MATERIAL SUBMITTAL

Sanitary wares and Accessories for utility buildings

Project : CONSTRUCTION OF ZAYED ROAD NETWORK IN MINA ZAYED AREA - STAGE1- MAIN TUNNEL

Client : DEPARTMENT OF TRANSPORT

Employer :Musanada

Main Contractor : ITINERA/AGILITY JV

Contractor : Voltas ltd

Engineer : BILFINGER -TEBODIN

PMC : PARSONS

Revision :00

Date :18/8/2020

INDEX

1.0.COPIES OF RELEVANT PARTS OF SPECS

ERW PIPES

STAINLESS STEEL PIPE DIMENSION & WEIGHT-KG. PER MTR. (ANSI B36.19)

Nominal Bore		Outside Diameter	Schedule 5S		Schedule 10S		Schedule 40S		Schedule 80S		Schedule 160S		Schedule XXS	
mm	INCH	mm	Wt mm	Weight (Kg/mt)	Wt mm	Weight (Kg/mt)	Wt mm	Weight (Kg/mt)	Wt mm	Weight (Kg/mt)	Wt mm	Weight (Kg/mt)	Wt mm	Weight (Kg/mt)
3	1/8	10.3	1.24	0.278	1.24	0.28	1.73	0.37	2.41	0.47	-	-	-	-
6	1/4	13.7	1.24	0.390	1.65	0.49	2.24	0.631	3.02	0.80	-	-	-	-
10	3/8	17.1	1.24	0.490	1.65	0.63	2.31	0.845	3.20	1.10	-	-	-	-
15	1/2	21.3	1.65	0.800	2.11	1.00	2.77	1.27	3.75	1.62	4.75	1.94	7.47	2.55
20	3/4	26.7	1.65	1.03	2.11	1.28	2.87	1.68	3.91	2.20	5.54	2.89	7.82	3.63
25	1	33.4	1.65	1.30	2.77	2.09	3.38	2.50	4.55	3.24	6.35	4.24	9.09	5.45
32	1 1/4	42.2	1.65	1.65	2.77	2.70	3.56	3.38	4.85	4.47	6.35	5.61	9.70	7.77
40	1 1/2	48.3	1.65	1.91	2.77	3.11	3.68	4.05	5.08	5.41	7.14	7.25	10.16	9.54
50	2	60.3	1.65	2.40	2.77	3.93	3.91	5.44	5.54	7.48	8.74	11.1	11.07	13.44
65	2 1/2	73.0	2.11	3.69	3.05	5.26	5.16	8.63	7.01	11.4	9.53	14.9	14.2	20.39
80	3	88.9	2.11	4.51	3.05	6.45	5.49	11.30	7.62	15.2	11.1	21.3	15.24	27.65
100	4	114.3	2.11	5.84	3.05	8.36	6.02	16.07	8.56	22.3	13.49	33.54	17.12	41.03
125	5	141.3	2.77	9.47	3.40	11.57	6.55	21.8	9.53	31.97	15.88	49.11	19.05	57.43
150	6	168.3	2.77	11.32	3.40	13.84	7.11	28.3	10.97	42.7	18.2	67.56	21.95	79.22
200	8	219.1	2.77	14.79	3.76	19.96	8.18	42.6	12.07	64.6	23.0	111.2	22.23	107.8
250	10	273.1	3.40	22.63	4.19	27.78	9.27	60.5	15.06	96.0	28.6	172.4	25.40	155.15
300	12	323.9	3.96	31.25	4.57	36.00	9.52	73.88	17.45	132.0	33.32	238.76	25.40	186.97
350	14	355.6	3.96	34.36	4.78	41.3	11.13	94.59	19.05	158.08	35.71	281.70	-	-
400	16	406.4	4.19	41.56	4.78	47.29	12.7	123.30	21.41	203.33	40.46	365.11	-	-
450	18	457.2	4.19	46.80	4.78	53.42	14.27	155.80	23.8	254.36	45.71	466.40	-	-
500	20	508.0	4.78	59.25	5.54	68.71	15.09	183.42	26.19	311.2	49.99	584.68	-	-
600	24	609.6	5.54	82.47	6.35	94.45	17.48	255.41	30.96	442.08	59.54	808.22	-	-

FLANGES

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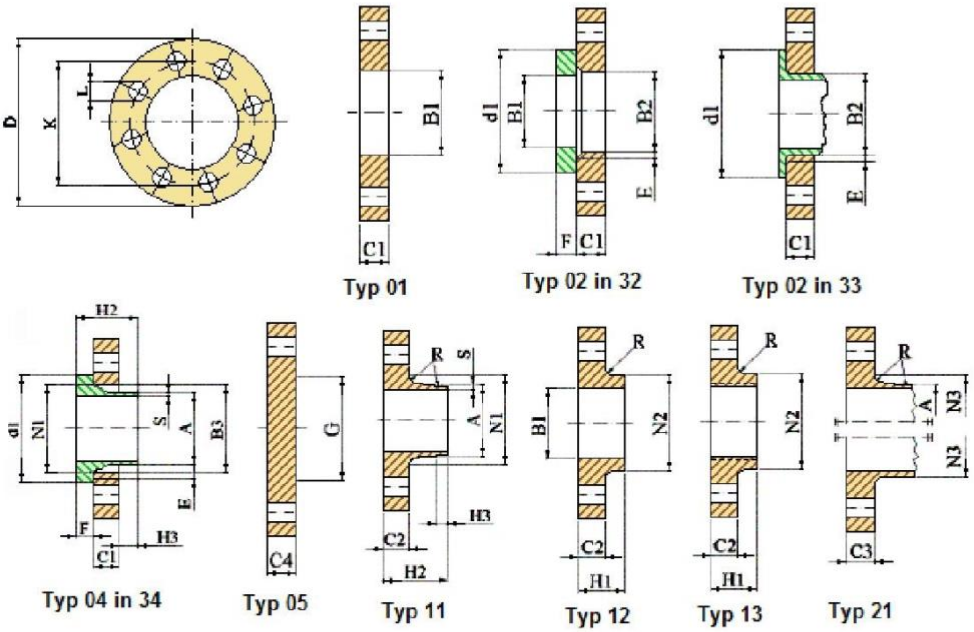
EN 1092-1 PN16 Flanges



Flange type (typ) as in EN 1092-1	
01 (Plate [slip-on] flanges for welding)	13 (Hubbed threaded flanges)
02 (Loose plate flanges with weld-on plate collar)	21 (Integral flanges)
04 (Loose plate flanges with weld-neck collar)	32 (Weld-on plate collars)
05 (Blank [blind] flanges)	33 (Lapped pipe ends)
11 (Weld-neck flanges)	34 (Weld-neck collars)
12 (Hubbed slip-on flanges for welding)	

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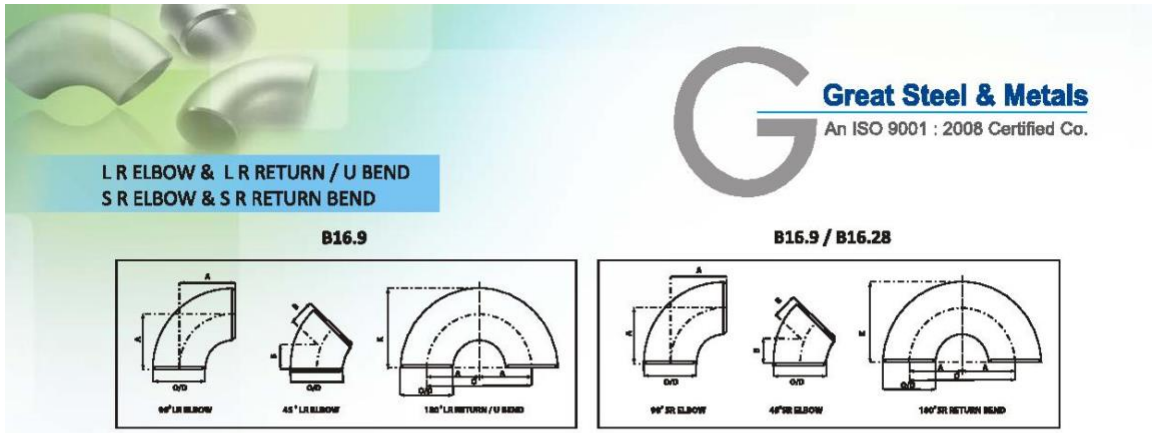
EN 1092-1 PN16 Flanges

