



**PROJECT: EXPANSION OF 40,000M<sup>3</sup> STORAGE CAPACITY AT PETEC HAI PHONG  
MTO OF PIPE AND FITTINGS FOR PIPING (PROCESS)**



No.	NAME	SPECIFICATION	SIZE 1	SIZE 2	SIZE 3	DESSCRPTION	MATERIAL	UNIT	DES. Q.TY	SPARE	TOTAL	REMARK
1	CAP	1A1	50	50	0	CAP THREADED FEMALE #3000 ASME B16.11 ASTM A234 WCB	A234 GR.WPB	psc	4	20%	5	
2	COUPLING	1A1	15	15	0	FULL COUPLING SCRDR #3000 ASME B16.11 A105N	A105N	psc	1	50%	2	
3	COUPLING	1A1	25	25	0	FULL COUPLING SW #3000 ASME B16.11 A105N	A105N	psc	8	10%	9	
4	ELBOW	1A1	300	300	0	ELBOW 90DEG LR BW SCH20 ASME B16.9 ASTM A234 Gr. WPB	A234 GR.WPB	psc	26	10%	29	
5	ELBOW	1A1	15	15	0	ELBOW 90DEG SW #3000 ASME B16.11 ASTM A105	A105N	psc	4	10%	4	
6	ELBOW	1A1	100	100	0	ELBOW 90DEG LR BW SCH40 ASME B16.9 ASTM A234 Gr. WPB	A234 GR.WPB	psc	62	5%	65	
7	ELBOW	1A1	150	150	0	ELBOW 90DEG LR BW SCH40 ASME B16.9 ASTM A234 Gr. WPB	A234 GR.WPB	psc	89	5%	93	
8	ELBOW	1A1	200	200	0	ELBOW 90DEG LR BW SCH20 ASME B16.9 ASTM A234 Gr. WPB	A234 GR.WPB	psc	58	10%	64	
9	ELBOW	1A1	250	250	0	ELBOW 90DEG LR BW SCH20 ASME B16.9 ASTM A234 Gr. WPB	A234 GR.WPB	psc	15	10%	17	
10	ELBOW	1A1	20	20	0	ELBOW 90DEG SW #3000 ASME B16.11 ASTM A105	A105N	psc	4	10%	4	
11	ELBOW	1A1	300	300	0	ELBOW 45DEG LR BW SCH20 ASME B16.9 ASTM A234 Gr. WPB	A234 GR.WPB	psc	20	10%	22	
12	ELBOW	1A1	100	100	0	ELBOW 45DEG LR BW SCH40 ASME B16.9 ASTM A234 Gr. WPB	A234 GR.WPB	psc	22	10%	24	
13	ELBOW	1A1	25	25	0	ELBOW 90DEG SW #3000 ASME B16.11 ASTM A105	A105	psc	28	10%	31	
14	ELBOW	1A1	150	150	0	ELBOW 45DEG LR BW SCH40 ASME B16.9 ASTM A234 Gr. WPB	A234 GR.WPB	psc	7	10%	8	
15	ELBOW	1A1	200	200	0	ELBOW 45DEG LR BW SCH20 ASME B16.9 ASTM A234 Gr. WPB	A234 GR.WPB	psc	22	10%	24	
16	ELBOW	1A1	250	250	0	ELBOW 45DEG LR BW SCH20 ASME B16.9 ASTM A234 Gr. WPB	A234 GR.WPB	psc	2	10%	2	
17	ELBOW	1A1	50	50	0	ELBOW 90DEG LR BW SCH40 ASME B16.9 ASTM A234 Gr. WPB	A234 GR.WPB	psc	9	10%	10	
18	ELBOW	1A1	80	80	0	ELBOW 90DEG LR BW SCH40 ASME B16.9 ASTM A234 Gr. WPB	A234 GR.WPB	psc	12	10%	13	
19	BLIND FLANGE	1A1	300	300	0	BLIND FLANGE #150 RF ASME B16.5 ASTM A105N	A105N	psc	12	10%	13	
