

				MINIMUM YIELD STRENGTH, KSI																
				55	65	75	80	80	90	95	95	95	110	110	125	135	140	150	155	
				MINIMUM TENSILE STRENGTH, KSI																
				95	80	95	95	100	100	105	105	110	120	125	135	145	150	160	165	
DIA	WEIGHT		WALL	GRADE																
	WN	WPE		K-55	M-65	75	L-80	N-80	C-90	C-95	T-95	HC-95	C-110	P-110	Q-125	135	140	V-150	155	
4.500	9.50	9.41	0.205																	
	2.766 A	COLLAPSE PRESSURE			3310	3600	3810	3900	3900	4080	4200	4200	0	4500	4500	4720	4820	4840	4870	
	4.090 ID	BODY YIELD STRENGTH			152	180	207	221	221	249	263	263	263	304	304	346	373	387	415	
	3.965 DO	API INTERNAL PRESSURE			4380	5180	5980	6380	6380	7180	7570	7570	7570	8770	8770	9970	10760	11160	11960	
			SD	TEST PRESS 80%			4000	4700	5500	5800	5800	6600	6900	6900	6900	8000	8000	9100	10900	
4.500	10.50	10.24	0.224																	
	3.009 A	COLLAPSE PRESSURE			4010	4430	4780	4940	4940	5200	5310	5310	0	5560	5560	5830	6030	6110	6240	
	4.052 ID	BODY YIELD STRENGTH			185	196	226	241	241	271	286	286	286	331	331	376	406	421	451	
	3.927 DO	API INTERNAL PRESSURE			4790	5660	6530	6970	6970	7840	8280	8280	8280	9580	9580	10890	11760	12200	13070	
			SD	TEST PRESS 80%			4400	5200	6000	6400	6400	7200	7600	7600	7600	8800	8800	10000	11900	
4.500	11.00	10.80	0.237																	
	3.174 A	COLLAPSE PRESSURE			4480	4990	5440	5650	5650	6010	6170	6170	0	6570	6570	6830	6930	6980	7180	
	4.026 ID	BODY YIELD STRENGTH			175	206	238	254	254	286	302	302	302	349	349	397	428	444	476	
	3.901 DO	API INTERNAL PRESSURE			5070	5990	6910	7370	7370	8300	8760	8760	8760	10140	10140	11520	12440	12900	13830	
			SD	TEST PRESS 80%			4600	5500	6300	6700	6700	7600	8000	8000	8000	9300	9300	10500	12600	
4.500	11.60	11.36	0.250																	
	3.336 A	COLLAPSE PRESSURE			4960	5560	6100	6360	6360	6810	7030	7030	8650	7580	7580	8000	8210	8300	8430	
	4.000 ID	BODY YIELD STRENGTH			184	217	250	267	267	300	317	317	317	367	367	417	451	467	501	
	3.875 DO	API INTERNAL PRESSURE			5350	6320	7290	7780	7780	8750	9240	9240	9240	10690	10690	12150	13130	13610	14580	
			SD	TEST PRESS 80%			4900	5800	6700	7100	7100	8000	8400	8400	8400	9800	9800	11100	13000	
4.500	12.60	12.25	0.271																	
	3.600 A	COLLAPSE PRESSURE			5730	6480	7170	7500	7500	8120	8410	8410	0	9210	9210	9890	10280	10450	10770	
	3.958 ID	BODY YIELD STRENGTH			198	234	270	288	288	324	342	342	342	396	396	450	486	504	540	
	3.833 DO	API INTERNAL PRESSURE			5800	6850	7900	8430	8430	9490	10010	10010	10010	11590	11590	13170	14230	14750	15810	
			SD	TEST PRESS 80%			5300	6300	7200	7700	7700	8700	9200	9200	9200	10600	10600	12000	14900	
4.500	13.50	13.05	0.290																	
	3.836 A	COLLAPSE PRESSURE			6420	7310	8140	8540	8540	9300	9660	9660	10380	10690	10690	11600	12150	12400	12880	
	3.920 ID	BODY YIELD STRENGTH			211	249	288	307	307	345	364	364	364	422	422	480	518	537	575	
	3.795 DO	API INTERNAL PRESSURE			6200	7330	8460	9020	9020	10150	10710	10710	10710	12410	12410	14100	15230	15790	16920	
			SD	TEST PRESS 80%			5700	6700	7700	8200	8200	9300	9800	9800	9800	11300	11300	12900	16000	
4.500	15.10	15.00	0.337																	
	4.407 A	COLLAPSE PRESSURE			7620	9010	10390	11080	11080	12220	12760	12760	12330	14340	14340	15830	16770	17220	18110	
	3.826 ID	BODY YIELD STRENGTH			242	286	331	353	353	397	419	419	419	485	485	551	595	617	661	
	3.701 DO	API INTERNAL PRESSURE			7210	8520	9830	10480	10480	11800	12450	12450	12450	14420	14420	16380	17690	18350	19660	
			SD	TEST PRESS 80%			6600	7800	9000	9600	9600	10800	11400	11400	11400	13200	13200	15000	18600	
4.500	16.60	16.54	0.375																	
	4.860 A	COLLAPSE PRESSURE			8400	9930	11460	12220	12220	13750	14510	14510	0	16810	16810	19100	20510	21120	22330	
	3.750 ID	BODY YIELD STRENGTH			267	316	365	389	389	437	462	462	462	535	535	608	656	680	729	
	3.625 DO	API INTERNAL PRESSURE			8020	9480	10940	11670	11670	13130	13850	13850	13850	16040	16040	18230	19690	20420	21880	
			SD	TEST PRESS 80%			7300	8700	10000	10700	10700	12000	12700	12700	12700	14700	14700	16700	20700	
4.500	17.00	16.74	0.380																	
	4.918 A	COLLAPSE PRESSURE			8500	10050	11600	12370	12370	13920	14690	14690	0	17010	17010	19330	20870	21630	22890	
	3.740 ID	BODY YIELD STRENGTH			270	320	369	393	393	443	467	467	467	541	541	615	664	689	738	
	3.615 DO	API INTERNAL PRESSURE			8130	9610	11080	11820	11820	13300	14040	14040	14040	16260	16260	18470	19950	20690	22170	
			SD	TEST PRESS 80%			7400	8800	10100	10800	10800	12200	12800	12800	12800	14900	14900	16900	20900	
4.500	18.80	18.71	0.430																	
	5.498 A	COLLAPSE PRESSURE			9510	11240	12960	13830	13830	15560	16420	16420	0	19010	19010	21610	23330	24200	25930	
	3.640 ID	BODY YIELD STRENGTH			302	357	412	440	440	495	522	522	522	605	605	687	742	770	825	
	3.515 DO	API INTERNAL PRESSURE			9200	10870	12540	13380	13380	15050	15890	15890	15890	18390	18390	20900	22580	23410	25080	
			SD	TEST PRESS 80%			8400	9900	11500	12200	12200	13800	14500	14500	14500	16800	16800	19100	23700	
4.500	21.50	21.38	0.500																	
	6.283 A	COLLAPSE PRESSURE			10660	12840	14810	15800	15800	17780	18770	18770	0	21730	21730	24690	26670	27650	29630	
	3.500 ID	BODY YIELD STRENGTH			346	408	471	503	503	565	597	597	597	691	691	785	848	880	942	
	3.375 DO	API INTERNAL PRESSURE			10690	12640	14580	15560	15560	17500	18470	18470	18470	21390	21390	24310	26250	27220	29170	
			SD	TEST PRESS 80%			9600	11600	13300	14200	14200	16000	16900	16900	16900	19600	19600	22200	27600	

				MINIMUM YIELD STRENGTH, KSI																
				55	65	75	80	80	90	95	95	95	110	110	125	135	140	150	155	
				MINIMUM TENSILE STRENGTH, KSI																
				95	80	95	95	100	100	105	105	110	120	125	135	145	150	160	165	
				GRADE																
DIA	WEIGHT		WALL	K-55	M-65	75	L-80	N-80	C-90	C-95	T-95	HC-95	C-110	P-110	Q-125	135	140	V-150	155	
4.500	23.70	23.59	0.560																	
	6.932 A	COLLAPSE PRESSURE			11990	14160	16340	17430	17430	19610	20700	20700	0	23970	23970	27240	29420	30510	32690	33780
	3.380 ID	BODY YIELD STRENGTH			381	451	520	555	555	624	659	659	659	763	763	867	936	970	1040	1074
	3.255 DO	API INTERNAL PRESSURE			11960	14160	16330	17420	17420	19600	20690	20690	20690	23960	23960	27220	29400	30490	32670	33760
	SD	TEST PRESS 80%			11000	12900	14900	15900	15900	17900	18900	18900	18900	21900	21900	24900	26900	27900	29900	30900
4.500	26.10	26.06	0.630																	
	7.660 A	COLLAPSE PRESSURE			13240	15650	18060	19260	19260	21670	22860	22860	0	26490	26490	30100	32510	33710	36120	37320
	3.240 ID	BODY YIELD STRENGTH			421	498	575	613	613	689	728	728	728	843	843	958	1034	1072	1149	1187
	3.115 DO	API INTERNAL PRESSURE			13480	15930	18380	19600	19600	22050	23260	23260	23260	26950	26950	30630	33080	34300	36750	37980
	SD	TEST PRESS 80%			12300	14600	16800	17900	17900	20200	21300	21300	21300	24600	24600	28000	30200	31400	33600	34700
4.500	27.90	28.00	0.687																	
	8.229 A	COLLAPSE PRESSURE			14230	16820	19400	20700	20700	23280	24580	24580	0	28460	28460	32340	34930	36220	38810	40100
	3.126 ID	BODY YIELD STRENGTH			453	535	617	658	658	741	782	782	782	905	905	1029	1111	1152	1234	1275
	3.001 DO	API INTERNAL PRESSURE			14690	17370	20040	21370	21370	24050	25380	25380	25380	29390	29390	33400	36070	37400	40080	41410
	SD	TEST PRESS 80%			13400	15900	18300	19500	19500	22000	23200	23200	23200	26900	26900	30500	33000	34200	36600	37900
4.500	30.00	30.07	0.750																	
	8.836 A	COLLAPSE PRESSURE			15280	18060	20830	22220	22220	25000	26390	26390	0	30560	30560	34720	37500	38890	41670	43060
	3.000 ID	BODY YIELD STRENGTH			486	574	663	707	707	795	839	839	839	972	972	1105	1193	1237	1325	1370
	2.875 DO	API INTERNAL PRESSURE			16040	18960	21880	23330	23330	26250	27710	27710	27710	32080	32080	36460	39380	40830	43750	45210
	SD	TEST PRESS 80%			14700	17300	20000	21300	21300	24000	25300	25300	25300	29300	29300	33300	36000	37300	40000	41300
4.500	31.90	32.01	0.812																	
	9.406 A	COLLAPSE PRESSURE			16270	19220	22180	23660	23660	26620	28100	28100	0	32530	32530	36970	39930	41410	44370	45840
	2.876 ID	BODY YIELD STRENGTH			517	612	706	753	753	847	894	894	894	1035	1035	1176	1270	1317	1411	1458
	2.751 DO	API INTERNAL PRESSURE			17370	20530	23680	25260	25260	28420	30000	30000	30000	34740	34740	39470	42630	44210	47370	48950
	SD	TEST PRESS 80%			15900	18800	21700	23100	23100	26000	27400	27400	27400	31800	31800	36100	39000	40400	43300	44800
4.500	33.70	33.91	0.875																	
	9.965 A	COLLAPSE PRESSURE			17230	20360	23500	25060	25060	28190	29760	29760	0	34460	34460	39160	42290	43860	46990	48560
	2.750 ID	BODY YIELD STRENGTH			548	648	747	797	797	897	947	947	947	1096	1096	1246	1345	1395	1495	1545
	2.625 DO	API INTERNAL PRESSURE			18720	22120	25520	27220	27220	30630	32330	32330	32330	37430	37430	42530	45940	47640	51040	52740
	SD	TEST PRESS 80%			17100	20200	23300	24900	24900	28000	29600	29600	29600	34200	34200	38900	42000	43600	46700	48200
5.000	11.50	11.24	0.220																	
	3.304 A	COLLAPSE PRESSURE			3060	3290	3460	3560	3560	3790	3900	3900	0	4150	4150	4310	4370	4370	4380	4380
	4.560 ID	BODY YIELD STRENGTH			182	215	248	264	264	297	314	314	314	363	363	413	446	463	496	512
	4.435 DO	API INTERNAL PRESSURE			4240	5010	5780	6160	6160	6930	7320	7320	7320	8470	8470	9630	10400	10780	11500	11940
	SD	TEST PRESS 80%			3900	4600	5300	5600	5600	6300	6700	6700	6700	7700	7700	8800	9500	9900	10600	10900
5.000	13.00	12.84	0.253																	
	3.773 A	COLLAPSE PRESSURE			4140	4590	4970	5140	5140	5430	5550	5550	0	5840	5840	6060	6270	6350	6510	6570
	4.494 ID	BODY YIELD STRENGTH			208	245	283	302	302	340	358	358	358	415	415	472	509	528	566	585
	4.369 DO	API INTERNAL PRESSURE			4870	5760	6640	7080	7080	7970	8410	8410	8410	9740	9740	11070	11950	12400	13280	13730
	SD	TEST PRESS 80%			4500	5300	6100	6500	6500	7300	7700	7700	7700	8900	8900	10100	10900	11300	12100	12500
5.000	15.00	14.88	0.296																	
	4.374 A	COLLAPSE PRESSURE			5560	6280	6940	7260	7260	7830	8110	8110	9380	8850	8850	9480	9830	9980	10260	10360
	4.406 ID	BODY YIELD STRENGTH			241	284	328	350	350	394	416	416	416	481	481	547	590	612	656	678
	4.283 DO	API INTERNAL PRESSURE			5700	6730	7770	8290	8290	9320	9840	9840	9840	11400	11400	12950	13990	14500	15540	16060
	SD	TEST PRESS 80%			5200	6200	7100	7600	7600	8500	9000	9000	9000	10400	10400	11800	12800	13300	14200	14700
5.000	16.00	17.96	0.362																	
	5.275 A	COLLAPSE PRESSURE			7390	8730	9960	10500	10500	11520	12020	12020	11880	13470	13470	14820	15670	16070	16860	17230
	4.276 ID	BODY YIELD STRENGTH			290	343	396	422	422	475	501	501	501	580	580	659	712	739	791	818
	4.151 DO	API INTERNAL PRESSURE			6970	8240	9500	10140	10140	11400	12040	12040	12040	13940	13940	15840	17100	17740	19010	19640
	SD	TEST PRESS 80%			6400	7500	8700	9300	9300	10400	11000	11000	11000	12700	12700	14500	15600	16200	17400	18000
5.000	20.30	20.03	0.408																	
	5.886 A	COLLAPSE PRESSURE			8240	9740	11240	11990	11990	13490	14240	14240	0	16490	16490	18550	19740	20320	21480	22010
	4.184 ID	BODY YIELD STRENGTH			324	383	441	471	471	530	559	559	559	647	647	736	795	824	883	912
	4.059 DO	API INTERNAL PRESSURE			7850	9280	10710	11420	11420	12850	13570	13570	13570	15710	15710	17850	19280	19990	21420	22130
	SD	TEST PRESS 80%			7200	8500	9800	10400	10400	11800	12400	12400	12400	14400	14400	16300	17600	18300	19600	20200

				MINIMUM YIELD STRENGTH, KSI																
				55	65	75	80	80	90	90	95	95	95	110	110	125	135	140	150	155
				MINIMUM TENSILE STRENGTH, KSI																
				95	90	95	95	100	100	105	105	110	120	125	135	145	150	160	165	
DIA	WEIGHT		WALL	GRADE																
	WN	WPE		K-55	M-55	75	L-80	N-80	C-80	C-95	T-95	HC-95	C-110	P-110	Q-125	135	140	V-150	155	
5.000	20.80	20.65	0.422																	
6.069	A		COLLAPSE PRESSURE	8500	10050	11590	12360	12360	13910	14680	14680	0	17000	17000	19320	20860	21610	22870	23470	
4.156	ID		BODY YIELD STRENGTH	334	394	455	486	486	546	577	577	577	668	668	759	819	850	910	941	
4.031	DO		API INTERNAL PRESSURE	8120	9600	11080	11820	11820	13290	14030	14030	14030	16250	16250	18460	19940	20680	22160	22890	
	SD		TEST PRESS 80%	7400	8800	10100	10600	10600	12200	12800	12800	12800	14900	14900	16900	18200	18900	20300	20900	
5.000	21.40	21.32	0.437																	
6.264	A		COLLAPSE PRESSURE	8770	10370	11960	12760	12760	14360	15150	15150	0	17550	17550	19940	21540	22330	23630	24730	
4.126	ID		BODY YIELD STRENGTH	345	407	470	501	501	564	595	595	595	689	689	783	846	877	940	971	
4.001	DO		API INTERNAL PRESSURE	8410	9940	11470	12240	12240	13770	14530	14530	14530	16820	16820	19120	20650	21410	22940	23710	
	SD		TEST PRESS 80%	7700	9100	10500	11200	11200	12600	13300	13300	13300	15400	15400	17500	18900	19600	21000	21700	
5.000	23.20	23.11	0.478																	
6.791	A		COLLAPSE PRESSURE	9510	11240	12970	13830	13830	15560	16430	16430	15820	19020	19020	21620	23340	24210	25940	26800	
4.044	ID		BODY YIELD STRENGTH	374	441	509	543	543	611	645	645	645	747	747	849	917	951	1019	1053	
3.919	DO		API INTERNAL PRESSURE	9000	10670	12350	13080	13080	15060	15890	15890	15890	18400	18400	20910	22590	23420	25100	25930	
	SD		TEST PRESS 80%	8400	9900	11500	12200	12200	13800	14500	14500	14500	16800	16800	19100	20600	21400	22900	23700	
5.000	24.10	24.05	0.500																	
7.069	A		COLLAPSE PRESSURE	9900	11700	13500	14400	14400	16200	17100	17100	0	19800	19800	22500	24300	25200	27000	27900	
4.000	ID		BODY YIELD STRENGTH	389	459	530	566	566	636	672	672	672	778	778	884	954	990	1060	1096	
3.875	DO		API INTERNAL PRESSURE	9630	11360	13130	14000	14000	15750	16630	16630	16630	19250	19250	21880	23630	24500	26250	27130	
	SD		TEST PRESS 80%	8800	10400	12000	12800	12800	14400	15200	15200	15200	17600	17600	20000	21600	22400	24000	24800	
5.000	26.70	26.66	0.562																	
7.836	A		COLLAPSE PRESSURE	10970	12970	14960	15960	15960	17960	18960	18960	0	21960	21960	24940	26940	27930	29930	30930	
3.876	ID		BODY YIELD STRENGTH	431	509	588	627	627	705	744	744	744	862	862	980	1058	1097	1175	1215	
3.751	DO		API INTERNAL PRESSURE	10820	12790	14750	15740	15740	17700	18690	18690	18690	21640	21640	24590	26550	27540	29510	30490	
	SD		TEST PRESS 80%	9900	11700	13500	14400	14400	16200	17100	17100	17100	19800	19800	22500	24300	25200	27000	27900	
5.000	29.20	29.23	0.625																	
8.590	A		COLLAPSE PRESSURE	12030	14220	16410	17500	17500	19690	20780	20780	0	24060	24060	27340	29530	30630	32810	33910	
3.750	ID		BODY YIELD STRENGTH	472	558	644	687	687	773	816	816	816	945	945	1074	1160	1203	1289	1331	
3.625	DO		API INTERNAL PRESSURE	12030	14220	16410	17500	17500	19690	20780	20780	20780	24060	24060	27340	29530	30630	32810	33910	
	SD		TEST PRESS 80%	11000	13000	15000	16000	16000	18000	19000	19000	19000	22000	22000	25000	27000	28000	30000	31000	
5.000	31.60	31.67	0.687																	
9.309	A		COLLAPSE PRESSURE	13040	15410	17780	18960	18960	21330	22520	22520	0	26070	26070	29630	32000	33190	35560	36740	
3.626	ID		BODY YIELD STRENGTH	512	605	698	745	745	838	884	884	884	1024	1024	1164	1257	1303	1396	1443	
3.501	DO		API INTERNAL PRESSURE	13220	15630	18030	19240	19240	21640	22840	22840	22840	26450	26450	30060	32460	33660	36070	37270	
	SD		TEST PRESS 80%	12100	14300	16500	17600	17600	19800	20900	20900	20900	24200	24200	27500	29700	30800	33000	34100	
5.000	34.00	34.07	0.750																	
10.014	A		COLLAPSE PRESSURE	14030	16580	19130	20400	20400	22950	24230	24230	0	28050	28050	31880	34430	35700	38250	39530	
3.500	ID		BODY YIELD STRENGTH	551	651	751	801	801	901	951	951	951	1102	1102	1252	1352	1402	1502	1552	
3.375	DO		API INTERNAL PRESSURE	14440	17060	19690	21000	21000	23630	24940	24940	24940	28860	28860	32810	35440	36750	39360	40690	
	SD		TEST PRESS 80%	13200	15600	18000	19200	19200	21600	22800	22800	22800	26400	26400	30000	32400	33600	36000	37200	
5.000	36.20	36.35	0.812																	
10.663	A		COLLAPSE PRESSURE	14960	17680	20400	21760	21760	24480	25840	25840	0	29930	29930	34010	36730	38090	40810	42170	
3.376	ID		BODY YIELD STRENGTH	588	694	801	855	855	961	1015	1015	1015	1175	1175	1335	1442	1496	1602	1656	
3.251	DO		API INTERNAL PRESSURE	15630	18470	21320	22740	22740	25580	27000	27000	27000	31260	31260	35530	38370	39790	42630	44050	
	SD		TEST PRESS 80%	14300	16900	19500	20800	20800	23400	24700	24700	24700	28600	28600	32500	35100	36400	39000	40300	
5.000	38.40	38.58	0.875																	
11.339	A		COLLAPSE PRESSURE	15880	18770	21660	23100	23100	25990	27430	27430	0	31760	31760	36090	38980	40430	43310	44760	
3.250	ID		BODY YIELD STRENGTH	624	737	850	907	907	1021	1077	1077	1077	1247	1247	1417	1531	1587	1701	1758	
3.125	DO		API INTERNAL PRESSURE	16840	19910	22970	24500	24500	27560	29090	29090	29090	33690	33690	38280	41340	42880	45940	47470	
	SD		TEST PRESS 80%	15400	18200	21000	22400	22400	25200	26600	26600	26600	30800	30800	35000	37800	39200	42000	43400	
5.500	14.00	13.71	0.244																	
4.029	A		COLLAPSE PRESSURE	3120	3360	3540	3620	3620	3860	3970	3970	0	4230	4230	4400	4470	4480	4490	4490	
5.012	ID		BODY YIELD STRENGTH	222	262	302	322	322	363	383	383	383	443	443	504	544	564	604	624	
4.887	DO		API INTERNAL PRESSURE	4270	5050	5820	6210	6210	6990	7380	7380	7380	8540	8540	9700	10480	10870	11650	12030	
	SD		TEST PRESS 80%	3900	4600	5300	5700	5700	6400	6700	6700	6700	7800	7800	8900	9600	9900	10600	11000	