Nominal diameter DN	Mating dimensions					Outside diameter of neck	Bore diameters			Flange thickness				Chamfer	Collar thickness	Diameter of shoulders	Length			Neck diameters			Corner radius	Neck thickness (preferred value)
	Outside diameter	Diameter of bolt circle	Diameter of bolt hole	Bolting																				
	D	K	L	No	Size	A	B1	B2	B3	C1	C2	C3	C4	E	F	G max.	H1	H2	H3	N1	N2	N3	R	S
	Flange Type																							
	01, 02, 05, 11, 12, 21					11 21* 34	01 12 32	02	04	01 02 04	11 12 13	21	05	02 04	32 34	05	12 13	11 34	11 34	11 34	12 13	21	11 12 13 21	11 34
10 15 20 25 32 40	Use PN 40 dimensions																							
50	165	125	18	4	M16	60,3	61,5	65	77	19	18	18	18	5	16	-	28	45	8	74	84	84	5	2,9
65	185	145	18	**	M16	76,1	77,5	81	96	20	18	18	18	6	16	55	32	45	10	92	104	104	6	2,9
80	200	160	18	8	M16	88,9	90,5	94	108	20	20	20	20	6	16	70	34	50	10	105	118	120	6	3,2
100	220	180	18	8	M16	114,3	116,0	120	134	22	20	20	20	6	18	90	40	52	12	131	140	140	8	3,6
125	250	210	18	8	M16	139,7	141,5	145	162	22	22	22	22	6	18	115	44	55	12	158	168	170	8	4,0
150	285	240	22	8	M20	168,3	170,5	174	188	24	22	22	22	6	20	140	44	55	12	184	195	190	10	4,5
200	340	295	22	12	M20	219,1	221,5	226	240	26	24	24	24	6	20	190	44	62	16	235	246	246	10	5,9
250	405	355	26	12	M24	273,0	276,5	281	294	29	26	26	26	8	22	235	46	70	16	292	298	296	12	6,3
300	460	410	26	12	M24	323,9	327,5	333	348	32	28	28	28	8	24	285	46	78	16	344	350	350	12	7,1
350	520	470	26	16	M24	355,6	359,0	365	400	35	30	30	30	8	26	330	57	82	16	390	400	410	12	8,0
400	580	525	30	16	M27	406,4	411,0	416	454	38	32	32	32	8	28	380	63	85	16	445	456	458	12	8,0
450	640	585	30	20	M27	457,0	462,0	467	500	42	40	40	40	8	30	425	68	87	16	490	502	518	12	8,0
500	715	650	33	20	M30	508,0	513,5	510	556	46	44	44	44	8	32	475	73	90	16	548	559	576	12	8,0
600	840	770	36	20	M33	610,0	616,5	622	660	52	54	54	54	8	32	575	83	95	18	652	658	690	12	8,8
700	910	840	36	24	M33	711,0	-	-	-	-	36	42	48	-	-	670	83	100	18	755	760	760	12	8,8
800	1025	950	39	24	M36	813,0	-	-	-	-	38	42	52	-	-	770	90	105	20	855	864	862	12	10,0
900	1125	1050	39	28	M36	914,0	-	-	-	-	40	44	58	-	-	860	94	110	20	955	968	962	12	10,0
1000	1255	1170	42	28	M39	1016,0	-	-	-	-	42	46	64	-	-	960	100	120	22	1058	1072	1076	16	10,0
1200	1485	1390	48	32	M45	1219,0	-	-	-	-	48	52	76	-	-	1160	-	130	30	1262	-	1282	16	12,5
1400	1685	1590	48	36	M45	1422,0	-	-	-	-	52	58	-	-	-	1346	-	145	30	1465	-	1482	16	14,2
1600	1930	1820	56	40	M52	1626,0	-	-	-	-	58	64	-	-	-	1546	-	160	35	1668	-	1696	16	16,0
1800	2130	2020	56	44	M52	1829,0	-	-	-	-	62	68	-	-	-	1746	-	170	35	1870	-	1896	16	17,5
2000	2345	2230	62	48	M56	2032,0	-	-	-	-	66	70	-	-	-	1950	-	180	40	2072	-	2100	16	20,0

Note 1: Dimensions N1, N2 and N3 are measured at the intersection of the hub draft angle and the back face of the flange.
Note 2: For d1 dimensions see document "Flange Facing Dimensions EN 1092-1".

FITTINGS



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L R ELBOW & L R RETURN / U BEND
S R ELBOW & S R RETURN BEND

B16.9

B16.9 / B16.28

B16.9 LR ELBOW & LR RETURN / U BEND

Nominal Pipe Size (NPS)	Outside Diameter at Bevel (O/D)	Dimension A	Dimension B	Center to Center O	Back to Face K
1/2"	21.3	38	16	76	48
3/4"	26.7	38	19	76	51
1"	33.4	38	22	76	56
1.1/4"	42.2	48	25	95	70
1.1/2"	48.3	57	29	114	83
2"	60.3	76	35	152	106
2.1/2"	73.0	95	44	190	132
3"	88.9	114	51	229	159
3.1/2"	101.6	133	57	267	184
4"	114.3	152	64	305	210
5"	141.3	190	78	381	262
6"	168.3	229	95	457	313
8"	219.1	305	127	610	414
10"	273.0	381	159	762	518
12"	323.8	457	190	914	619
14"	355.6	533	222	1067	711
16"	406.4	610	254	1219	813
18"	457.0	686	286	1372	914
20"	508.0	762	318	1524	1016
22"	559.0	838	343	1676	1118
24"	610.0	914	381	1829	1219
26"	660.0	991	406	----	----
28"	711.0	1067	438	----	-----
30"	762.0	1143	470	----	-----
32"	813.0	1219	502	----	-----
34"	864.0	1295	533	----	-----
36"	914.0	1372	565	----	-----

Note : All Dimensions are in millimeters (mm) Dimension for 38" and above on request.

B16.9 / B16.28 SR ELBOW & SR RETURN BEND

Nominal Pipe Size (NPS)	Outside Diameter at Bevel (O/D)	Dimension A	Dimension B	Center to Center O	Back to Face K
1/2"	21.3	-----	-----	----	-----
3/4"	26.7	-----	-----	----	----
1"	33.4	25	----	51	41
1.1/4"	42.2	32	----	64	52
1.1/2"	48.3	38	----	76	62
2"	60.3	51	---	102	81
2.1/2"	73.0	64	----	127	100
3"	88.9	76	31.6	152	121
3.1/2"	101.6	89	36.8	178	140
4"	114.3	102	42.1	203	159
5"	141.3	127	52.6	254	197
6"	168.3	152	63.4	305	237
8"	219.1	203	84.2	406	313
10"	273.0	254	105.2	508	391
12"	323.8	305	126.3	610	467
14"	355.6	356	147.3	711	533
16"	406.4	406	168.3	813	610
18"	457.0	457	189.4	914	686
20"	508.0	508	210.4	1016	762
22"	559.0	559	231.5	1118	838
24"	610.0	610	252.5	1219	914

Note : All Dimensions are in millimeters (mm)

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EQUAL TEE, CROSS & CAPS

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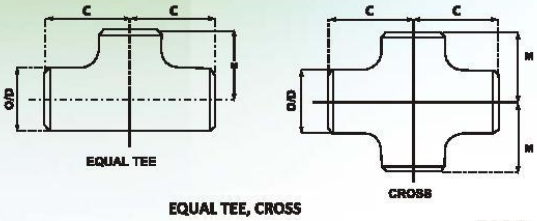
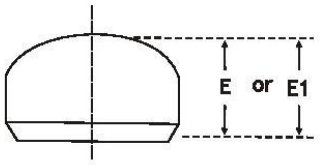


EQUAL TEE, CROSS

B16.9

Nominal Pipe Size (NPS)	Outside Diameter at Bevel (O/D)	Run 'C'	Outlet 'M'
1/2"	21.3	25	25
3/4"	26.7	29	29
1"	33.4	38	38
1.1/4"	42.2	48	48
1.1/2"	48.3	57	57
2"	60.3	64	64
2.1/2"	73.0	76	76
3"	88.9	86	86
3.1/2"	101.6	95	95
4"	114.3	105	105
5"	141.3	124	124
6"	168.3	143	143
8"	219.1	178	178
10"	273.0	216	216
12"	323.8	254	254
14"	355.6	279	279
16"	406.4	305	305
18"	457.0	343	343
20"	508.0	381	381
22"	559.0	419	419
24"	610.0	432	432
26"	660.0	495	495
28"	711.0	521	521
30"	762.0	559	559
32"	813.0	597	597
34"	864.0	635	635
36"	914.0	673	673

Note : All Dimensions are in millimeters (mm)
Dimension for 38" and above on request.



CAPS

B16.9

Nominal Pipe Size (NPS)	Outside Diameter at Bevel D	Length (1) E	Limiting Wall Thickness for Length E	Length (2) E1
1/2	0.84	1.00	0.18	1.00
3/4	1.05	1.00	1.15	1.00
1	1.32	1.50	0.18	1.50
11/4	1.66	1.50	0.19	1.50
1 1/2	1.90	1.50	0.20	1.50
2	2.38	1.50	0.22	1.75
2 1/2	2.88	1.50	0.28	2.00
3	3.50	2.00	0.30	2.50
3 1/2	4.00	2.50	0.32	3.00
4	4.50	2.50	0.34	3.00
5	5.56	3.00	0.38	3.50
6	6.62	3.50	0.43	4.00
8	8.62	4.00	0.50	5.00
10	10.75	5.00	0.50	6.00
12	12.75	6.00	0.50	7.00
14	14.00	6.50	0.50	7.50
16	16.00	7.00	0.50	8.00
18	18.00	8.00	0.50	9.00
20	20.00	9.00	0.50	10.00
22	22.00	10.00	0.50	10.00
24	24.00	10.50	0.50	12.00
26	26.00	10.50	...	...
28	28.00	10.50	...	...
30	30.00	10.50	...	...
32	32.00	10.50	...	...
34	34.00	10.50	...	...
36	36.00	10.50	...	...
38	38.00	12.00	...	...
40	40.00	12.00	...	...
42	42.00	12.00	...	...
44	44.00	13.50	...	...
46	46.00	13.50	...	...
48	48.00	13.50	...	...