20	BLIND FLANGE	1A1	80	80	0	BLIND FLANGE #150 RF ASME B16.5 ASTM A105N	A105N	psc	1	10%	1	
21	BLIND FLANGE	1A1	100	100	0	BLIND FLANGE #150 RF ASME B16.5 ASTM A105N	A105N	psc	17	10%	19	
22	BLIND FLANGE	1A1	150	150	0	BLIND FLANGE #150 RF ASME B16.5 ASTM A105N	A105N	psc	20	10%	22	
23	BLIND FLANGE	1A1	200	200	0	BLIND FLANGE #150 RF ASME B16.5 ASTM A105N	A105N	psc	43	5%	45	
24	BLIND FLANGE	1A1	250	250	0	BLIND FLANGE #150 RF ASME B16.5 ASTM A105N	A105N	psc	6	20%	7	
25	FLANGE	1A1	300	300	0	FLANGE SO-RF #150 ASME B16.5 ASTM A105N	A105N	psc	24	10%	26	
26	FLANGE	1A1	20	20	0	FLANGE SW-RF #150 ASME B16.5 ASTM A105N	A105N	psc	4	20%	5	
27	FLANGE	1A1	25	25	0	FLANGE SW-RF #150 ASME B16.5 ASTM A105	A105N	psc	12	10%	13	
28	FLANGE	1A1	50	50	0	FLANGE SO-RF #150 ASME B16.5 ASTM A105N	A105N	psc	20	10%	22	
29	FLANGE	1A1	80	80	0	FLANGE SO-RF #150 ASME B16.5 ASTM A105N	A105N	psc	5	10%	6	
30	FLANGE	1A1	100	100	0	FLANGE SO-RF #150 ASME B16.5 ASTM A105N	A105N	psc	74	10%	81	
31	FLANGE	1A1	150	150	0	FLANGE SO-RF #150 ASME B16.5 ASTM A105N	A105N	psc	64	10%	70	
32	FLANGE	1A1	200	200	0	FLANGE SO-RF #150 ASME B16.5 ASTM A105N	A105N	psc	153	5%	161	
33	FLANGE	1A1	250	250	0	FLANGE SO-RF #150 ASME B16.5 ASTM A105N	A105N	psc	44	10%	48	
34	WELDOLET	1A1	150	150	50	WELDOLET BW SCH40 MSS-SP-97, ASTM A234 WPB	A234 GR.WPB	psc	8	10%	9	
35	WELDOLET	1A1	200	200	80	WELDOLET BW SCH40 MSS-SP-97, ASTM A234 WPB	A234 GR.WPB	psc	4	10%	4	
36	WELDOLET	1A1	300	300	100	WELDOLET BW SCH40 MSS-SP-97, ASTM A234 WPB	A234 GR.WPB	psc	1	10%	1	
37	WELDOLET	1A1	200	200	50	WELDOLET BW SCH40 MSS-SP-97, ASTM A234 WPB	A234 GR.WPB	psc	4	10%	4	
38	SOCKOLET	1A1	300	300	15	SOCKOLET SW #3000 MSS-SP-97, A105N	A234 GR.WPB	psc	1	10%	1	
39	SOCKOLET	1A1	100	100	15	SOCKOLET SW #3000 MSS-SP-97, A105N	A105N	psc	16	10%	18	



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MTO OF PIPE AND FITTINGS FOR PIPING (PROCESS)**



No.	NAME	SPECIFICATION	SIZE 1	SIZE 2	SIZE 3	DESSCRIPTION	MATERIAL	UNIT	DES. Q.TY	SPARE	TOTAL	REMARK
40	SOCKOLET	1A1	100	100	25	SOCKOLET SW #3000 MSS-SP-97, A105N	A105N	psc	4	10%	4	
