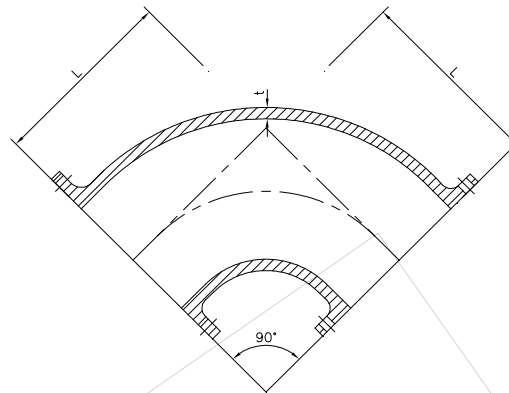
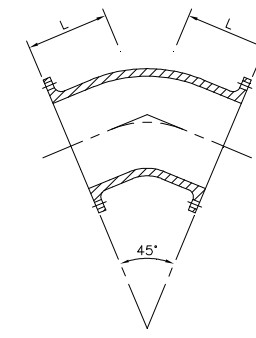


PUSH IN JOINT

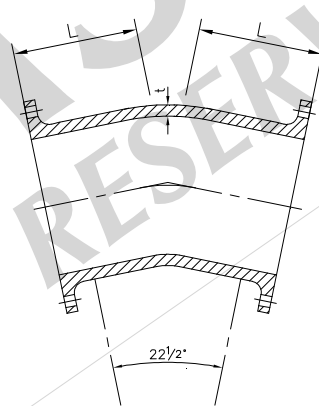


DOUBLE FLANGED 90° BEND

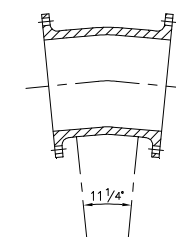


DOUBLE FLANGED 45° BEND

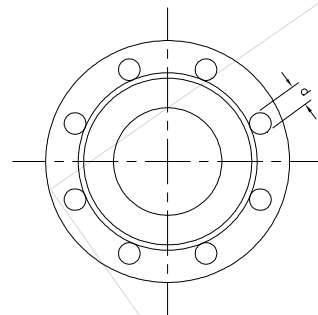
NOMINAL DIAMETRE ND (mm)	NOMINAL OUTER DIAMETER DE (mm)	D (mm)	P (mm)	T(K9) (mm)	t (mm)	L (mm)
100	118	160	85	6.0	4.0	6000
150	170	215	90	6.0	4.0	6000
200	222	275	100	6.3	4.0	6000
250	274	325	105	6.8	4.0	6000
300	326	380	110	7.2	4.0	6000
350	378	445	110	7.7	5.0	6000
400	429	495	115	8.1	5.0	6000
450	480	550	120	8.6	5.0	6000
500	532	600	120	9.0	5.0	6000
600	635	710	120	9.9	5.0	6000



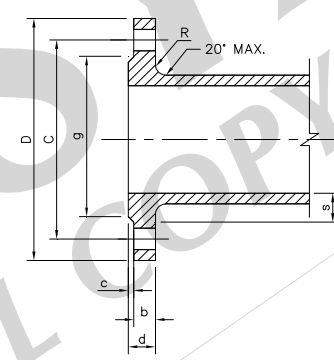
DOUBLE FLANGED 22 1/2° BEND



DOUBLE FLANGED 11 1/4° BEND



FLANGED



NOMINAL DIAMETRE ND (mm)	D	C	g	a	b	c	BOLT			MASS (kg)	s (mm)	R
							SIZE	No.	d			
100	220	180	156	19.0	16.0	3	M16	8	19	3.3	15.0	6
150	285	240	211	19.0	16.0	3	M20	8	23	4.9	15.0	8
200	340	295	266	20.0	17.0	3	M20	12	23	6.6	16.0	8
250	400	355	319	22.0	19.0	3	M24	12	28	9.2	17.5	10
300	455	410	370	24.5	20.5	4	M24	12	28	12.4	19.5	10
350	520	470	429	26.5	22.5	4	M24	16	28	17.2	21.0	10
400	580	525	480	28.0	24.0	4	M27	16	31	21.9	22.5	10
450	640	585	548	30.0	26.0	4	M27	20	31	26.7	24.0	12
500	715	650	609	31.5	27.5	4	M30	20	34	37.0	25.0	12
600	840	770	720	36.0	31.0	5	M33	20	37	57.3	29.0	12

NOMINAL DIAMETRE ND (mm)	OUTER DIAMETER OD (mm)	t PLATE THK. (mm)	90°	45°	22 1/2°	11 1/4°
			L (mm)	L (mm)	L (mm)	L (mm)
100	118	7.2	180	140	140	140
150	170	7.8	220	160	160	160
200	222	8.4	260	180	180	180
250	274	9.0	350	350	350	350
300	326	9.6	400	400	400	400
350	378	10.2	450	298	298	298
400	429	10.8	500	324	324	324
450	480	11.4	550	350	350	350

NOTE :

1. FOR LEGEND, ABBREVIATIONS AND GENERAL NOTES, SEE DWG NO.: SYA/STD/001.
2. ALL DIMENSIONS ARE IN mm UNLESS OTHERWISE STATED.
3. DESIGN STANDARD COMPLY WITH BS EN 545 : 2002.