GENERAL NOTE :

(a) Dimensions are in inches.

(b) The shape of these caps shall be ellipsoidal and shall conform to the shape requirements as given in the ASME Boiler and Pressure Vessel Code

NOTES :

(1) Length E applies for thickness not exceeding that given in column "Limiting Wall Thickness for Length E".

(2) Length E1 applies for thickness greater than that given in column "Limiting Wall Thickness" for NPS 24 and smaller For NPS 26 and larger, length E1 shall be by agreement between manufacturer and purchaser.

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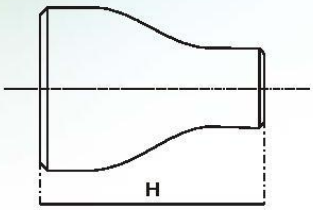
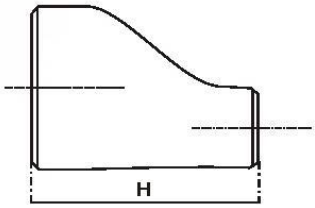
REDUCER : CONCENTRIC & ECCENTRIC



CONCENTRIC REDUCER



ECCENTRIC REDUCER

B16.9

Nominal Pipe Size (NPS)	Outside Diameter at Bevel (O/D)		End-to-End	Nominal Pipe Size (NPS)	Outside Diameter at Bevel (O/D)		End-to-End
	Run	Outlet	H		Run	Outlet	H
3/4" x 1/2"	26.7	21.3	38	12" x10"	323.8	273.0	203
3/4" x 3/8"	26.7	17.3	38	12" x 8"	323.8	219.1	203
1" x 3/4"	33.4	26.7	51	12" x 6"	323.8	168.3	203
1" x 1/2"	33.4	21.3	51	12" x 5"	323.8	141.3	203
1.1/4" x 1"	42.2	33.4	51	14" x 12"	355.6	323.8	330
1.1/4" x 3/4"	42.2	26.7	51	14" x 10"	355.6	273.0	330
1.1/4" x 1/2"	42.2	21.3	51	14" x 8"	355.6	219.1	330
1.1/2" x 1.1/4"	48.3	42.2	64	14" x 6"	355.6	168.3	330
1.1/2 x 1"	48.3	33.4	64	16" x 14"	406.4	355.6	356
1.1/2" x 3/4"	48.3	26.7	64	16" x 12"	406.4	323.8	356
1.1/2" x 1/2"	46.3	21.3	64	16" x 10"	406.4	273.0	356
2" x 1.1/2"	60.3	48.3	76	16" x 8"	406.4	219.1	356
2" x 1.1/4"	60.3	42.2	76	18" x 16"	457.0	406.4	381
2" x 1"	60.3	33.4	76	18" x 14"	457.0	356.6	381
2" x 3/4"	60.3	26.7	76	18" x 12"	457.0	323.8	381
2.1/2" x 2"	73.0	60.3	89	18" x 10"	457.0	273.0	381
2.1/2" x 1.1/2"	73.0	48.3	89	20" x 18"	508.0	457.0	508
2.1/2" x 1.1/4"	73.0	42.2	89	20" x 16"	508.0	406.4	508
2.1/2 x 1"	73.0	33.4	89	20" x 14"	508.0	355.6	508
3" x 2.1/2"	88.9	73.0	89	20" x 12"	508.0	323.8	508
3" x 2"	88.9	60.3	89	22" x 20"	559.0	508.0	508
3" x 1.1/2"	88.9	48.3	89	22" x 18"	559.0	457.0	508
3" x 1.1/4"	88.9	42.2	89	22" x 16"	559.0	406.4	508
3.1/2" x 3"	101.6	88.9	102	22" x 14"	559.0	355.6	508
3.1/2" x 2.1/2"	101.6	73.0	102	24" x 22"	610.0	559.0	508
3.1/2" x 2"	101.6	60.3	102	24" x 20"	610.0	508.0	508
3.1/2" x 1.1/2"	101.6	48.3	102	24" x 18"	610.0	457.0	508
4" x 3.1/2"	114.3	101.6	102	24" x 16"	610.0	406.4	508
4" x 3"	114.3	88.9	102	26" x 24"	660.0	610.0	610
4" x 2.1/2"	114.3	73.0	102	26" x 22"	660.0	559.0	610
4" x 2"	114.3	60.3	102	26" x 20"	660.0	508.0	610
4" x 1.1/2"	114.3	48.3	102	26" x 18"	660.0	457.0	610
5" x 4"	141.3	114.3	127	28" x 26"	711.0	660.0	610
5" x 3.1/2"	141.3	101.6	127	28" x 24"	711.0	610.0	610
5" x 3"	141.3	88.9	127	28" x 20"	711.0	508.0	610
5" x 2.1/2"	141.3	73.0	127	28" x 18"	711.0	457.0	610
5" x 2"	141.3	60.3	127	30" x 28"	762.0	711.0	610
6" x 5"	168.3	141.3	140	30" x 26"	762.0	660.0	610
6" x 4"	168.3	114.3	140	30" x 24"	762.0	610.0	610
6" x 3.1/2"	168.3	101.6	140	30" x 20"	762.0	508.0	610
6" x 3"	168.3	88.9	140	32" x 30"	813.0	762.0	610
6" x 2.1/2"	168.3	73.0	140	32" x 28"	813.0	711.0	610
8" x 6"	219.1	168.3	152	32" x 26"	813.0	660.0	610
8" x 5"	219.1	141.3	152	32" x 24"	813.0	610.0	610
8" x 4"	219.1	114.3	152	34" x 32"	864.0	813.0	610
8" x 3.1/2"	219.1	101.6	152	34" x 30"	864.0	762.0	610
10" x 8"	273.0	219.1	178	34" x 28"	864.0	660.0	610
10" x 6"	273.0	168.3	178	34" x 24"	864.0	610.0	610
10" x 5"	273.0	141.3	178				
10" x 4"	273.0	114.3	178				

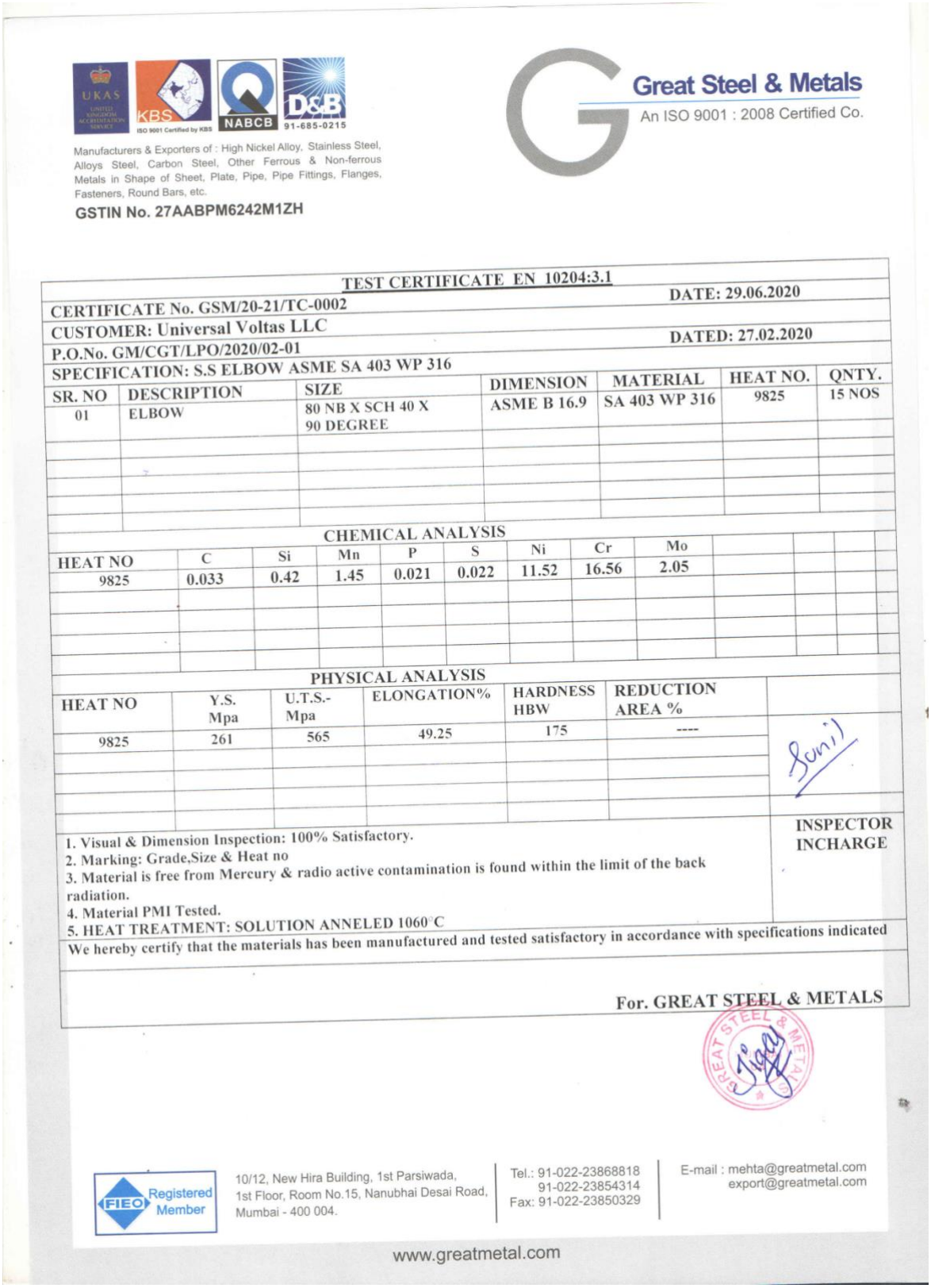
Note : All Dimensions are in millimeters (mm)
Dimension for 36" and above on request.