41	SOCKOLET	1A1	150	150	15	SOCKOLET SW #3000 MSS-SP-97, A105N	A105N	psc	7	10%	8	
42	SOCKOLET	1A1	200	200	15	SOCKOLET SW #3000 MSS-SP-97, A105N	A105N	psc	6	10%	7	
43	SOCKOLET	1A1	200	200	20	SOCKOLET SW #3000 MSS-SP-97, A105N	A105N	psc	4	10%	4	
44	SOCKOLET	1A1	250	250	20	SOCKOLET SW #3000 MSS-SP-97, A105N	A105N	psc	4	10%	4	
45	REDUCER	1A1	150	65	0	CONCENTRIC REDUCER BW SCH40 ASME B16.9 ASTM A234 WBP	A234 GR.WPB	psc	3	20%	4	
46	REDUCER	1A1	200	125	0	CONCENTRIC REDUCER BW SCH20 ASME B16.9 ASTM A234 WBP	A234 GR.WPB	psc	1	50%	2	
47	REDUCER	1A1	300	150	0	ECCENTRIC REDUCER SMLS BW SCH20 ASME B16.9 ASTM A234 Gr. WPB	A234 GR.WPB	psc	1	0%	1	
48	REDUCER	1A1	200	100	0	ECCENTRIC REDUCER SMLS BW SCH40 ASME B16.9 ASTM A234 Gr. WPB	A234 GR.WPB	psc	3	20%	4	
49	REDUCER	1A1	200	150	0	ECCENTRIC REDUCER SMLS BW SCH40 ASME B16.9 ASTM A234 Gr. WPB	A234 GR.WPB	psc	1	50%	2	
50	R-TEE	1A1	300	300	150	REDUCING TEE SMLS BW SCH20 ASME B16.9 ASTM A234 Gr. WPB	A234 GR.WPB	psc	1	50%	2	
51	R-TEE	1A1	300	300	200	REDUCING TEE SMLS BW SCH20 ASME B16.9 ASTM A234 Gr. WPB	A234 GR.WPB	psc	32	10%	35	
52	R-TEE	1A1	300	300	250	REDUCING TEE SMLS BW SCH20 ASME B16.9 ASTM A234 Gr. WPB	A234 GR.WPB	psc	12	10%	13	
53	E-TEE	1A1	300	300	300	TEE SMLS BW SCH20 ASME B16.9 ASTM A234 Gr. WPB	A234 GR.WPB	psc	9	10%	10	
54	E-TEE	1A1	20	20	20	TEE SW #3000 ASME B16.11 ASTM A105N	A105N	psc	4	30%	5	
55	R-TEE	1A1	100	100	50	REDUCING TEE SMLS BW SCH40 ASME B16.9 ASTM A234 Gr. WPB	A234 GR.WPB	psc	4	20%	5	
56	R-TEE	1A1	100	100	80	REDUCING TEE SMLS BW SCH40 ASME B16.9 ASTM A234 Gr. WPB	A234 GR.WPB	psc	1	50%	2	
57	E-TEE	1A1	100	100	100	TEE SMLS BW SCH40 ASME B16.9 ASTM A234 Gr. WPB	A234 GR.WPB	psc	20	10%	22	
58	R-TEE	1A1	150	150	100	REDUCING TEE SMLS BW SCH40 ASME B16.9 ASTM A234 Gr. WPB	A234 GR.WPB	psc	4	20%	5	
59	E-TEE	1A1	150	150	150	TEE SMLS BW SCH40 ASME B16.9 ASTM A234 Gr. WPB	A234 GR.WPB	psc	20	10%	22	
60	R-TEE	1A1	200	200	100	REDUCING TEE SMLS BW SCH20 ASME B16.9 ASTM A234 Gr. WPB	A234 GR.WPB	psc	2	30%	3	
61	R-TEE	1A1	200	200	150	REDUCING TEE SMLS BW SCH20 ASME B16.9 ASTM A234 Gr. WPB	A234 GR.WPB	psc	5	10%	6	