REV.	DESCRIPTION	DATE



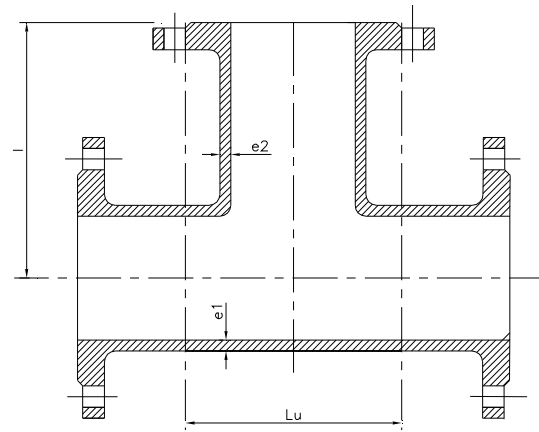
SYARIKAT BEKALAN AIR SELANGOR SDN BHD
 PETI SURAT 5001,
 JALAN PANTAI BAHRU,
 59990, KUALA LUMPUR.
 TEL NO : 03 - 2282 6244 / 03 - 2283 1111
 FAX NO : 03 - 2282 5498
 LAMAN WEB : www.syabas.com.my
 EMAIL : puspel@syabas.com.my

PROJECT :

DRAWING TITLE :
 DETAILS OF DUCTILE IRON GUSSETED BENDS,
 PUSH-IN JOINT AND FLANGE

DRAWN BY : SHAHRUL	DESIGNED : SAT
CHECKED : HS	APPROVED : LPL
SCALE : NTS	DATE : OCT 2006

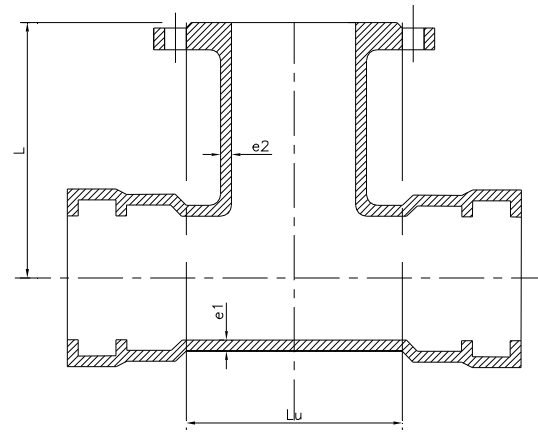
DRAWING NO :
 SYA / DI / STD / 001



ALL FLANGED TEES

ALL FLANGED TEES, DN 40 TO DN 700

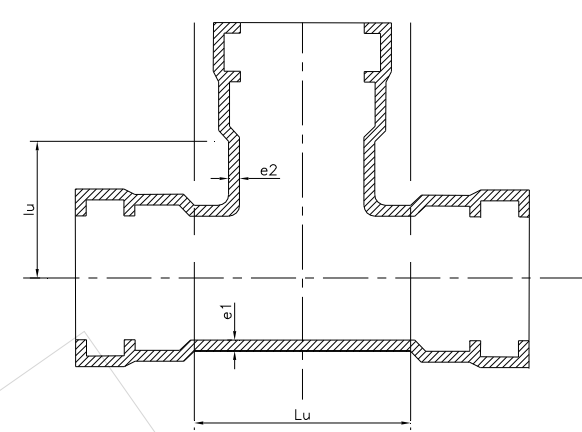
DN	BODY		BRANCH	
	e1	L	e2	L
100 x 100	7.2	360	7.2	180
150 x 100	7.8	440	7.2	220
150 x 150	7.8	440	7.8	220
200 x 100	8.4	400	7.2	230
200 x 150	8.4	460	7.8	245
200 x 200	8.4	520	8.4	260
250 x 100	9	425	7.2	270
250 x 150	9	485	7.8	280
250 x 200	9	540	8.4	325
250 x 250	9	600	9	300
300 x 100	9.6	450	7.2	300
300 x 150	9.6	450	7.8	300
300 x 200	9.6	565	8.4	320
300 x 250	9.6	620	9	330
300 x 300	9.6	680	9.6	340
350 x 100	10.2	470	7.2	330
350 x 150	10.2	530	7.8	340
350 x 200	10.2	585	8.4	350
350 x 250	10.2	645	9	360
350 x 300	10.2	720	10.2	380
350 x 350	10.2	760	10.2	380
400 x 100	10.8	490	7.2	360
400 x 150	10.8	550	7.8	370
400 x 200	10.8	610	8.4	380
400 x 250	10.8	665	9	390
400 x 300	10.8	765	9.6	400
400 x 400	10.8	840	10.8	450
450 x 100	11.4	515	7.2	390
450 x 150	11.4	570	7.8	400
450 x 200	11.4	630	8.4	410
450 x 250	11.4	690	9	420
450 x 300	11.4	690	9.6	420
450 x 350	11.4	700	10.2	425
450 x 400	11.4	745	10.8	430
450 x 450	11.4	860	11.4	450
500 x 100	12	535	7.2	420
500 x 200	12	650	8.4	440
500 x 400	12	885	10.8	480
500 x 500	12	1000	12	500
600 x 200	13.2	700	8.4	500
600 x 400	13.2	930	10.8	540
600 x 600	13.2	1165	13.2	580



DOUBLE-SOCKET TEES WITH FLANGED BRANCH

DOUBLE SOCKET TEES WITH FLANGED BRANCH

DN	Body		Branch	
	e1	L	e2	L
100 x 100	7.2	195	7.2	180
150 x 100	7.8	200	7.2	205
150 x 150	7.8	260	7.8	220
200 x 100	8.4	200	7.2	230
200 x 150	8.4	260	7.8	245
200 x 200	8.4	320	8.4	260
250 x 100	9	205	7.2	270
250 x 150	9	265	7.8	280
250 x 200	9	320	8.4	290
250 x 250	9	380	9	300
300 x 100	9.6	210	7.2	300
300 x 150	9.6	265	7.8	300
300 x 200	9.6	325	8.4	320
300 x 250	9.6	325	9	325
300 x 300	9.6	440	9.6	340
350 x 100	10.2	210	7.2	330
350 x 150	10.2	270	7.8	340
350 x 200	10.2	325	8.4	350
350 x 250	10.2	385	9	360
350 x 300	10.2	440	10.2	370
350 x 350	10.2	500	10.2	380
400 x 100	10.8	210	7.2	360
400 x 150	10.8	270	7.8	370
400 x 200	10.8	330	8.4	380
400 x 250	10.8	385	9	390
400 x 300	10.8	445	9.6	400
400 x 400	10.8	560	10.8	420
450 x 100	11.4	215	7.2	390
450 x 150	11.4	270	7.8	400
450 x 200	11.4	330	8.4	410
450 x 250	11.4	390	9	420
450 x 300	11.4	445	9.6	420
450 x 350	11.4	510	10.2	415
450 x 400	11.4	560	10.8	450
450 x 450	11.4	620	11.4	460
500 x 100	12	215	7.2	420
500 x 200	12	330	8.4	440
500 x 400	12	565	10.8	480
500 x 500	12	680	12	500
600 x 200	13.2	340	8.4	500
600 x 400	13.2	570	10.8	540
600 x 600	13.2		13.2	580