				MINIMUM YIELD STRENGTH, KSI															
				55	65	75	80	80	90	95	95	95	110	110	125	135	140	150	155
				MINIMUM TENSILE STRENGTH, KSI															
				95	95	95	95	100	100	105	105	110	120	125	135	145	150	160	165
DIA	WEIGHT		WALL	GRADE															
	WN	WPE		K-55	M-65	75	L-80	N-80	C-90	C-95	T-95	HC-95	C-110	P-110	Q-125	135	140	V-150	155
5.500	15.50	15.36	0.275																
	4.514 A	COLLAPSE PRESSURE		4040	4470	4830	4990	4990	5260	5380	5380	0	5630	5630	5890	6100	6170	6320	6370
	4.950 ID	BODY YIELD STRENGTH		248	293	339	361	361	406	429	429	429	497	497	564	609	632	677	700
	4.825 DO	API INTERNAL PRESSURE		4810	5690	6560	7000	7000	7580	8310	8310	8310	9630	9630	10940	11810	12250	13130	13560
	SD	TEST PRESS 80%		4400	5200	6000	6400	6400	7200	7600	7600	7600	8800	8800	10000	10800	11200	12000	12400
5.500	17.00	16.89	0.304																
	4.962 A	COLLAPSE PRESSURE		4910	5510	6040	6290	6290	6730	6940	6940	6580	7480	7480	7890	8090	8170	8290	8320
	4.892 ID	BODY YIELD STRENGTH		273	323	372	397	397	447	471	471	471	546	546	620	670	695	744	769
	4.767 DO	API INTERNAL PRESSURE		5320	6290	7250	7740	7740	8710	9190	9190	9190	10640	10640	12090	13060	13540	14510	14990
	SD	TEST PRESS 80%		4900	5700	6600	7100	7100	8000	8400	8400	8400	9700	9700	11100	11900	12400	13300	13700
5.500	20.00	19.83	0.361																
	5.828 A	COLLAPSE PRESSURE		6620	7540	8410	8930	8930	9630	10020	10020	10630	11110	11110	12090	12670	12950	13480	13710
	4.778 ID	BODY YIELD STRENGTH		321	379	437	466	466	525	554	554	554	641	641	729	787	816	874	903
	4.653 DO	API INTERNAL PRESSURE		6320	7470	8610	9190	9190	10340	10910	10910	10910	12640	12640	14360	15510	16080	17230	17800
	SD	TEST PRESS 80%		5800	6800	7900	8400	8400	9500	10000	10000	10000	11600	11600	13100	14200	14700	15800	16300
5.500	23.00	22.56	0.415																
	6.630 A	COLLAPSE PRESSURE		7670	9070	10460	11160	11160	12380	12930	12930	12450	14540	14540	16060	17020	17480	18390	18820
	4.670 ID	BODY YIELD STRENGTH		365	431	497	530	530	597	630	630	630	729	729	829	895	928	995	1028
	4.545 DO	API INTERNAL PRESSURE		7260	8580	9900	10560	10560	11880	12540	12540	12540	14530	14530	16510	17830	18490	19810	20470
	SD	TEST PRESS 80%		6600	7800	9100	9700	9700	10900	11500	11500	11500	13300	13300	15100	16300	16900	18100	18700
5.500	26.00	25.56	0.476																
	7.513 A	COLLAPSE PRESSURE		8700	10280	11860	12650	12650	14230	15020	15020	0	17390	17390	19760	21340	22140	23720	24510
	4.548 ID	BODY YIELD STRENGTH		413	488	563	601	601	676	714	714	714	826	826	939	1014	1052	1127	1165
	4.423 DO	API INTERNAL PRESSURE		8330	9840	11360	12120	12120	13630	14390	14390	14390	16660	16660	18930	20450	21200	22720	23480
	SD	TEST PRESS 80%		7600	9000	10400	11100	11100	12500	13200	13200	13200	15200	15200	17300	18700	19400	20900	21500
5.500	26.80	26.73	0.500																
	7.854 A	COLLAPSE PRESSURE		9090	10740	12400	13220	13220	14880	15700	15700	0	18180	18180	20660	22310	23140	24790	25620
	4.500 ID	BODY YIELD STRENGTH		432	511	589	628	628	707	746	746	746	864	864	982	1060	1100	1178	1217
	4.375 DO	API INTERNAL PRESSURE		8750	10340	11930	12730	12730	14320	15110	15110	15110	17500	17500	19890	21480	22270	23860	24660
	SD	TEST PRESS 80%		8000	9500	10900	11600	11600	13100	13800	13800	13800	16000	16000	18200	19600	20400	21800	22500
5.500	28.40	28.16	0.530																
	8.275 A	COLLAPSE PRESSURE		9580	11320	13060	13930	13930	15670	16540	16540	0	19160	19160	21770	23510	24380	26120	26990
	4.440 ID	BODY YIELD STRENGTH		455	538	621	662	662	745	786	786	786	910	910	1034	1117	1159	1241	1283
	4.315 DO	API INTERNAL PRESSURE		9280	10960	12650	13490	13490	15180	16020	16020	16020	18550	18550	21080	22770	23610	25300	26140
	SD	TEST PRESS 80%		8500	10000	11600	12300	12300	13900	14600	14600	14600	17000	17000	19300	20800	21600	23100	23900
5.500	29.70	29.67	0.562																
	8.718 A	COLLAPSE PRESSURE		10090	11930	13760	14680	14680	16510	17430	17430	0	20180	20180	22940	24770	25690	27520	28440
	4.376 ID	BODY YIELD STRENGTH		479	567	654	697	697	785	828	828	828	959	959	1090	1177	1221	1308	1351
	4.251 DO	API INTERNAL PRESSURE		9840	11620	13410	14310	14310	16090	16990	16990	16990	19670	19670	22350	24140	25030	26820	27720
	SD	TEST PRESS 80%		9000	10600	12300	13100	13100	14700	15500	15500	15500	18000	18000	20400	22100	22900	24500	25300
5.500	32.00	31.98	0.612																
	9.396 A	COLLAPSE PRESSURE		10880	12860	14830	15820	15820	17800	18790	18790	0	21760	21760	24720	26700	27690	29670	30660
	4.276 ID	BODY YIELD STRENGTH		517	611	705	752	752	846	893	893	893	1034	1034	1175	1269	1316	1410	1457
	4.151 DO	API INTERNAL PRESSURE		10710	12660	14600	15580	15580	17530	18500	18500	18500	21420	21420	24340	26290	27260	29210	30180
	SD	TEST PRESS 80%		9800	11600	13400	14200	14200	16000	16900	16900	16900	19600	19600	22300	24000	24900	26700	27600
5.500	32.60	32.57	0.625																
	9.572 A	COLLAPSE PRESSURE		11080	13090	15110	16120	16120	18130	19140	19140	0	22160	22160	25180	27200	28200	30220	31220
	4.250 ID	BODY YIELD STRENGTH		526	622	718	766	766	861	909	909	909	1053	1053	1197	1292	1340	1436	1484
	4.125 DO	API INTERNAL PRESSURE		10940	12930	14910	15910	15910	17900	18890	18890	18890	21880	21880	24860	26850	27840	29830	30820
	SD	TEST PRESS 80%		10000	11800	13600	14500	14500	16400	17300	17300	17300	20000	20000	22700	24500	25500	27300	28200
5.500	35.30	35.35	0.687																
	10.388 A	COLLAPSE PRESSURE		12020	14210	16400	17490	17490	19680	20770	20770	0	24050	24050	27330	29510	30610	32790	33890
	4.126 ID	BODY YIELD STRENGTH		571	675	779	831	831	935	987	987	987	1143	1143	1299	1402	1454	1558	1610
	4.001 DO	API INTERNAL PRESSURE		12020	14210	16390	17490	17490	19670	20770	20770	20770	24050	24050	27320	29510	30600	32790	33880
	SD	TEST PRESS 80%		11000	13000	15000	16000	16000	18000	19000	19000	19000	22000	22000	25000	27000	28000	30000	31000

				MINIMUM YIELD STRENGTH, KSI																
				55	65	75	80	80	90	90	95	95	95	110	110	125	135	140	150	155
				MINIMUM TENSILE STRENGTH, KSI																
				95	80	95	95	100	100	105	105	110	120	125	135	145	150	160	165	
DIA	WEIGHT		WALL	GRADE																
	WN	WPE		K-55	M-65	75	L-80	N-80	C-80	C-95	T-95	HC-95	C-110	P-110	Q-125	135	140	V-150	155	
5.500	36.40	36.14	0.705																	
	10.620 A		COLLAPSE PRESSURE	12290	14530	16760	17880	17880	20120	21230	21230	0	24590	24590	27940	30170	31290	33530	34640	
	4.090 ID		BODY YIELD STRENGTH	584	690	797	850	850	956	1009	1009	1009	1168	1168	1328	1434	1487	1593	1646	
	3.965 DO		API INTERNAL PRESSURE	12340	14580	16820	17950	17950	20190	21310	21310	21310	24680	24680	28040	30280	31400	33650	34770	
5.500			SD TEST PRESS 80%	11300	13300	15400	16400	16400	18500	19500	19500	19500	22600	22600	25600	27700	28700	30800	31800	
	38.00	38.06	0.750																	
	11.192 A		COLLAPSE PRESSURE	12950	15310	17670	18840	18840	21200	22380	22380	0	25910	25910	29440	31800	32980	35330	36510	
	4.000 ID		BODY YIELD STRENGTH	616	727	839	896	896	1007	1063	1063	1063	1231	1231	1399	1511	1567	1679	1735	
5.500	3.875 DO		API INTERNAL PRESSURE	13130	15510	17900	19090	19090	21480	22670	22670	22670	26250	26250	29830	32220	33410	35800	36990	
			SD TEST PRESS 80%	12000	14200	16400	17500	17500	19600	20700	20700	20700	24000	24000	27300	29500	30500	32700	33800	
5.500	40.50	40.69	0.812																	
	11.959 A		COLLAPSE PRESSURE	13840	16360	18880	20130	20130	22650	23910	23910	0	27680	27680	31460	33980	35240	37750	39010	
	3.876 ID		BODY YIELD STRENGTH	658	777	897	957	957	1076	1136	1136	1136	1315	1315	1495	1614	1674	1794	1854	
	3.751 DO		API INTERNAL PRESSURE	14210	16790	19380	20670	20670	23250	24540	24540	24540	28420	28420	32300	34880	36170	38750	40050	
5.500			SD TEST PRESS 80%	13000	15400	17700	18900	18900	21390	22400	22400	22400	26000	26000	29500	31900	33100	35400	36600	
	43.10	43.26	0.875																	
	12.714 A		COLLAPSE PRESSURE	14720	17390	20070	21400	21400	24080	25420	25420	0	29430	29430	33450	36120	37460	40130	41470	
	3.750 ID		BODY YIELD STRENGTH	699	826	954	1017	1017	1144	1208	1208	1208	1399	1399	1589	1716	1780	1907	1971	
5.500	3.625 DO		API INTERNAL PRESSURE	15310	18100	20880	22270	22270	25060	26450	26450	26450	30630	30630	34800	37590	38980	41760	43150	
			SD TEST PRESS 80%	14000	16500	19100	20400	20400	22900	24200	24200	24200	28000	28000	31800	34400	35600	38200	39500	
5.500	45.50	45.71	0.937																	
	13.432 A		COLLAPSE PRESSURE	15550	18370	21200	22610	22610	25440	26850	26850	0	31090	31090	35330	38160	39580	42400	43820	
	3.626 ID		BODY YIELD STRENGTH	739	873	1007	1075	1075	1209	1276	1276	1276	1478	1478	1679	1813	1880	2015	2082	
	3.501 DO		API INTERNAL PRESSURE	16400	19380	22360	23850	23850	26830	28320	28320	28320	32800	32800	37270	40250	41740	44720	46210	
5.750			SD TEST PRESS 80%	15000	17700	20400	21800	21800	24500	25900	25900	25900	30000	30000	34100	36800	38200	40900	42300	
	18.00	18.14	0.312																	
	5.330 A		COLLAPSE PRESSURE	4740	5310	5810	6040	6040	6450	6640	6640	0	7130	7130	7480	7640	7700	7780	7820	
	5.126 ID		BODY YIELD STRENGTH	293	346	400	426	426	450	506	506	506	586	586	666	720	746	800	826	
5.750	5.001 DO		API INTERNAL PRESSURE	5220	6170	7120	7600	7600	8550	9020	9020	9020	10450	10450	11870	12820	13290	14240	14720	
			SD TEST PRESS 80%	4800	5600	6500	6900	6900	7800	8200	8200	8200	9500	9500	10900	11700	12200	13000	13500	
5.750	21.80	21.55	0.375																	
	6.332 A		COLLAPSE PRESSURE	6550	7460	8320	8730	8730	9510	9890	9890	0	10960	10960	11920	12490	12760	13270	13490	
	5.000 ID		BODY YIELD STRENGTH	348	412	475	507	507	570	602	602	602	697	697	792	855	886	950	981	
	4.875 DO		API INTERNAL PRESSURE	6280	7420	8560	9130	9130	10270	10840	10840	10840	12550	12550	14270	15410	15980	17120	17690	
5.750			SD TEST PRESS 80%	5700	6800	7800	8300	8300	9400	9900	9900	9900	11500	11500	13000	14100	14600	15700	16200	
	24.20	23.93	0.420																	
	7.033 A		COLLAPSE PRESSURE	7450	8800	10110	10650	10650	11700	12220	12220	0	13700	13700	15080	15950	16370	17180	17560	
	4.910 ID		BODY YIELD STRENGTH	387	457	527	563	563	633	668	668	668	774	774	879	949	985	1055	1090	
6.000	4.785 DO		API INTERNAL PRESSURE	7030	8310	9590	10230	10230	11500	12140	12140	12140	14060	14060	15980	17260	17900	19170	19810	
			SD TEST PRESS 80%	6400	7600	8800	9300	9300	10500	11100	11100	11100	12900	12900	14600	15800	16400	17500	18100	
	20.00	19.66	0.324																	
	5.777 A		COLLAPSE PRESSURE	4700	5260	5750	5980	5980	6380	6560	6560	0	7030	7030	7370	7520	7580	7650	7730	
6.000	5.352 ID		BODY YIELD STRENGTH	318	376	433	462	462	520	549	549	549	635	635	722	780	809	867	895	
	5.227 DO		API INTERNAL PRESSURE	5200	6140	7090	7560	7560	8510	8980	8980	8980	10400	10400	11810	12760	13230	14180	14650	
			SD TEST PRESS 80%	4800	5600	6500	6900	6900	7800	8200	8200	8200	9500	9500	10800	11700	12100	13000	13400	
6.000	23.00	22.83	0.380																	
	6.709 A		COLLAPSE PRESSURE	6240	7090	7890	8270	8270	8990	9330	9330	0	10300	10300	11150	11650	11890	12320	12510	
	5.240 ID		BODY YIELD STRENGTH	369	436	503	537	537	604	637	637	637	738	738	839	906	939	1006	1040	
	5.115 DO		API INTERNAL PRESSURE	6100	7200	8310	8870	8870	9980	10530	10530	10530	12190	12190	13850	14960	15520	16630	17180	
6.625			SD TEST PRESS 80%	5600	6600	7600	8100	8100	9100	9600	9600	9600	11100	11100	12700	13700	14200	15200	15700	
	20.00	19.51	0.288																	
	5.734 A		COLLAPSE PRESSURE	2970	3190	3350	3480	3480	3700	3800	3800	0	4030	4030	4170	4220	4220	4220	4220	
	6.049 ID		BODY YIELD STRENGTH	315	373	430	459	459	516	545	545	545	631	631	717	774	803	860	889	
6.625	5.924 DO		API INTERNAL PRESSURE	4190	4940	5710	6090	6090	6850	7230	7230	7230	8370	8370	9510	10270	10650	11410	11790	
			SD TEST PRESS 80%	3800	4500	5200	5600	5600	6300	6600	6600	6600	7700	7700	8700	9400	9700	10400	10800	

				MINIMUM YIELD STRENGTH, KSI															
				55	65	75	80	80	90	95	95	95	110	110	125	135	140	150	155
				MINIMUM TENSILE STRENGTH, KSI															
				95	80	95	95	100	100	105	105	110	120	125	135	145	150	160	165
DIA	WEIGHT		WALL	GRADE															
	WN	WPE		K-55	M-45	75	L-80	N-80	C-90	C-95	T-95	HC-95	C-110	P-110	Q-125	135	140	V-150	155
6.625	22.60	22.21	0.330																
	8.526 A			4010	4430	4790	4950	4950	5210	5320	5320	0	5570	5570	5840	6040	6120	6250	6310
	5.965 ID			359	424	489	522	522	587	620	620	620	718	718	816	881	914	979	1012
	5.840 DO			4790	5670	6540	6970	6970	7850	8280	8280	8280	9590	9590	10900	11770	12200	13080	13510
6.625	24.00	23.60	0.352																
	6.937 A			4560	5090	5550	5760	5760	6140	6310	6310	0	6730	6730	7020	7140	7180	7340	7430
	5.921 ID			382	451	520	555	555	624	659	659	659	763	763	867	936	971	1041	1075
	5.796 DO			5110	6040	6970	7440	7440	8370	8830	8830	8830	10230	10230	11620	12550	13020	13950	14410
6.625	24.60	24.24	0.362																
	7.123 A			4810	5380	5890	6130	6130	6560	6750	6750	0	7260	7260	7630	7810	7880	7970	7990
	5.901 ID			392	463	534	570	570	641	677	677	677	784	784	890	962	997	1068	1104
	5.776 DO			5260	6220	7170	7650	7650	8610	9080	9080	9080	10520	10520	11950	12910	13380	14340	14820
6.625	28.00	27.67	0.417																
	8.133 A			6170	7010	7800	8170	8170	8880	9220	9220	0	10160	10160	11000	11480	11710	12130	12310
	5.791 ID			447	529	610	651	651	732	773	773	773	895	895	1017	1088	1139	1220	1261
	5.666 DO			6060	7160	8260	8810	8810	9910	10460	10460	10460	12120	12120	13770	14870	15420	16520	17070
6.625	32.00	31.23	0.475																
	9.177 A			7320	8650	9800	10320	10320	11330	11820	11820	0	13230	13230	14540	15360	15750	16510	16860
	5.675 ID			505	597	688	734	734	824	872	872	872	1009	1009	1147	1239	1285	1377	1422
	5.550 DO			6900	8160	9410	10040	10040	11290	11920	11920	11920	13600	13600	15680	16940	17570	18820	19450
6.625	33.00	32.74	0.500																
	9.621 A			7680	9070	10470	11160	11160	12360	12940	12940	0	14550	14550	16070	17030	17490	18400	18830
	5.625 ID			529	625	722	770	770	868	914	914	914	1058	1058	1203	1299	1347	1443	1491
	5.500 DO			7260	8580	9910	10570	10570	11880	12550	12550	12550	14530	14530	16510	17830	18490	19810	20470
6.625	34.50	34.23	0.525																
	10.061 A			8030	9490	10940	11670	11670	13130	13860	13860	0	15870	15870	17600	18700	19230	20290	20790
	5.575 ID			553	654	755	805	805	905	956	956	956	1107	1107	1258	1358	1409	1509	1559
	5.450 DO			7630	9010	10400	11090	11090	12450	13170	13170	13170	15250	15250	17330	18720	19420	20800	21500
6.625	36.70	36.43	0.562																
	10.705 A			8540	10090	11650	12420	12420	13970	14750	14750	0	17080	17080	19410	20960	21740	23080	23690
	5.501 ID			589	696	803	856	856	963	1017	1017	1017	1178	1178	1338	1445	1499	1606	1659
	5.376 DO			8160	9650	11130	11880	11880	13360	14100	14100	14100	16330	16330	18560	20040	20780	22270	23010
6.625	40.20	40.09	0.625																
	11.781 A			9400	11110	12820	13670	13670	15380	16230	16230	0	18800	18800	21360	23070	23920	25630	26490
	5.375 ID			648	766	884	942	942	1060	1119	1119	1119	1296	1296	1473	1590	1649	1767	1826
	5.250 DO			9080	10730	12380	13210	13210	14860	15680	15680	15680	18160	18160	20640	22290	23110	24760	25590
6.625	43.70	43.61	0.687																
	12.816 A			10220	12080	13940	14870	14870	16730	17660	17660	0	20450	20450	23240	25100	26020	27880	28810
	5.251 ID			705	833	961	1025	1025	1153	1218	1218	1218	1410	1410	1602	1730	1794	1922	1986
	5.126 DO			9960	11800	13610	14520	14520	16330	17240	17240	17240	19960	19960	22680	24500	25410	27220	28130
6.625	47.10	47.10	0.750																
	13.843 A			11040	13050	15060	16060	16060	18070	19070	19070	0	22090	22090	25100	27110	28110	30120	31120
	5.125 ID			761	900	1038	1107	1107	1246	1315	1315	1315	1523	1523	1730	1869	1938	2076	2146
	5.000 DO			10900	12880	14860	15850	15850	17830	18820	18820	18820	21790	21790	24760	26750	27740	29720	30710