62	E-TEE	1A1	200	200	200	TEE SMLS BW SCH20 ASME B16.9 ASTM A234 Gr. WPB	A234 GR.WPB	psc	52	5%	55	
63	R-TEE	1A1	250	250	100	REDUCING TEE SMLS BW SCH20 ASME B16.9 ASTM A234 Gr. WPB	A234 GR.WPB	psc	4	10%	4	
64	E-TEE	1A1	250	250	250	TEE SMLS BW SCH20 ASME B16.9 ASTM A234 Gr. WPB	A234 GR.WPB	psc	12	10%	13	
65	PIPE	1A1	15	0	0	PIPE SMLS PE SCH80 ASME B36.10 ASTM A106 GR.B	A106 GR.B	m	4	10%	4	
66	PIPE	1A1	100	0	0	PIPE SMLS BE SCH40 ASME B36.10M ASTM A106 GR.B	A106 GR.B	m	427	23	450	
67	PIPE	1A1	300	0	0	PIPE SMLS BE SCH20 ASME B36.10M ASTM A106 GR.B	A106 GR.B	m	899	49	948	
68	PIPE	1A1	150	0	0	PIPE SMLS BE SCH40 ASME B36.10M ASTM A106 GR.B	A106 GR.B	m	558	30	588	
69	PIPE	1A1	200	0	0	PIPE SMLS BE SCH20 ASME B36.10M ASTM A106 GR.B	A106 GR.B	m	585	33	618	
70	PIPE	1A1	250	0	0	PIPE SMLS BE SCH20 ASME B36.10M ASTM A106 GR.B	A106 GR.B	m	91	5	96	
71	PIPE	1A1	20	0	0	PIPE SMLS PE SCH80 ASME B36.10 ASTM A106 GR.B	A106 GR.B	m	10	2	12	
72	PIPE	1A1	25	0	0	PIPE SMLS PE SCH80 ASME B36.10 ASTM A106 GR.B	A106 GR.B	m	82	8	90	
73	PIPE	1A1	50	0	0	PIPE SMLS BE SCH40 ASME B36.10M ASTM A106 GR.B	A106 GR.B	m	17	1	18	
74	PIPE	1A1	80	0	0	PIPE SMLS BE SCH40 ASME B36.10M ASTM A106 GR.B	A106 GR.B	m	14	4	18	



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MTO OF PIPE AND FITTINGS FOR PIPING (FIRE FIGHTING)**



No.	NAME	SPECIFICATION	SIZE 1	SIZE 2	SIZE 3	DESSCRPTION	MATERIAL	UNIT	DES. Q.TY	SPARE	TOTAL	REMARK
1	ELBOW	1A2	300	300	0	ELBOW 90DEG LR BW SCH20 ASME B16.9 ASTM A234 Gr. WPB	A234 GR.WPB	psc	4	20%	5	
2	ELBOW	1A2	15	15	0	ELBOW 90DEG SW #3000 ASME B16.11 ASTM A105N	A105N	psc	10	10%	11	
3	ELBOW	1A2	100	100	0	ELBOW 90DEG LR BW SCH40 ASME B16.9 ASTM A234 Gr. WPB	A234 GR.WPB	psc	122	5%	128	
4	ELBOW	1A2	150	150	0	ELBOW 90DEG LR BW SCH40 ASME B16.9 ASTM A234 Gr. WPB	A234 GR.WPB	psc	25	10%	28	
5	ELBOW	1A2	200	200	0	ELBOW 90DEG LR BW SCH20 ASME B16.9 ASTM A234 Gr. WPB	A234 GR.WPB	psc	45	10%	50	
6	ELBOW	1A2	250	250	0	ELBOW 90DEG LR BW SCH20 ASME B16.9 ASTM A234 Gr. WPB	A234 GR.WPB	psc	4	20%	5	
