


Material Take off for Metallic ( Pipe ,Fittings , Flange )

0	Oct 10,2017					
Rev.	Date	Description	ORG.	PRPD.	CHKD	APP,D.


REV. PAGE	0	1	2	3	4	5	REV. PAGE	0	1	2	3	4	5	REV. PAGE	0	1	2	3	4	5
1	X						36							71						
2	X						37							72						
3	X						38							73						
4	X						39							74						
5	X						40							75						
6							41							76						
7							42							77						
8							43							78						
9							44							79						
10							45							80						
11							46							81						
12							47							82						
13							48							83						
14							49							84						
15							50							85						
16							51							86						
17							52							87						
18							53							88						
19							54							89						
20							55							90						
21							56							91						
22							57							92						
23							58							93						
24							59							94						
25							60							95						
26							61							96						
27							62							97						
28							63							98						
29							64							99						
30							65							100						
31							66							101						
32							67							102						
33							68							103						
34							69							104						


MTO FOR PIPE				
MARK	QTY	SIZE	DESCRIPTION	LENGTH(m)
1	1	1 1/2"	PIPE, SCH 80 API 5L GR.B SMLS, PE ASME B36.10	105
2	1	1"	PIPE, SCH 80 API 5L GR.B SMLS, PE ASME B36.10	75
3	1	3"	PIPE, SCH 40 API-5L GR.B SMLS Hot Dip Galvanized, TE ASME B36.10	320
4	1	1/2"	PIPE, SCH 80 API 5L GR.B SMLS, PE ASME B36.10	5
5	1	10"	PIPE, SCH 20 API 5L GR.B ERW BE ASME B36.10	100
6	1	12"	PIPE, SCH 20 API 5L GR.B ERW BE ASME B36.10	7
7	1	16"	PIPE, SCH 20 API 5L GR.B ERW BE ASME B36.10	20
8	1	2"	PIPE, SCH 40 API 5L GR.B SMLS, BE ASME B36.10	500
9	1	3"	PIPE, SCH 40 API 5L GR.B SMLS, BE ASME B36.10	280
10	1	3/4"	PIPE, SCH 80 API 5L GR.B SMLS, PE ASME B36.10	30
11	1	4"	PIPE, SCH 40 API 5L GR.B SMLS, BE ASME B36.10	90
12	1	6"	PIPE, SCH 40 API 5L GR.B SMLS, BE ASME B36.10	1250
13	1	8"	PIPE, SCH 20 API 5L GR.B ERW BE ASME B36.10	2070

MTO FOR FITTING				
MARK	QTY	SIZE	DESCRIPTION	
1	52	1 1/2"	90 ELL LR, SCH. SAME AS PIPE 3000# SW ASTM A105 ASME B16.11	
2	21	10"	90 ELL LR, Same as pipe ASTM A234 Gr.WPB BW ASME B16.9	
3	2	12"	90 ELL LR, Same as pipe ASTM A234 Gr.WPB BW ASME B16.9	
4	2	16"	90 ELL LR, Same as pipe ASTM A234 Gr.WPB BW ASME B16.9	
5	77	2"	90 ELL LR, Same as pipe ASTM A234 Gr.WPB BW ASME B16.9	
6	42	3"	90 ELL LR, Same as pipe ASTM A234 Gr.WPB BW ASME B16.9	
7	47	4"	90 ELL LR, Same as pipe ASTM A234 Gr.WPB BW ASME B16.9	
8	100	6"	90 ELL LR, Same as pipe ASTM A234 Gr.WPB BW ASME B16.9	
9	107	8"	90 ELL LR, Same as pipe ASTM A234 Gr.WPB BW ASME B16.9	
10	2	10"	45 ELL LR, Same as pipe ASTM A234 Gr.WPB BW ASME B16.9	
11	2	12"	45 ELL LR, Same as pipe ASTM A234 Gr.WPB BW ASME B16.9	
12	6	2"	45 ELL LR, Same as pipe ASTM A234 Gr.WPB BW ASME B16.9	
13	6	3"	45 ELL LR, Same as pipe ASTM A234 Gr.WPB BW ASME B16.9	
14	12	6"	45 ELL LR, Same as pipe ASTM A234 Gr.WPB BW ASME B16.9	
15	11	8"	45 ELL LR, Same as pipe ASTM A234 Gr.WPB BW ASME B16.9	
16	26	1 1/2"	TEE, 3000# SW ASTM A105 SW ASME B16.11	
17	11	10"	TEE, Same as pipe ASTM A234 Gr.WPB BW ASME B16.9	
18	46	2"	TEE, Same as pipe ASTM A234 Gr.WPB BW ASME B16.9	
19	13	3"	TEE, Same as pipe ASTM A234 Gr.WPB BW ASME B16.9	
20	2	4"	TEE, Same as pipe ASTM A234 Gr.WPB BW ASME B16.9	