ALL-SOCKET TEES

ALL SOCKET TEE

DN	Body		Branch	
	e1	L	e2	L
100 x 100	7.2	195	7.2	100
150 x 100	7.8	200	7.2	125
150 x 150	7.8	260	7.8	130
200 x 100	8.4	200	7.2	150
200 x 150	8.4	260	7.8	155
200 x 200	8.4	320	8.4	160
250 x 100	9	205	7.2	190
250 x 150	9	265	7.8	190
250 x 200	9	320	8.4	190
250 x 250	9	380	9	190
300 x 100	9.6	210	7.2	220
300 x 150	9.6	265	7.8	220
300 x 200	9.6	325	8.4	220
300 x 250	9.6	380	9	220
300 x 300	9.6	440	9.6	220
350 x 100	10.2	210	7.2	220
350 x 150	10.2	270	7.8	225
350 x 200	10.2	325	8.4	250
350 x 250	10.2	385	9	250
350 x 300	10.2	440	10.2	255
350 x 350	10.2	500	10.2	270
400 x 100	10.8	210	7.2	245
400 x 150	10.8	270	7.8	290
400 x 200	10.8	330	8.4	295
400 x 250	10.8	385	9	300
400 x 300	10.8	445	9.6	300
400 x 400	10.8	560	10.8	300
450 x 100	11.4	215	7.2	325
450 x 150	11.4	270	7.8	325
450 x 200	11.4	330	8.4	325
450 x 250	11.4	390	9	330
450 x 300	11.4	445	9	330
450 x 350	11.4	510	10.2	330
450 x 400	11.4	560	10.8	330
450 x 450	11.4	620	9.6	330
500 x 100	12	215	7.2	295
500 x 200	12	330	8.4	305
500 x 400	12	565	10.8	335
500 x 500	12	680	12	340
600 x 200	13.2	340	8.4	355
600 x 400	13.2	570	10.8	380
600 x 600	13.2	800	13.2	440

NOTE :
 1. FOR LEGEND, ABBREVIATIONS AND GENERAL NOTES, SEE DWG NO: SYA/STD/001.
 2. ALL DIMENSIONS ARE IN mm UNLESS OTHERWISE STATED.
 3. DESIGN STANDARD COMPLY WITH BS EN 545 : 2002

SYABAS
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REV.	REVISED BY	DESCRIPTION	DATE
0	HS/LPL	Original drawing	OCT. '06
1	YHH	To reintroduce socket joint	13 APR. 11



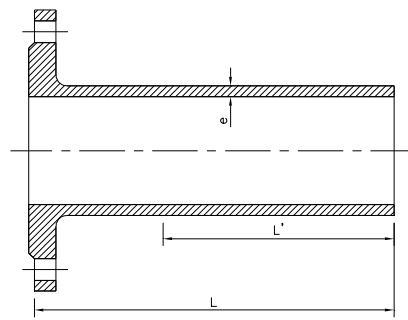
SYARIKAT BEKALAN AIR SELANGOR SDN BHD
 PETI SURAT 5001,
 JALAN PANTAI BAHRU,
 59990, KUALA LUMPUR.
 TEL NO : 03 - 2282 6244 / 03 - 2283 1111
 FAX NO : 03 - 2282 5498
 LAMAN WEB : www.syabas.com.my
 EMAIL : puspel@syabas.com.my

PROJECT :

DRAWING TITLE :
 DETAILS OF DUCTILE IRON FLANGED TEES, DOUBLE SOCKET TEES WITH FLANGED AND ALL-SOCKET TEES

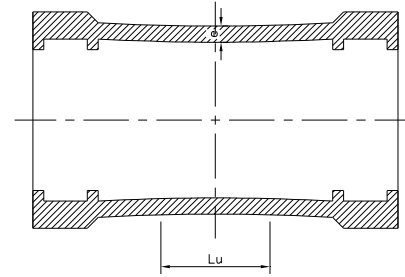
DRAWN BY : SHAHRUL	DESIGNED : YHH
CHECKED : KTT	APPROVED : SS
SCALE : NTS	DATE : APR. 2011

DRAWING NO :
 SYA / DI / STD / 002 / REV.1



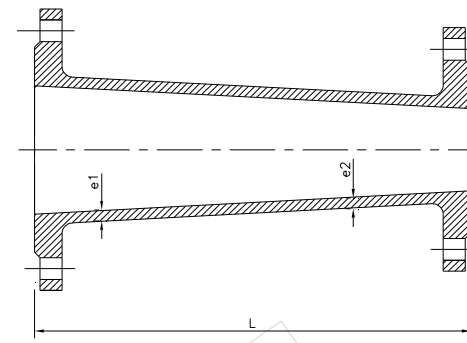
FLANGED SPIGOT

DN	e	FLANGED SPIGOTS	
		L	
100	7.2	360	
150	7.8	380	
200	8.4	400	
250	9	420	
300	9.6	440	
350	10.2	460	
400	10.8	480	
450	11.4	500	
500	12	520	
600	13.2	560	



