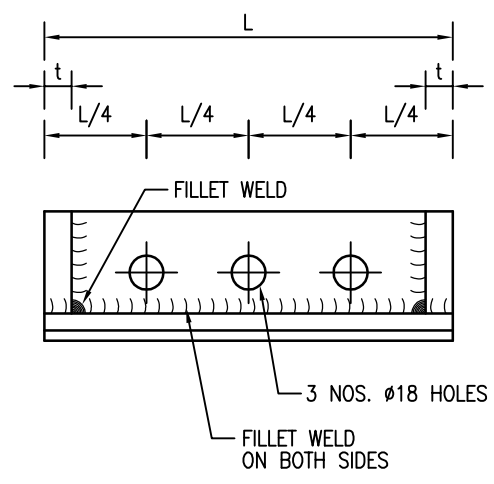
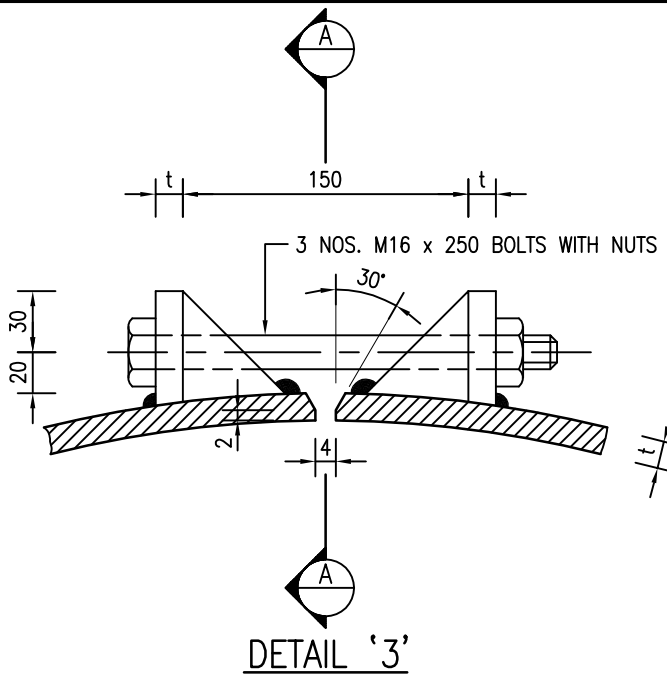
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DETAILS OF COLLAR

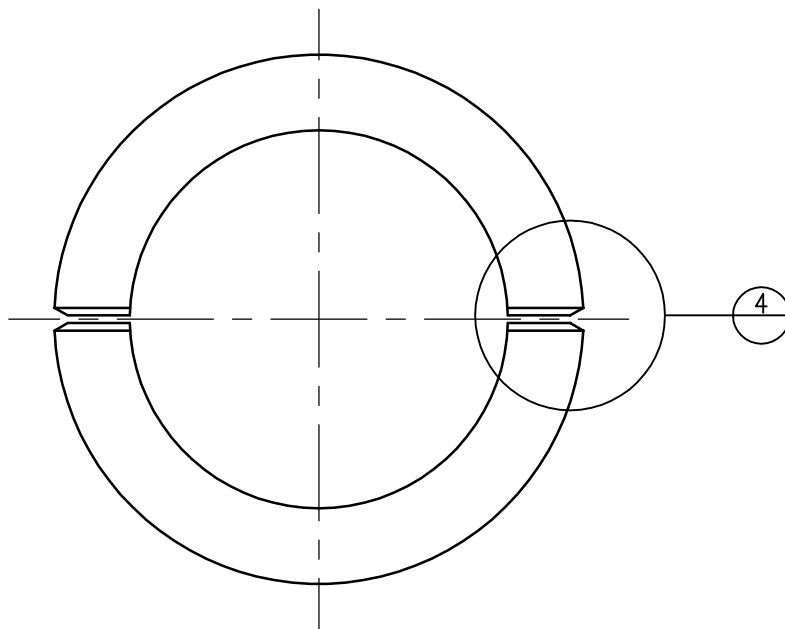
- NOTES :
1. ALL DIMENSIONS ARE IN MILLIMETRES.
 2. MINIMUM LEG LENGTH OF FILLET WELD TO BE EQUAL TO THE THICKNESS OF THE COLLAR, t.

NOMINAL SIZE	PIPE O.D.	COLLAR		
		I.D.	L	t
600	610	614	250	6.3
700	711	715	250	7.1
800	813	817	250	8.0
900	914	918	250	8.8
1000	1016	1020	250	10.0
1200	1219	1223	250	10.0
1400	1422	1426	300	11.0
1600	1626	1630	300	12.5
1800	1829	1833	300	12.5
2000	2032	2036	300	14.2
2200	2235	2239	300	16.0