Tel. : +91 022 2386 8818 / +91 022 2385 4314 Fax : +91 022 2385 0329

2.0.TECHNICAL COMPARISON TABLE

please enclose the comparison table and specification compliance in attached format.

RECENT TEST REPORTS / CERTIFICATES



Great Steel & Metals
An ISO 9001 : 2008 Certified Co.

Manufacturers & Exporters of : High Nickel Alloy, Stainless Steel, Alloys Steel, Carbon Steel, Other Ferrous & Non-ferrous Metals in Shape of Sheet, Plate, Pipe, Pipe Fittings, Flanges, Fasteners, Round Bars, etc.

GSTIN No. 27AABPM6242M1ZH

TEST CERTIFICATE EN 10204:3.1

CERTIFICATE No. GSM/20-21/TC-0002 — DATE: 29.06.2020

CUSTOMER: Universal Voltas LLC

P.O.No. GM/CGT/LPO/2020/02-01 — DATED: 27.02.2020

SPECIFICATION: S.S ELBOW ASME SA 403 WP 316

SR. NO	DESCRIPTION	SIZE	DIMENSION	MATERIAL	HEAT NO.	QNTY.
01	ELBOW	80 NB X SCH 40 X 90 DEGREE	ASME B 16.9	SA 403 WP 316	9825	15 NOS

CHEMICAL ANALYSIS

HEAT NO	C	Si	Mn	P	S	Ni	Cr	Mo
9825	0.033	0.42	1.45	0.021	0.022	11.52	16.56	2.05

PHYSICAL ANALYSIS

HEAT NO	Y.S. Mpa	U.T.S.- Mpa	ELONGATION%	HARDNESS HBW	REDUCTION AREA %
9825	261	565	49.25	175	----

1. Visual & Dimension Inspection: 100% Satisfactory.
2. Marking: Grade,Size & Heat no
3. Material is free from Mercury & radio active contamination is found within the limit of the back radiation.
4. Material PMI Tested.
5. HEAT TREATMENT: SOLUTION ANNELED 1060°C

INSPECTOR INCHARGE

We hereby certify that the materials has been manufactured and tested satisfactory in accordance with specifications indicated

For. GREAT STEEL & METALS

FIEO Registered Member

10/12, New Hira Building, 1st Parsiwada, 1st Floor, Room No.15, Nanubhai Desai Road, Mumbai - 400 004.

Tel.: 91-022-23868818
91-022-23854314
Fax: 91-022-23850329

E-mail : mehta@greatmetal.com
export@greatmetal.com

www.greatmetal.com

UKAS KBS ISO 9001 Certified by KBS NABCB D&B 91-685-0215

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Manufacturers & Exporters of : High Nickel Alloy, Stainless Steel, Alloys Steel, Carbon Steel, Other Ferrous & Non-ferrous Metals in Shape of Sheet, Plate, Pipe, Pipe Fittings, Flanges, Fasteners, Round Bars, etc.

GSTIN No. 27AABPM6242M1ZH

TEST CERTIFICATE AS PER EN 10204 TYPE 3.1

Customer : Universal Voltas LLC
PO No : GM/CGT/LPO/2020/02-01 DATED: 27.02.2020
Specification: ASME SA312 TP316L ED.2019
Dimension : ASME B36.19

Cert.No :GSM/20-21/0007
Date : 29-JUNE-2020
TPI :
Invoice :

SrNo	HT/LT No	Item Description	Qty mtr	H/T Condition	Media	Temp. C
1.	D78231	SS, SMLS, PE Pipe, ASME SA312 TP316L, 2"NB X SCH 40	6.005	SOLUTION ANNEALED	Water	1060
2.	D67852	SS, SMLS, PE Pipe, ASME SA312 TP316L, 3"NB X SCH 40	11.615	SOLUTION ANNEALED	Water	1060
3.	D58785	SS, SMLS, PE Pipe, ASME SA312 TP316L, 6"NB X SCH 40	19.090	SOLUTION ANNEALED	Water	1060

CHEMICAL COMPOSITION (%)

HT/LT No	C	Si	Mn	P	S	Cr	Ni	Mo
	0.035-Max	1-Max	2-Max	0.045-Max	0.03-Max	16-18	10-14	2-3
D78231	0.021	0.383	1.272	0.025	0.011	17.083	11.061	2.021
D67852	0.023	0.385	1.275	0.027	0.013	17.087	11.062	2.024
D58785	0.025	0.389	1.277	0.027	0.016	17.089	11.067	2.027

MECHANICAL PROPERTIES

HT/LT No	Tensile			
	U.T.S Mpa	Y.S Mpa	Elongation %	Hardness (HRB)
	485-Min	170-Min	40-Min	95-Max
D78231	543	251	43	71
D67852	545	257	45	74
D58785	548	262	48	78

Remarks :
We hereby certify that Items was Manufactured, Sample Tested & Inspected with Specification as per PO & was found to meet the requirements.
1. 100% PMI - OK
2. 100 % Visual Inspection - OK
3. 100 % Dimensions Checked - OK

IDENTIFICATION : GSM
MARKING : LOGO STANDARD / SIZE/ SCH/ HEAT NO

SIGNATURE / INSPECTION AUTHORITY / SURVEYOR

GREAT STEEL & METALS

FIEO Registered Member
10/12, New Hira Building, 1st Parsiwada, 1st Floor, Room No.15, Nanubhai Desai Road, Mumbai - 400 004.
Tel.: 91-022-23868818
91-022-23854314
Fax: 91-022-23850329
4500418290,4500416877
E-mail : mehta@greatmetal.com
export@greatmetal.com
www.greatmetal.com

UKAS KBS ISO 9001 Certified by KBS NABCB D&B 91-685-0215

Manufacturers & Exporters of : High Nickel Alloy, Stainless Steel, Alloys Steel, Carbon Steel, Other Ferrous & Non-ferrous Metals in Shape of Sheet, Plate, Pipe, Pipe Fittings, Flanges, Fasteners, Round Bars, etc.

GSTIN No. 27AABPM6242M1ZH

Great Steel & Metals
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TEST CERTIFICATE EN 10204:3.1

CERTIFICATE No. GSM/20-21/TC-0001 — **DATE: 29.06.2020**

CUSTOMER: Universal Voltas LLC

P.O.No. GM/CGT/LPO/2020/02-01 — **DATED: 27.02.2020**

SPECIFICATION: S.S FLANGE ASME SA 182 F 316

SR. NO	DESCRIPTION	SIZE	DIMENSION	MATERIAL	HEAT NO.	QNTY.
	S.S FLANGE					
01	SORF	50 NB X 150#	ANSI B 16.5	SA 182 F 316	5018	06 NOS
02	SORF	80 NB X 150#	ANSI B 16.5	SA 182 F 316	1882	14 NOS
03	SORF	150 NB X 150#	ANSI B 16.5	SA 182 F 316	1872	18 NOS

CHEMICAL ANALYSIS

HEAT NO	C	Si	Mn	P	S	Ni	Cr	MO	N
5018	0.041	0.21	1.19	0.021	0.023	11.51	16.42	2.04	0.036
1882	0.043	0.23	1.21	0.023	0.023	11.53	16.45	2.06	0.038
1872	0.045	0.25	1.23	0.024	0.025	11.55	16.48	2.06	0.039

PHYSICAL ANALYSIS

HEAT NO	Y.S. Mpa	U.T.S.- Mpa	ELONGATION%	HARDNESS HBW	REDUCTION AREA %
5018	258	571	48.71	171	65.81
1882	262	573	48.73	173	65.83
1872	263	575	48.75	174	65.85

Sunil

1. Visual & Dimension Inspection: 100% Satisfactory.
2. Marking: Grade,Size & Heat no
3. Material is free from Mercury & radio active contamination is found within the limit of the back radiation.
4. Material PMI Tested.
5. HEAT TREATMENT: SOLUTION ANNELED 1060°C

INSPECTOR INCHARGE

We hereby certify that the materials has been manufactured and tested satisfactory in accordance with specifications indicated

For. GREAT STEEL & METALS

GREAT STEEL & METALS

FIEO Registered Member

10/12, New Hira Building, 1st Parsiwada, 1st Floor, Room No.15, Nanubhai Desai Road, Mumbai - 400 004.