21	161	6"	TEE, Same as pipe ASTM A234 Gr.WPB BW ASME B16.9
22	58	8"	TEE, Same as pipe ASTM A234 Gr.WPB BW ASME B16.9
23	3	10"x4"	TEE RED, Same as pipe ASTM A234 Gr.WPB BW ASME B16.9
24	16	10"x8"	TEE RED, Same as pipe ASTM A234 Gr.WPB BW ASME B16.9
25	2	16"x12"	TEE RED, Same as pipe ASTM A234 Gr.WPB BW ASME B16.9
26	4	3"x2 1/2"	TEE RED, Same as pipe ASTM A234 Gr.WPB BW ASME B16.9
27	3	3"x2"	TEE RED, Same as pipe ASTM A234 Gr.WPB BW ASME B16.9
28	18	4"x2"	TEE RED, Same as pipe ASTM A234 Gr.WPB BW ASME B16.9
29	15	4"x3"	TEE RED, Same as pipe ASTM A234 Gr.WPB BW ASME B16.9
30	24	6"x2 1/2"	TEE RED, Same as pipe ASTM A234 Gr.WPB BW ASME B16.9
31	16	6"x3"	TEE RED, Same as pipe ASTM A234 Gr.WPB BW ASME B16.9
32	12	6"x4"	TEE RED, Same as pipe ASTM A234 Gr.WPB BW ASME B16.9
33	11	8"x4"	TEE RED, Same as pipe ASTM A234 Gr.WPB BW ASME B16.9
34	100	8"x6"	TEE RED, Same as pipe ASTM A234 Gr.WPB BW ASME B16.9
35	2	10"x8"	RED CONC, Same as pipe ASTM A234 Gr.WPB BW ASME B16.9
36	2	12"x10"	RED CONC, Same as pipe ASTM A234 Gr.WPB BW ASME B16.9
37	26	2"x1 1/2"	RED CONC, Same as pipe ASTM A234 Gr.WPB BW ASME B16.9
38	18	3"x2"	RED CONC, Same as pipe ASTM A234 Gr.WPB BW ASME B16.9
39	8	6"x4"	RED CONC, Same as pipe ASTM A234 Gr.WPB BW ASME B16.9
40	2	8"x6"	RED CONC, Same as pipe ASTM A234 Gr.WPB BW ASME B16.9
41	2	10"x8"	RED ECC, Same as pipe ASTM A234 Gr.WPB BW ASME B16.9
42	8	6"x4"	RED ECC, Same as pipe ASTM A234 Gr.WPB BW ASME B16.9
43	23	1"	90 ELL, 3000# SW ASTM A105 ASME B16.11
44	2	1"x3/4"	TEE RED, 3000# SW ASTM A105 ASME B16.11
45	20	3/4"	CAP, 3000# SW ASTM A105 ASME B16.11
46	2	10"x1 1/2"	Weldolet Same as pipe ASTM A105 BW MSSSP97
47	2	10"x1"	Weldolet Same as pipe ASTM A105 BW MSSSP97
48	9	10"x1/2"	Weldolet Same as pipe ASTM A105 BW MSSSP97
49	14	10"x2"	Weldolet Same as pipe ASTM A105 BW MSSSP97
50	9	10"x3"	Weldolet Same as pipe ASTM A105 BW MSSSP97
51	5	10"x3/4"	Weldolet Same as pipe ASTM A105 BW MSSSP97
52	2	10"x4"	Weldolet Same as pipe ASTM A105 BW MSSSP97
53	2	12"x1/2"	Weldolet Same as pipe ASTM A105 BW MSSSP97
54	2	12"x3/4"	Weldolet Same as pipe ASTM A105 BW MSSSP97
55	2	16"x3"	Weldolet Same as pipe ASTM A105 BW MSSSP97
56	30	2"x3/4"	Weldolet Same as pipe ASTM A105 BW MSSSP97
57	6	3"x1/2"	Weldolet Same as pipe ASTM A105 BW MSSSP97
58	35	3"x3/4"	Weldolet Same as pipe ASTM A105 BW MSSSP97
59	5	4"x3/4"	Weldolet Same as pipe ASTM A105 BW MSSSP97
60	8	6"x1 1/2"	Weldolet Same as pipe ASTM A105 BW MSSSP97
61	1	6"x1"	Weldolet Same as pipe ASTM A105 BW MSSSP97
62	24	6"x1/2"	Weldolet Same as pipe ASTM A105 BW MSSSP97
63	20	6"x2"	Weldolet Same as pipe ASTM A105 BW MSSSP97
64	2	6"x3"	Weldolet Same as pipe ASTM A105 BW MSSSP97
65	21	6"x3/4"	Weldolet Same as pipe ASTM A105 BW MSSSP97
66	21	8"x1"	Weldolet Same as pipe ASTM A105 BW MSSSP97
67	42	8"x3"	Weldolet Same as pipe ASTM A105 BW MSSSP97
68	43	8"x3/4"	Weldolet Same as pipe ASTM A105 BW MSSSP97
69	26	3"	90 ELL LR, 3000# THRD ASTM A105 Hot Dip Galvanized,ASME B16.11
70	5	3"	45 ELL LR, 3000# THRD ASTM A105 Hot Dip Galvanized,ASME B16.11
71	13	3"	TEE, 3000# THRD ASTM A105 Hot Dip Galvanized,ASME B16.11