7	ELBOW	1A2	300	300	0	ELBOW 45DEG LR BW SCH20 ASME B16.9 ASTM A234 Gr. WPB	A234 GR.WPB	psc	1	50%	2	
8	ELBOW	1A2	100	100	0	ELBOW 45DEG LR BW SCH40 ASME B16.9 ASTM A234 Gr. WPB	A234 GR.WPB	psc	60	10%	66	
9	ELBOW	1A2	25	25	0	ELBOW 90DEG SW #3000 ASME B16.11 ASTM A105N	A105N	psc	9	10%	10	
10	ELBOW	1A2	150	150	0	ELBOW 45DEG LR BW SCH40 ASME B16.9 ASTM A234 Gr. WPB	A234 GR.WPB	psc	5	10%	6	
11	ELBOW	1A2	200	200	0	ELBOW 45DEG LR BW SCH20 ASME B16.9 ASTM A234 Gr. WPB	A234 GR.WPB	psc	9	10%	10	
12	ELBOW	1A2	50	50	0	ELBOW 90DEG LR BW SCH40 ASME B16.9 ASTM A234 Gr. WPB	A234 GR.WPB	psc	1	50%	2	
13	ELBOW	1A2	80	80	0	ELBOW 90DEG LR BW SCH40 ASME B16.9 ASTM A234 Gr. WPB	A234 GR.WPB	psc	13	10%	14	
14	BLIND FLANGE	1A2	300	300	0	BLIND FLANGE #150 RF ASME B16.5 ASTM A105N	A105N	psc	1	0%	1	
15	BLIND FLANGE	1A2	200	200	0	BLIND FLANGE #150 RF ASME B16.5 ASTM A105N	A105N	psc	2	0%	2	
16	FLANGE	1A2	300	300	0	FLANGE SO-RF #150 ASME B16.5 ASTM A105N	A105N	psc	4	20%	5	
17	FLANGE	1A2	15	15	0	FLANGE SW-RF #150 ASME B16.5 ASTM A105N	A105N	psc	3	20%	4	
18	FLANGE	1A2	25	25	0	FLANGE SW-RF #150 ASME B16.5 ASTM A105N	A105N	psc	1	50%	2	
19	FLANGE	1A2	50	50	0	FLANGE SO-RF #150 ASME B16.5 ASTM A105N	A105N	psc	1	50%	2	
20	FLANGE	1A2	80	80	0	FLANGE SO-RF #150 ASME B16.5 ASTM A105N	A105N	psc	16	10%	18	
21	FLANGE	1A2	100	100	0	FLANGE SO-RF #150 ASME B16.5 ASTM A105N	A105N	psc	96	5%	101	
22	FLANGE	1A2	150	150	0	FLANGE SO-RF #150 ASME B16.5 ASTM A105N	A105N	psc	29	10%	32	
23	FLANGE	1A2	200	200	0	FLANGE SO-RF #150 ASME B16.5 ASTM A105N	A105N	psc	55	5%	58	
24	FLANGE	1A2	250	250	0	FLANGE SO-RF #150 ASME B16.5 ASTM A105N	A105N	psc	8	10%	9	
25	WELDOLET	1A2	200	200	80	WELDOLET BW SCH40 MSS-SP-97, ASTM A234 WPB	A234 GR.WPB	psc	2	30%	3	
26	WELDOLET	1A2	250	250	80	WELDOLET BW SCH40 MSS-SP-97, ASTM A234 WPB	A234 GR.WPB	psc	2	30%	3	
27	WELDOLET	1A2	300	300	100	WELDOLET BW SCH40 MSS-SP-97, ASTM A234 WPB	A234 GR.WPB	psc	1	50%	2	
28	SOCKOLET	1A2	80	80	25	SOCKOLET SW #3000 MSS-SP-97, A105N	A105N	psc	1	50%	2	
29	SOCKOLET	1A2	100	100	15	SOCKOLET SW #3000 MSS-SP-97, A105N	A105N	psc	2	30%	3	
30	SOCKOLET	1A2	100	100	25	SOCKOLET SW #3000 MSS-SP-97, A105N	A105N	psc	1	50%	2	