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Fax: 91-022-23850329

E-mail : mehta@greatmetal.com
export@greatmetal.com

www.greatmetal.com

4.0. LICENCE FROM DEPARTMENT OF ECONOMIC DEVELOPMENT (REGISTRATION)

Please enclose the Valid license from abudhabi economic department

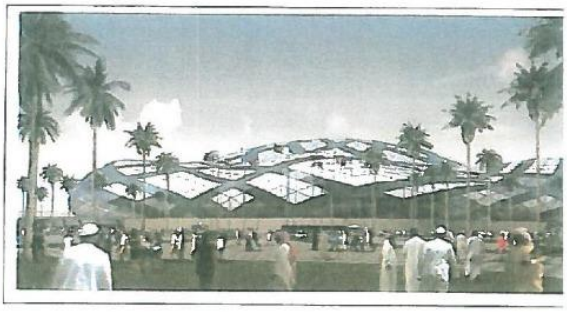
Our Company is based in India so we dont have any licenses from abu dhabi economic department

PREVIOUS APPROVAL

QATAR OLYMPIC COMMITTEE
CONSTRUCTION OF SUPERSTRUCTURE & FACADE WORKS FOR MULTIPURPOSE HALL AT LUSAIL SPORTS CLUB-PK2

Issue date 13-Jan-2015

QATAR OLYMPIC COMMITTEE



Multipurpose Hall @ Lusail Sports Club
Project Code : 2782A
KEO

A	No Comments - Proceed
B	Reviewed with Minor comments. Resubmit for Final Approval
C	Reviewed with Major Comments / Resubmit for Review
D	Not Approved / Rejected
E	See Response
Engr:	R.E.
Date:	Date:

Corrections or comments made relative to submittals during this review does not relieve the contractor from compliance with the requirements of the Contract drawings and specifications. This review is only in respect of general conformance with the design intent of the project and general compliance with the information given in the Contract documents. The contractor remains responsible, among other things, for the design of the project or such parts of the project he has design responsibility for (if design forms part of the Contract), for confirming and correlating all quantities and dimensions, selecting fabrication processes and techniques of construction, coordinating his work with that of other trades, and performing his work in a safe and satisfactory manner, all in accordance with the Contract.

Pre-Qualification for
Stainless Steel Pipes and Access Great Steel and Metal

Construction Of Superstructure & Facade Works for Multipurpose Hall at Lusail Sports Club-Package 2

Contract No.: EPD/C/154/2012

Document No.: 2782B-CCC-PD-01AR-0013 Revision No.: C

Issue Status: For Approval Project Phase: Construction

	Prepared by	Reviewed by	Reviewed by	Reviewed by	Approved by
Name	Shiju Thomas	Salim Shah	Tarek Hajjar	Amr Farouk	Mr. Mahdi Salem
Job Title	Sr.Project Engineer-Multitech	Procurement Manager CCC/TCC JV	Engineering Manager CCC/TCC JV	QA/QC Manager CCC/TCC JV	Project Director CCC/TCC JV
Signature					
Date	13-Jan-2015	16/1/15	17/01/15	17/01/15	19/01/15

Controlled Copy No:	1	Issued to:	KEO Int'l Consultants

SITE MASTER
KEO/CCC/9944
29 JAN 2015
CCC/KEO/18253
LMH - DCG

MATERIAL APPROVAL SHEET

MAS No. M-06	Rev. No. 03	Civil ☐	Mechanical ☐	Electrical ☐	HVAC ☐

Project Name	: PROPOSED 3S FACILITIES & OFFICE FOR TOWELL AUTO CENTER LLC
Client:	: W J TOWELL AUTO CENTER LLC
Consultant:	: AL HATMY ENGINEERING CONSULTANCY LLC
Main Contractor:	: QURUM BUSINESS GROUP

Material Description	: CARBON STEEL PIPE	Manufacturer (Local)	: (India)
Location of Use	: EXTERNAL	-Do- (GCC/Foreign)	: GREAT STEEL & METALS
BOQ Ref.	: 2/PL/9	Supplier	: RIMAL GLOBAL
Specification Ref.	: NA	Sample Attached	Yes ☐ No ☐
Drawing Ref.	: LO 101	Certificate Attached	Yes ☐ No ☐
Financial Implication	: NA	Catalogue Attached	Yes ☐ No ☐
Material Conformance Status:	☐ Conforms to Spec ☐ Equivalent. ☐ Alternative	Assurance of delivery in Time	Yes ☐ No ☐
Supplementary Information:		Required at Site on: 10.09.2017	

Confirmation of Local Product: ☐ Yes ☐ No

In Case, Product Recommended is Non-Omani , Give Reason:

☐ We confirm that there is no local manufacturer available for the proposed product, and no alternative product and no alternate local product can meet the requirement for the duty conditions in Oman.

Material Proposed By:

Signature & Stamp Date: 8/06/2017

Consultant's Observations	Client/Statutory Authority's Observations
ASTM Standard, Grade. Sizes to follow approved drawing. Recommended for Approval.	
☐ Approved. ☐ Approved with Comments ☐ Rejected ☐ Resubmit	☐ Approved. ☐ Approved with Comments ☐ Rejected ☐ Resubmit
Signature & Stamp Date: 13.6.17	Signature & Stamp Date:

Provide sample at site.

MATERIAL APPROVAL SHEET

MAS No. M-04	Rev. No. 03	Civil ☐	Mechanical ☐	Electrical ☐	HVAC ☐
Project Name	: PROPOSED 3S FACILITIES & OFFICE FOR TOWELL AUTO CENTER LLC				
Client:	: W J TOWELL AUTO CENTER LLC				
Consultant:	: AL HATMY ENGINEERING CONSULTANCY LLC				
Main Contractor:	: QURUM BUSINESS GROUP				

Material Description	: STAINLESS STEEL PIPE	Manufacturer (Local)	: Great steel & Metals
Location of Use	: EXTERNAL	-Do- (GCC/Foreign)	: GREAT STEEL & METALS (India)
BOQ Ref.	: 2/PL/8	Supplier	: RIMAL GLOBAL
Specification Ref.	: EM-1/8	Sample Attached	Yes ☐ No ☐
Drawing Ref.	: CO 101	Certificate Attached	Yes ☐ No ☐
Financial Implication	: NA	Catalogue Attached	Yes ☐ No ☐
Material Conformance Status:	☐ Conforms to Spec ☐ Equivalent. ☐ Alternative	Assurance of delivery in Time	Yes ☐ No ☐
Supplementary Information:		Required at Site on: 10.08.2017	

Confirmation of Local Product: ☐ Yes ☐ No

In Case, Product Recommended is Non-Omani , Give Reason:

☐ We confirm that there is no local manufacturer available for the proposed product, and no alternative product and no alternate local product can meet the requirement for the duty conditions in Oman.

Material Proposed By:

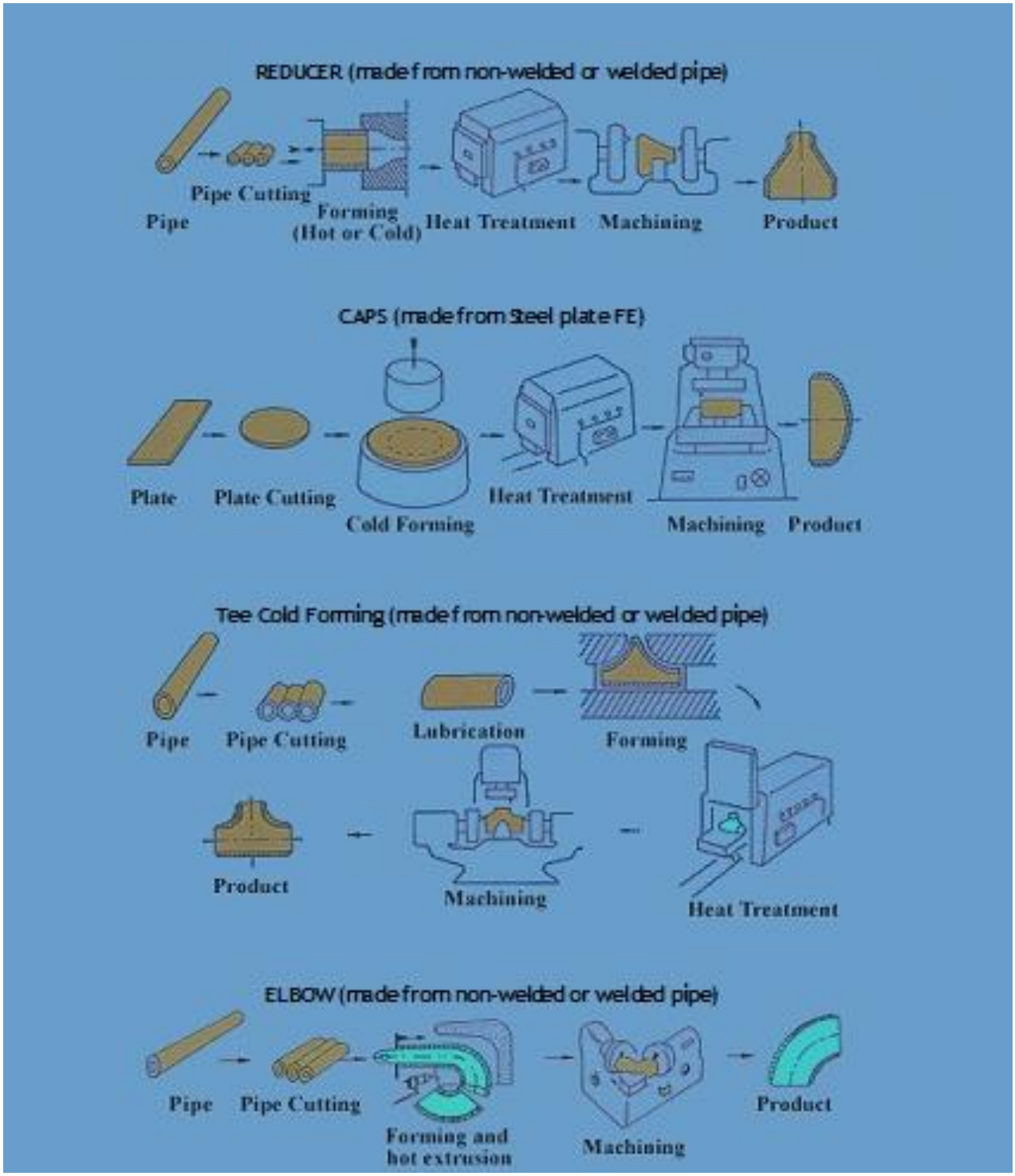
Signature & Stamp Date: 8/06/2017

Consultant's Observations	Client/Statutory Authority's Observations
ASTM standard, Grade, sizes to follow approved dwg.	
☐ Approved. ☐ Rejected ☐ Approved with Comments ☐ Resubmit	☐ Approved. ☐ Rejected ☐ Approved with Comments ☐ Resubmit
Recommended for approval 13.6.17 Signature & Stamp Date:	Signature & Stamp Date:

Provide sample at site.

6.0. SUPPLIER'S METHOD STATEMENT

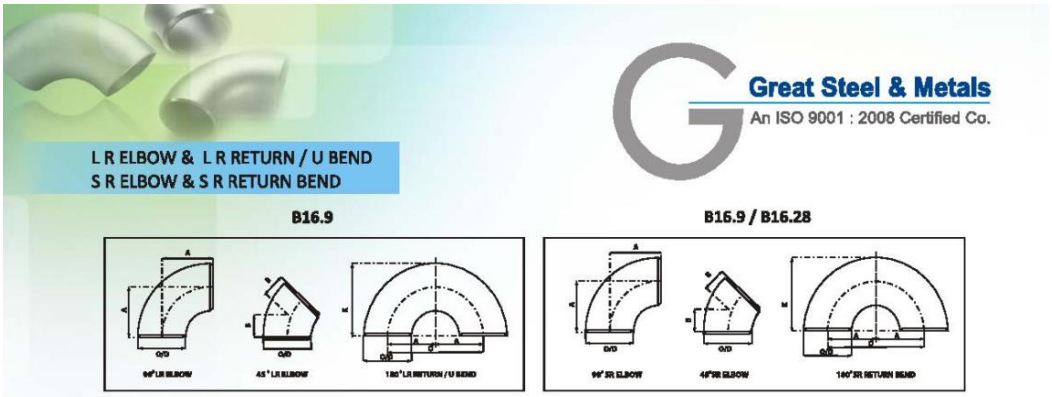
FITTINGS




Marerial storage
Inspection of raw material
Purchasing
Cutting
Heat treatment
Forging
Machining Processing
Heat treament after forging
Cooling after forging
Card check
UT test
Drilling
Input storage/ Packing
Inspection of finished products
Marking
Despatch

7.0.DRAWINGS

FITTINGS



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L R ELBOW & L R RETURN / U BEND
S R ELBOW & S R RETURN BEND

B16.9 | B16.9 / B16.28

B16.9 LR ELBOW & LR RETURN / U BEND

Nominal Pipe Size (NPS)	Outside Diameter at Bevel (O/D)	Dimension A	Dimension B	Center to Center O	Back to Face K
1/2"	21.3	38	16	76	48
3/4"	26.7	38	19	76	51
1"	33.4	38	22	76	56
1.1/4"	42.2	48	25	95	70
1.1/2"	48.3	57	29	114	83
2"	60.3	76	35	152	106
2.1/2"	73.0	95	44	190	132
3"	88.9	114	51	229	159
3.1/2"	101.6	133	57	267	184
4"	114.3	152	64	305	210
5"	141.3	190	79	381	262
6"	168.3	229	95	457	313
8"	219.1	305	127	610	414
10"	273.0	381	159	762	518
12"	323.8	457	190	914	619
14"	355.6	533	222	1067	711
16"	406.4	610	254	1219	813
18"	457.0	686	286	1372	914
20"	508.0	762	318	1524	1016
22"	559.0	838	343	1676	1118
24"	610.0	914	381	1829	1219
26"	660.0	991	406	....	....
28"	711.0	1067	438	....	.....
30"	762.0	1143	470	....	.....
32"	813.0	1219	502	....	.....
34"	864.0	1295	533	....	.....
36"	914.0	1372	565	....	.....

Note : All Dimensions are in millimeters (mm) Dimension for 38" and above on request.

B16.9 / B16.28 SR ELBOW & SR RETURN BEND

Nominal Pipe Size (NPS)	Outside Diameter at Bevel (O/D)	Dimension A	Dimension B	Center to Center O	Back to Face K
1/2"	21.3	.....	.....	....	.....
3/4"	26.7	.....	.....	....	.....
1"	33.4	25	....	51	41
1.1/4"	42.2	32	....	64	52
1.1/2"	48.3	38	....	76	62
2"	60.3	51	...	102	81
2.1/2"	73.0	64	....	127	100
3"	88.9	76	31.6	152	121
3.1/2"	101.6	89	36.8	178	140
4"	114.3	102	42.1	203	159
5"	141.3	127	52.6	254	197
6"	168.3	152	63.4	305	237
8"	219.1	203	84.2	406	313
10"	273.0	254	105.2	508	391
12"	323.8	305	126.3	610	467
14"	355.6	356	147.3	711	533
16"	406.4	406	168.3	813	610
18"	457.0	457	189.4	914	686
20"	508.0	508	210.4	1016	762
22"	559.0	559	231.5	1118	838
24"	610.0	610	252.5	1219	914

Note : All Dimensions are in millimeters (mm)

Tel. : +91 022 2386 8818 / +91 022 2385 4314 Fax : +91 022 2385 0329

EQUAL TEE, CROSS & CAPS

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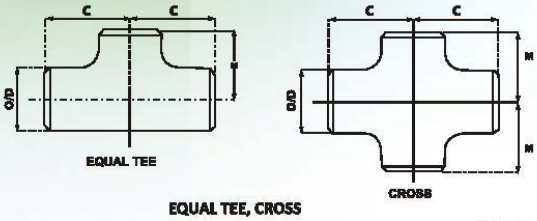
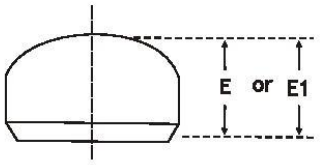


EQUAL TEE, CROSS

B16.9

Nominal Pipe Size (NPS)	Outside Diameter at Bevel (O/D)	Run 'C'	Outlet 'M'
1/2"	21.3	25	25
3/4"	26.7	29	29
1"	33.4	38	38
1.1/4"	42.2	48	48
1.1/2"	48.3	57	57
2"	60.3	64	64
2.1/2"	73.0	76	76
3"	88.9	86	86
3.1/2"	101.6	95	95
4"	114.3	105	105
5"	141.3	124	124
6"	168.3	143	143
8"	219.1	178	178
10"	273.0	216	216
12"	323.8	254	254
14"	355.6	279	279
16"	406.4	305	305
18"	457.0	343	343
20"	508.0	381	381
22"	559.0	419	419
24"	610.0	432	432
26"	660.0	495	495
28"	711.0	521	521
30"	762.0	559	559
32"	813.0	597	597
34"	864.0	635	635
36"	914.0	673	673

Note : All Dimensions are in millimeters (mm)
Dimension for 38" and above on request.