				MINIMUM YIELD STRENGTH, KSI															
				55	65	75	80	80	90	95	95	95	110	110	125	135	140	150	155
				MINIMUM TENSILE STRENGTH, KSI															
				95	80	95	95	100	100	105	105	110	120	125	135	145	150	160	165
DIA	WEIGHT		WALL	GRADE															
	WN	WPE		K-55	M-65	75	L-80	N-80	C-90	C-95	T-95	HC-95	C-110	P-110	Q-125	135	140	V-150	155
6.625	50.40	50.45	0.812																
	14.829 A		COLLAPSE PRESSURE	11830	13980	16130	17210	17210	19360	20430	20430	0	23660	23660	26690	29040	30110	32260	33340
	5.001 ID		BODY YIELD STRENGTH	815	964	1112	1186	1186	1335	1409	1409	1409	1631	1631	1854	2002	2076	2224	2298
	4.876 DD		API INTERNAL PRESSURE	11800	13940	16090	17160	17160	19300	20380	20380	20380	23590	23590	26610	28960	30030	32170	33250
	SD		TEST PRESS 80%	10800	12700	14700	15700	15700	17600	18600	18600	18600	21600	21600	24500	26500	27500	29400	30400
6.625	53.70	53.75	0.875																
	15.806 A		COLLAPSE PRESSURE	12610	14900	17190	18340	18340	20630	21780	21780	0	25220	25220	28660	30950	32100	34390	35540
	4.875 ID		BODY YIELD STRENGTH	869	1027	1185	1264	1264	1423	1502	1502	1502	1739	1739	1976	2134	2213	2371	2450
	4.750 DD		API INTERNAL PRESSURE	12710	15020	17330	18490	18490	20800	21960	21960	21960	25420	25420	28890	31200	32360	34670	35830
	SD		TEST PRESS 80%	11600	13700	15800	16900	16900	19000	20100	20100	20100	23200	23200	26400	28500	29600	31700	32800
6.625	56.80	56.97	0.937																
	16.744 A		COLLAPSE PRESSURE	13360	15790	18210	19430	19430	21860	23070	23070	0	26710	26710	30360	32790	34000	36430	37640
	4.751 ID		BODY YIELD STRENGTH	921	1088	1256	1340	1340	1507	1591	1591	1591	1842	1842	2093	2260	2344	2512	2595
	4.626 DD		API INTERNAL PRESSURE	13610	16090	18560	19800	19800	22280	23510	23510	23510	27230	27230	30940	33410	34650	37130	38360
	SD		TEST PRESS 80%	12400	14700	17000	18100	18100	20400	21500	21500	21500	24800	24800	28300	30500	31700	33900	35100
6.625	59.90	60.13	1.000																
	17.671 A		COLLAPSE PRESSURE	14100	16660	19220	20510	20510	23070	24350	24350	0	28200	28200	32040	34600	35880	38450	39730
	4.625 ID		BODY YIELD STRENGTH	972	1149	1325	1414	1414	1590	1679	1679	1679	1944	1944	2209	2386	2474	2651	2739
	4.500 DD		API INTERNAL PRESSURE	14530	17170	19810	21130	21130	23770	25090	25090	25090	29060	29060	33020	35660	36980	39620	40940
	SD		TEST PRESS 80%	13300	15700	18100	19300	19300	21700	22900	22900	22900	26600	26600	30200	32600	33800	36200	37400
6.625	62.90	63.16	1.062																
	18.560 A		COLLAPSE PRESSURE	14810	17500	20190	21540	21540	24230	25570	25570	0	29510	29510	33650	36340	37690	40380	41730
	4.501 ID		BODY YIELD STRENGTH	1021	1206	1392	1485	1485	1670	1783	1783	1783	2042	2042	2320	2506	2598	2784	2877
	4.376 DD		API INTERNAL PRESSURE	15430	18230	21040	22440	22440	25250	26650	26650	26650	30860	30860	35070	37870	39270	42080	43480
	SD		TEST PRESS 80%	14100	16700	19200	20500	20500	23100	24400	24400	24400	28200	28200	32100	34600	35900	38500	39800
6.625	65.80	66.14	1.125																
	19.439 A		COLLAPSE PRESSURE	15510	18330	21150	22560	22560	25380	26790	26790	0	31010	31010	35240	38060	39470	42290	43700
	4.375 ID		BODY YIELD STRENGTH	1069	1264	1458	1555	1555	1750	1847	1847	1847	2138	2138	2430	2624	2721	2916	3013
	4.250 DD		API INTERNAL PRESSURE	16340	19320	22290	23770	23770	26750	28230	28230	28230	32690	32690	37150	40120	41600	44580	46060
	SD		TEST PRESS 80%	14900	17700	20400	21700	21700	24500	25800	25800	25800	29900	29900	34000	36700	38000	40800	42100
6.625	68.60	69.00	1.187																
	20.279 A		COLLAPSE PRESSURE	16180	19120	22060	23530	23530	26470	27940	27940	0	32350	32350	36770	39710	41180	44120	45590
	4.251 ID		BODY YIELD STRENGTH	1115	1318	1521	1622	1622	1825	1927	1927	1927	2231	2231	2535	2738	2839	3042	3143
	4.126 DD		API INTERNAL PRESSURE	17250	20380	23520	25080	25080	28220	29790	29790	29790	34490	34490	39190	42330	43900	47030	48600
	SD		TEST PRESS 80%	15800	18600	21500	22900	22900	25800	27200	27200	27200	31500	31500	35800	38700	40100	43000	44400
6.625	72.00	71.82	1.250																
	21.108 A		COLLAPSE PRESSURE	16840	19900	22960	24490	24490	27550	29090	29090	0	33680	33680	38270	41330	42860	45920	47450
	4.125 ID		BODY YIELD STRENGTH	1161	1372	1583	1689	1689	1900	2005	2005	2005	2322	2322	2639	2850	2955	3166	3272
	4.000 DD		API INTERNAL PRESSURE	18160	21460	24760	26420	26420	29720	31370	31370	31370	36320	36320	41270	44580	46230	49530	51180
	SD		TEST PRESS 80%	16600	19600	22600	24200	24200	27200	28700	28700	28700	33200	33200	37700	40800	42300	45300	46800
7.000	17.00	16.72	0.231																
	4.912 A		COLLAPSE PRESSURE	1630	1730	1790	1800	1800	1800	1800	1800	0	1800	1800	1800	1800	1800	1800	1800
	6.538 ID		BODY YIELD STRENGTH	270	319	368	393	393	442	467	467	467	540	540	614	663	688	737	761
	6.413 DD		API INTERNAL PRESSURE	3180	3750	4330	4620	4620	5200	5490	5490	5490	6350	6350	7220	7800	8090	8660	8950
	SD		TEST PRESS 80%	2900	3400	4000	4200	4200	4800	5000	5000	5000	5800	5800	6600	7100	7400	7900	8200
7.000	20.00	19.56	0.272																
	5.749 A		COLLAPSE PRESSURE	2270	2490	2660	2740	2740	2860	2910	2910	0	2980	2980	2980	2980	2980	2980	2980
	6.456 ID		BODY YIELD STRENGTH	316	374	431	460	460	517	546	546	546	632	632	719	776	805	862	891
	6.331 DD		API INTERNAL PRESSURE	3740	4420	5100	5440	5440	6120	6460	6460	6460	7480	7480	8500	9180	9520	10200	10540
	SD		TEST PRESS 80%	3400	4000	4700	5000	5000	5600	5900	5900	5900	6800	6800	7800	8400	8700	9300	9600
7.000	23.00	22.65	0.317																
	6.655 A		COLLAPSE PRESSURE	3270	3550	3750	3830	3830	4030	4150	4150	5650	4440	4440	4650	4740	4760	4780	4780
	6.366 ID		BODY YIELD STRENGTH	368	433	499	532	532	599	632	632	632	732	732	832	898	932	998	1032
	6.241 DD		API INTERNAL PRESSURE	4360	5150	5940	6340	6340	7130	7530	7530	7530	8720	8720	9910	10700	11100	11890	12280
	6.250 SD		TEST PRESS 80%	4000	4700	5400	5800	5800	6500	6900	6900	6900	8000	8000	9100	9800	10100	10900	11200

				MINIMUM YIELD STRENGTH, KSI															
				55	65	75	80	80	90	95	95	95	110	110	125	135	145	150	155
				MINIMUM TENSILE STRENGTH, KSI															
				95	80	95	95	100	100	105	105	110	120	125	135	145	150	160	165
DIA	WEIGHT		WALL	GRADE															
	WN	WPE		K-55	M-65	75	L-80	N-80	C-90	C-95	T-95	HC-95	C-110	P-110	Q-125	135	140	V-150	155
7.000	26.00	25.69	0.362																
	7.549 A	COLLAPSE PRESSURE			4330	4810	5220	5410	5410	5740	5890	5890	7800	6230	6230	6450	6590	6690	6870
	6.276 ID	BODY YIELD STRENGTH			415	491	566	604	604	679	717	717	717	830	830	944	1019	1057	1132
	6.151 DO	API INTERNAL PRESSURE			4980	5680	6790	7240	7240	8150	8600	8600	8600	9960	9960	11310	12220	12670	13580
	SD	TEST PRESS 80%			4690	5400	6200	6600	6600	7400	7900	7900	7900	9100	9100	10300	11200	11600	12400
7.000	29.00	28.75	0.406																
	8.449 A	COLLAPSE PRESSURE			5410	6100	6730	7030	7030	7580	7840	7840	9200	8530	8530	9110	9420	9560	9800
	6.184 ID	BODY YIELD STRENGTH			465	549	634	676	676	760	803	803	803	929	929	1056	1141	1183	1267
	6.059 DO	API INTERNAL PRESSURE			5610	6630	7650	8160	8160	9180	9690	9690	9690	11220	11220	12750	13770	14280	15300
	6.125 SD	TEST PRESS 80%			5100	6100	7000	7500	7500	8400	8900	8900	8900	10300	10300	11700	12600	13100	14000
7.000	32.00	31.70	0.453																
	9.317 A	COLLAPSE PRESSURE			6460	7360	8200	8610	8610	9370	9740	9740	10400	10780	10780	11710	12270	12530	13020
	6.094 ID	BODY YIELD STRENGTH			512	606	699	745	745	839	885	885	885	1025	1025	1165	1258	1304	1398
	5.969 DO	API INTERNAL PRESSURE			6230	7360	8490	9060	9060	10190	10760	10760	10760	12460	12460	14160	15290	15860	16960
	6.000 SD	TEST PRESS 80%			5700	6700	7800	8300	8300	9300	9800	9800	9800	11400	11400	12900	14000	14500	15500
7.000	35.00	34.61	0.496																
	10.172 A	COLLAPSE PRESSURE			7270	8590	9670	10190	10190	11170	11650	11650	11600	13030	13030	14320	15110	15490	16230
	6.004 ID	BODY YIELD STRENGTH			559	661	763	814	814	915	966	966	966	1119	1119	1272	1373	1424	1526
	5.879 DO	API INTERNAL PRESSURE			6850	8090	9340	9960	9960	11210	11830	11830	11830	13700	13700	15560	16810	17430	18660
	SD	TEST PRESS 80%			6300	7400	8500	9100	9100	10200	10800	10800	10800	12500	12500	14200	15400	15900	17100
7.000	38.00	37.29	0.540																
	10.959 A	COLLAPSE PRESSURE			7830	9250	10660	11390	11390	12810	13430	13430	12700	15130	15130	16740	17770	18260	19230
	5.920 ID	BODY YIELD STRENGTH			603	712	822	877	877	986	1041	1041	1041	1205	1205	1370	1479	1534	1644
	5.795 DO	API INTERNAL PRESSURE			7430	8780	10130	10800	10800	12150	12830	12830	12830	14850	14850	16880	18230	18900	20290
	5.875 SD	TEST PRESS 80%			6800	8000	9300	9900	9900	11100	11700	11700	11700	13600	13600	15400	16700	17300	18500
7.000	41.00	40.43	0.590																
	11.881 A	COLLAPSE PRESSURE			8490	10030	11580	12350	12350	13890	14660	14660	0	16980	16980	19300	20840	21560	22810
	5.820 ID	BODY YIELD STRENGTH			653	772	891	950	950	1069	1129	1129	1129	1307	1307	1485	1604	1663	1782
	5.695 DO	API INTERNAL PRESSURE			8110	9590	11060	11800	11800	13280	14010	14010	14010	16230	16230	18440	19910	20650	22130
	SD	TEST PRESS 80%			7400	8800	10100	10800	10800	12100	12800	12800	12800	14800	14800	16900	18200	18900	20200
7.000	42.70	42.59	0.625																
	12.517 A	COLLAPSE PRESSURE			8940	10570	12200	13010	13010	14640	15450	15450	0	17890	17890	20330	21950	22770	24390
	5.750 ID	BODY YIELD STRENGTH			688	814	939	1001	1001	1127	1189	1189	1189	1377	1377	1565	1690	1752	1878
	5.625 DO	API INTERNAL PRESSURE			8590	10160	11720	12500	12500	14060	14840	14840	14840	17190	17190	19530	21090	21880	23440
	SD	TEST PRESS 80%			7900	9300	10700	11400	11400	12900	13600	13600	13600	15700	15700	17900	19300	20000	21400
7.000	44.00	43.51	0.640																
	12.788 A	COLLAPSE PRESSURE			9140	10800	12460	13290	13290	14950	15780	15780	0	18280	18280	20770	22430	23260	24920
	5.720 ID	BODY YIELD STRENGTH			703	831	959	1023	1023	1151	1215	1215	1215	1407	1407	1599	1726	1790	1918
	5.595 DO	API INTERNAL PRESSURE			8800	10400	12000	12800	12800	14400	15200	15200	15200	17600	17600	20000	21600	22400	24000
	SD	TEST PRESS 80%			8000	9500	11000	11700	11700	13200	13900	13900	13900	16100	16100	18300	19700	20500	21900
7.000	45.40	45.34	0.670																
	13.324 A	COLLAPSE PRESSURE			9520	11250	12980	13850	13850	15580	16450	16450	0	19040	19040	21640	23370	24230	25970
	5.680 ID	BODY YIELD STRENGTH			733	866	999	1066	1066	1199	1266	1266	1266	1466	1466	1666	1799	1865	1999
	5.535 DO	API INTERNAL PRESSURE			9210	10890	12560	13400	13400	15080	15910	15910	15910	18430	18430	20940	22610	23490	25130
	SD	TEST PRESS 80%			8400	10000	11500	12300	12300	13800	14500	14500	14500	16800	16800	19100	20700	21400	23000
7.000	46.40	46.36	0.687																
	13.625 A	COLLAPSE PRESSURE			9740	11510	13280	14160	14160	15930	16820	16820	0	19470	19470	22130	23900	24780	26550
	5.626 ID	BODY YIELD STRENGTH			749	886	1022	1090	1090	1226	1294	1294	1294	1499	1499	1703	1839	1908	2044
	5.501 DO	API INTERNAL PRESSURE			9450	11160	12880	13740	13740	15460	16320	16320	16320	18890	18890	21470	23190	24050	25760
	SD	TEST PRESS 80%			8600	10200	11800	12600	12600	14100	14900	14900	14900	17300	17300	19600	21200	22000	23600
7.000	49.50	48.93	0.730																
	14.379 A	COLLAPSE PRESSURE			10280	12140	14010	14950	14950	16810	17750	17750	0	20550	20550	23350	25220	26150	28020
	5.540 ID	BODY YIELD STRENGTH			791	935	1078	1150	1150	1294	1366	1366	1366	1582	1582	1797	1941	2013	2157
	5.415 DO	API INTERNAL PRESSURE			10040	11860	13690	14500	14500	16430	17340	17340	17340	20080	20080	22810	24640	25550	27380
	SD	TEST PRESS 80%			9200	10800	12500	13300	13300	15000	15900	15900	15900	18400	18400	20900	22500	23400	25000

DIA				MINIMUM YIELD STRENGTH, KSI																
				55	65	75	80	80	90	90	95	95	95	110	110	125	135	140	150	155
				MINIMUM TENSILE STRENGTH, KSI																
WEIGHT				95	80	95	95	100	100	105	105	110	120	125	135	145	150	160	165	
WV	WV	WV	WV	GRADE																
K-55	M-65	75	L-80	N-80	C-90	C-95	T-95	HC-95	C-110	P-110	Q-125	135	140	V-150	155					
7.000	50.10	50.11	0.750																	
14.726 A	COLLAPSE PRESSURE			10520	12440	14350	15310	15310	17320	18180	18180	0	21050	21050	23920	25830	26790	28700	29660	
5.500 ID	BODY YIELD STRENGTH			810	957	1104	1178	1178	1325	1399	1399	1399	1620	1620	1841	1988	2062	2209	2283	
5.375 DD	API INTERNAL PRESSURE			10310	12190	14060	15000	15000	16880	17810	17810	17810	20630	20630	23440	25310	26250	28130	29080	
SD	TEST PRESS 80%			9400	11100	12900	13700	13700	15400	16300	16300	16300	18900	18900	21400	23100	24000	25700	26600	
7.000	53.60	53.71	0.812																	
15.785 A	COLLAPSE PRESSURE			11280	13330	15380	16410	16410	18460	19480	19480	0	22560	22560	25640	27690	28710	30760	31790	
5.376 ID	BODY YIELD STRENGTH			868	1026	1184	1263	1263	1421	1500	1500	1500	1736	1736	1973	2131	2210	2368	2447	
5.251 DD	API INTERNAL PRESSURE			11170	13200	15230	16240	16240	18270	19290	19290	19290	22330	22330	25380	27410	28420	30450	31470	
SD	TEST PRESS 80%			10200	12100	13900	14800	14800	16700	17600	17600	17600	20400	20400	23200	25100	26000	27800	28800	
7.000	57.10	57.29	0.875																	
16.837 A	COLLAPSE PRESSURE			12030	14220	16410	17500	17500	19690	20780	20780	0	24060	24060	27340	29530	30630	32810	33910	
5.250 ID	BODY YIELD STRENGTH			926	1094	1263	1347	1347	1515	1600	1600	1600	1852	1852	2105	2273	2357	2526	2610	
5.125 DD	API INTERNAL PRESSURE			12030	14220	16410	17500	17500	19690	20780	20780	20780	24060	24060	27340	29530	30630	32810	33910	
SD	TEST PRESS 80%			11000	13000	15000	16000	16000	18000	19000	19000	19000	22000	22000	25000	27000	28000	30000	31000	
7.000	60.50	60.73	0.937																	
17.847 A	COLLAPSE PRESSURE			12750	15070	17390	18550	18550	20870	22030	22030	0	25510	25510	28980	31300	32490	34780	35940	
5.126 ID	BODY YIELD STRENGTH			982	1160	1339	1428	1428	1606	1695	1695	1695	1963	1963	2231	2409	2499	2677	2766	
5.001 DD	API INTERNAL PRESSURE			12880	15230	17570	18740	18740	21080	22250	22250	22250	25770	25770	29280	31620	32800	35140	36310	
SD	TEST PRESS 80%			11500	13900	16100	17100	17100	19300	20300	20300	20300	23600	23600	26800	28900	30000	32100	33200	
7.000	63.90	64.14	1.000																	
18.850 A	COLLAPSE PRESSURE			13470	15920	18370	19590	19590	22040	23270	23270	0	26940	26940	30610	33060	34290	36730	37960	
5.000 ID	BODY YIELD STRENGTH			1037	1225	1414	1508	1508	1697	1791	1791	1791	2074	2074	2356	2545	2639	2828	2922	
4.875 DD	API INTERNAL PRESSURE			13750	16250	18750	20000	20000	22500	23750	23750	23750	27500	27500	31250	33750	35000	37500	38750	
SD	TEST PRESS 80%			12600	14900	17100	18300	18300	20600	21700	21700	21700	25100	25100	28800	30900	32000	34300	35400	
7.000	67.10	67.41	1.062																	
19.811 A	COLLAPSE PRESSURE			14160	16730	19300	20590	20590	23170	24450	24450	0	28310	28310	32170	34750	36040	38610	39900	
4.876 ID	BODY YIELD STRENGTH			1090	1288	1486	1585	1585	1783	1882	1882	1882	2179	2179	2476	2674	2774	2972	3071	
4.751 DD	API INTERNAL PRESSURE			14600	17260	19910	21240	21240	23900	25220	25220	25220	29210	29210	33190	35840	37170	39830	41150	
SD	TEST PRESS 80%			13400	15800	18200	19400	19400	21800	23100	23100	23100	26700	26700	30300	32800	34000	36400	37600	
7.000	70.30	70.65	1.125																	
20.764 A	COLLAPSE PRESSURE			14840	17540	20230	21580	21580	24280	25630	25630	0	29670	29670	33720	36420	37770	40470	41810	
4.750 ID	BODY YIELD STRENGTH			1142	1350	1557	1661	1661	1869	1973	1973	1973	2284	2284	2586	2803	2907	3115	3218	
4.625 DD	API INTERNAL PRESSURE			15470	18280	21090	22500	22500	25310	26720	26720	26720	30940	30940	35160	37970	39380	42190	43590	
SD	TEST PRESS 80%			14100	16700	19300	20600	20600	23100	24400	24400	24400	28300	28300	32100	34700	36000	38600	39900	
7.000	73.30	73.76	1.187																	
21.677 A	COLLAPSE PRESSURE			15490	18310	21120	22530	22530	25350	26760	26760	0	30960	30960	35200	38020	39430	42250	43650	
4.626 ID	BODY YIELD STRENGTH			1192	1409	1626	1734	1734	1951	2059	2059	2059	2384	2384	2710	2926	3035	3292	3360	
4.501 DD	API INTERNAL PRESSURE			16320	19290	22260	23740	23740	26710	28190	28190	28190	32640	32640	37090	40060	41550	44510	46000	
SD	TEST PRESS 80%			14900	17600	20300	21700	21700	24400	25800	25800	25800	29800	29800	33900	36600	38000	40700	42100	
7.000	76.30	76.83	1.250																	
22.580 A	COLLAPSE PRESSURE			16140	19070	22000	23470	23470	26400	27870	27870	0	32270	32270	36670	39600	41070	44010	45470	
4.500 ID	BODY YIELD STRENGTH			1242	1468	1694	1806	1806	2032	2145	2145	2145	2484	2484	2823	3048	3161	3387	3500	
4.375 DD	API INTERNAL PRESSURE			17190	20310	23440	25000	25000	28130	29690	29690	29690	34380	34380	39060	42190	43750	46880	48440	
SD	TEST PRESS 80%			15700	18600	21400	22900	22900	25700	27100	27100	27100	31400	31400	35700	38600	40000	42900	44300	
7.625	24.20	23.49	0.300																	
6.904 A	COLLAPSE PRESSURE			2320	2550	2740	2820	2820	2950	3000	3000	0	3090	3090	3100	3100	3100	3100	3100	
7.025 ID	BODY YIELD STRENGTH			380	449	518	552	552	621	656	656	656	759	759	863	932	967	1036	1070	
6.900 DD	API INTERNAL PRESSURE			3790	4480	5160	5510	5510	6200	6540	6540	6540	7570	7570	8610	9300	9640	10330	10670	
SD	TEST PRESS 80%			3500	4100	4700	5000	5000	5700	6000	6000	6000	6900	6900	7900	8500	8800	9400	9800	
7.625	26.40	25.59	0.328																	
7.519 A	COLLAPSE PRESSURE			2890	3100	3290	3400	3400	3610	3710	3710	4850	3920	3920	4050	4080	4080	4080	4080	
6.969 ID	BODY YIELD STRENGTH			414	489	564	602	602	677	714	714	714	827	827	940	1015	1053	1128	1165	
6.844 DD	API INTERNAL PRESSURE			4140	4890	5650	6020	6020	6780	7150	7150	7150	8280	8280	9410	10160	10540	11290	11670	
SD	TEST PRESS 80%			3800	4500	5200	5500	5500	6200	6500	6500	6500	7600	7600	8600	9300	9600	10300	10700	