31	SOCKOLET	1A2	200	200	15	SOCKOLET SW #3000 MSS-SP-97, A105N	A105N	psc	10	10%	11	
32	SOCKOLET	1A2	250	250	15	SOCKOLET SW #3000 MSS-SP-97, A105N	A105N	psc	4	30%	5	
33	SOCKOLET	1A2	80	80	15	SOCKOLET SW #3000 MSS-SP-97, A105N	A105N	psc	2	30%	3	
34	REDUCER	1A2	200	125	0	CONCENTRIC REDUCER BW SCH40 ASME B16.9 ASTM A234 WBP	A234 GR.WPB	psc	2	30%	3	
35	REDUCER	1A2	50	25	0	CONCENTRIC REDUCER BW SCH40 ASME B16.9 ASTM A234 WBP	A234 GR.WPB	psc	1	50%	2	
36	REDUCER	1A2	100	50	0	ECCENTRIC REDUCER SMLS BW SCH40 ASME B16.9 ASTM A234 Gr. WPB	A234 GR.WPB	psc	1	50%	2	
37	REDUCER	1A2	150	80	0	ECCENTRIC REDUCER SMLS BW SCH40 ASME B16.9 ASTM A234 Gr. WPB	A234 GR.WPB	psc	1	50%	2	



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MTO OF PIPE AND FITTINGS FOR PIPING (FIRE FIGHTING)**



No.	NAME	SPECIFICATION	SIZE 1	SIZE 2	SIZE 3	DESSCRIPTION	MATERIAL	UNIT	DES. Q.TY	SPARE	TOTAL	REMARK
38	REDUCER	1A2	200	150	0	ECCENTRIC REDUCER SMLS BW SCH40 ASME B16.9 ASTM A234 Gr. WPB	A234 GR.WPB	psc	1	50%	2	
39	REDUCER	1A2	250	100	0	ECCENTRIC REDUCER SMLS BW SCH40 ASME B16.9 ASTM A234 Gr. WPB	A234 GR.WPB	psc	2	0%	2	
40	REDUCER	1A2	250	150	0	ECCENTRIC REDUCER SMLS BW SCH40 ASME B16.9 ASTM A234 Gr. WPB	A234 GR.WPB	psc	2	0%	2	
41	REDUCER	1A2	25	15	0	CONCENTRIC REDUCER SW #3000 ASME B16.11 A105N	A105N	psc	1	50%	2	
42	REDUCER	1A2	80	40	0	CONCENTRIC REDUCER BW SCH40 ASME B16.9 ASTM A234 WBP	A234 GR.WPB	psc	4	20%	5	
43	REDUCER	1A2	80	50	0	CONCENTRIC REDUCER BW SCH40 ASME B16.9 ASTM A234 WBP	A234 GR.WPB	psc	1	50%	2	
44	REDUCER	1A2	150	80	0	CONCENTRIC REDUCER BW SCH40 ASME B16.9 ASTM A234 WBP	A234 GR.WPB	psc	2	50%	3	
45	REDUCER	1A2	200	150	0	CONCENTRIC REDUCER BW SCH40 ASME B16.9 ASTM A234 WBP	A234 GR.WPB	psc	2	50%	3	
46	REDUCER	1A2	40	25	0	CONCENTRIC REDUCER SW #3000 ASME B16.11 A105	A234 GR.WPB	psc	2	30%	3	
47	R-TEE	1A2	300	300	250	REDUCING TEE SMLS BW SCH20 ASME B16.9 ASTM A234 Gr. WPB	A234 GR.WPB	psc	4	0%	4	
48	E-TEE	1A2	300	300	300	TEE SMLS BW SCH20 ASME B16.9 ASTM A234 Gr. WPB	A234 GR.WPB	psc	1	0%	1	