CAPS

B16.9

Nominal Pipe Size (NPS)	Outside Diameter at Bevel D	Length (1) E	Limiting Wall Thickness for Length E	Length (2) E1
1/2	0.84	1.00	0.18	1.00
3/4	1.05	1.00	1.15	1.00
1	1.32	1.50	0.18	1.50
11/4	1.66	1.50	0.19	1.50
1 1/2	1.90	1.50	0.20	1.50
2	2.38	1.50	0.22	1.75
2 1/2	2.88	1.50	0.28	2.00
3	3.50	2.00	0.30	2.50
3 1/2	4.00	2.50	0.32	3.00
4	4.50	2.50	0.34	3.00
5	5.56	3.00	0.38	3.50
6	6.62	3.50	0.43	4.00
8	8.62	4.00	0.50	5.00
10	10.75	5.00	0.50	6.00
12	12.75	6.00	0.50	7.00
14	14.00	6.50	0.50	7.50
16	16.00	7.00	0.50	8.00
18	18.00	8.00	0.50	9.00
20	20.00	9.00	0.50	10.00
22	22.00	10.00	0.50	10.00
24	24.00	10.50	0.50	12.00
26	26.00	10.50	...	...
28	28.00	10.50	...	...
30	30.00	10.50	...	...
32	32.00	10.50	...	...
34	34.00	10.50	...	...
36	36.00	10.50	...	...
38	38.00	12.00	...	...
40	40.00	12.00	...	...
42	42.00	12.00	...	...
44	44.00	13.50	...	...
46	46.00	13.50	...	...
48	48.00	13.50	...	...

GENERAL NOTE :

(a) Dimensions are in inches.

(b) The shape of these caps shall be ellipsoidal and shall conform to the shape requirements as given in the ASME Boiler and Pressure Vessel Code

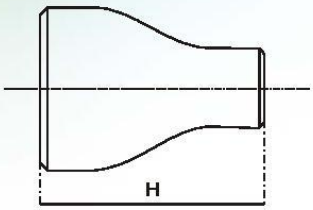
NOTES :

(1) Length E applies for thickness not exceeding that given in column "Limiting Wall Thickness for Length E".

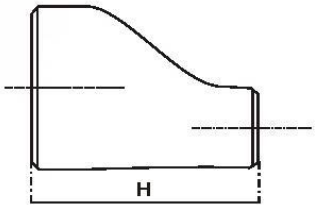
(2) Length E1 applies for thickness greater than that given in column "Limiting Wall Thickness" for NPS 24 and smaller For NPS 26 and larger, length E1 shall be by agreement between manufacturer and purchaser.

Great Steel & Metals
An ISO 9001 : 2008 Certified Co.

REDUCER : CONCENTRIC & ECCENTRIC



CONCENTRIC REDUCER



ECCENTRIC REDUCER

B16.9

Nominal Pipe Size (NPS)	Outside Diameter at Bevel (O/D)		End-to-End	Nominal Pipe Size (NPS)	Outside Diameter at Bevel (O/D)		End-to-End
	Run	Outlet	H		Run	Outlet	H
3/4" x 1/2"	26.7	21.3	38	12" x10"	323.8	273.0	203
3/4" x 3/8"	26.7	17.3	38	12" x 8"	323.8	219.1	203
1" x 3/4"	33.4	26.7	51	12" x 6"	323.8	168.3	203
1" x 1/2"	33.4	21.3	51	12" x 5"	323.8	141.3	203
1.1/4" x 1"	42.2	33.4	51	14" x 12"	355.6	323.8	330
1.1/4" x 3/4"	42.2	26.7	51	14" x 10"	355.6	273.0	330
1.1/4" x 1/2"	42.2	21.3	51	14" x 8"	355.6	219.1	330
1.1/2" x 1.1/4"	48.3	42.2	64	14" x 6"	355.6	168.3	330
1.1/2 x 1"	48.3	33.4	64	16" x 14"	406.4	355.6	356
1.1/2" x 3/4"	48.3	26.7	64	16" x 12"	406.4	323.8	356
1.1/2" x 1/2"	46.3	21.3	64	16" x 10"	406.4	273.0	356
2" x 1.1/2"	60.3	48.3	76	16" x 8"	406.4	219.1	356
2" x 1.1/4"	60.3	42.2	76	18" x 16"	457.0	406.4	381
2" x 1"	60.3	33.4	76	18" x 14"	457.0	356.6	381
2" x 3/4"	60.3	26.7	76	18" x 12"	457.0	323.8	381
2.1/2" x 2"	73.0	60.3	89	18" x 10"	457.0	273.0	381
2.1/2" x 1.1/2"	73.0	48.3	89	20" x 18"	508.0	457.0	508
2.1/2" x 1.1/4"	73.0	42.2	89	20" x 16"	508.0	406.4	508
2.1/2 x 1"	73.0	33.4	89	20" x 14"	508.0	355.6	508
3" x 2.1/2"	88.9	73.0	89	20" x 12"	508.0	323.8	508
3" x 2"	88.9	60.3	89	22" x 20"	559.0	508.0	508
3" x 1.1/2"	88.9	48.3	89	22" x 18"	559.0	457.0	508
3" x 1.1/4"	88.9	42.2	89	22" x 16"	559.0	406.4	508
3.1/2" x 3"	101.6	88.9	102	22" x 14"	559.0	355.6	508
3.1/2" x 2.1/2"	101.6	73.0	102	24" x 22"	610.0	559.0	508
3.1/2" x 2"	101.6	60.3	102	24" x 20"	610.0	508.0	508
3.1/2" x 1.1/2"	101.6	48.3	102	24" x 18"	610.0	457.0	508
4" x 3.1/2"	114.3	101.6	102	24" x 16"	610.0	406.4	508
4" x 3"	114.3	88.9	102	26" x 24"	660.0	610.0	610
4" x 2.1/2"	114.3	73.0	102	26" x 22"	660.0	559.0	610
4" x 2"	114.3	60.3	102	26" x 20"	660.0	508.0	610
4" x 1.1/2"	114.3	48.3	102	26" x 18"	660.0	457.0	610
5" x 4"	141.3	114.3	127	28" x 26"	711.0	660.0	610
5" x 3.1/2"	141.3	101.6	127	28" x 24"	711.0	610.0	610
5" x 3"	141.3	88.9	127	28" x 20"	711.0	508.0	610
5" x 2.1/2"	141.3	73.0	127	28" x 18"	711.0	457.0	610
5" x 2"	141.3	60.3	127	30" x 28"	762.0	711.0	610
6" x 5"	168.3	141.3	140	30" x 26"	762.0	660.0	610
6" x 4"	168.3	114.3	140	30" x 24"	762.0	610.0	610
6" x 3.1/2"	168.3	101.6	140	30" x 20"	762.0	508.0	610
6" x 3"	168.3	88.9	140	32" x 30"	813.0	762.0	610
6" x 2.1/2"	168.3	73.0	140	32" x 28"	813.0	711.0	610
8" x 6"	219.1	168.3	152	32" x 26"	813.0	660.0	610
8" x 5"	219.1	141.3	152	32" x 24"	813.0	610.0	610
8" x 4"	219.1	114.3	152	34" x 32"	864.0	813.0	610
8" x 3.1/2"	219.1	101.6	152	34" x 30"	864.0	762.0	610
10" x 8"	273.0	219.1	178	34" x 28"	864.0	660.0	610
10" x 6"	273.0	168.3	178	34" x 24"	864.0	610.0	610
10" x 5"	273.0	141.3	178				
10" x 4"	273.0	114.3	178				

Note : All Dimensions are in millimeters (mm)
Dimension for 36" and above on request.

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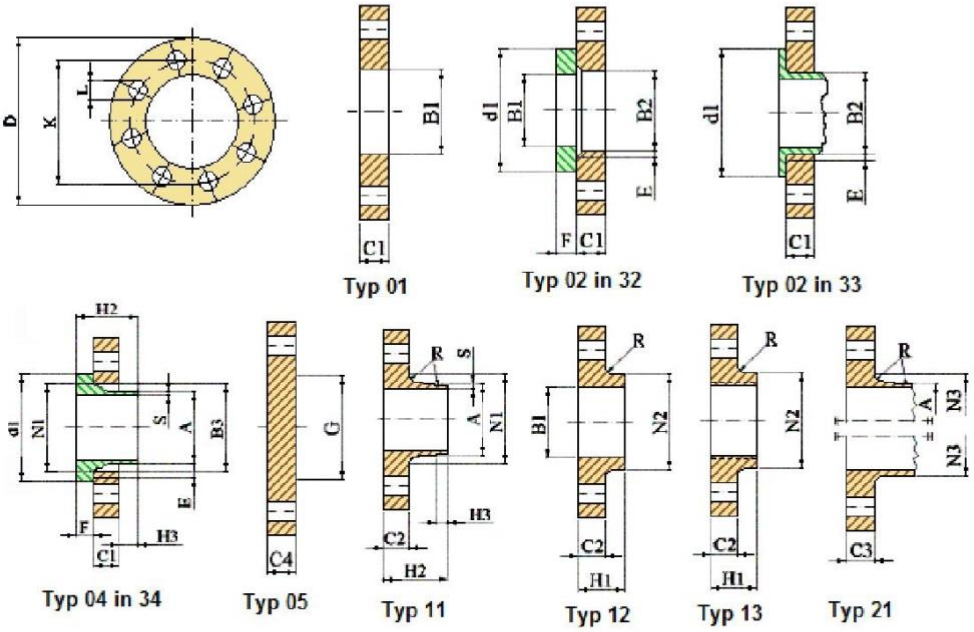
FLANGES

