Quality		Chemical Analysis										Mechanical Properties			Special Requirement
SMLS	ERW	Specification	WT	C%	Mn%	P% Max	S% Max	Si%	Cr%	MO%	Ni%	Tensile Strength Mpa	Yield Stress Mpa	Elongation in 50 mm min Longitudinal	
Alloy Steel Pipes / Tubes Conform in various specifications as listed below															
*	---	ASTMA335/P1	AW	0.10-0.20	0.30-0.80	0.025	0.025	0.10-0.50	----	0.44-0.65		380Min	205Min	30	----
*	---	ASTMA335/P2	AW	0.10-0.20	0.30-0.61	0.025	0.025	0.10-0.30	0.50-0.81	0.44-0.65		380Min	205Min	30	----
*	---	ASTMA335/P5	AW	0.15 Max	0.30-0.60	0.025	0.025	0.50 Max	4.00-6.00	0.44-0.65		415Min	205Min	30	-----
*	--	ASTMA335/P9	AW	0.15 Max	0.30-0.60	0.030	0.030	0.25-1.00	8.00-10.00	0.90-1.10		415Min	172 Min	30/22	-----
*	---	ASTMA335/P11	AW	0.15 Max	0.30-0.60	0.025	0.025	0.50-1.00	1.00-1.50	0.44-0.65		415Min	205Min	30	-------
*	---	ASTMA335/P12	AW	0.15 Max	0.30-0.61	0.025	0.025	0.50 Max	0.80-1.25	0.44-0.65		415Min	205Min	30	-------
*	--	ASTMA335/P22	AW	0.15 Max	0.30-0.61	0.025	0.025	0.50 Max	1.90-2.60	0.87-1.13		415Min	205Min	30	--------
*	--	ASTMA213/T2	MW	0.10-0.20	0.30-.61	0.045	0.045	0.10-0.30	0.50-0.81	0.44-0.65		415Min	205Min	30/22	Hardness 85HRB Max
*	---	ASTMA213/T5	MW	0.15 Max	0.30-0.60	0.030	0.030	0.50Max	4.00-6.00	0.44-0.65		415Min	205Min	30/22	Hardness 85HRB Max
*	---	ASTMA213/T9	MW	0.15 Max	0.30-0.60	0.030	0.030	0.25-1.00	8.00-10.00	0.90-1.10		415Min	170Min	30/22	Hardness 89HRB Max
*	---	ASTMA213/T11	MW	0.15 Max	0.30-0.60	0.030	0.030	0.50-1.00	1.00-1.50	0.44-0.65		415Min	205Min	30/22	Hardness 85HRB Max
*	---	ASTMA213/T12	MW	0.15 Max	0.30-0.61	0.045	0.045	0.50Max	0.80-1.25	0.44-0.65		415Min	205Min	30/22	Hardness 85HRB Max
*	---	ASTMA213/T22	MW	0.15 Max	0.30-0.60	0.030	0.030	0.50Max	1.90-2.60	0.87-1.13		415Min	205Min	30/22	Hardness 85HRB Max
*	---	DIN/17175/13CrMO44		0.10-0.18	0.40-0.70	0.040	0.040	0.10-0.35	0.70-1.00	0.40-0.50		441-570	294 Min	22	AL max 0.020
*	---	DIN/17175/10CrMO 910		0.15 Max	0.40-0.60	0.040	0.040	0.15-0.50	2.0-2.5	0.90-1.10		441-570	294 Min	22	-----
*	---	DIN/17175/15 MO3		0.12-0.20	0.40-0.80	0.040	0.040	0.10-0.35	------	0.25-0.35		441-540	284 Min	21	-----
*	---	ASTM A209/T1	MW	0.10-0.20	0.30-0.80	0.045	0.045	0.15-0.50	----	0.44-0.65		380 Min	205 Min	30/22	Hardness 80HRB Max
*	---	ASTM A209/Ta	MW	0.15-0.25	0.30-0.80	0.045	0.045	0.15-0.50	--	0.44-0.65		365 Min	195 Min	30/22	Hardness 81HRB Max

*	---	ASTM A209/T1B	MW	0.14 Max	0.30-0.80	0.045	0.045	0.15-0.50	---	0.44-0.65		415 Min	220 Min	30/22	Hardness 77HRB Max	
Low Temperature Service Fitting Conform To ASTM/420 Imp. Test At (-)°																
*	---	WPL 6		.30 Max	.39-1.06	0.030	0.030	.1 Min	----	---	---	415-585	240 Min	22-30	-50°F10x10J17.6	
*	---	WPL 9		.20 Max	.40-1.06	0.030	0.030	----	---	---	1.6-2.24	435-610	315 Min	22-28	-100°F10x10J17.6	
*	---	WPL 3		.20 Max	.31-.64	0.050	0.050	.13-.37	----	----	3.1-3.82	450-620	240 Min	22-30	-150°F10x10J17.6	
*	---	WPL 8		.13 Max	.90 Max	0.030	0.030	.13-.37	---	-----	8.4-9.6	690-865	515 Min	16-20	-320°F10x10J33.9	
High Temperature Service fitting Conform To ASTM / 234													Class	Tensile	Yeild	
*	--	WPB		0.30 Max	0.29-1.06	0.050	0.050	.10 Min	---	--	--	415 Min	240 Min	22-38		
*	--	WPC		0.35 Max	0.29-1.06	0.050	0.050	.10 Min	----	---	---	485 Min	275 Min	22-30		
*	--	WPB1		0.28 Max	0.30-0.90	0.045	0.045	.10-.50	---	44-0.65		380 Min	205 Min	22-30		
*	--	WP12CL11/C12*		0.20 Max	0.30-0.80	0.045	0.045	.60 Max	.80-1.25	44-0.65		415 Min	205 Min	22-30	C12*	485 Min	275 Min
*	--	WP11CL12/C13*		0.20 Max	0.30-0.80	0.040	0.040	.50-1.00	1.0-1.5	44-0.65		485 Min	275 Min	22-30	C13*	515 Min	310 Min
*	--	WP11b		0.15 Max	0.30-0.60	0.030	0.030	.50-1.00	1.0-1.5	44-0.65		415 Min	205 Min	22-30			
*	--	WP22CL1/CL3		0.15 Max	0.30-0.60	0.040	0.040	.50 Max	1.9-2.6	.87-1.13		415 Min	205 Min	22-30	C13*	515 Min	310 Min
*	--	WP 5		0.15 Max	0.30-0.60	0.040	0.030	.50 Max	4.0-6.0	.44-0.65		415 Min	205 Min	22-30			
*	--	WP 9		0.15 Max	0.30-0.60	0.030	0.030	.25-1.00	8.0-10	.90-1.11		415 Min	205 Min	22-30			