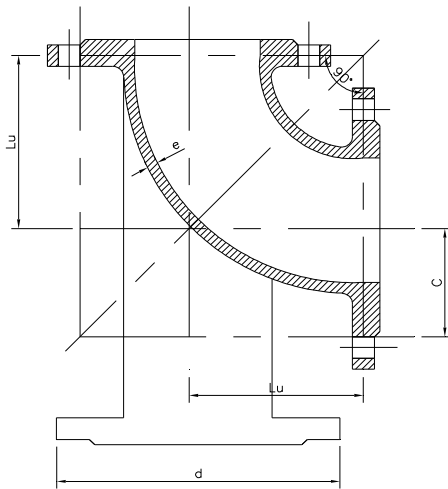
SOCKET COLLAR

DN	e	SOCKET COLLAR	
		L	d
100	7.2	160	130
150	7.8	165	183
200	8.4	170	235
250	9	175	288
300	9.6	180	340
350	10.2	185	393
400	10.8	190	445
450	11.4	195	498
500	12	200	550
600	13.2	210	655



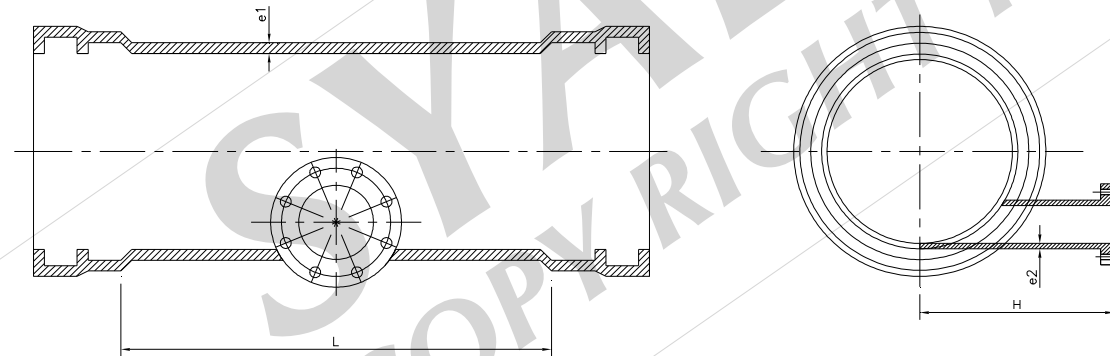
DOUBLE FLANGED TAPER

DN	DOUBLE FLANGE TAPERS			
	e	e2	L Series A	Lu Series B
125 x 100	7.5	7.2	200	185
150 x 125	7.8	7.5	200	190
200 x 150	8.4	7.8	300	235
250 x 200	9	8.4	300	250
300 x 250	9.6	9	300	265
350 x 300	10.2	9.6	300	290
400 x 350	10.8	10.2	300	305
450 x 400	11.4	10.8	300	320
500 x 400	12	10.8	600	-
600 x 500	13.2	10.8	600	-



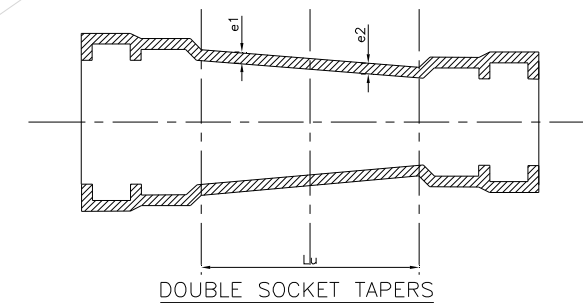
DOUBLE FLANGED DUCKFOOT 90° BENDS

DN	e	90° DUCKFOOT BEND	
		c	d'
100	7.2	125	200
125	7.5	140	225
150	7.8	160	250
200	8.4	190	300
250	9	225	350
300	9.6	255	400
350	10.2	290	450
400	10.8	320	500
450	11.4	355	550
500	12	385	600
600	13.2	450	700



DOUBLE SOCKET LEVEL INVERT TEE WITH FLANGED BRANCH

DN	DOUBLE SOCKET LEVEL INVERT TEE WITH FLANGED BRANCH			
	BODY		BRANCH	
	e	L	e2	H
150 x 80	7.8	190	7.0	150
150 x 100	7.8	340	7.2	220
200 x 80	8.4	305	7.0	155
200 x 100	8.4	350	7.2	230
200 x 150	8.4	380	7.8	260
250 x 80	9	310	7.0	285
250 x 100	9	340	7.2	265
250 x 150	9	435	7.8	285
300 x 80	9.6	330	7.0	300
300 x 100	9.6	350	7.2	300
300 x 150	9.6	415	7.8	420
350 x 100	10.8	200	7.2	325
400 x 100	10.8	280	7.2	350
450 x 100	11.4	285	7.2	375
500 x 100	12.0	290	7.2	400
600 x 100	13.2	295	7.2	450



DOUBLE SOCKET TAPERS

DN	e	DOUBLE SOCKET TAPER				
		FLANGED SPIGOT				
		L Series A	L Series B	L Series A	L Series B	
125 x 100	7.5	7.2	100	120		
150 x 100	7.8	7.2	150	150		
150 x 125	7.8	7.5	100	115		
200 x 100	8.4	7.2	250	250		
200 x 125	8.4	7.5	200	230		
200 x 150	8.4	7.8	150	145		
250 x 125	9	7.5	300	335		
250 x 150	9	7.8	250	250		
250 x 200	9	8.4	150	150		
300 x 150	9.6	7.8	350	370		
300 x 200	9.6	8.4	250	250		
300 x 250	9.6	9	150	150		
350 x 200	10.2	8.4	360	370		
350 x 250	10.2	9	260	260		
350 x 300	10.2	9.6	160	160		
400 x 250	10.8	9	360	380		
400 x 300	10.8	9.6	260	260		
400 x 350	10.8	10.2	160	155		
450 x 350	11.4	10.2	260	270		
450 x 400	11.4	10.8	160	160		
500 x 350	12	10.2	360	-		
500 x 400	12	10.8	260	-		
600 x 400	13.2	10.8	460	-		
600 x 500	13.2	12	260	-		

- NOTE:
- FOR LEGEND, ABBREVIATIONS AND GENERAL NOTES, SEE DWG NO.: SYA/STD/001.
 - ALL DIMENSIONS ARE IN mm UNLESS OTHERWISE STATED.
 - DESIGN STANDARD COMPLY WITH BS EN 545 - 2002.