MTO FOR FLANGE

MARK	QTY	SIZE	DESCRIPTION
1	138	1 1/2"	FLG WELD NECK, 150#RF ASTM A105 ASME B16.5
2	2	1 1/2"	FLG WELD NECK, 300#RF ASTM A105 ASME B16.5
3	43	10"	FLG WELD NECK, 150#RF ASTM A105 ASME B16.5
4	8	12"	FLG WELD NECK, 150#RF ASTM A105 ASME B16.5
5	7	16"	FLG WELD NECK, 150#RF ASTM A105 ASME B16.5
6	56	2 1/2"	FLG WELD NECK, 150#RF ASTM A105 ASME B16.5
7	299	2"	FLG WELD NECK, 150#RF ASTM A105 ASME B16.5
8	233	3"	FLG WELD NECK, 150#RF ASTM A105 ASME B16.5
9	81	4"	FLG WELD NECK, 150#RF ASTM A105 ASME B16.5
10	415	6"	FLG WELD NECK, 150#RF ASTM A105 ASME B16.5
11	267	8"	FLG WELD NECK, 150#RF ASTM A105 ASME B16.5
12	26	1 1/2"	FLG BLIND, 150#RF ASTM A105 ASME B16.5
13	5	10"	FLG BLIND, 150#RF ASTM A105 ASME B16.5
14	1	16"	FLG BLIND, 150#RF ASTM A105 ASME B16.5
15	27	2"	FLG BLIND, 150#RF ASTM A105 ASME B16.5
16	15	3"	FLG BLIND, 150#RF ASTM A105 ASME B16.5
17	13	4"	FLG BLIND, 150#RF ASTM A105 ASME B16.5
18	36	6"	FLG BLIND, 150#RF ASTM A105 ASME B16.5
19	39	8"	FLG BLIND, 150#RF ASTM A105 ASME B16.5
20	2	10"	SPECTACLE BLIND, 150#RF ASTM A51660 ASME B16.48
21	24	6"	SPECTACLE BLIND, 150#RF ASTM A51660 ASME B16.48
22	32	8"	SPECTACLE BLIND, 150#RF ASTM A51660 ASME B16.48
23	31	3"	FLG WELD NECK, 150#RF ASTM A105 Hot Dip Galvanized, THRD ASME B16.5
24	1	3"	FLG BLIND, 150#RF ASTM A105 Hot Dip Galvanized, THRD ASME B16.5
25	2	3"	SPECTACLE BLIND, 150#RF ASTM A51660 Hot Dip Galvanized, ASME B16.48