				MINIMUM YIELD STRENGTH, KSI															
				55	65	75	80	80	90	95	95	95	110	110	125	135	140	150	155
				MINIMUM TENSILE STRENGTH, KSI															
				95	95	95	95	100	100	105	105	110	120	125	135	145	150	160	165
DIA	WEIGHT		WALL	GRADE															
	WN	WPE		K-55	M-65	75	L-80	N-80	C-90	C-95	T-95	HC-95	C-110	P-110	Q-125	135	140	V-150	155
7.625	29.70	29.06	0.375																
	8.541 A	COLLAPSE PRESSURE		3910	4310	4640	4790	4790	5030	5130	5130	7150	5350	5350	5670	5860	5930	6050	6090
	6.875 ID	BODY YIELD STRENGTH		470	555	641	683	683	769	811	811	811	940	940	1068	1153	1196	1281	1324
	6.750 OD	API INTERNAL PRESSURE		4730	5590	6450	6890	6890	7750	8180	8180	8180	9470	9470	10760	11620	12050	12910	13340
	SD	TEST PRESS 80%		4300	5100	5900	6300	6300	7100	7500	7500	7500	8700	8700	9800	10600	11000	11800	12200
7.625	33.70	33.07	0.430																
	9.720 A	COLLAPSE PRESSURE		5100	5730	6300	6560	6560	7050	7270	7270	8800	7870	7870	8340	8580	8690	8850	8900
	6.765 ID	BODY YIELD STRENGTH		535	632	729	778	778	875	923	923	923	1069	1069	1215	1312	1361	1458	1507
	6.640 OD	API INTERNAL PRESSURE		5430	6410	7400	7900	7900	8880	9380	9380	9380	10860	10860	12340	13320	13820	14800	15300
	SD	TEST PRESS 80%		5000	5900	6800	7200	7200	8100	8600	8600	8600	9900	9900	11300	12200	12600	13500	14000
7.625	39.00	38.08	0.500																
	11.192 A	COLLAPSE PRESSURE		6610	7530	8400	8820	8820	9610	10000	10000	10600	11080	11080	12060	12650	12920	13450	13680
	6.625 ID	BODY YIELD STRENGTH		616	727	839	895	895	1007	1063	1063	1063	1231	1231	1389	1511	1567	1679	1735
	6.500 OD	API INTERNAL PRESSURE		6310	7460	8610	9180	9180	10330	10900	10900	10900	12620	12620	14340	15490	16070	17210	17790
	SD	TEST PRESS 80%		5800	6800	7900	8400	8400	9400	10000	10000	10000	11500	11500	13100	14200	14700	15700	16300
7.625	42.80	42.43	0.562																
	12.470 A	COLLAPSE PRESSURE		7510	8860	10240	10820	10820	11890	12410	12410	0	13930	13930	15350	16240	16680	17510	17910
	6.501 ID	BODY YIELD STRENGTH		686	811	935	998	998	1122	1185	1185	1185	1372	1372	1559	1683	1746	1871	1933
	6.376 OD	API INTERNAL PRESSURE		7090	8380	9670	10320	10320	11610	12250	12250	12250	14190	14190	16120	17410	18090	19350	19990
	SD	TEST PRESS 80%		6500	7700	8900	9400	9400	10600	11200	11200	11200	13000	13000	14700	15900	16500	17700	18300
7.625	45.30	44.71	0.595																
	13.141 A	COLLAPSE PRESSURE		7910	9350	10790	11510	11510	12950	13670	13670	12900	15440	15440	17110	18160	18670	19680	20160
	6.435 ID	BODY YIELD STRENGTH		723	854	986	1051	1051	1183	1248	1248	1248	1446	1446	1643	1774	1840	1971	2037
	6.310 OD	API INTERNAL PRESSURE		7510	8860	10240	10920	10920	12290	12970	12970	12970	15020	15020	17070	18440	19120	20480	21170
	6.375 SD	TEST PRESS 80%		6900	8100	9400	10000	10000	11200	11900	11900	11900	13700	13700	15600	16900	17500	18700	19400
7.625	47.10	46.77	0.625																
	13.744 A	COLLAPSE PRESSURE		8280	9780	11290	12040	12040	13540	14300	14300	0	16550	16550	18700	19900	20490	21650	22210
	6.375 ID	BODY YIELD STRENGTH		756	893	1031	1100	1100	1237	1306	1306	1306	1512	1512	1718	1855	1924	2062	2130
	6.250 OD	API INTERNAL PRESSURE		7890	9320	10760	11480	11480	12910	13630	13630	13630	15780	15780	17930	19360	20080	21520	22230
	SD	TEST PRESS 80%		7200	8500	9800	10500	10500	11800	12500	12500	12500	14400	14400	16490	17700	18400	19700	20300
7.625	51.20	50.95	0.687																
	14.974 A	COLLAPSE PRESSURE		9020	10660	12300	13120	13120	14760	15580	15580	0	18040	18040	20500	22130	22950	24590	25410
	6.251 ID	BODY YIELD STRENGTH		824	973	1123	1196	1196	1348	1423	1423	1423	1647	1647	1872	2021	2096	2246	2321
	6.126 OD	API INTERNAL PRESSURE		8670	10250	11830	12610	12610	14190	14980	14980	14980	17340	17340	19710	21290	22070	23650	24440
	SD	TEST PRESS 80%		7900	9400	10800	11500	11500	13000	13700	13700	13700	15900	15900	18000	19500	20200	21600	22300
7.625	52.10	51.82	0.700																
	15.229 A	COLLAPSE PRESSURE		9170	10840	12510	13340	13340	15010	15840	15840	0	18340	18340	20840	22510	23350	25010	25850
	6.225 ID	BODY YIELD STRENGTH		838	990	1142	1218	1218	1371	1447	1447	1447	1675	1675	1904	2056	2132	2284	2360
	6.100 OD	API INTERNAL PRESSURE		8840	10440	12050	12850	12850	14460	15260	15260	15260	17670	17670	20080	21690	22490	24100	24900
	SD	TEST PRESS 80%		8100	9500	11000	11800	11800	13200	14000	14000	14000	16200	16200	18400	19800	20600	22000	22800
7.625	52.80	52.62	0.712																
	15.463 A	COLLAPSE PRESSURE		9310	11010	12700	13550	13550	15240	16080	16080	0	18620	18620	21160	22860	23700	25400	26240
	6.201 ID	BODY YIELD STRENGTH		850	1005	1160	1237	1237	1392	1469	1469	1469	1701	1701	1933	2088	2165	2319	2397
	6.076 OD	API INTERNAL PRESSURE		8990	10620	12260	13070	13070	14710	15520	15520	15520	17980	17980	20430	22060	22880	24510	25330
	SD	TEST PRESS 80%		8200	9700	11200	12000	12000	13400	14200	14200	14200	16400	16400	18700	20200	20900	22400	23200
7.625	55.30	55.12	0.750																
	16.199 A	COLLAPSE PRESSURE		9760	11530	13300	14190	14190	15960	16850	16850	0	19510	19510	22170	23950	24830	26610	27490
	6.125 ID	BODY YIELD STRENGTH		891	1053	1215	1296	1296	1458	1539	1539	1539	1782	1782	2025	2187	2268	2430	2511
	6.000 OD	API INTERNAL PRESSURE		9470	11190	12910	13770	13770	15490	16350	16350	16350	18930	18930	21520	23240	24100	25820	26680
	SD	TEST PRESS 80%		8700	10200	11800	12600	12600	14200	15000	15000	15000	17300	17300	19700	21200	22000	23600	24400
7.625	58.30	58.37	0.800																
	17.153 A	COLLAPSE PRESSURE		10330	12210	14090	15030	15030	16900	17840	17840	0	20660	20660	23480	25360	26290	28170	29110
	6.025 ID	BODY YIELD STRENGTH		943	1115	1286	1372	1372	1544	1630	1630	1630	1887	1887	2144	2316	2401	2573	2659
	5.900 OD	API INTERNAL PRESSURE		10100	11930	13770	14690	14690	16520	17440	17440	17440	20200	20200	22950	24790	25700	27540	28460
	SD	TEST PRESS 80%		9200	10900	12600	13400	13400	15100	15900	15900	15900	18500	18500	21000	22700	23500	25200	26000

				MINIMUM YIELD STRENGTH, KSI																
				55	65	75	80	80	90	95	95	95	110	110	125	135	140	150	155	
				MINIMUM TENSILE STRENGTH, KSI																
				95	80	95	95	100	100	105	105	110	120	125	135	145	150	160	165	
DIA	WEIGHT		WALL	GRADE																
	WN	WPE		K-55	M-65	75	L-80	N-80	C-80	C-85	T-95	HC-95	C-110	P-110	Q-125	135	140	V-150	155	
7.625	59.20	59.14	0.812																	
	17.380 A	COLLAPSE PRESSURE			10470	12370	14270	15220	15220	17130	18080	18080	0	20930	20930	23790	25690	26640	28550	29500
	6.001 ID	BODY YIELD STRENGTH			956	1130	1304	1390	1390	1564	1651	1651	1651	1912	1912	2173	2346	2433	2607	2694
	5.876 DD	API INTERNAL PRESSURE			10250	12110	13980	14910	14910	16770	17700	17700	17700	20500	20500	23300	25160	26090	27950	28890
7.625	63.20	63.14	0.875																	
	18.555 A	COLLAPSE PRESSURE			11170	13210	15240	16250	16250	18290	19300	19300	0	22350	22350	25400	27430	28440	30480	31490
	5.875 ID	BODY YIELD STRENGTH			1021	1206	1392	1484	1484	1670	1763	1763	1763	2041	2041	2319	2505	2598	2783	2876
	5.750 DD	API INTERNAL PRESSURE			11050	13050	15060	16070	16070	18070	19080	19080	19080	22090	22090	25100	27110	28110	30120	31130
7.625	66.90	66.99	0.937																	
	19.687 A	COLLAPSE PRESSURE			11860	14010	16170	17250	17250	19400	20480	20480	0	23710	23710	26950	29100	30180	32340	33410
	5.751 ID	BODY YIELD STRENGTH			1083	1280	1477	1575	1575	1772	1870	1870	1870	2166	2166	2461	2658	2756	2953	3051
	5.626 DD	API INTERNAL PRESSURE			11830	13980	16130	17200	17200	19350	20430	20430	20430	23660	23660	26880	29030	30110	32260	33330
7.625	70.70	70.82	1.000																	
	20.813 A	COLLAPSE PRESSURE			12530	14810	17090	18230	18230	20510	21650	21650	0	25070	25070	28490	30770	31910	34180	35320
	5.625 ID	BODY YIELD STRENGTH			1145	1353	1561	1665	1665	1873	1977	1977	1977	2289	2289	2602	2810	2914	3122	3226
	5.500 DD	API INTERNAL PRESSURE			12620	14920	17210	18360	18360	20680	21800	21800	21800	25250	25250	28690	30980	32130	34430	35570
7.625	74.30	74.51	1.062																	
	21.897 A	COLLAPSE PRESSURE			13190	15580	17980	19180	19180	21580	22780	22780	0	26370	26370	29970	32370	33570	35960	37160
	5.501 ID	BODY YIELD STRENGTH			1204	1423	1642	1752	1752	1971	2080	2080	2080	2409	2409	2737	2956	3066	3285	3394
	5.376 DD	API INTERNAL PRESSURE			13410	15840	18280	19500	19500	21940	23160	23160	23160	26810	26810	30470	32900	34120	36560	37760
7.625	77.90	78.17	1.125																	
	22.973 A	COLLAPSE PRESSURE			13830	16350	18870	20120	20120	22640	23900	23900	0	27670	27670	31440	33960	35220	37730	38990
	5.375 ID	BODY YIELD STRENGTH			1264	1493	1723	1838	1838	2068	2182	2182	2182	2527	2527	2872	3101	3216	3446	3561
	5.250 DD	API INTERNAL PRESSURE			14200	16780	19360	20660	20660	23240	24530	24530	24530	28400	28400	32270	34860	36150	38730	40020
7.625	81.40	81.69	1.187																	
	24.008 A	COLLAPSE PRESSURE			14460	17090	19720	21030	21030	23660	24970	24970	0	28920	28920	32890	35490	36800	39430	40750
	5.251 ID	BODY YIELD STRENGTH			1320	1561	1801	1921	1921	2161	2281	2281	2281	2641	2641	3001	3241	3361	3601	3721
	5.126 DD	API INTERNAL PRESSURE			14980	17710	20430	21790	21790	24520	25880	25880	25880	29970	29970	34050	36780	38140	40860	42230
7.625	82.10	82.42	1.200																	
	24.222 A	COLLAPSE PRESSURE			14590	17240	19890	21220	21220	23870	25200	25200	0	29170	29170	33150	35800	37130	39780	41110
	5.225 ID	BODY YIELD STRENGTH			1332	1574	1817	1938	1938	2180	2301	2301	2301	2664	2664	3028	3270	3391	3633	3754
	5.100 DD	API INTERNAL PRESSURE			15150	17900	20660	22030	22030	24790	26160	26160	26160	30300	30300	34430	37180	38560	41310	42690
7.625	84.80	85.19	1.250																	
	25.035 A	COLLAPSE PRESSURE			15080	17820	20560	21930	21930	24670	26040	26040	0	30150	30150	34260	37010	38380	41120	42490
	5.125 ID	BODY YIELD STRENGTH			1377	1627	1878	2003	2003	2253	2378	2378	2378	2754	2754	3129	3380	3505	3755	3880
	5.000 DD	API INTERNAL PRESSURE			15780	18650	21520	22950	22950	25820	27250	27250	27250	31560	31560	35860	38730	40160	43030	44470
7.750	46.10	45.51	0.595																	
	13.374 A	COLLAPSE PRESSURE			7800	9210	10630	11340	11340	12750	13320	13320	12650	15000	15000	16600	17600	18090	19050	19500
	6.560 ID	BODY YIELD STRENGTH			736	869	1003	1070	1070	1204	1271	1271	1271	1471	1471	1672	1805	1872	2006	2073
	6.435 DD	API INTERNAL PRESSURE			7390	8730	10080	10750	10750	12090	12760	12760	12760	14780	14780	16790	18140	18810	20150	20830
7.750	48.60	48.64	0.640																	
	14.296 A	COLLAPSE PRESSURE			8330	9850	11360	12120	12120	13640	14390	14390	0	16670	16670	18940	20170	20770	21960	22520
	6.470 ID	BODY YIELD STRENGTH			786	929	1072	1144	1144	1287	1358	1358	1358	1573	1573	1787	1930	2001	2144	2216
	6.345 DD	API INTERNAL PRESSURE			7950	9390	10840	11560	11560	13010	13730	13730	13730	15900	15900	18060	19510	20230	21680	22400

				MINIMUM YIELD STRENGTH, KSI																
				55	65	75	80	80	90	95	95	95	110	110	125	135	140	150	155	
				MINIMUM TENSILE STRENGTH, KSI																
				95	80	95	95	100	100	105	105	110	120	125	135	145	150	160	165	
DIA	WEIGHT		WALL	GRADE																
	WN	WPE		K-55	M-65	75	L-80	N-80	C-90	C-95	T-95	HC-95	C-110	P-110	Q-125	135	140	V-150	155	
7.750	54.20	53.57	0.712																	
15.743 A			COLLAPSE PRESSURE	9180	10850	12510	13350	13350	15020	15850	15850	0	18350	18350	20860	22530	23360	25030	25860	
6.326 ID			BODY YIELD STRENGTH	866	1023	1181	1259	1259	1417	1496	1496	1496	1732	1732	1968	2125	2204	2361	2440	
6.201 DD			API INTERNAL PRESSURE	8840	10450	12060	12860	12860	14470	15270	15270	15270	17690	17690	20100	21700	22510	24120	24920	
6.250 SD			TEST PRESS 80%	8100	9600	11000	11800	11800	13200	14000	14000	14000	16200	16200	18400	19800	20600	22000	22800	
8.000	31.00	30.57	0.375																	
8.983 A			COLLAPSE PRESSURE	3530	3860	4120	4230	4230	4390	4460	4460	0	4800	4800	5060	5200	5240	5300	5310	
7.250 ID			BODY YIELD STRENGTH	494	584	674	719	719	808	853	853	853	988	988	1123	1213	1258	1347	1392	
7.125 DD			API INTERNAL PRESSURE	4510	5330	6150	6560	6560	7380	7790	7790	7790	9020	9020	10250	11070	11480	12300	12710	
SD			TEST PRESS 80%	4100	4900	5600	6000	6000	6800	7100	7100	7100	8300	8300	9400	10100	10500	11300	11600	
8.000	70.80	70.75	0.937																	
20.791 A			COLLAPSE PRESSURE	11370	13440	15510	16550	16550	18610	19650	19650	0	22750	22750	25850	27920	28950	31020	32060	
6.126 ID			BODY YIELD STRENGTH	1144	1351	1559	1663	1663	1871	1975	1975	1975	2287	2287	2599	2807	2911	3119	3223	
6.001 DD			API INTERNAL PRESSURE	11270	13320	15370	16400	16400	18450	19470	19470	19470	22550	22550	25620	27670	28700	30750	31770	
SD			TEST PRESS 80%	10300	12200	14100	15000	15000	16900	17800	17800	17800	20600	20600	23400	25300	26200	28100	29000	
8.063	74.20	74.20	0.980																	
21.807 A			COLLAPSE PRESSURE	11740	13880	16020	17080	17080	19220	20290	20290	0	23490	23490	26690	28830	29900	32030	33100	
6.103 ID			BODY YIELD STRENGTH	1199	1417	1636	1745	1745	1963	2072	2072	2072	2399	2399	2726	2944	3053	3271	3380	
5.978 DD			API INTERNAL PRESSURE	11700	13830	15950	17020	17020	19140	20210	20210	20210	23400	23400	26590	28710	29780	31900	32970	
SD			TEST PRESS 80%	10700	12600	14600	15600	15600	17500	18500	18500	18500	21400	21400	24300	26300	27200	29200	30100	
8.125	32.50	31.07	0.375																	
9.130 A			COLLAPSE PRESSURE	3410	3720	3950	4050	4050	4190	4320	4320	0	4640	4640	4880	4990	5020	5060	5070	
7.375 ID			BODY YIELD STRENGTH	502	593	685	730	730	822	867	867	867	1004	1004	1141	1233	1278	1370	1415	
7.250 DD			API INTERNAL PRESSURE	4440	5250	6060	6460	6460	7270	7670	7670	7670	8880	8880	10100	10900	11310	12120	12520	
SD			TEST PRESS 80%	4100	4800	5500	5900	5900	6600	7000	7000	7000	8100	8100	9200	10000	10300	11100	11400	
8.125	35.50	34.59	0.420																	
10.167 A			COLLAPSE PRESSURE	4320	4800	5220	5410	5410	5730	5880	5880	0	6230	6230	6440	6580	6680	6870	6940	
7.285 ID			BODY YIELD STRENGTH	559	661	763	813	813	915	966	966	966	1118	1118	1271	1373	1423	1525	1576	
7.160 DD			API INTERNAL PRESSURE	4980	5880	6780	7240	7240	8140	8590	8590	8590	9950	9950	11310	12210	12660	13570	14020	
SD			TEST PRESS 80%	4500	5400	6200	6600	6600	7400	7900	7900	7900	9100	9100	10300	11200	11600	12400	12800	
8.125	39.50	38.46	0.470																	
11.303 A			COLLAPSE PRESSURE	5330	6010	6630	6920	6920	7450	7710	7710	0	8380	8380	8930	9230	9360	9580	9660	
7.185 ID			BODY YIELD STRENGTH	622	735	848	904	904	1017	1074	1074	1074	1243	1243	1413	1528	1582	1695	1752	
7.060 DD			API INTERNAL PRESSURE	5570	6580	7590	8100	8100	9110	9620	9620	9620	11140	11140	12650	13670	14170	15180	15690	
SD			TEST PRESS 80%	5100	6000	6900	7400	7400	8300	8800	8800	8800	10200	10200	11600	12500	13000	13900	14300	
8.625	24.00	23.60	0.264																	
6.934 A			COLLAPSE PRESSURE	1370	1420	1430	1430	1430	1430	1430	1430	0	1430	1430	1430	1430	1430	1430	1430	
8.097 ID			BODY YIELD STRENGTH	381	451	520	555	555	624	659	659	659	763	763	867	936	971	1040	1075	
7.972 DD			API INTERNAL PRESSURE	2950	3480	4020	4290	4290	4820	5090	5090	5090	5890	5890	6700	7230	7500	8030	8300	
SD			TEST PRESS 80%	2700	3200	3700	3900	3900	4400	4700	4700	4700	5400	5400	6100	6600	6900	7300	7600	
8.625	28.00	27.04	0.304																	
7.947 A			COLLAPSE PRESSURE	1880	2020	2130	2160	2160	2200	2210	2210	0	2210	2210	2210	2210	2210	2210	2210	
8.017 ID			BODY YIELD STRENGTH	437	517	596	636	636	715	755	755	755	874	874	993	1073	1113	1192	1232	
7.892 DD			API INTERNAL PRESSURE	3390	4010	4630	4930	4930	5550	5860	5860	5860	6780	6780	7710	8330	8640	9250	9560	
SD			TEST PRESS 80%	3100	3700	4200	4500	4500	5100	5400	5400	5400	6200	6200	7000	7600	7900	8500	8700	
8.625	32.00	31.13	0.352																	
9.149 A			COLLAPSE PRESSURE	2530	2740	2960	3050	3050	3210	3290	3290	0	3420	3420	3470	3470	3470	3470	3470	
7.921 ID			BODY YIELD STRENGTH	593	695	796	832	832	923	969	969	969	1006	1006	1144	1235	1281	1372	1418	
7.796 DD			API INTERNAL PRESSURE	3930	4640	5360	5710	5710	6430	6780	6780	6780	7860	7860	8930	9640	10000	10710	11070	
7.875 SD			TEST PRESS 80%	3600	4200	4900	5200	5200	5900	6200	6200	6200	7200	7200	8200	8800	9100	9800	10100	
8.625	36.00	35.17	0.400																	
10.336 A			COLLAPSE PRESSURE	3450	3760	4000	4100	4100	4250	4360	4360	6060	4690	4690	4930	5050	5090	5130	5140	
7.825 ID			BODY YIELD STRENGTH	568	672	775	827	827	930	982	982	982	1137	1137	1292	1395	1447	1550	1602	
7.700 DD			API INTERNAL PRESSURE	4480	5280	6090	6490	6490	7300	7710	7710	7710	8930	8930	10140	10960	11360	12170	12580	
SD			TEST PRESS 80%	4100	4800	5600	5900	5900	6700	7000	7000	7000	8200	8200	9300	10000	10400	11100	11500	