REV.	REVISED BY	DESCRIPTION	DATE
0	HS/LPL	Original drawing	OCT. '06
1	YHH	To reintroduce socket joint	13 APR. 11



SYARIKAT BEKALAN AIR SELANGOR SDN BHD
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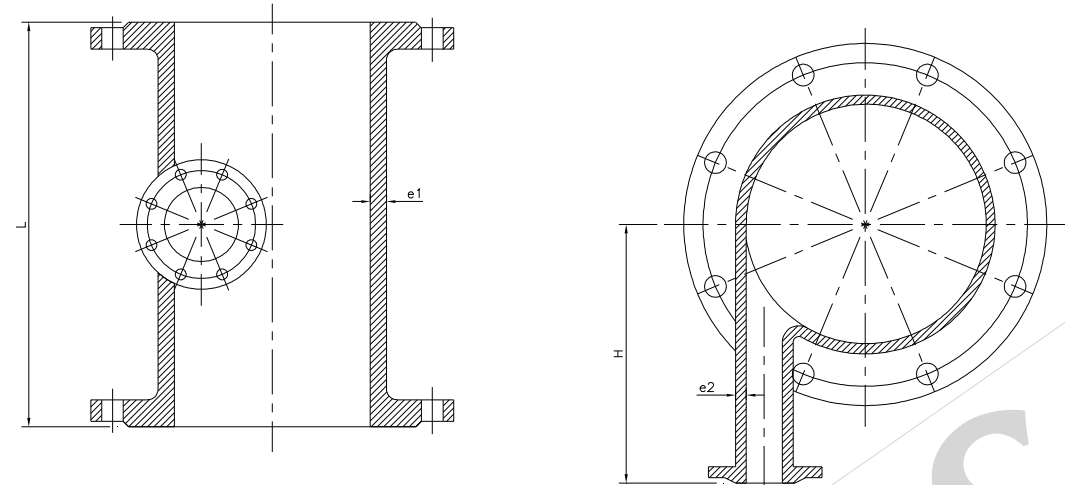
PROJECT :

DRAWING TITLE :
 DETAILS OF DUCTILE IRON FLANGED SPIGOT, COLLARS,
 FLANGED DOUBLE SOCKET LEVEL INVERT TEE WITH
 FLANGED, TAPERS AND 90° DUCKFOOT.

DRAWN BY : SHAHRUL	DESIGNED : YHH
CHECKED : KTT	APPROVED : SS
SCALE : NTS	DATE : APR. 2011

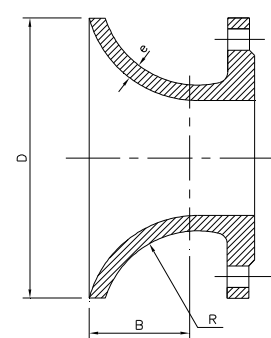
DRAWING NO :
 SYA / DI / STD / 003 / REV.1

NOTE :
 1. FOR LEGEND, ABBREVIATIONS AND GENERAL NOTES, SEE DWG NO: SYA/STD/001.
 2. ALL DIMENSIONS ARE IN mm UNLESS OTHERWISE STATED.
 3. DESIGN STANDARD COMPLY WITH BS EN 545 : 2002.



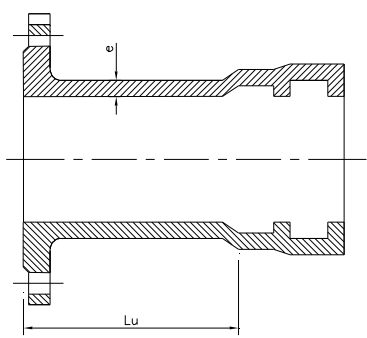
ALL-FLANGED LEVEL INVERT TEE

DN x dn	BODY		BRANCH	
	e	L	L Series B	L'
150 x 100	7.8	400	7.2	215
200 x 100	8.4	400	7.2	235
250 x 100	9.0	480	7.2	275
300 x 100	9.6	460	7.2	305
300 x 150	9.6	470	7.8	310
350 x 100	10.2	480	7.2	330
350 x 150	10.2	540	7.8	350
400 x 100	10.8	500	7.2	385
400 x 150	10.8	510	7.8	380
400 x 200	10.8	550	8.4	410
450 x 100	11.5	530	7.2	400
450 x 150	11.5	570	7.8	400
450 x 200	11.5	610	8.4	420
450 x 250	11.5	650	9.0	450
500 x 100	12.0	560	7.2	420
500 x 150	12.0	600	7.8	440
500 x 200	12.0	620	8.4	450
600 x 100	13.2	600	7.2	485
600 x 150	13.2	620	7.8	450
600 x 200	13.2	650	8.4	450



FLANGED BELLMOUTHS

DN	FLANGED BELLMOUTH			
	L	D	L'	Lu Series A
100	140	185	85	106
150	155	245	95	119
200	170	310	110	137
250	190	370	120	169
300	210	435	135	161
350	225	485	145	200
400	245	560	160	212
450	260	620	170	231
500	280	685	185	262
600	300	810	210	281



FLANGED SOCKET

FLANGE SOCKET		
DN	e	L Series A
100	7.2	130
150	7.8	135
200	8.4	140
250	9	145
300	9.6	150
350	10.2	155
400	10.8	160
450	11.4	165
500	12	170
600	13.2	180

REV.	REVISED BY	DESCRIPTION	DATE
0	HS/LPL	Original drawing	OCT. '06
1	YHH	To reintroduce socket joint	13 APR. 11



SYARIKAT BEKALAN AIR SELANGOR SDN BHD
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 LAMAN WEB : www.syabas.com.my
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PROJECT :

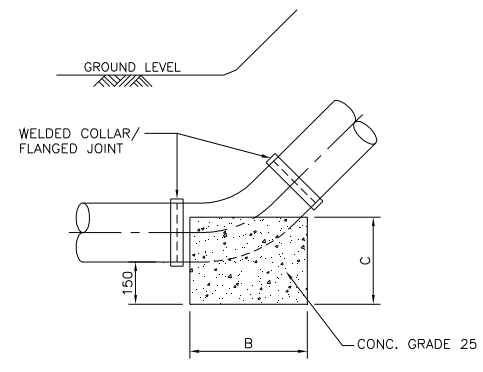
DRAWING TITLE :
 DETAILS OF DUCTILE IRON ALL-FLANGED LEVEL
 INVERT TEE, FLANGED BELLMOUTHS AND
 FLANGED SOCKET.