49	E-TEE	1A2	25	25	25	TEE SW #3000 ASME B16.11 ASTM A105N	A105N	psc	1	50%	2	
50	R-TEE	1A2	25	25	15	REDUCING TEE SW #3000 ASME B16.11 ASTM A105N	A105N	psc	1	10%	1	
51	E-TEE	1A2	80	80	80	TEE SMLS BW SCH40 ASME B16.9 ASTM A234 Gr. WPB	A234 GR.WPB	psc	3	30%	4	
52	R-TEE	1A2	100	100	50	REDUCING TEE SMLS BW SCH40 ASME B16.9 ASTM A234 Gr. WPB	A234 GR.WPB	psc	1	50%	2	
53	E-TEE	1A2	100	100	100	TEE SMLS BW SCH40 ASME B16.9 ASTM A234 Gr. WPB	A234 GR.WPB	psc	1	50%	2	
54	R-TEE	1A2	150	150	100	REDUCING TEE SMLS BW SCH40 ASME B16.9 ASTM A234 Gr. WPB	A234 GR.WPB	psc	21	10%	23	
55	E-TEE	1A2	150	150	150	TEE SMLS BW SCH40 ASME B16.9 ASTM A234 Gr. WPB	A234 GR.WPB	psc	1	50%	2	
56	R-TEE	1A2	200	200	100	REDUCING TEE SMLS BW SCH20 ASME B16.9 ASTM A234 Gr. WPB	A234 GR.WPB	psc	27	10%	30	
57	R-TEE	1A2	200	200	150	REDUCING TEE SMLS BW SCH20 ASME B16.9 ASTM A234 Gr. WPB	A234 GR.WPB	psc	1	50%	2	
58	E-TEE	1A2	200	200	200	TEE SMLS BW SCH20 ASME B16.9 ASTM A234 Gr. WPB	A234 GR.WPB	psc	11	10%	12	
59	R-TEE	1A2	250	250	150	REDUCING TEE SMLS BW SCH20 ASME B16.9 ASTM A234 Gr. WPB	A234 GR.WPB	psc	4	20%	5	
60	PIPE	1A2	15	0	0	PIPE SMLS PE SCH80 ASME B36.10 ASTM A53 GR.B	A53 GR.B	m	11	10%	12	
61	PIPE	1A2	100	0	0	PIPE SMLS BE SCH40 ASME B36.10M ASTM A53 GR.B	A53 GR.B	m	1367	37	1404	
62	PIPE	1A2	300	0	0	PIPE SMLS BE SCH20 ASME B36.10M ASTM A53 GR.B	A53 GR.B	m	34	5%	36	
63	PIPE	1A2	150	0	0	PIPE SMLS BE SCH40 ASME B36.10M ASTM A53 GR.B	A53 GR.B	m	441	27	468	
64	PIPE	1A2	200	0	0	PIPE SMLS BE SCH20 ASME B36.10M ASTM A53 GR.B	A53 GR.B	m	742	38	780	
65	PIPE	1A2	250	0	0	PIPE SMLS BE SCH20 ASME B36.10M ASTM A53 GR.B	A53 GR.B	m	18	6	24	
66	PIPE	1A2	25	0	0	PIPE SMLS PE SCH80 ASME B36.10 ASTM A53 GR.B	A53 GR.B	m	16	2	18	
67	PIPE	1A2	40	0	0	PIPE SMLS PE SCH80 ASME B36.10 ASTM A53 GR.B	A53 GR.B	m	1	5	6	
68	PIPE	1A2	50	0	0	PIPE SMLS BE SCH40 ASME B36.10M ASTM A53 GR.B	A53 GR.B	m	1	5	6	
69	PIPE	1A2	80	0	0	PIPE SMLS BE SCH40 ASME B36.10M ASTM A53 GR.B	A53 GR.B	m	17	1	18	
70	UNION	1A2	15	15	0	FEMALE THREAD UNION BY MFR	STAINLESS	psc	2	0%	2	
71	UNION	1A2	40	40	0	FEMALE THREAD UNION BY MFR	STAINLESS	psc	2	0%	2	