				MINIMUM YIELD STRENGTH, KSI															
				55	65	75	80	80	90	95	95	95	110	110	125	135	140	150	155
				MINIMUM TENSILE STRENGTH, KSI															
				95	80	95	95	100	100	105	105	110	120	125	135	145	150	160	165
DIA	WEIGHT		WALL	GRADE															
	WN	WPE		K-55	M-65	75	L-80	N-80	C-90	C-95	T-95	HC-95	C-110	P-110	Q-125	135	140	V-150	155
8.625	40.00	39.33	0.450																
	11.557 A			4400	4900	5330	5530	5530	5870	6020	6020	7900	6400	6400	6640	6720	6830	7020	7110
	7.725 ID			636	751	867	925	925	1040	1098	1098	1098	1271	1271	1445	1560	1618	1734	1791
	7.600 DD			5020	5930	6850	7300	7300	8220	8670	8670	8670	10040	10040	11410	12330	12780	13700	14150
	7.625 SD			4600	5400	6300	6700	6700	7500	7900	7900	7900	9200	9200	10400	11300	11700	12500	12900
8.625	44.00	43.43	0.500																
	12.763 A			5360	6040	6660	6950	6950	7490	7740	7740	9100	8420	8420	8980	9280	9410	9640	9720
	7.825 ID			702	830	957	1021	1021	1149	1212	1212	1212	1404	1404	1595	1723	1787	1914	1978
	7.500 DD			5580	6590	7610	8120	8120	9130	9640	9640	9640	11160	11160	12680	13700	14200	15220	15720
	SD			5100	6000	7000	7400	7400	8300	8800	8800	8800	10200	10200	11600	12500	13000	13900	14400
8.625	49.00	48.04	0.557																
	14.118 A			6440	7330	8170	8570	8570	9340	9700	9700	10400	10740	10740	11680	12210	12460	12950	13160
	7.511 ID			776	918	1059	1129	1129	1271	1341	1341	1341	1553	1553	1765	1906	1977	2118	2188
	7.386 DD			6220	7350	8480	9040	9040	10170	10740	10740	10740	12430	12430	14130	15260	15820	16950	17520
	SD			5700	6700	7700	8300	8300	9300	9800	9800	9800	11400	11400	12900	13900	14500	15500	16000
8.625	52.00	51.08	0.595																
	15.010 A			7060	8200	9180	9660	9660	10570	11010	11010	0	12280	12280	13440	14160	14500	15150	15450
	7.435 ID			826	976	1126	1201	1201	1351	1426	1426	1426	1651	1651	1876	2026	2101	2252	2327
	7.310 DD			6640	7850	9050	9660	9660	10670	11470	11470	11470	13280	13280	15090	16300	16900	18110	18710
	SD			6100	7200	8300	8800	8800	9900	10500	10500	10500	12100	12100	13800	14900	15500	16600	17100
8.625	54.00	53.45	0.625																
	15.708 A			7390	8740	9980	10510	10510	11540	12040	12040	0	13490	13490	14850	15700	16100	16890	17260
	7.375 ID			864	1021	1178	1257	1257	1414	1492	1492	1492	1728	1728	1964	2121	2199	2356	2435
	7.250 DD			6970	8240	9510	10140	10140	11140	12050	12050	12050	13950	13950	15850	17120	17750	19020	19680
	SD			6400	7500	8700	9300	9300	10400	11000	11000	11000	12800	12800	14500	15700	16200	17400	18000
8.625	58.70	58.30	0.687																
	17.132 A			8060	9530	11000	11730	11730	13200	13930	13930	0	16010	16010	17760	18880	19420	20490	21000
	7.251 ID			942	1114	1285	1371	1371	1542	1628	1628	1628	1885	1885	2142	2313	2398	2570	2655
	7.126 DD			7670	9060	10450	11150	11150	12550	13240	13240	13240	15330	15330	17420	18820	19510	20910	21610
	SD			7000	8300	9600	10200	10200	11500	12100	12100	12100	14000	14000	15900	17200	17800	19100	19800
8.625	63.50	63.14	0.750																
	18.555 A			8730	10320	11910	12700	12700	14290	15090	15090	0	17470	17470	19850	21440	22230	23820	24610
	7.125 ID			1021	1206	1392	1484	1484	1670	1763	1763	1763	2041	2041	2319	2505	2598	2783	2876
	7.000 DD			8370	9890	11410	12170	12170	13700	14460	14460	14460	16740	16740	19020	20540	21300	22830	23590
	SD			7700	9000	10400	11100	11100	12500	13200	13200	13200	15300	15300	17400	18800	19500	20900	21600
8.625	68.10	67.82	0.812																
	19.931 A			9380	11090	12790	13650	13650	15350	16200	16200	0	18760	18760	21320	23030	23880	25580	26440
	7.001 ID			1096	1296	1495	1594	1594	1794	1893	1893	1893	2192	2192	2491	2691	2790	2990	3089
	6.876 DD			9060	10710	12360	13180	13180	14830	15650	15650	15650	18120	18120	20590	22240	23070	24710	25540
	SD			8300	9800	11300	12100	12100	13600	14300	14300	14300	16600	16600	18800	20300	21100	22600	23300
8.625	72.70	72.49	0.875																
	21.304 A			10030	11850	13670	14590	14590	16410	17320	17320	0	20050	20050	22790	24610	25520	27350	28260
	6.875 ID			1172	1385	1598	1704	1704	1917	2024	2024	2024	2343	2343	2663	2876	2983	3196	3302
	6.750 DD			9760	11540	13320	14200	14200	15980	16870	16870	16870	19530	19530	22190	23970	24860	26630	27520
	SD			8900	10600	12200	13000	13000	14600	15400	15400	15400	17900	17900	20300	21900	22700	24300	25200
8.625	77.10	77.01	0.937																
	22.631 A			10650	12590	14530	15490	15490	17430	18400	18400	0	21300	21300	24210	26150	27110	29050	30020
	6.751 ID			1245	1471	1697	1810	1810	2037	2150	2150	2150	2489	2489	2829	3055	3168	3395	3508
	6.626 DD			10460	12360	14260	15210	15210	17110	18060	18060	18060	20910	20910	23760	25670	26620	28520	29470
	SD			9600	11300	13000	13900	13900	15600	16500	16500	16500	19100	19100	21700	23500	24300	26100	26900
8.625	81.50	81.51	1.000																
	23.955 A			11270	13320	15370	16400	16400	18450	19470	19470	0	22550	22550	25620	27670	28700	30750	31770
	6.625 ID			1318	1557	1797	1916	1916	2156	2276	2276	2276	2635	2635	2994	3234	3354	3593	3713
	6.500 DD			11160	13190	15220	16230	16230	18260	19280	19280	19280	22320	22320	25360	27390	28410	30430	31450
	SD			10200	12100	13900	14800	14800	16700	17600	17600	17600	20400	20400	23200	25000	26000	27800	28800

				MINIMUM YIELD STRENGTH, KSI																
				55	65	75	80	80	90	95	95	95	110	110	125	135	140	150	155	
				MINIMUM TENSILE STRENGTH, KSI																
				95	80	95	95	100	100	105	105	110	120	125	135	145	150	160	165	
DIA	WEIGHT		WALL	GRADE																
	WN	WPE		K-55	M-65	75	L-80	N-80	C-80	C-85	T-95	HC-95	C-110	P-110	Q-125	135	140	V-150	155	
8.625	81.50	81.51	1.000																	
	23.955 A		COLLAPSE PRESSURE	11270	13320	15370	16400	16400	18450	19470	19470	0	22550	22550	25620	27670	28700	30750	31770	
	6.625 ID		BODY YIELD STRENGTH	1318	1557	1797	1916	1916	2156	2276	2276	2276	2635	2635	2994	3234	3354	3593	3713	
	6.500 DO		API INTERNAL PRESSURE	11160	13190	15220	16230	16230	18260	19280	19280	19280	22320	22320	25360	27390	28410	30430	31450	
	SD		TEST PRESS 80%	10200	12100	13900	14800	14800	16700	17600	17600	17600	20400	20400	23200	25000	26000	27800	28800	
8.625	83.20	83.28	1.025																	
	24.473 A		COLLAPSE PRESSURE	11520	13610	15710	16750	16750	18850	19900	19900	0	23040	23040	26180	28270	29320	31420	32460	
	6.575 ID		BODY YIELD STRENGTH	1346	1591	1835	1958	1958	2203	2325	2325	2325	2692	2692	3059	3304	3426	3671	3793	
	6.450 DO		API INTERNAL PRESSURE	11440	13520	15600	16640	16640	18720	19760	19760	19760	22880	22880	26000	28080	29120	31200	32240	
	6.500 SD		TEST PRESS 80%	10500	12400	14300	15200	15200	17100	18100	18100	18100	20900	20900	23600	25700	26600	28500	29500	
8.625	85.80	85.86	1.062																	
	25.233 A		COLLAPSE PRESSURE	11880	14040	16200	17280	17280	19430	20510	20510	0	23750	23750	26990	29150	30230	32390	33470	
	6.501 ID		BODY YIELD STRENGTH	1388	1640	1892	2019	2019	2271	2397	2397	2397	2776	2776	3154	3406	3533	3785	3911	
	6.376 DO		API INTERNAL PRESSURE	11850	14010	16160	17240	17240	19390	20470	20470	20470	23700	23700	26930	29090	30170	32320	33400	
	SD		TEST PRESS 80%	10800	12800	14800	15800	15800	17700	18700	18700	18700	21700	21700	24600	26600	27600	29600	30600	
8.625	90.00	90.20	1.125																	
	26.507 A		COLLAPSE PRESSURE	12480	14740	17010	18150	18150	20420	21550	21550	0	24950	24950	28360	30620	31760	34030	35160	
	6.375 ID		BODY YIELD STRENGTH	1458	1723	1988	2121	2121	2388	2518	2518	2518	2916	2916	3313	3578	3711	3976	4109	
	6.250 DO		API INTERNAL PRESSURE	12550	14840	17120	18260	18260	20540	21680	21680	21680	25110	25110	28530	30820	31960	34240	35380	
	SD		TEST PRESS 80%	11500	13600	15700	16700	16700	18800	19800	19800	19800	23000	23000	26100	28200	29200	31300	32300	
8.750	49.70	48.78	0.557																	
	14.337 A		COLLAPSE PRESSURE	6290	7150	7960	8350	8350	9060	9430	9430	10260	10410	10410	11280	11800	12040	12490	12680	
	7.636 ID		BODY YIELD STRENGTH	789	932	1075	1147	1147	1290	1362	1362	1362	1577	1577	1792	1935	2007	2151	2222	
	7.480 DO		API INTERNAL PRESSURE	6130	7240	8360	8910	8910	10030	10580	10580	10580	12250	12250	13930	15040	15600	16710	17270	
	SD		TEST PRESS 80%	5600	6600	7600	8100	8100	9200	9700	9700	9700	11200	11200	12700	13700	14300	15300	15800	
9.000	40.00	38.96	0.425																	
	11.449 A		COLLAPSE PRESSURE	3590	3930	4200	4310	4310	4480	4550	4550	10260	4880	4880	5160	5300	5340	5410	5430	
	8.150 ID		BODY YIELD STRENGTH	630	744	859	916	916	1030	1088	1088	1088	1259	1259	1431	1546	1603	1717	1775	
	7.994 DO		API INTERNAL PRESSURE	4550	5370	6200	6610	6610	7440	7850	7850	7850	9090	9090	10330	11160	11570	12400	12810	
	8.025 SD		TEST PRESS 80%	4200	4900	5700	6000	6000	6800	7200	7200	7200	8300	8300	9400	10200	10600	11300	11700	
9.375	39.00	38.38	0.400																	
	11.278 A		COLLAPSE PRESSURE	2840	3030	3230	3350	3350	3550	3650	3650	0	3840	3840	3960	3980	3980	3980	3980	
	8.575 ID		BODY YIELD STRENGTH	620	733	846	902	902	1015	1071	1071	1071	1241	1241	1410	1523	1579	1692	1748	
	8.500 DO		API INTERNAL PRESSURE	4110	4850	5600	5970	5970	6720	7090	7090	7090	8210	8210	9330	10080	10450	11200	11570	
	SD		TEST PRESS 80%	3800	4400	5100	5500	5500	6100	6500	6500	6500	7500	7500	8500	9200	9600	10200	10600	
9.625	32.30	31.06	0.312																	
	9.128 A		COLLAPSE PRESSURE	1570	1660	1700	1710	1710	1710	1710	1710	0	1710	1710	1710	1710	1710	1710	1710	
	9.001 ID		BODY YIELD STRENGTH	502	593	685	730	730	822	867	867	867	1004	1004	1141	1232	1278	1369	1415	
	8.845 DO		API INTERNAL PRESSURE	3120	3690	4250	4540	4540	5110	5390	5390	5390	6240	6240	7090	7660	7940	8510	8790	
	SD		TEST PRESS 80%	2900	3400	3900	4100	4100	4700	4900	4900	4900	5700	5700	6500	7000	7300	7800	8000	
9.625	36.00	34.89	0.352																	
	10.254 A		COLLAPSE PRESSURE	2020	2190	2320	2370	2370	2440	2470	2470	0	2470	2470	2470	2470	2470	2470	2470	
	8.921 ID		BODY YIELD STRENGTH	564	667	769	820	820	923	974	974	974	1128	1128	1282	1384	1436	1538	1589	
	8.765 DO		API INTERNAL PRESSURE	3520	4160	4800	5120	5120	5760	6080	6080	6080	7040	7040	8000	8640	8960	9600	9920	
	SD		TEST PRESS 80%	3200	3800	4400	4700	4700	5300	5600	5600	5600	6400	6400	7300	7900	8200	8800	9100	
9.625	40.00	38.97	0.395																	
	11.454 A		COLLAPSE PRESSURE	2570	2770	2990	3090	3090	3260	3330	3330	4230	3470	3470	3530	3530	3530	3530	3530	
	8.835 ID		BODY YIELD STRENGTH	630	745	859	916	916	1031	1088	1088	1088	1260	1260	1432	1546	1604	1718	1775	
	8.679 DO		API INTERNAL PRESSURE	3960	4670	5390	5750	5750	6460	6820	6820	6820	7900	7900	8980	9700	10050	10770	11130	
	8.750 SD		TEST PRESS 80%	3600	4300	4900	5300	5300	5900	6260	6260	6260	7200	7200	8200	8900	9200	9800	10200	
9.625	43.50	42.73	0.435																	
	12.559 A		COLLAPSE PRESSURE	3250	3530	3730	3810	3810	4010	4130	4130	5600	4420	4420	4620	4710	4730	4750	4750	
	8.755 ID		BODY YIELD STRENGTH	691	816	942	1005	1005	1120	1193	1193	1193	1381	1381	1570	1695	1758	1884	1947	
	8.599 DO		API INTERNAL PRESSURE	4350	5140	5930	6330	6330	7120	7510	7510	7510	8700	8700	9890	10680	11070	11860	12260	
	8.625 SD		TEST PRESS 80%	4000	4700	5400	5800	5800	6500	6900	6900	6900	8000	8000	9000	9800	10100	10800	11200	

				MINIMUM YIELD STRENGTH, KSI															
				55	65	75	80	80	90	95	95	95	110	110	125	135	140	150	155
				MINIMUM TENSILE STRENGTH, KSI															
				95	80	95	95	100	100	105	105	110	120	125	135	145	150	160	165
				GRADE															
DIA	WGT	WPE	WALL	K-55	M-65	75	L-80	N-80	C-90	C-95	T-95	HC-95	C-110	P-110	Q-125	135	140	V-150	155
9.625	47.00	46.18	0.472																
	13.572 A			3890	4250	4610	4760	4760	4990	5090	5090	7100	5300	5300	5630	5820	5890	6000	6040
	8.681 ID			746	882	1018	1086	1086	1221	1289	1289	1289	1493	1493	1697	1832	1900	2036	2104
	8.525 DO			4720	5580	6440	6870	6870	7720	8150	8150	8150	9440	9440	10730	11590	12010	12870	13300
	SD			4300	5100	5900	6300	6300	7100	7500	7500	7500	8600	8600	9800	10600	11000	11800	12200
9.625	53.50	52.90	0.545																
	15.546 A			5130	5770	6350	6620	6620	7110	7340	7340	8850	7950	7950	8440	8890	8790	8970	9020
	8.535 ID			855	1010	1166	1244	1244	1399	1477	1477	1477	1710	1710	1943	2099	2176	2332	2410
	8.379 DO			5450	6440	7430	7930	7930	8920	9410	9410	9410	10900	10900	12390	13380	13870	14860	15360
	8.500 SD			5000	5900	6800	7290	7290	8200	8600	8600	8600	10000	10000	11390	12200	12700	13600	14000
9.625	58.40	57.44	0.595																
	16.879 A			5990	6790	7540	7900	7900	8560	8880	8880	0	9770	9770	10540	10980	11190	11570	11720
	8.435 ID			928	1097	1266	1350	1350	1519	1604	1604	1604	1857	1857	2110	2279	2363	2532	2616
	8.279 DO			5950	7030	8110	8650	8650	9740	10280	10280	10280	11900	11900	13520	14600	15150	16230	16770
	8.375 SD			5400	6400	7400	7900	7900	8900	9400	9400	9400	10900	10900	12400	13400	13800	14800	15300
9.625	59.40	58.70	0.609																
	17.250 A			6230	7080	7870	8250	8250	8970	9320	9320	0	10280	10280	11130	11630	11860	12290	12480
	8.407 ID			949	1121	1294	1380	1380	1553	1639	1639	1639	1898	1898	2156	2329	2415	2588	2674
	8.251 DO			6090	7200	8300	8860	8860	9970	10520	10520	10520	12180	12180	13840	14950	15500	16610	17160
	SD			5600	6600	7600	8100	8100	9100	9600	9600	9600	11100	11100	12700	13700	14200	15200	15700
9.625	61.10	60.13	0.625																
	17.671 A			6500	7400	8250	8660	8660	9440	9810	9810	0	10860	10860	11800	12360	12630	13130	13350
	8.375 ID			972	1149	1325	1414	1414	1590	1679	1679	1679	1944	1944	2209	2386	2474	2651	2739
	8.219 DO			6250	7390	8520	9090	9090	10230	10800	10800	10800	12500	12500	14200	15340	15910	17050	17610
	SD			5700	6800	7800	8300	8300	9400	9900	9900	9900	11400	11400	13000	14000	14500	15600	16100
9.625	64.90	64.32	0.672																
	18.901 A			7140	8360	9370	9860	9860	10800	11260	11260	0	12570	12570	13780	14520	14880	15570	15890
	8.281 ID			1040	1229	1418	1512	1512	1701	1796	1796	1796	2079	2079	2363	2552	2646	2835	2930
	8.125 DO			6720	7940	9160	9770	9770	11000	11610	11610	11610	13440	13440	15270	16490	17110	18330	18940
	SD			6100	7300	8400	8900	8900	10150	10600	10600	10600	12300	12300	14000	15100	15600	16800	17300
9.625	70.30	69.76	0.734																
	20.502 A			7750	9160	10570	11270	11270	12600	13170	13170	0	14820	14820	16390	17380	17850	18790	19240
	8.157 ID			1128	1333	1538	1640	1640	1845	1948	1948	1948	2255	2255	2563	2768	2870	3075	3178
	8.001 DO			7340	8670	10010	10680	10680	12010	12680	12680	12680	14680	14680	16680	18020	18680	20020	20690
	SD			6700	7900	9200	9800	9800	11000	11600	11600	11600	13400	13400	15300	16500	17100	18300	18900
9.625	71.60	71.16	0.750																
	20.911 A			7900	9340	10780	11500	11500	12930	13650	13650	0	15400	15400	17060	18110	18620	19620	20100
	8.125 ID			1150	1359	1568	1673	1673	1882	1987	1987	1987	2300	2300	2614	2823	2928	3137	3241
	7.969 DO			7500	8860	10230	10910	10910	12270	12950	12950	12950	15000	15000	17050	18410	19090	20450	21140
	SD			6900	8100	9400	10000	10000	11200	11800	11800	11800	13700	13700	15600	16800	17500	18700	19300
9.625	75.60	75.21	0.797																
	22.104 A			8350	9870	11390	12150	12150	13670	14430	14430	0	16710	16710	18990	20270	20880	22070	22640
	8.031 ID			1216	1437	1658	1768	1768	1989	2100	2100	2100	2431	2431	2763	2984	3095	3316	3426
	7.875 DO			7970	9420	10870	11590	11590	13040	13770	13770	13770	15940	15940	18110	19560	20290	21740	22460
	SD			7300	8600	9900	10600	10600	11900	12600	12600	12600	14600	14600	16600	17900	18500	19900	20500
9.625	80.80	80.50	0.859																
	23.656 A			8940	10570	12190	13010	13010	14630	15440	15440	0	17880	17880	20320	21950	22760	24380	25200
	7.907 ID			1301	1538	1774	1892	1892	2129	2247	2247	2247	2602	2602	2957	3194	3312	3548	3667
	7.751 DO			8590	10150	11710	12490	12490	14060	14840	14840	14840	17180	17180	19520	21080	21870	23430	24210
	SD			7900	9300	10700	11400	11400	12900	13600	13600	13600	15700	15700	17800	19300	20000	21400	22100
9.625	86.00	85.78	0.922																
	25.209 A			9630	11260	12990	13860	13860	15590	16460	16460	0	19060	19060	21650	23390	24250	25980	26850
	7.781 ID			1386	1639	1891	2017	2017	2269	2395	2395	2395	2773	2773	3151	3403	3529	3781	3907
	7.625 DO			9220	10900	12570	13410	13410	15090	15930	15930	15930	18440	18440	20950	22630	23470	25150	25980
	SD			8400	10000	11500	12300	12300	13800	14600	14600	14600	16900	16900	19200	20700	21500	23000	23800