DRAWN BY : SHAHRUL DESIGNED : YHH
 CHECKED : KTT APPROVED : SS

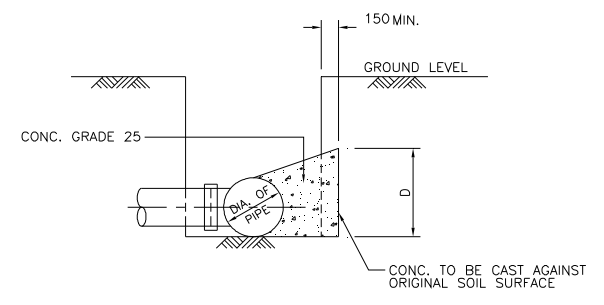
SCALE : NTS DATE : APRIL 2011

DRAWING NO :
 SYA / DI / STD / 004 / REV.1

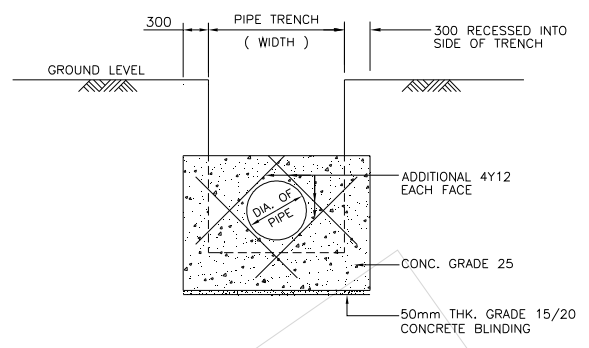
- NOTE:**
- FOR LEGEND, ABBREVIATIONS AND GENERAL NOTES, SEE DWG NO. SYA/STD/001.
 - ALL DIMENSIONS ARE IN mm UNLESS OTHERWISE STATED.
 - REINFORCEMENT CONCRETE GRADE 25.
 - MASS CONCRETE GRADE 20/25.
 - BLINDING CONCRETE GRADE 15.
 - DESIGN PRESSURE FOR THRUST BLOCK IS BASED ON 75m HEAD OF WATER.
 - ALLOWABLE BEARING PRESSURE = 75 kN/m².
 - DIMENSION OF THRUST BLOCKS TO BE INCREASED IF ACTUAL BEARING PRESSURE IS FOUND TO BE LESS THAN 75 kN/m².
 - DIMENSION 'A' OF THRUST BLOCK TO BE ADJUSTED BY THE S.O IF NECESSARY TO SUIT TRENCH WIDTH.
 - WHERE THE THRUST BLOCK REQUIRE REINFORCEMENT, THE ENGINEER SHALL SUBMIT HIS DETAILS.



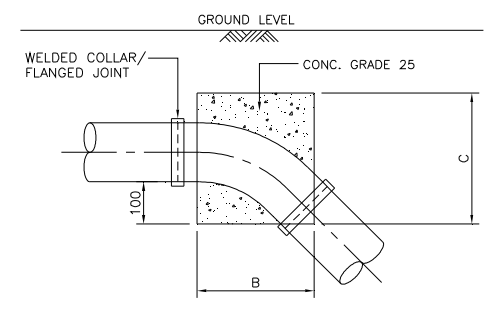
SECTION D-D



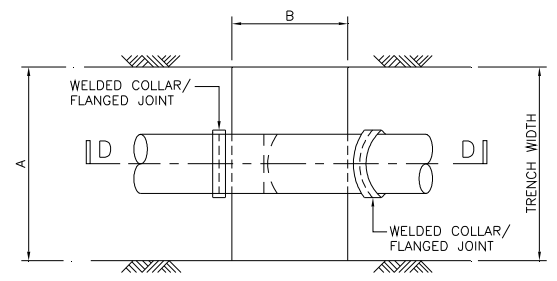
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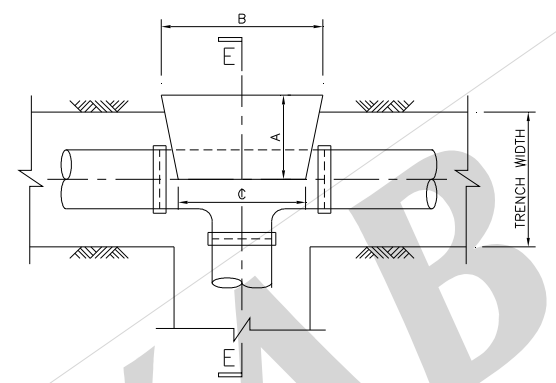
SECTION F-F



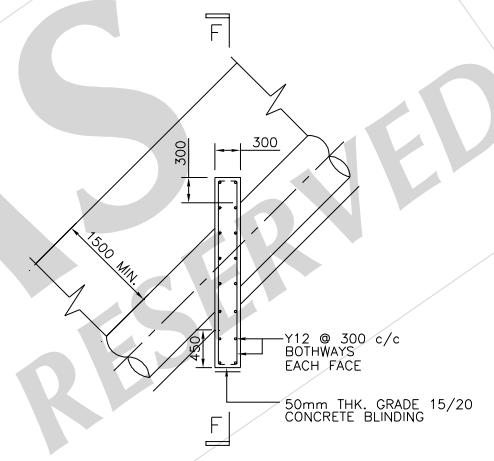
SECTION G-G



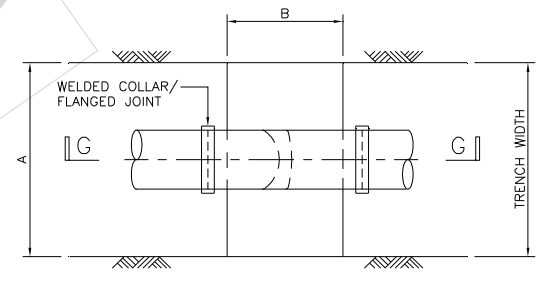
PLAN
DETAIL OF THRUST BLOCK FOR VERTICAL BEND
(ACTING DOWNWARD)