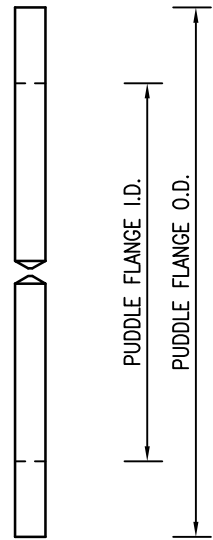
SCHEDULE OF DIMENSIONS FOR COLLARS

Cad Ref. : WSD012108-E.dwg

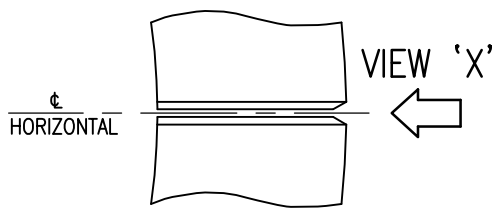
<p>STEEL PIPES AND SPECIALS</p>	<p style="margin: 0;">水務署 Water Supplies Department</p>			
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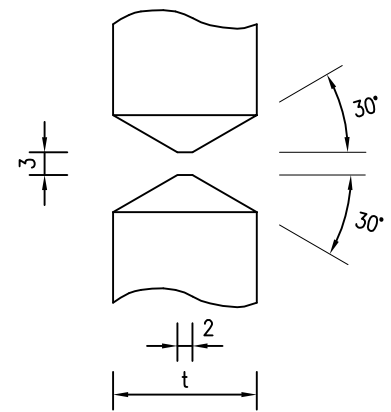
ELEVATION



SIDE ELEVATION



DETAIL '4'



VIEW 'X'

DETAILS OF PUDDLE FLANGE

NOMINAL SIZE OF PIPE	PIPE O.D.	PUDDLE FLANGE I.D.	PUDDLE FLANGE O.D.	t
600	610	616	850	20
700	711	717	950	20
800	813	819	1050	25
900	914	920	1200	25
1000	1016	1022	1300	30
1200	1219	1225	1500	35
1400	1422	1428	1720	40
1600	1626	1632	1950	45
1800	1829	1835	2150	50
2000	2032	2038	2380	55
2200	2235	2241	2580	60

NOTES :

1. ALL DIMENSIONS ARE IN MILLIMETRES.

SCHEDULE OF DIMENSIONS FOR PUDDLE FLANGES

Cad Ref. : WSD012109-E.dwg

STEEL PIPES AND SPECIALS



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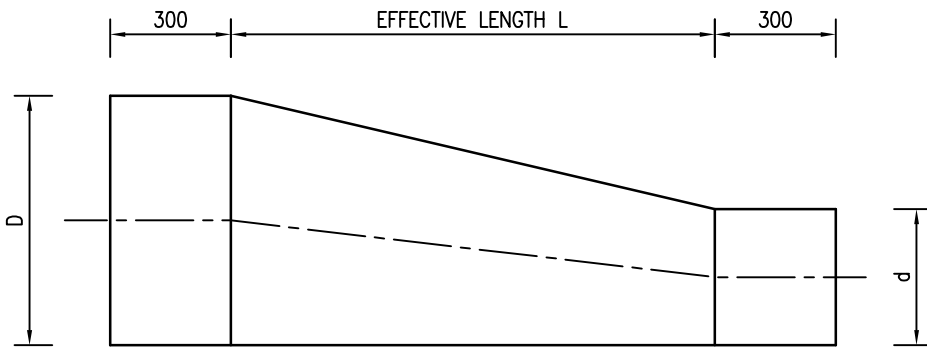
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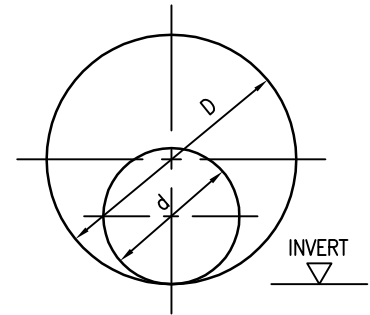
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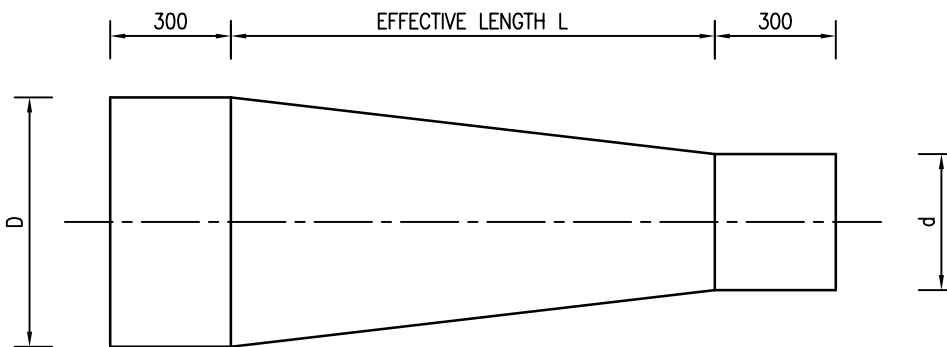
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ELEVATION



END ELEVATION



PLAN

DETAILS OF FLAT TAPER

NOTES :

1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. EFFECTIVE LENGTH OF FLAT TAPER $L = (D - d) \times 12$
WHERE D & d ARE THE NOMINAL SIZES OF THE PIPES AT THE TWO ENDS OF THE TAPER
3. ENDS TO SUIT THE JOINT TYPES.
4. FLAT TAPER WITH ENDS OF THE APPROPRIATE JOINT TYPES SHALL BE USED FOR CONNECTION TO THE ADJACENT PIPES AND FITTINGS.

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