				MINIMUM YIELD STRENGTH, KSI															
				55	65	75	80	80	90	95	95	95	110	110	125	135	140	150	155
				MINIMUM TENSILE STRENGTH, KSI															
				95	80	95	95	100	100	105	105	110	120	125	135	145	150	160	165
DIA	WEIGHT		WALL	GRADE															
	WN	WPE		K-55	M-65	75	L-80	N-80	C-80	C-95	T-95	HC-95	C-110	P-110	Q-125	135	140	V-150	155
9.625	91.00	90.89	0.984																
	26.712 A																		
	7.657 ID																		
	7.501 DO																		
9.750	59.20	58.23	0.595																
	17.113 A																		
	8.560 ID																		
	8.404 DO																		
	8.500 SD																		
9.875	62.80	61.80	0.625																
	18.162 A																		
	8.625 ID																		
	8.469 DO																		
	8.500 SD																		
9.875	65.10	64.10	0.650																
	18.838 A																		
	8.575 ID																		
	8.419 DO																		
	8.500 SD																		
10.000	0.00	67.01	0.672																
	19.693 A																		
	8.656 ID																		
	8.500 DO																		
10.000	0.00	68.49	0.688																
	20.127 A																		
	8.624 ID																		
	8.468 DO																		
	8.500 SD																		
10.750	32.75	31.23	0.279																
	9.178 A																		
	10.192 ID																		
	10.036 DO																		
10.750	40.50	38.91	0.350																
	11.435 A																		
	10.050 ID																		
	9.894 DO																		
10.750	45.50	44.26	0.400																
	13.006 A																		
	9.950 ID																		
	9.794 DO																		
	9.875 SD																		
10.750	51.00	49.55	0.450																
	14.561 A																		
	9.850 ID																		
	9.694 DO																		
10.750	55.50	54.26	0.495																
	15.947 A																		
	9.760 ID																		
	9.604 DO																		
	9.625 SD																		

				MINIMUM YIELD STRENGTH, KSI															
				55	65	75	80	80	90	95	95	95	110	110	125	135	140	150	155
				MINIMUM TENSILE STRENGTH, KSI															
				95	90	95	95	100	100	105	105	110	120	125	135	145	150	160	165
DIA	WEIGHT		WALL	GRADE															
	WN	WPE		K-55	M-65	75	L-80	N-80	C-90	C-95	T-95	HC-95	C-110	P-110	Q-125	135	140	V-150	155
10.750	60.70	59.45	0.545																
	17.473 A		COLLAPSE PRESSURE	4160	4610	4990	5160	5160	5480	5580	5580	7550	5880	5880	6070	6300	6380	6540	6610
	9.660 ID		BODY YIELD STRENGTH	961	1136	1310	1398	1398	1573	1660	1660	1660	1660	1922	2184	2359	2446	2621	2708
	9.504 DD		API INTERNAL PRESSURE	4580	5770	6650	7100	7100	7980	8430	8430	8430	9760	9760	11090	11980	12420	13310	13750
10.750	65.70	64.59	0.595																
	18.962 A		COLLAPSE PRESSURE	4920	5520	6060	6310	6310	6760	6960	6960	8540	7510	7510	7920	8120	8200	8330	8360
	9.560 ID		BODY YIELD STRENGTH	1044	1234	1424	1519	1519	1708	1803	1803	1803	2088	2088	2373	2563	2657	2847	2942
	9.404 DD		API INTERNAL PRESSURE	5330	6300	7260	7750	7750	8720	9200	9200	10650	10650	12110	13080	13560	14530	15010	
10.750	71.10	70.18	0.650																
	20.625 A		COLLAPSE PRESSURE	5770	6530	7230	7560	7560	8190	8480	8480	9500	9300	9300	9990	10380	10560	10890	11020
	9.450 ID		BODY YIELD STRENGTH	1134	1341	1547	1650	1650	1856	1959	1959	1959	2269	2269	2578	2784	2888	3094	3197
	9.294 DD		API INTERNAL PRESSURE	5820	6880	7940	8470	8470	9520	10050	10050	10050	11640	11640	13230	14280	14810	15870	16400
10.750	73.20	72.40	0.672																
	21.276 A		COLLAPSE PRESSURE	6100	6930	7700	8070	8070	8760	9090	9090	0	10010	10010	10820	11290	11510	11910	12080
	9.406 ID		BODY YIELD STRENGTH	1170	1383	1596	1702	1702	1915	2021	2021	2021	2340	2340	2660	2872	2979	3191	3298
	9.250 DD		API INTERNAL PRESSURE	6020	7110	8200	8750	8750	9850	10390	10390	10390	12030	12030	13670	14770	15320	16410	16960
10.750	75.90	75.20	0.700																
	22.101 A		COLLAPSE PRESSURE	6530	7440	8290	8710	8710	9490	9860	9860	0	10920	10920	11880	12440	12710	13220	13440
	9.350 ID		BODY YIELD STRENGTH	1216	1437	1658	1768	1768	1989	2100	2100	2100	2431	2431	2763	2984	3094	3315	3426
	9.194 DD		API INTERNAL PRESSURE	6270	7410	8550	9120	9120	10260	10830	10830	10830	12530	12530	14240	15380	15950	17090	17660
10.750	79.20	78.59	0.734																
	23.096 A		COLLAPSE PRESSURE	7000	8060	9020	9480	9480	10370	10800	10800	0	12030	12030	13160	13840	14170	14800	15080
	9.282 ID		BODY YIELD STRENGTH	1270	1501	1732	1848	1848	2079	2194	2194	2194	2541	2541	2887	3118	3233	3464	3580
	9.126 DD		API INTERNAL PRESSURE	6570	7770	8960	9560	9560	10750	11350	11350	11350	13140	13140	14940	16130	16730	17920	18520
10.750	80.80	80.18	0.750																
	23.562 A		COLLAPSE PRESSURE	7140	8350	9360	9850	9850	10790	11240	11240	0	12550	12550	13760	14500	14860	15540	15860
	9.250 ID		BODY YIELD STRENGTH	1296	1532	1767	1885	1885	2121	2238	2238	2238	2592	2592	2945	3181	3299	3534	3652
	9.094 DD		API INTERNAL PRESSURE	6720	7940	9160	9770	9770	10990	11600	11600	11600	13430	13430	15260	16480	17090	18310	18920
10.750	85.30	84.80	0.797																
	24.921 A		COLLAPSE PRESSURE	7550	8920	10300	10920	10920	12010	12540	12540	0	14080	14080	15530	16440	16880	17730	18130
	9.156 ID		BODY YIELD STRENGTH	1371	1620	1869	1994	1994	2243	2367	2367	2367	2741	2741	3115	3364	3489	3738	3863
	9.000 DD		API INTERNAL PRESSURE	7140	8430	9730	10380	10380	11680	12330	12330	12330	14270	14270	16220	17520	18160	19460	20110
10.750	91.20	90.83	0.859																
	26.692 A		COLLAPSE PRESSURE	8090	9560	11030	11760	11760	13230	13970	13970	0	16100	16100	17860	18990	19540	20620	21130
	9.032 ID		BODY YIELD STRENGTH	1468	1735	2002	2135	2135	2402	2536	2536	2536	2936	2936	3337	3603	3737	4004	4137
	8.876 DD		API INTERNAL PRESSURE	7690	9090	10490	11190	11190	12590	13280	13280	13280	15380	15380	17480	18880	19580	20980	21670
10.750	97.10	96.87	0.922																
	28.467 A		COLLAPSE PRESSURE	8630	10190	11760	12550	12550	14110	14900	14900	0	17250	17250	19600	21170	21960	23520	24180
	8.906 ID		BODY YIELD STRENGTH	1566	1850	2135	2277	2277	2562	2704	2704	2704	3131	3131	3568	3843	3985	4270	4412
	8.750 DD		API INTERNAL PRESSURE	8260	9760	11260	12010	12010	13510	14260	14260	14260	16510	16510	18760	20260	21010	22510	23260
10.750	102.90	102.73	0.984																
	30.190 A		COLLAPSE PRESSURE	9150	10810	12470	13300	13300	14970	15800	15800	0	18290	18290	20790	22450	23280	24950	25780
	8.782 ID		BODY YIELD STRENGTH	1680	1982	2284	2415	2415	2717	2868	2868	2868	3321	3321	3774	4076	4227	4529	4679
	8.626 DD		API INTERNAL PRESSURE	8810	10410	12010	12810	12810	14420	15220	15220	15220	17620	17620	20020	21630	22430	24030	24830
10.750	107.90	107.73	1.046																
	31.190 A		COLLAPSE PRESSURE	9100	10700	12300	13100	13100	14700	15500	15500	0	18100	18100	20600	22200	23000	24600	25400
	8.782 ID		BODY YIELD STRENGTH	1680	1982	2284	2415	2415	2717	2868	2868	2868	3321	3321	3774	4076	4227	4529	4679
	8.626 DD		API INTERNAL PRESSURE	8810	10410	12010	12810	12810	14420	15220	15220	15220	17620	17620	20020	21630	22430	24030	24830

				MINIMUM YIELD STRENGTH, KSI															
				55	65	75	80	80	90	95	95	95	110	110	125	135	140	150	155
				MINIMUM TENSILE STRENGTH, KSI															
				95	80	95	95	100	100	105	105	110	120	125	135	145	150	160	165
				GRADE															
DIA	WEIGHT		WALL	K-55	M-65	75	L-80	N-80	C-90	C-95	T-95	HC-95	C-110	P-110	Q-125	135	140	V-150	155
	WN	WPE																	
10.750	104.30	104.23	1.000																
	30.631 A			9280	10970	12660	13500	13500	15190	16030	16030	0	18560	18560	21090	22780	23620	25310	26150
	8.750 ID			1685	1991	2297	2450	2450	2757	2910	2910	2910	3369	3369	3829	4135	4288	4595	4748
	8.594 DD			8950	10580	12210	13020	13020	14650	15470	15470	15470	17910	17910	20350	21980	22790	24420	25230
	SD			8200	9700	11200	11900	11900	13400	14100	14100	14100	16400	16400	18600	20100	20800	22300	23100
10.750	108.70	108.60	1.047																
	31.916 A			9670	11430	13190	14070	14070	15820	16700	16700	0	19340	19340	21980	23740	24610	26370	27250
	8.656 ID			1755	2075	2394	2553	2553	2872	3032	3032	3032	3511	3511	3990	4309	4468	4787	4947
	8.500 DD			9370	11080	12780	13640	13640	15340	16190	16190	16190	18750	18750	21310	23010	23860	25570	26420
	SD			8600	10100	11700	12500	12500	14000	14800	14800	14800	17100	17100	19500	21000	21800	23400	24200
11.750	42.00	40.64	0.333																
	11.944 A			1120	1130	1130	1130	1130	1130	1130	1130	0	1130	1130	1130	1130	1130	1130	1130
	11.084 ID			657	776	896	956	956	1075	1135	1135	1135	1314	1314	1493	1612	1672	1792	1851
	10.928 DD			2730	3220	3720	3970	3970	4460	4710	4710	4710	5460	5460	6200	6700	6940	7440	7690
	11.000 SD			2500	2900	3400	3600	3600	4100	4300	4300	4300	5000	5000	5700	6100	6300	6800	7000
11.750	47.00	45.60	0.375																
	13.401 A			1510	1590	1630	1630	1630	1630	1630	1630	0	1630	1630	1630	1630	1630	1630	1630
	11.000 ID			737	871	1005	1072	1072	1206	1273	1273	1273	1474	1474	1675	1809	1876	2010	2077
	10.844 DD			3070	3630	4190	4470	4470	5030	5310	5310	5310	6140	6140	6980	7540	7820	8380	8660
	SD			2890	3300	3800	4100	4100	4600	4900	4900	4900	5600	5600	6400	6900	7100	7700	7900
11.750	54.00	52.62	0.435																
	15.463 A			2070	2250	2390	2450	2450	2530	2560	2560	0	2570	2570	2570	2570	2570	2570	2570
	10.880 ID			850	1005	1160	1237	1237	1392	1469	1469	1469	1701	1701	1933	2088	2165	2319	2397
	10.724 DD			3560	4210	4860	5180	5180	5830	6150	6150	6150	7130	7130	8100	8750	9070	9720	10040
	SD			3300	3900	4400	4700	4700	5300	5600	5600	5600	6500	6500	7400	8000	8300	8900	9200
11.750	60.00	58.87	0.489																
	17.300 A			2660	2840	3080	3180	3180	3360	3440	3440	4410	3610	3610	3680	3680	3680	3680	3680
	10.772 ID			952	1125	1298	1384	1384	1557	1644	1644	1644	1903	1903	2163	2336	2422	2595	2682
	10.616 DD			4010	4730	5460	5830	5830	6550	6920	6920	6920	8010	8010	9100	9830	10200	10920	11290
	10.625 SD			3790	4300	5000	5300	5300	6000	6300	6300	6300	7300	7300	8300	9000	9300	10000	10300
11.750	65.00	64.03	0.534																
	18.816 A			3290	3580	3790	3870	3870	4060	4180	4180	5740	4480	4480	4690	4780	4810	4830	4840
	10.682 ID			1035	1223	1411	1505	1505	1693	1788	1788	1788	2070	2070	2352	2540	2634	2822	2916
	10.526 DD			4370	5170	5960	6360	6360	7160	7560	7560	7560	8750	8750	9940	10740	11130	11930	12330
	10.625 SD			4000	4700	5500	5800	5800	6500	6900	6900	6900	8000	8000	9100	9800	10200	10900	11300
11.750	71.00	69.48	0.582																
	20.420 A			3970	4380	4720	4880	4880	5130	5240	5240	7280	5470	5470	5760	5960	6030	6160	6210
	10.586 ID			1123	1327	1532	1634	1634	1838	1940	1940	1940	2246	2246	2553	2757	2859	3063	3165
	10.430 DD			4770	5630	6500	6930	6930	7800	8230	8230	8230	9530	9530	10840	11700	12140	13000	13440
	SD			4400	5200	5900	6300	6300	7100	7500	7500	7500	8700	8700	9900	10700	11100	11900	12300
11.750	73.60	72.53	0.609																
	21.315 A			4340	4830	5250	5440	5440	5770	5920	5920	0	6270	6270	6500	6620	6720	6910	6990
	10.532 ID			1172	1385	1599	1705	1705	1918	2025	2025	2025	2345	2345	2684	2878	2984	3197	3304
	10.376 DD			4990	5900	6800	7260	7260	8160	8620	8620	8620	9980	9980	11340	12240	12700	13610	14060
	SD			4600	5400	6200	6600	6600	7500	7900	7900	7900	9100	9100	10400	11200	11600	12400	12900
11.750	80.50	79.58	0.672																
	23.387 A			5230	5880	6480	6760	6760	7270	7510	7510	0	8150	8150	8670	8940	9050	9250	9320
	10.406 ID			1286	1520	1754	1871	1871	2105	2222	2222	2222	2573	2573	2923	3157	3274	3508	3625
	10.250 DD			5500	6510	7510	8010	8010	9010	9510	9510	9510	11010	11010	12510	13510	14010	15010	15510
	SD			5000	5900	6900	7300	7300	8200	8700	8700	8700	10100	10100	11400	12400	12800	13700	14200
11.750	87.20	86.44	0.734																
	25.402 A			6090	6920	7690	8060	8060	8750	9080	9080	0	10000	10000	10800	11270	11490	11890	12060
	10.282 ID			1397	1651	1905	2032	2032	2286	2413	2413	2413	2794	2794	3175	3429	3556	3810	3937
	10.126 DD			6010	7110	8200	8750	8750	9840	10390	10390	10390	12030	12030	13660	14760	15300	16400	16940
	SD			5500	6500	7500	8000	8000	9000	9500	9500	9500	11000	11000	12500	13500	14000	15000	15500

				MINIMUM YIELD STRENGTH, KSI															
				55	65	75	80	80	90	95	95	95	110	110	125	135	140	150	155
				MINIMUM TENSILE STRENGTH, KSI															
				95	90	95	95	100	100	105	105	110	120	125	135	145	150	160	165
DIA	WEIGHT		WALL	GRADE															
	WN	WPE		K-55	M-45	75	L-80	N-80	C-90	C-95	T-95	HC-95	C-110	P-110	Q-125	135	140	V-150	155
11.750	94.00	93.32	0.797																
	27.425 A		COLLAPSE PRESSURE	6960	7970	8920	9370	9370	10250	10670	10670	0	11870	11870	12970	13640	13960	14570	14850
	10.156 ID		BODY YIELD STRENGTH	1508	1783	2057	2194	2194	2468	2605	2605	2605	3017	3017	3428	3702	3840	4114	4251
	10.000 DD		API INTERNAL PRESSURE	6530	7720	8900	9500	9500	10680	11280	11280	11280	13060	13060	14840	16020	16620	17810	18400
11.750	100.50	100.01	0.859																
	29.391 A		COLLAPSE PRESSURE	7450	8810	10120	10670	10670	11720	12230	12230	0	13720	13720	15110	15980	16400	17210	17600
	10.032 ID		BODY YIELD STRENGTH	1617	1910	2204	2351	2351	2645	2792	2792	2792	3233	3233	3674	3968	4115	4409	4556
	9.876 DD		API INTERNAL PRESSURE	7040	8320	9600	10230	10230	11510	12150	12150	12150	14070	14070	15990	17270	17910	19190	19830
11.750	107.10	106.72	0.922																
	31.364 A		COLLAPSE PRESSURE	7950	9400	10850	11570	11570	13020	13740	13740	0	15600	15600	17280	18350	18870	19900	20390
	9.906 ID		BODY YIELD STRENGTH	1725	2039	2352	2509	2509	2823	2980	2980	2980	3450	3450	3921	4234	4391	4705	4861
	9.750 DD		API INTERNAL PRESSURE	7550	8930	10300	10990	10990	12360	13050	13050	13050	15110	15110	17160	18540	19220	20600	21280
11.750	113.50	113.25	0.984																
	33.281 A		COLLAPSE PRESSURE	8440	9980	11510	12280	12280	13810	14580	14580	0	16880	16880	19180	20690	21310	22540	23130
	9.782 ID		BODY YIELD STRENGTH	1830	2163	2496	2662	2662	2995	3162	3162	3162	3661	3661	4160	4493	4659	4992	5159
	9.626 DD		API INTERNAL PRESSURE	8060	9530	10990	11720	11720	13190	13920	13920	13920	16120	16120	18320	19780	20520	21980	22720
11.750	119.90	119.79	1.047																
	35.205 A		COLLAPSE PRESSURE	8930	10550	12170	12990	12990	14610	15420	15420	0	17860	17860	20290	21910	22730	24350	25160
	9.656 ID		BODY YIELD STRENGTH	1936	2288	2640	2816	2816	3168	3344	3344	3344	3873	3873	4401	4753	4929	5281	5457
	9.500 DD		API INTERNAL PRESSURE	8580	10140	11700	12470	12470	14030	14810	14810	14810	17150	17150	19490	21050	21830	23390	24170
11.750	126.20	126.15	1.109																
	37.074 A		COLLAPSE PRESSURE	9400	11110	12820	13680	13680	15390	16240	16240	0	18800	18800	21370	23080	23930	25640	26500
	9.532 ID		BODY YIELD STRENGTH	2039	2410	2781	2966	2966	3337	3522	3522	3522	4078	4078	4634	5005	5190	5561	5746
	9.376 DD		API INTERNAL PRESSURE	9080	10740	12390	13210	13210	14870	15690	15690	15690	18170	18170	20650	22300	23120	24780	25600
11.875	71.80	70.26	0.582																
	20.648 A		COLLAPSE PRESSURE	3880	4280	4690	4750	4750	4980	5080	5080	7190	5290	5290	5630	5810	5880	5990	6030
	10.711 ID		BODY YIELD STRENGTH	1136	1342	1549	1652	1652	1858	1962	1962	1962	2271	2271	2581	2787	2891	3097	3200
	10.555 DD		API INTERNAL PRESSURE	4720	5570	6430	6860	6860	7720	8150	8150	8150	9430	9430	10720	11580	12010	12870	13290
12.000	74.80	74.85	0.615																
	21.997 A		COLLAPSE PRESSURE	4250	4720	5120	5300	5300	5610	5750	5750	7190	6070	6070	6260	6460	6550	6720	6790
	10.770 ID		BODY YIELD STRENGTH	1210	1430	1650	1760	1760	1980	2090	2090	2090	2420	2420	2750	2970	3080	3300	3410
	10.614 DD		API INTERNAL PRESSURE	4930	5830	6730	7180	7180	8070	8520	8520	8520	9870	9870	11210	12110	12560	13450	13900
12.063	78.10	78.15	0.640																
	22.967 A		COLLAPSE PRESSURE	4550	5070	5530	5740	5740	6110	6280	6280	7190	6700	6700	6990	7110	7140	7310	7410
	10.783 ID		BODY YIELD STRENGTH	1263	1493	1723	1837	1837	2067	2182	2182	2182	2526	2526	2871	3101	3215	3445	3560
	10.627 DD		API INTERNAL PRESSURE	5110	6030	6960	7430	7430	8360	8820	8820	8820	10210	10210	11610	12530	13000	13930	14390
12.750	0.00	79.04	0.609																
	23.229 A		COLLAPSE PRESSURE	3680	4030	4320	4440	4440	4640	4710	4710	0	5000	5000	5300	5450	5500	5590	5610
	11.532 ID		BODY YIELD STRENGTH	1278	1510	1742	1858	1858	2091	2207	2207	2207	2555	2555	2904	3136	3252	3484	3600
	11.376 DD		API INTERNAL PRESSURE	4600	5430	6270	6690	6690	7520	7940	7940	7940	9190	9190	10450	11280	11700	12540	12960
12.750	0.00	86.76	0.672																
	25.498 A		COLLAPSE PRESSURE	4480	5000	5450	5660	5660	6020	6180	6180	0	6580	6580	6850	6950	6990	7200	7290
	11.406 ID		BODY YIELD STRENGTH	1402	1657	1912	2040	2040	2295	2422	2422	2422	2805	2805	3187	3442	3570	3825	3952
	11.250 DD		API INTERNAL PRESSURE	5070	6000	6920	7380	7380	8300	8760	8760	8760	10150	10150	11530	12450	12910	13840	14300