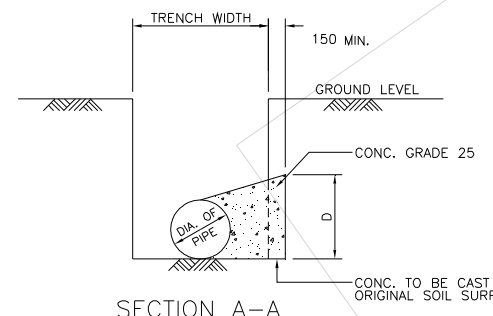
DETAILS OF THRUST BLOCK
FOR DUCTILE IRON TEE



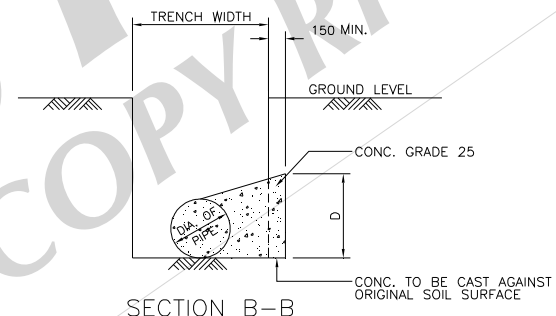
ELEVATION
ANCHOR BLOCK



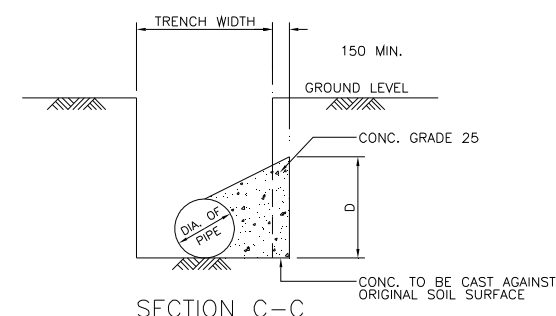
PLAN
THRUST BLOCK FOR VERTICAL BEND
(ACTING UPWARD)



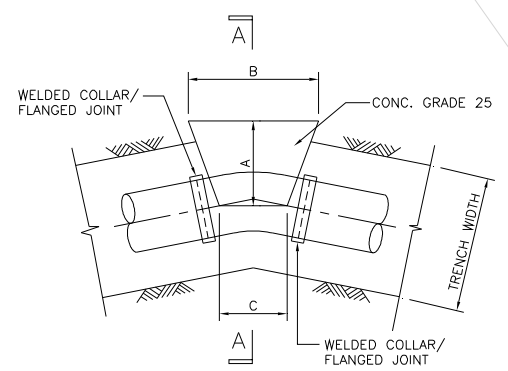
SECTION A-A



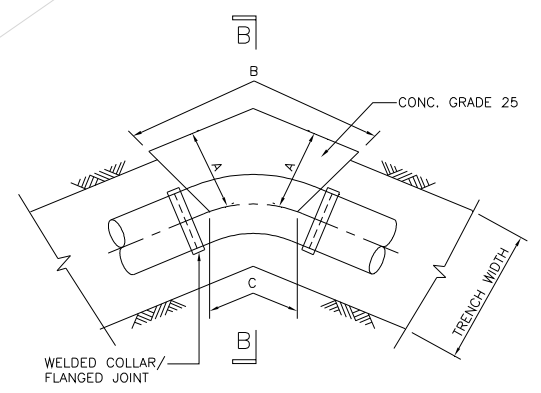
SECTION B-B



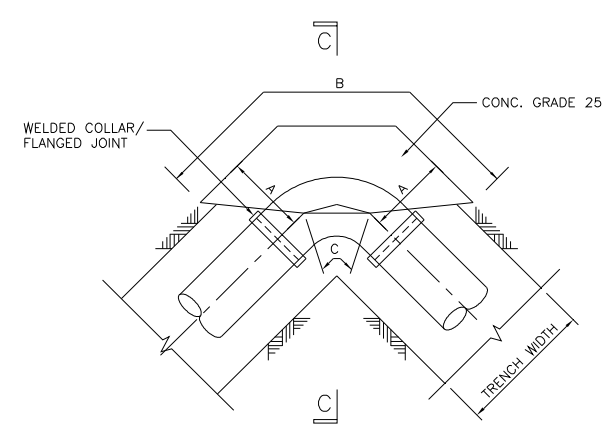
SECTION C-C



DETAILS OF THRUST BLOCK FOR DUCTILE IRON
GUSSETED BEND UP TO 30°
(HORIZONTAL BEND)



DETAILS OF THRUST BLOCK FOR
OVER 30° TO 60° DUCTILE IRON GUSSETED BEND
(HORIZONTAL BEND)



DETAILS OF THRUST BLOCK FOR
OVER 60° TO 90° DUCTILE IRON GUSSETED BEND
(HORIZONTAL BEND)

SCHEDULE OF ANCHOR BLOCK	
GRADIENT EXCEEDING	POSITION OF ANCHOR BLOCK
1:12	EVERY 3RD. PIPE
1:8	EVERY 2ND. PIPE
1:5	EVERY PIPE

REV.	DESCRIPTION	DATE



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 EMAIL : puspel@syabas.com.my

PROJECT :

DRAWING TITLE :
 DETAILS OF DUCTILE IRON THRUST BLOCK AND ANCHOR BLOCK.