Great Steel & Metals

An ISO 9001:2008 Certified Co

EN 1092-1 PN16 Flanges



Flange type (typ) as in EN 1092-1	
01 (Plate [slip-on] flanges for welding)	13 (Hubbed threaded flanges)
02 (Loose plate flanges with weld-on plate collar)	21 (Integral flanges)
04 (Loose plate flanges with weld-neck collar)	32 (Weld-on plate collars)
05 (Blank [blind] flanges)	33 (Lapped pipe ends)
11 (Weld-neck flanges)	34 (Weld-neck collars)
12 (Hubbed slip-on flanges for welding)	

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EN 1092-1 PN16 Flanges

Nominal diameter DN	Mating dimensions					Outside diameter of neck	Bore diameters			Flange thickness				Chamfer	Collar thickness	Diameter of shoulders	Length			Neck diameters			Corner radius	Neck thickness (preferred value)
	Outside diameter	Diameter of bolt circle	Diameter of bolt hole	Bolting																				
	D	K	L	No	Size	A	B1	B2	B3	C1	C2	C3	C4	E	F	G max.	H1	H2	H3	N1	N2	N3	R	S
	Flange Type																							
	01, 02, 05, 11, 12, 21					11 21* 34	01 12 32	02	04	01 02 04	11 12 13	21	05	02 04	32 34	05	12 13	11 34	11 34	11 34	12 13	21	11 12 13 21	11 34
10 15 20 25 32 40	Use PN 40 dimensions																							
50	165	125	18	4	M16	60,3	61,5	65	77	19	18	18	18	5	16	-	28	45	8	74	84	84	5	2,9
65	185	145	18	**	M16	76,1	77,5	81	96	20	18	18	18	6	16	55	32	45	10	92	104	104	6	2,9
80	200	160	18	8	M16	88,9	90,5	94	108	20	20	20	20	6	16	70	34	50	10	105	118	120	6	3,2
100	220	180	18	8	M16	114,3	116,0	120	134	22	20	20	20	6	18	90	40	52	12	131	140	140	8	3,6
125	250	210	18	8	M16	139,7	141,5	145	162	22	22	22	22	6	18	115	44	55	12	158	168	170	8	4,0
150	285	240	22	8	M20	168,3	170,5	174	188	24	22	22	22	6	20	140	44	55	12	184	195	190	10	4,5
200	340	295	22	12	M20	219,1	221,5	226	240	26	24	24	24	6	20	190	44	62	16	235	246	246	10	5,9
250	405	355	26	12	M24	273,0	276,5	281	294	29	26	26	26	8	22	235	46	70	16	292	298	296	12	6,3
300	460	410	26	12	M24	323,9	327,5	333	348	32	28	28	28	8	24	285	46	78	16	344	350	350	12	7,1
350	520	470	26	16	M24	355,6	359,0	365	400	35	30	30	30	8	26	330	57	82	16	390	400	410	12	8,0
400	580	525	30	16	M27	406,4	411,0	416	454	38	32	32	32	8	28	380	63	85	16	445	456	458	12	8,0
450	640	585	30	20	M27	457,0	462,0	467	500	42	40	40	40	8	30	425	68	87	16	490	502	518	12	8,0
500	715	650	33	20	M30	508,0	513,5	510	556	46	44	44	44	8	32	475	73	90	16	548	559	576	12	8,0
600	840	770	36	20	M33	610,0	616,5	622	660	52	54	54	54	8	32	575	83	95	18	652	658	690	12	8,8
700	910	840	36	24	M33	711,0	-	-	-	-	36	42	48	-	-	670	83	100	18	755	760	760	12	8,8
800	1025	950	39	24	M36	813,0	-	-	-	-	38	42	52	-	-	770	90	105	20	855	864	862	12	10,0
900	1125	1050	39	28	M36	914,0	-	-	-	-	40	44	58	-	-	860	94	110	20	955	968	962	12	10,0
1000	1255	1170	42	28	M39	1016,0	-	-	-	-	42	46	64	-	-	960	100	120	22	1058	1072	1076	16	10,0
1200	1485	1390	48	32	M45	1219,0	-	-	-	-	48	52	76	-	-	1160	-	130	30	1262	-	1282	16	12,5
1400	1685	1590	48	36	M45	1422,0	-	-	-	-	52	58	-	-	-	1346	-	145	30	1465	-	1482	16	14,2
1600	1930	1820	56	40	M52	1626,0	-	-	-	-	58	64	-	-	-	1546	-	160	35	1668	-	1696	16	16,0
1800	2130	2020	56	44	M52	1829,0	-	-	-	-	62	68	-	-	-	1746	-	170	35	1870	-	1896	16	17,5
2000	2345	2230	62	48	M56	2032,0	-	-	-	-	66	70	-	-	-	1950	-	180	40	2072	-	2100	16	20,0

Note 1: Dimensions N1, N2 and N3 are measured at the intersection of the hub draft angle and the back face of the flange.
Note 2: For d1 dimensions see document "Flange Facing Dimensions EN 1092-1".

8.0.OTHERS (SUPPLIER'S PROFILE & PHOTOS)


ASME SA790 UNS S32750 1 1/2"NB X SCH 40 SMLS HT NO.78946
ASME SA790 UNS S32750 1 1/4"NB X SCH 40 SMLS HT NO.64641
ASME SA790 UNS S32750 1"NB X SCH 40 SMLS HT NO.36364
ASME SA790 UNS S32750 3/4"NB X SCH 40 SMLS HT NO.26894

OUR COMPANY PROFILE ATTACHED

9.0.MATERIAL SOURCE DECLARATION JUSTIFICATION (MSD)

ALL THE PRODUCTS ARE MADE IN INDIA WHICH WE HAVE QUOTED CERTIFICATE OF ORIGIN WE CAN ONLY PROVIDE YOU AT THE TIME OF DISPATCH OF MATERIAL.

10.0.MATERIAL SOURCE DECLARATION FORM

Please find attached format and please fill and enclose here

11.0.IDAS APPROVAL (MANDATORY FOR CAPITAL AND INVESTMENT)

Please enclose NOT applicable template

12.0.BOQ

Please find attached BOQ & Please enclose here the same

13.0.OTHER DOCUMENTS

ISO 14001:2015

AQSR

Certificate of Registration

ENVIRONMENT MANAGEMENT SYSTEM

Certificate No - 11409

This is to certify that the Management System of

Great Steel & Metals

New Hira Bldg, 1st Floor, Room No.15,1st Parsiwada, N.D Road, Mumbai-400 004, Maharashtra, India.

has been found to conform to:

ISO 14001:2015

This Certificate is valid for the below scope of services

Manufacturer and Exporter of Duplex, Super Duplex, Nickel Alloy, Stainless Steel, Alloy Steel, Carbon Steel, Pipe Fittings, Flanges, Fasteners & Stockist of Pipes and Plates

Date of Registration 12/03/2018

Re-certification Date 11/03/2021

UNITED STATES ACCREDITATION USAC

Date of Expiry 11/03/2021

Signed on behalf of AQSR

OHSAS 18001:2007

AQSR

Certificate of Registration

OCCUPATIONAL HEALTH & SAFETY MANAGEMENT SYSTEM

Certificate No - 11410

This is to certify that the Management System of

Great Steel & Metals

New Hira Bldg, 1st Floor, Room No.15,1st Parsiwala, N.D Road, Mumbai-400 004, Maharashtra, India.

has been found to conform to:

OHSAS 18001:2007

This Certificate is valid for the below scope of services

Manufacturer and Exporter of Duplex, Super Duplex, Nickel Alloy, Stainless Steel, Alloy Steel, Carbon Steel, Pipe Fittings, Flanges, Fasteners & Stockist of Pipes and Plates

Date of Registration
12/03/2018

Recertification Date
11/03/2021

UNITED STATES ACCREDITATION USAC

Date of Expiry
11/03/2021

Signed on behalf of AQSR

ISO 9001:2015

AQSR

Certificate of Registration

QUALITY MANAGEMENT SYSTEM

Certificate No - 11408

This is to certify that the Management System of

Great Steel & Metals

New Hira Bldg, 1st Floor, Room No.15,1st Pirojwada, N.D Road,
Mumbai-400 004, Maharashtra, India.

has been found to conform to:

ISO 9001:2015

This Certificate is valid for the below scope of services

Manufacturer and Exporter of Duplex, Super Duplex, Nickel Alloy, Stainless Steel, Alloy Steel, Carbon Steel, Pipe Fittings, Flanges, Fasteners & Stockist of Pipes and Plates

Date of Registration
12/03/2018

Re-certification Date
11/03/2021

UNITED STATES ACCREDITATION
USAC

Date of Expiry
11/03/2021

Signed on behalf of AQSR

14.0.MANUFACTURER'S TECHNICAL DATA / ORIGINAL CATALOGUE

CATALOGUE ATTACHED.

15.0.MANUFACTURER'S / SUPPLIER'S GUARANTEE

Please enclose the draft warranty which should include project details, client and contractor's name.

16.0.CONSULTANT'S TECHNICAL EVALUATION REPORT

Keep blank and don't enclose anything here

NOT APPLICABLE

NOT APPLICABLE

NOT APPLICABLE