				MINIMUM YIELD STRENGTH, KSI															
				55	65	75	80	80	90	95	95	95	110	110	125	135	140	150	155
				MINIMUM TENSILE STRENGTH, KSI															
				95	80	95	95	100	100	105	105	110	120	125	135	145	150	160	165
DIA	WEIGHT		WALL	GRADE															
	WN	WPE		K-55	M-65	75	L-80	N-80	C-90	C-95	T-95	HC-95	C-110	P-110	Q-125	135	140	V-150	155
12.750	94.20	94.28	0.734																
27.708 A				5290	5960	6570	6850	6850	7380	7620	7620	0	8280	8280	8820	9100	9230	9440	9510
11.282 ID				1524	1801	2078	2217	2217	2494	2632	2632	2632	3048	3048	3464	3741	3879	4156	4295
11.126 DO				5540	6550	7560	8060	8060	9070	9570	9570	9570	11080	11080	12590	13600	14100	15110	15620
SD				5100	6000	6900	7400	7400	8300	8800	8800	8800	10100	10100	11500	12400	12900	13800	14300
12.750	101.70	101.84	0.797																
29.929 A				6100	6930	7700	8070	8070	8760	9090	9090	0	10010	10010	10820	11290	11510	11910	12080
11.156 ID				1646	1945	2245	2394	2394	2694	2843	2843	2843	3292	3292	3741	4040	4190	4489	4639
11.000 DO				6020	7110	8200	8750	8750	9850	10390	10390	10390	12030	12030	13670	14770	15310	16410	16960
SD				5500	6500	7500	8000	8000	9000	9500	9500	9500	11000	11000	12500	13500	14000	15000	15500
12.750	109.10	109.19	0.859																
32.089 A				6900	7880	8810	9260	9260	10120	10530	10530	0	11710	11710	12790	13440	13750	14350	14610
11.032 ID				1765	2066	2407	2567	2567	2888	3048	3048	3048	3530	3530	4011	4332	4492	4813	4974
10.876 DO				6480	7660	8840	9430	9430	10610	11200	11200	11200	12970	12970	14740	15920	16510	17690	18270
SD				5900	7000	8100	8600	8600	9700	10200	10200	10200	11900	11900	13500	14600	15100	16200	16700
12.750	116.50	116.58	0.922																
34.260 A				7380	8720	9940	10480	10480	11500	12000	12000	0	13440	13440	14790	15630	16030	16820	17180
10.906 ID				1884	2227	2570	2741	2741	3083	3255	3255	3255	3769	3769	4283	4625	4796	5139	5310
10.750 DO				6960	8230	9490	10120	10120	11390	12020	12020	12020	13920	13920	15820	17080	17720	18980	19620
SD				6400	7500	8700	9300	9300	10400	11000	11000	11000	12700	12700	14500	15600	16200	17400	17900
12.750	123.70	123.77	0.984																
36.373 A				7830	9260	10680	11400	11400	12820	13440	13440	0	15140	15140	16760	17780	18280	19250	19710
10.782 ID				2001	2364	2728	2910	2910	3274	3455	3455	3455	4001	4001	4547	4910	5092	5456	5638
10.626 DO				7430	8780	10130	10800	10800	12160	12830	12830	12830	14860	14860	16880	18230	18910	20260	20930
SD				6800	8000	9300	9900	9900	11100	11700	11700	11700	13600	13600	15400	16700	17300	18500	19100
12.750	130.90	130.99	1.047																
38.494 A				8290	9800	11310	12060	12060	13570	14320	14320	0	16580	16580	18760	19970	20560	21720	22280
10.656 ID				2117	2502	2887	3080	3080	3464	3657	3657	3657	4234	4234	4812	5197	5389	5774	5967
10.500 DO				7900	9340	10780	11500	11500	12930	13650	13650	13650	15810	15810	17960	19400	20120	21560	22270
SD				7200	8500	9900	10500	10500	11800	12500	12500	12500	14500	14500	16400	17700	18400	19700	20400
12.750	137.90	138.01	1.109																
40.558 A				8740	10320	11910	12710	12710	14290	15090	15090	0	17470	17470	19850	21440	22240	23820	24620
10.532 ID				2231	2636	3042	3245	3245	3650	3853	3853	3853	4461	4461	5070	5475	5678	6084	6286
10.376 DO				8370	9890	11420	12180	12180	13700	14460	14460	14460	16740	16740	19030	20550	21310	22830	23590
SD				7700	9000	10400	11100	11100	12500	13200	13200	13200	15300	15300	17400	18800	19500	20900	21600
13.375	48.00	48.02	0.330																
13.524 A				740	740	740	740	740	740	740	740	0	740	740	740	740	740	740	740
12.715 ID				744	879	1014	1082	1082	1217	1285	1285	1285	1488	1488	1691	1826	1893	2029	2096
12.559 DO				2370	2810	3240	3450	3450	3890	4100	4100	4100	4750	4750	5400	5830	6040	6480	6690
SD				2200	2600	3000	3200	3200	3600	3800	3800	3800	4300	4300	4900	5300	5500	5900	6100
13.375	54.50	52.79	0.380																
15.513 A				1130	1140	1140	1140	1140	1140	1140	1140	0	1140	1140	1140	1140	1140	1140	1140
12.615 ID				853	1008	1163	1241	1241	1396	1474	1474	1474	1708	1708	1939	2094	2172	2327	2405
12.459 DO				2730	3230	3730	3980	3980	4470	4720	4720	4720	5470	5470	6210	6710	6960	7460	7710
SD				2500	3000	3400	3600	3600	4100	4300	4300	4300	5000	5000	5700	6100	6400	6800	7000
13.375	61.00	59.50	0.430																
17.487 A				1540	1620	1660	1670	1670	1670	1670	1670	0	1670	1670	1670	1670	1670	1670	1670
12.515 ID				962	1137	1312	1399	1399	1574	1661	1661	1661	1924	1924	2186	2361	2448	2623	2710
12.359 DO				3090	3660	4220	4500	4500	5060	5340	5340	5340	6190	6190	7030	7600	7880	8440	8720
SD				2800	3300	3800	4100	4100	4600	4900	4900	4900	5700	5700	6400	6900	7200	7700	8000
13.375	68.00	66.17	0.480																
19.445 A				1950	2100	2220	2260	2260	2320	2340	2340	0	2330	2330	2330	2330	2330	2330	2330
12.415 ID				1069	1264	1458	1556	1556	1750	1847	1847	1847	2139	2139	2431	2625	2722	2917	3014
12.259 DO				3450	4080	4710	5020	5020	5650	5970	5970	5970	6910	6910	7850	8480	8790	9420	9730
SD				3200	3700	4300	4600	4600	5200	5500	5500	5500	6300	6300	7200	7800	8000	8600	8900

				MINIMUM YIELD STRENGTH, KSI															
				55	65	75	80	80	90	95	95	95	110	110	125	135	140	150	155
				MINIMUM TENSILE STRENGTH, KSI															
				95	90	95	95	100	100	105	105	110	120	125	135	145	150	160	165
				GRADE															
DIA	WEIGHT		WALL	K-55	M-65	75	L-80	N-80	C-80	C-95	T-95	HC-95	C-110	P-110	Q-125	135	140	V-150	155
13.375	72.00	70.67	0.514																
	20.768 A			2220	2430	2600	2670	2670	2780	2830	2830	3470	2880	2880	2880	2880	2880	2880	2880
	12.347 ID			1142	1350	1558	1661	1661	1869	1973	1973	1973	2284	2284	2596	2804	2908	3115	3219
	12.191 OD			3700	4370	5040	5380	5380	6050	6390	6390	6390	7400	7400	8410	9080	9420	10090	10420
	12.250 SD			3400	4000	4600	4900	4900	5500	5800	5800	5800	6800	6800	7700	8300	8600	9200	9500
13.375	77.00	75.40	0.550																
	22.160 A			2580	2780	3000	3100	3100	3270	3350	3350	0	3490	3490	3550	3550	3550	3550	3550
	12.275 ID			1219	1440	1662	1773	1773	1994	2105	2105	2105	2438	2438	2770	2992	3102	3324	3435
	12.119 OD			3960	4680	5400	5760	5760	6480	6840	6840	6840	7920	7920	9000	9710	10070	10790	11150
	SD			3600	4300	4900	5300	5300	5900	6300	6300	6300	7200	7200	8200	8900	9200	9900	10200
13.375	80.70	79.33	0.580																
	23.314 A			2950	3170	3340	3460	3460	3680	3780	3780	4990	4000	4000	4140	4180	4180	4180	4180
	12.215 ID			1282	1515	1749	1865	1865	2098	2215	2215	2215	2565	2565	2914	3147	3264	3497	3614
	12.059 OD			4170	4930	5690	6070	6070	6830	7210	7210	7210	8350	8350	9490	10240	10620	11380	11760
	SD			3800	4500	5200	5600	5600	6200	6600	6600	6600	7600	7600	8700	9400	9700	10400	10800
13.375	85.00	82.98	0.608																
	24.386 A			3300	3580	3790	3880	3880	4060	4180	4180	0	4480	4480	4690	4790	4810	4830	4840
	12.159 ID			1341	1585	1829	1951	1951	2195	2317	2317	2317	2682	2682	3048	3292	3414	3658	3780
	12.003 OD			4380	5170	5970	6360	6360	7160	7560	7560	7560	8750	8750	9940	10740	11140	11930	12330
	SD			4000	4700	5500	5800	5800	6500	6900	6900	6900	8000	8000	9100	9800	10200	10900	11300
13.375	86.00	85.19	0.625																
	25.035 A			3510	3830	4080	4190	4190	4350	4430	4430	6240	4770	4770	5030	5150	5190	5250	5260
	12.125 ID			1377	1627	1878	2003	2003	2253	2378	2378	2378	2754	2754	3129	3380	3505	3755	3880
	11.969 OD			4500	5320	6130	6540	6540	7360	7770	7770	7770	9000	9000	10220	11040	11450	12270	12680
	SD			4100	4900	5600	6000	6000	6700	7100	7100	7100	8200	8200	9300	10100	10500	11200	11600
13.375	92.50	91.25	0.672																
	26.818 A			4080	4520	4890	5050	5050	5330	5450	5450	0	5720	5720	5950	6170	6250	6390	6450
	12.031 ID			1475	1743	2011	2145	2145	2414	2548	2548	2548	2950	2950	3352	3620	3755	4023	4157
	11.875 OD			4840	5720	6590	7030	7030	7910	8350	8350	8350	9670	9670	10990	11870	12310	13190	13630
	SD			4400	5200	6000	6400	6400	7200	7600	7600	7600	8800	8800	10000	10900	11300	12100	12500
13.375	100.30	99.19	0.734																
	29.149 A			4850	5430	5950	6190	6190	6620	6820	6820	0	7340	7340	7730	7910	7990	8090	8110
	11.907 ID			1603	1895	2186	2332	2332	2623	2769	2769	2769	3206	3206	3644	3935	4081	4372	4518
	11.751 OD			5280	6240	7200	7680	7680	8640	9120	9120	9120	10560	10560	12000	12970	13450	14410	14890
	SD			4800	5700	6600	7000	7000	7900	8300	8300	8300	9700	9700	11000	11900	12300	13200	13600
13.375	108.10	107.16	0.797																
	31.493 A			5620	6350	7030	7350	7350	7940	8220	8220	0	8990	8990	9640	10000	10160	10450	10560
	11.781 ID			1732	2047	2362	2519	2519	2834	2992	2992	2992	3464	3464	3937	4252	4409	4724	4881
	11.625 OD			5740	6780	7820	8340	8340	9390	9910	9910	9910	11470	11470	13040	14080	14600	15640	16160
	SD			5200	6200	7200	7600	7600	8600	9100	9100	9100	10500	10500	11900	12900	13300	14300	14800
13.375	115.70	114.93	0.859																
	33.776 A			6380	7260	8090	8490	8490	9240	9600	9600	0	10610	10610	11510	12050	12300	12770	12980
	11.657 ID			1858	2195	2533	2702	2702	3040	3209	3209	3209	3715	3715	4222	4560	4729	5066	5235
	11.501 OD			6180	7310	8430	8990	8990	10120	10680	10680	10680	12360	12360	14050	15170	15730	16860	17420
	SD			5700	6700	7700	8200	8200	9200	9800	9800	9800	11300	11300	12800	13900	14400	15400	15900
13.375	123.40	122.74	0.922																
	36.071 A			7060	8190	9170	9640	9640	10550	11000	11000	0	12260	12260	13420	14130	14470	15130	15430
	11.531 ID			1984	2345	2705	2886	2886	3246	3427	3427	3427	3968	3968	4509	4870	5050	5411	5591
	11.375 OD			6630	7840	9050	9650	9650	10860	11460	11460	11460	13270	13270	15080	16290	16890	18100	18700
	SD			6100	7200	8300	8800	8800	9900	10500	10500	10500	12100	12100	13800	14900	15400	16500	17100
13.375	130.80	130.34	0.984																
	38.305 A			7500	8860	10220	10780	10780	11850	12370	12370	0	13880	13880	15300	16180	16610	17450	17840
	11.407 ID			2107	2490	2873	3064	3064	3447	3639	3639	3639	4214	4214	4788	5171	5363	5746	5937
	11.251 OD			7080	8370	9660	10300	10300	11590	12230	12230	12230	14160	14160	16090	17380	18020	19310	19960
	SD			6500	7700	8800	9400	9400	10600	11200	11200	11200	12900	12900	14700	15900	16500	17700	18200

				MINIMUM YIELD STRENGTH, KSI															
				55	65	75	80	80	90	95	95	95	110	110	125	135	140	150	155
				MINIMUM TENSILE STRENGTH, KSI															
				95	80	95	95	100	100	105	105	110	120	125	135	145	150	160	165
DIA	WEIGHT		WALL	GRADE															
	WN	WPE		K-55	M-65	75	L-80	N-80	C-90	C-95	T-95	HC-95	C-110	P-110	Q-125	135	140	V-150	155
13.375	138.30	137.98	1.047																
	40.550 A			7940	9380	10820	11540	11540	12990	13710	13710	0	15530	15530	17210	18270	18790	19800	20290
	11.261 ID			2230	2638	3041	3244	3244	3650	3852	3852	3852	4461	4461	5069	5474	5677	6083	6285
	11.125 DD			7530	8900	10270	10960	10960	12330	13010	13010	13010	15070	15070	17120	18490	19180	20550	21230
	SD			6900	8100	9400	10000	10000	11300	11900	11900	11900	13800	13800	15700	16900	17500	18800	19400
13.375	145.60	145.42	1.109																
	42.735 A			8360	9890	11410	12170	12170	13690	14450	14450	0	16730	16730	19010	20320	20930	22120	22700
	11.157 ID			2350	2778	3205	3419	3419	3846	4060	4060	4060	4701	4701	5342	5769	5983	6410	6624
	11.001 DD			7980	9430	10880	11610	11610	13060	13780	13780	13780	15960	15960	18140	19590	20310	21770	22490
	SD			7300	8600	9900	10600	10600	11900	12600	12600	12600	14600	14600	16600	17900	18600	19900	20600
13.375	152.90	152.89	1.172																
	44.931 A			8790	10390	11990	12790	12790	14390	15190	15190	0	17590	17590	19990	21590	22390	23980	24780
	11.031 ID			2471	2921	3370	3594	3594	4044	4268	4268	4268	4942	4942	5616	6066	6290	6740	6964
	10.875 DD			8430	9970	11500	12270	12270	13800	14570	14570	14570	16870	16870	19170	20700	21470	23000	23770
	SD			7700	9100	10500	11200	11200	12600	13300	13300	13300	15400	15400	17500	18900	19600	21000	21700
13.500	81.40	80.11	0.580																
	23.542 A			2890	3090	3280	3400	3400	3610	3700	3700	4860	3910	3910	4040	4070	4070	4070	4070
	12.340 ID			1295	1530	1766	1883	1883	2119	2236	2236	2236	2590	2590	2943	3178	3296	3531	3649
	12.152 DD			4140	4890	5640	6010	6010	6770	7140	7140	7140	8270	8270	9400	10150	10530	11280	11650
	12.250 SD			3800	4500	5200	5500	5500	6200	6500	6500	6500	7600	7600	8600	9300	9600	10300	10700
13.625	88.20	86.86	0.625																
	25.525 A			3360	3660	3890	3980	3980	4130	4260	4260	5930	4570	4570	4800	4910	4930	4970	4980
	12.375 ID			1404	1659	1914	2042	2042	2297	2425	2425	2425	2808	2808	3191	3446	3574	3829	3956
	12.187 DD			4420	5220	6020	6420	6420	7220	7630	7630	7630	8830	8830	10030	10840	11240	12040	12440
	12.250 SD			4000	4800	5500	5900	5900	6600	7000	7000	7000	8100	8100	9200	9900	10300	11000	11400
14.000	0.00	92.76	0.650																
	27.261 A			3460	3770	4010	4120	4120	4260	4370	4370	0	4700	4700	4950	5070	5100	5150	5160
	12.700 ID			1499	1772	2045	2181	2181	2453	2590	2590	2590	2999	2999	3408	3680	3817	4089	4225
	12.512 DD			4470	5280	6090	6500	6500	7310	7720	7720	7720	8940	8940	10160	10970	11380	12190	12590
	SD			4100	4800	5600	5900	5900	6700	7100	7100	7100	8200	8200	9300	10000	10400	11100	11500
14.000	0.00	95.74	0.672																
	28.137 A			3710	4080	4370	4500	4500	4700	4780	4780	0	5060	5060	5360	5520	5570	5660	5690
	12.656 ID			1548	1829	2110	2251	2251	2532	2673	2673	2673	3096	3096	3517	3798	3939	4221	4361
	12.468 DD			4620	5460	6300	6720	6720	7560	7980	7980	7980	9240	9240	10500	11340	11760	12600	13020
	SD			4200	5000	5800	6100	6100	6900	7300	7300	7300	8400	8400	9600	10400	10800	11500	11900
14.000	99.60	99.52	0.700																
	29.248 A			4040	4470	4830	4990	4990	5260	5380	5380	0	5630	5630	5890	6100	6170	6320	6370
	12.600 ID			1609	1901	2194	2340	2340	2632	2779	2779	2779	3217	3217	3656	3948	4095	4387	4533
	12.412 DD			4810	5690	6560	7000	7000	7880	8310	8310	8310	9630	9630	10940	11810	12250	13130	13560
	SD			4400	5200	6000	6400	6400	7200	7600	7600	7600	8800	8800	10000	10800	11200	12000	12400
14.000	104.20	104.09	0.734																
	30.590 A			4440	4950	5390	5590	5590	5940	6100	6100	0	6480	6480	6740	6830	6900	7110	7190
	12.532 ID			1682	1988	2294	2447	2447	2753	2906	2906	2906	3365	3365	3824	4130	4283	4589	4741
	12.344 DD			5050	5960	6880	7340	7340	8260	8720	8720	8720	10090	10090	11470	12390	12850	13760	14220
	SD			4600	5500	6300	6700	6700	7500	8000	8000	8000	9200	9200	10500	11300	11700	12600	13000
14.000	0.00	106.23	0.750																
	31.220 A			4630	5170	5650	5870	5870	6260	6440	6440	0	6880	6880	7200	7330	7380	7480	7580
	12.500 ID			1717	2029	2342	2498	2498	2810	2966	2966	2966	3434	3434	3903	4215	4371	4683	4839
	12.312 DD			5160	6090	7030	7500	7500	8440	8910	8910	8910	10310	10310	11720	12660	13130	14060	14530
	SD			4700	5600	6400	6800	6800	7700	8100	8100	8100	9400	9400	10700	11600	12000	12900	13300
14.000	112.60	112.49	0.797																
	33.058 A			5180	5830	6420	6700	6700	7200	7430	7430	0	8060	8060	8560	8820	8930	9120	9180
	12.406 ID			1818	2149	2479	2645	2645	2975	3141	3141	3141	3636	3636	4132	4463	4628	4959	5124
	12.218 DD			5480	6480	7470	7970	7970	8970	9460	9460	9460	10960	10960	12450	13450	13950	14940	15440
	SD			5000	5900	6800	7300	7300	8200	8700	8700	8700	10000	10000	11400	12300	12800	13700	14100