DRAWN BY : SHAHRUL	DESIGNED : SAT
CHECKED : HS	APPROVED : LPL
SCALE : NTS	DATE : OCT 2006

DRAWING NO :
 SYA / DI / STD / 005

NOTE :

1. FOR LEGEND, ABBREVIATIONS AND GENERAL NOTES, SEE DWG NO.: SYA/STD/001.
2. ALL DIMENSIONS ARE IN mm UNLESS OTHERWISE STATED.

SCHEDULE OF CONCRETE THRUST BLOCK FOR PLAIN END TEE

NOMINAL DIA. OF BRANCH (mm)	NOMINAL DIA. OF BARREL (mm)	OUTER DIA. OF TEE (mm)	A	B	C	D
150	200	232.2	450	600	400	400
200	200	232.2	450	1000	600	400
250	250	286	600	1400	700	500
200	250	286	600	900	600	500
150	250	286	600	600	400	500
150	300	345.4	500	500	400	600
200	300	345.4	600	800	600	600
250	300	345.4	900	1200	900	600
300	300	345.4	1100	1700	900	600
150	350	399.3	450	500	400	600
200	350	399.3	500	800	500	600
250	350	399.3	900	1100	900	600
300	350	399.3	1300	1500	1000	600
350	350	399.3	1600	2000	1100	600
150	400	453.1	500	450	300	700
200	400	453.1	600	700	400	700
250	400	453.1	700	1100	600	700
300	400	453.1	1200	1400	1100	700
350	400	453.1	1400	1900	1100	700
400	400	453.1	2100	2300	1100	700
150	450	507	500	400	300	700
200	450	507	600	700	400	700
250	450	507	700	1000	600	700
300	450	507	1000	1400	900	700
400	450	507	1900	2200	1100	700
450	450	507	2300	2700	1100	700
150	500	560.3	550	400	300	800
200	500	560.3	700	600	400	800
250	500	560.3	900	900	700	800
300	500	560.3	1100	1300	900	900
350	500	560.3	1600	1600	1100	800
400	500	560.3	2400	2500	1100	800
500	500	560.3	2800	3000	1100	800
150	600	667	650	400	300	900
200	600	667	650	600	400	900
250	600	667	700	900	500	900
300	600	667	900	1200	800	900
350	600	667	1200	1500	1000	900
400	600	667	1500	1900	1100	900
450	600	667	1900	2300	1300	900
500	600	667	2400	2700	1400	900
600	600	667	3300	3600	1500	900

SCHEDULE OF CONCRETE THRUST BLOCK FOR HORIZONTAL BEND WITH WELDED JOINTS

NOMINAL DIA. OF PIPE (mm)	OUTER DIA. OF PIPE (mm)	GUSSETED BEND											
		UP TO 30°				OVER 30° TO 60°				OVER 60° TO 90°			
		A	B	C	D	A	B	C	D	A	B	C	D
200	232.2	400	700	400	400	400	1100	600	500	400	1600	700	500
250	286.0	500	900	500	400	500	1400	700	600	500	1800	800	600
300	345.4	500	1100	600	500	500	1600	700	600	500	2200	1000	600
350	399.3	500	1500	600	500	500	2000	700	600	500	2800	1000	600
400	453.1	600	1600	700	500	600	2200	800	700	600	3100	1000	700
450	507.0	600	1700	700	600	600	2600	800	750	600	3400	1100	800
500	560.3	800	1800	700	650	800	2800	800	850	800	3700	1100	900
600	667.0	800	1900	800	800	800	3100	900	1000	900	4500	1100	1100

SCHEDULE OF CONCRETE THRUST BLOCK FOR VERTICAL BEND (ACTING UPWARD)

NOMINAL DIA. OF PIPE (mm)	OUTER DIA. OF PIPE (mm)	GUSSETED BEND								
		UP TO 12°			UP TO 25°			UP TO 45°		
		A	B	C	A	B	C	A	B	C
100	122	300	300	300	200	400	350	200	400	350
150	177	350	350	350	300	450	400	400	450	500
200	232.2	400	400	400	350	550	450	600	600	550
250	286.0	500	450	500	500	700	500	800	800	600
300	345.4	600	500	600	650	850	550	1000	1000	650
350	399.3	700	500	700	800	1000	600	1200	1200	700
400	453.1	800	600	800	950	1150	650	1400	1400	800
450	507.0	900	700	900	1100	1300	700	1600	1600	900
500	560.3	1000	800	1000	1250	1450	800	1800	1800	1000
600	667.0	1200	900	1100	1400	1600	900	2000	2000	1100

SCHEDULE OF CONCRETE THRUST BLOCK FOR VERTICAL BEND (ACTING DOWNWARD)

NOMINAL DIA. OF PIPE (mm)	OUTER DIA. OF PIPE (mm)	GUSSETED BEND									
		UP TO 12°			UP TO 25°			UP TO 45°			
		A	B	C	A	B	C	A	B	C	
100	122	350	250	250	400	200	200	200	350	200	200
150	177	450	300	300	450	200	200	450	250	250	200
200	232.2	500	300	350	500	250	250	500	350	350	250
250	286.0	600	400	400	550	350	250	550	500	500	300
300	345.4	700	500	450	600	450	250	600	650	400	
350	399.3	800	600	500	650	550	300	700	750	400	
400	453.1	900	700	550	700	900	350	900	1000	550	
450	507.0	1000	800	600	800	950	350	1000	1100	600	
500	560.3	1100	900	650	1100	900	400	1100	1200	650	
600	667.0	1200	1100	700	1200	1100	450	1400	1350	750	

REV.	DESCRIPTION	DATE



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PROJECT :

DRAWING TITLE :
 SCHEDULE OF THRUST BLOCK.

DRAWN BY : SHAHRUL	DESIGNED : SAT
CHECKED : HS	APPROVED : LPL
SCALE : NTS	DATE : OCT 2006

DRAWING NO :
 SYA / DI / STD / 006