				MINIMUM YIELD STRENGTH, KSI															
				55	65	75	80	80	90	95	95	95	110	110	125	135	140	150	155
				MINIMUM TENSILE STRENGTH, KSI															
				95	80	95	95	100	100	105	105	110	120	125	135	145	150	160	165
DIA	WEIGHT		WALL	GRADE															
	WN	WPE		K-55	M-65	75	L-80	N-80	C-90	C-95	T-95	HC-95	C-110	P-110	Q-125	135	140	V-150	155
14.000	113.00	112.89	0.800																
	33.175 A	COLLAPSE PRESSURE		5220	5870	6470	6750	6750	7260	7500	7500	0	8130	8130	8650	8920	9030	9230	9290
	12.400 ID	BODY YIELD STRENGTH		1825	2156	2488	2654	2654	2986	3152	3152	3152	3649	3649	4147	4479	4645	4976	5142
	12.212 DO	API INTERNAL PRESSURE		5500	6500	7500	8000	8000	9000	9500	9500	9500	11000	11000	12500	13500	14000	15000	15500
	12.250 SD	TEST PRESS 80%		5000	5900	6900	7300	7300	8200	8700	8700	8700	10100	10100	11400	12300	12800	13700	14200
14.000	0.00	120.67	0.859																
	35.463 A	COLLAPSE PRESSURE		5910	6700	7430	7780	7780	8440	8750	8750	0	9610	9610	10350	10780	10980	11340	11480
	12.282 ID	BODY YIELD STRENGTH		1950	2305	2660	2837	2837	3192	3369	3369	3369	3901	3901	4433	4788	4965	5319	5497
	12.094 DO	API INTERNAL PRESSURE		5910	6980	8050	8590	8590	9660	10200	10200	10200	11810	11810	13420	14500	15030	16110	16640
	SD	TEST PRESS 80%		5400	6400	7400	7900	7900	8800	9300	9300	9300	10800	10800	12300	13300	13700	14700	15200
14.000	0.00	128.90	0.922																
	37.681 A	COLLAPSE PRESSURE		6650	7580	8460	8890	8890	9690	10080	10080	0	11180	11180	12180	12770	13050	13590	13830
	12.156 ID	BODY YIELD STRENGTH		2063	2462	2841	3030	3030	3409	3599	3599	3599	4167	4167	4735	5114	5303	5682	5872
	11.968 DO	API INTERNAL PRESSURE		6340	7490	8640	9220	9220	10370	10950	10950	10950	12680	12680	14410	15560	16140	17290	17860
	SD	TEST PRESS 80%		5800	6800	7900	8400	8400	9500	10000	10000	10000	11600	11600	13200	14200	14800	15800	16300
14.000	0.00	136.91	0.984																
	40.237 A	COLLAPSE PRESSURE		7190	8450	9480	9980	9980	10930	11400	11400	0	12730	12730	13970	14730	15100	15800	16130
	12.032 ID	BODY YIELD STRENGTH		2213	2615	3018	3219	3219	3621	3823	3823	3823	4426	4426	5030	5432	5633	6036	6237
	11.844 DO	API INTERNAL PRESSURE		6770	8000	9230	9840	9840	11070	11690	11690	11690	13530	13530	15380	16610	17220	18450	19070
	SD	TEST PRESS 80%		6200	7300	8400	9000	9000	10100	10700	10700	10700	12400	12400	14100	15200	15700	16900	17400
14.000	0.00	144.98	1.047																
	42.606 A	COLLAPSE PRESSURE		7610	9000	10380	11070	11070	12190	12730	12730	0	14310	14310	15790	16720	17170	18050	18470
	11.906 ID	BODY YIELD STRENGTH		2343	2769	3195	3408	3408	3835	4048	4048	4048	4687	4687	5326	5752	5965	6391	6604
	11.718 DO	API INTERNAL PRESSURE		7200	8510	9820	10470	10470	11780	12430	12430	12430	14400	14400	16360	17670	18320	19630	20290
	SD	TEST PRESS 80%		6600	7800	9000	9600	9600	10800	11400	11400	11400	13200	13200	15000	16200	16800	17900	18500
14.000	0.00	152.83	1.109																
	44.913 A	COLLAPSE PRESSURE		8020	9480	10940	11670	11670	13130	13860	13860	0	15860	15860	17580	18680	19220	20270	20770
	11.782 ID	BODY YIELD STRENGTH		2470	2919	3368	3593	3593	4042	4267	4267	4267	4940	4940	5614	6063	6288	6737	6962
	11.594 DO	API INTERNAL PRESSURE		7620	9010	10400	11090	11090	12480	13170	13170	13170	15250	15250	17330	18710	19410	20790	21490
	SD	TEST PRESS 80%		7000	8200	9500	10100	10100	11400	12000	12000	12000	13900	13900	15800	17100	17700	19000	19600
14.000	0.00	160.72	1.172																
	47.232 A	COLLAPSE PRESSURE		8440	9970	11510	12270	12270	13810	14570	14570	0	16880	16880	19180	20670	21300	22520	23110
	11.656 ID	BODY YIELD STRENGTH		2598	3070	3542	3779	3779	4251	4487	4487	4487	5196	5196	5904	6376	6612	7085	7321
	11.468 DO	API INTERNAL PRESSURE		8060	9520	10990	11720	11720	13190	13920	13920	13920	16120	16120	18310	19780	20510	21980	22710
	SD	TEST PRESS 80%		7400	8700	10000	10700	10700	12100	12700	12700	12700	14700	14700	16700	18100	18800	20100	20800
14.000	0.00	168.40	1.234																
	49.490 A	COLLAPSE PRESSURE		8840	10450	12060	12860	12860	14470	15270	15270	0	17880	17880	20090	21700	22500	24110	24920
	11.532 ID	BODY YIELD STRENGTH		2722	3217	3712	3959	3959	4454	4702	4702	4702	5444	5444	6186	6681	6929	7424	7671
	11.344 DO	API INTERNAL PRESSURE		8480	10030	11570	12340	12340	13880	14650	14650	14650	16970	16970	19280	20820	21600	23140	23910
	SD	TEST PRESS 80%		7800	9200	10600	11300	11300	12700	13400	13400	13400	15500	15500	17800	19000	19700	21200	21900
15.000	77.50	77.50	0.500																
	22.777 A	COLLAPSE PRESSURE		1670	1770	1840	1860	1860	1860	1860	1860	0	1860	1860	1860	1860	1860	1860	1860
	14.000 ID	BODY YIELD STRENGTH		1253	1481	1708	1822	1822	2050	2164	2164	2164	2505	2505	2847	3075	3189	3417	3530
	13.812 DO	API INTERNAL PRESSURE		3210	3790	4380	4670	4670	5250	5540	5540	5540	6420	6420	7290	7880	8170	8750	9040
	SD	TEST PRESS 80%		2900	3500	4000	4300	4300	4800	5100	5100	5100	5900	5900	6700	7200	7500	8000	8300
16.000	65.00	62.64	0.375																
	18.408 A	COLLAPSE PRESSURE		630	630	630	630	630	630	630	630	0	630	630	630	630	630	630	630
	15.250 ID	BODY YIELD STRENGTH		1012	1197	1381	1473	1473	1657	1749	1749	1749	2025	2025	2301	2485	2577	2761	2853
	15.062 DO	API INTERNAL PRESSURE		2260	2670	3080	3280	3280	3690	3900	3900	3900	4510	4510	5130	5540	5740	6150	6360
	SD	TEST PRESS 80%		2100	2400	2800	3000	3000	3400	3600	3600	3600	4100	4100	4700	5100	5300	5600	5800
16.000	75.00	72.86	0.438																
	21.414 A	COLLAPSE PRESSURE		1010	1020	1020	1020	1020	1020	1020	1020	0	1020	1020	1020	1020	1020	1020	1020
	15.124 ID	BODY YIELD STRENGTH		1178	1392	1606	1713	1713	1927	2034	2034	2034	2356	2356	2677	2891	2998	3212	3319
	14.936 DO	API INTERNAL PRESSURE		2630	3110	3590	3830	3830	4310	4550	4550	4550	5270	5270	5990	6470	6710	7190	7430
	SD	TEST PRESS 80%		2400	2800	3300	3500	3500	3900	4200	4200	4200	4800	4800	5500	5900	6100	6600	6800

				MINIMUM YIELD STRENGTH, KSI															
				55	65	75	80	80	90	95	95	95	110	110	125	135	140	150	155
				MINIMUM TENSILE STRENGTH, KSI															
				95	80	95	95	100	100	105	105	110	120	125	135	145	150	160	165
DIA	WEIGHT		WALL	GRADE															
	WN	WPE		K-55	M-65	75	L-80	N-80	C-90	C-95	T-95	HC-95	C-110	P-110	Q-125	135	140	V-150	155
16.000	84.00	82.05	0.495																
	24.112 A		COLLAPSE PRESSURE	1400	1470	1480	1480	1480	1480	1480	1480	0	1480	1480	1480	1480	1480	1480	1480
	15.010 ID		BODY YIELD STRENGTH	1328	1567	1808	1929	1929	2170	2291	2291	2291	2652	2652	3014	3255	3376	3617	3737
	14.822 DO		API INTERNAL PRESSURE	2980	3520	4060	4330	4330	4870	5140	5140	5140	5960	5960	6770	7310	7580	8120	8390
		SD	TEST PRESS 80%	2700	3200	3700	4000	4000	4500	4700	4700	4700	5400	5400	6200	6700	6900	7400	7700
16.000	84.80	82.85	0.500																
	24.347 A		COLLAPSE PRESSURE	1440	1510	1530	1530	1530	1530	1530	1530	0	1530	1530	1530	1530	1530	1530	1530
	15.000 ID		BODY YIELD STRENGTH	1339	1583	1826	1948	1948	2191	2313	2313	2313	2678	2678	3043	3287	3409	3652	3774
	14.812 DO		API INTERNAL PRESSURE	3010	3550	4100	4380	4380	4920	5200	5200	5200	6020	6020	6840	7380	7660	8200	8480
		SD	TEST PRESS 80%	2800	3300	3800	4000	4000	4500	4800	4800	4800	5500	5500	6300	6800	7000	7500	7800
16.000	94.50	92.75	0.562																
	27.257 A		COLLAPSE PRESSURE	1860	2010	2110	2140	2140	2180	2190	2190	0	2190	2190	2190	2190	2190	2190	2190
	14.876 ID		BODY YIELD STRENGTH	1499	1772	2044	2181	2181	2453	2589	2589	2589	2998	2998	3407	3680	3816	4089	4225
	14.688 DO		API INTERNAL PRESSURE	3380	4000	4610	4920	4920	5530	5840	5840	5840	6760	6760	7680	8300	8610	9220	9530
	14.750 SD		TEST PRESS 80%	3100	3700	4200	4500	4500	5100	5300	5300	5300	6200	6200	7000	7600	7900	8400	8700
16.000	95.00	93.38	0.566																
	27.444 A		COLLAPSE PRESSURE	1890	2040	2140	2180	2180	2230	2240	2240	0	2230	2230	2230	2230	2230	2230	2230
	14.868 ID		BODY YIELD STRENGTH	1509	1784	2058	2196	2196	2470	2607	2607	2607	3019	3019	3431	3705	3842	4117	4254
	14.680 DO		API INTERNAL PRESSURE	3400	4020	4640	4950	4950	5570	5880	5880	5880	6810	6810	7740	8360	8670	9290	9600
	14.750 SD		TEST PRESS 80%	3100	3700	4200	4500	4500	5100	5400	5400	5400	6200	6200	7100	7600	7900	8500	8800
16.000	96.00	94.81	0.575																
	27.664 A		COLLAPSE PRESSURE	1950	2110	2230	2270	2270	2330	2350	2350	0	2340	2340	2340	2340	2340	2340	2340
	14.850 ID		BODY YIELD STRENGTH	1533	1811	2090	2229	2229	2508	2647	2647	2647	3065	3065	3483	3762	3901	4180	4319
	14.662 DO		API INTERNAL PRESSURE	3460	4090	4720	5030	5030	5660	5970	5970	5970	6920	6920	7860	8490	8800	9430	9750
	14.750 SD		TEST PRESS 80%	3200	3700	4300	4600	4600	5200	5500	5500	5500	6300	6300	7200	7800	8100	8600	8900
16.000	102.90	102.72	0.625																
	30.189 A		COLLAPSE PRESSURE	2290	2510	2700	2770	2770	2900	2950	2950	0	3030	3030	3030	3030	3030	3030	3030
	14.750 ID		BODY YIELD STRENGTH	1860	1962	2264	2415	2415	2717	2868	2868	2868	3321	3321	3774	4076	4226	4528	4679
	14.562 DO		API INTERNAL PRESSURE	3760	4440	5130	5470	5470	6150	6490	6490	6490	7520	7520	8540	9230	9570	10290	10600
		SD	TEST PRESS 80%	3400	4100	4700	5000	5000	5600	5900	5900	5900	6900	6900	7800	8400	8800	9400	9700
16.000	109.00	107.60	0.656																
	31.622 A		COLLAPSE PRESSURE	2560	2760	2980	3080	3080	3250	3320	3320	0	3470	3470	3520	3520	3520	3520	3520
	14.688 ID		BODY YIELD STRENGTH	1739	2055	2372	2530	2530	2846	3004	3004	3004	3478	3478	3953	4269	4427	4743	4901
	14.500 DO		API INTERNAL PRESSURE	3950	4660	5380	5740	5740	6460	6820	6820	6820	7890	7890	8970	9690	10050	10760	11120
	14.600 SD		TEST PRESS 80%	3600	4300	4900	5200	5200	5900	6200	6200	6200	7200	7200	8200	8900	9200	9800	10200
16.000	0.00	116.83	0.715																
	34.334 A		COLLAPSE PRESSURE	3170	3430	3610	3690	3690	3920	4030	4030	0	4300	4300	4490	4570	4580	4590	4590
	14.570 ID		BODY YIELD STRENGTH	1888	2232	2575	2747	2747	3090	3262	3262	3262	3777	3777	4292	4635	4807	5150	5322
	14.382 DO		API INTERNAL PRESSURE	4300	5080	5870	6260	6260	7040	7430	7430	7430	8600	8600	9780	10560	10950	11730	12120
		SD	TEST PRESS 80%	3900	4600	5400	5700	5700	6400	6800	6800	6800	7900	7900	8900	9700	10000	10700	11100
16.000	119.00	117.30	0.718																
	34.471 A		COLLAPSE PRESSURE	3200	3460	3660	3730	3730	3960	4070	4070	0	4350	4350	4540	4620	4630	4650	4650
	14.564 ID		BODY YIELD STRENGTH	1896	2241	2585	2758	2758	3102	3275	3275	3275	3792	3792	4309	4654	4826	5171	5343
	14.376 DO		API INTERNAL PRESSURE	4320	5100	5890	6280	6280	7070	7460	7460	7460	8640	8640	9820	10600	10990	11780	12170
		SD	TEST PRESS 80%	3900	4700	5400	5700	5700	6500	6900	6900	6900	7900	7900	9000	9700	10100	10800	11100
16.000	128.60	127.06	0.781																
	37.341 A		COLLAPSE PRESSURE	3850	4240	4560	4700	4700	4930	5020	5020	0	5240	5240	5570	5750	5820	5930	5970
	14.438 ID		BODY YIELD STRENGTH	2054	2427	2801	2987	2987	3361	3547	3547	3547	4108	4108	4688	5041	5228	5601	5788
	14.250 DO		API INTERNAL PRESSURE	4700	5550	6410	6830	6830	7690	8120	8120	8120	9400	9400	10680	11530	11960	12810	13240
		SD	TEST PRESS 80%	4300	5100	5900	6200	6200	7000	7400	7400	7400	8600	8600	9800	10500	10900	11700	12100
16.000	137.90	136.59	0.843																
	40.141 A		COLLAPSE PRESSURE	4490	5000	5450	5650	5650	6010	6170	6170	0	6570	6570	6840	6940	6980	7190	7280
	14.314 ID		BODY YIELD STRENGTH	2208	2609	3011	3211	3211	3613	3813	3813	3813	4416	4416	5018	5419	5620	6021	6222
	14.126 DO		API INTERNAL PRESSURE	5070	5990	6920	7380	7380	8300	8760	8760	8760	10140	10140	11530	12450	12910	13830	14290
		SD	TEST PRESS 80%	4600	5500	6300	6700	6700	7600	8000	8000	8000	9300	9300	10500	11400	11800	12600	13100

				MINIMUM YIELD STRENGTH, KSI															
				55	65	75	80	80	90	95	95	95	110	110	125	135	140	150	155
				MINIMUM TENSILE STRENGTH, KSI															
				95	80	95	95	100	100	105	105	110	120	125	135	145	150	160	165
				GRADE															
DIA	WGT	WPE	WALL	K-55	M-65	75	L-80	N-80	C-80	C-85	T-85	HC-95	C-110	P-110	Q-125	135	140	V-150	155
16.000	147.30	146.19	0.906																
42.962 A				5130	5770	6350	6620	6620	7110	7340	7340	0	7950	7950	8440	8690	8790	8970	9020
14.188 ID				2363	2793	3222	3437	3437	3867	4081	4081	4081	4726	4726	5370	5800	6015	6444	6659
14.000 DO				5450	6440	7430	7930	7930	8920	9410	9410	9410	10900	10900	12390	13380	13870	14860	15360
SD				5000	5900	6800	7200	7200	8200	8600	8600	8600	10000	10000	11300	12200	12700	13600	14000
16.000	156.40	155.55	0.968																
45.713 A				5770	6530	7240	7570	7570	8200	8490	8490	0	9310	9310	10010	10400	10580	10910	11040
14.064 ID				2514	2971	3428	3657	3657	4114	4343	4343	4343	5028	5028	5714	6171	6400	6857	7086
13.876 DO				5820	6880	7940	8470	8470	9530	10060	10060	10060	11650	11650	13230	14290	14820	15880	16410
SD				5300	6300	7300	7700	7700	8700	9200	9200	9200	10600	10600	12100	13100	13600	14500	15000
16.000	0.00	160.35	1.000																
47.124 A				6100	6930	7690	8060	8060	8760	9090	9090	0	10010	10010	10820	11290	11500	11910	12080
14.000 ID				2592	3063	3534	3770	3770	4241	4477	4477	4477	5184	5184	5891	6362	6597	7069	7304
13.812 DO				6020	7110	8200	8750	8750	9840	10390	10390	10390	12030	12030	13670	14770	15310	16410	16950
SD				5500	6500	7500	8000	8000	9000	9500	9500	9500	11000	11000	12500	13500	14000	15000	15500
16.000	165.70	164.98	1.031																
48.484 A				6420	7310	8140	8540	8540	9300	9660	9660	0	10690	10690	11600	12140	12400	12880	13090
13.938 ID				2667	3151	3636	3879	3879	4384	4606	4606	4606	5333	5333	6061	6545	6788	7273	7515
13.750 DO				6200	7330	8460	9020	9020	10150	10710	10710	10710	12400	12400	14100	15220	15790	16910	17480
SD				5700	6700	7700	8200	8200	9300	9800	9800	9800	11300	11300	12900	13900	14400	15500	16000
16.000	174.70	174.18	1.093																
51.187 A				7000	8070	9030	9490	9490	10380	10810	10810	0	12040	12040	13170	13860	14190	14820	15100
13.814 ID				2815	3327	3839	4095	4095	4607	4863	4863	4863	5631	5631	6398	6910	7166	7678	7934
13.626 DO				6580	7770	8970	9560	9560	10760	11360	11360	11360	13150	13150	14940	16140	16740	17930	18530
SD				6000	7100	8200	8700	8700	9800	10400	10400	10400	12000	12000	13700	14800	15300	16400	16900
16.125	95.60	94.14	0.566																
27.666 A				1860	2000	2100	2140	2140	2180	2180	2180	0	2180	2180	2180	2180	2180	2180	2180
14.993 ID				1522	1798	2075	2213	2213	2490	2628	2628	2628	3043	3043	3458	3735	3873	4150	4288
14.805 DO				3380	3990	4610	4910	4910	5530	5840	5840	5840	6760	6760	7680	8290	8600	9210	9520
SD				3100	3700	4200	4500	4500	5100	5300	5300	5300	6200	6200	7000	7600	7900	8400	8700
17.000	77.50	77.55	0.438																
22.790 A				850	850	850	850	850	850	850	850	0	850	850	850	850	850	850	850
16.124 ID				1253	1481	1709	1823	1823	2051	2165	2165	2165	2507	2507	2849	3077	3191	3419	3532
15.936 DO				2480	2930	3380	3610	3610	4090	4280	4280	4280	4960	4960	5640	6090	6310	6760	6990
SD				2300	2700	3100	3300	3300	3700	3900	3900	3900	4500	4500	5200	5600	5800	6200	6400
17.000	88.10	88.19	0.500																
25.918 A				1240	1270	1270	1270	1270	1270	1270	1270	0	1270	1270	1270	1270	1270	1270	1270
16.000 ID				1425	1685	1944	2073	2073	2333	2462	2462	2462	2851	2851	3240	3499	3629	3888	4017
15.812 DO				2830	3350	3860	4120	4120	4630	4890	4890	4890	5660	5660	6430	6950	7210	7720	7980
SD				2600	3100	3500	3800	3800	4200	4500	4500	4500	5200	5200	5900	6400	6600	7100	7300
17.000	151.00	150.83	0.875																
44.326 A				4290	4760	5170	5350	5350	5670	5810	5810	0	6150	6150	6350	6520	6620	6790	6870
15.250 ID				2438	2881	3324	3546	3546	3989	4211	4211	4211	4876	4876	5541	5984	6206	6649	6871
15.062 DO				4950	5850	6760	7210	7210	8110	8560	8560	8560	9910	9910	11260	12160	12610	13510	13960
SD				4500	5400	6200	6600	6600	7400	7800	7800	7800	9100	9100	10300	11100	11500	12400	12800
17.000	191.00	190.92	1.125																
56.107 A				6700	7650	8540	8970	8970	9780	10180	10180	0	11290	11290	12300	12910	13200	13750	13990
14.750 ID				3086	3647	4208	4489	4489	5050	5330	5330	5330	6172	6172	7013	7574	7855	8416	8697
14.562 DO				6370	7530	8690	9260	9260	10420	11000	11000	11000	12740	12740	14480	15630	16210	17370	17950
SD				5800	6900	7900	8500	8500	9500	10100	10100	10100	11600	11600	13200	14300	14800	15900	16400
17.875	93.50	92.87	0.500																
27.293 A				1080	1090	1090	1090	1090	1090	1090	1090	0	1090	1090	1090	1090	1090	1090	1090
16.875 ID				1501	1774	2047	2183	2183	2456	2593	2593	2593	3002	3002	3412	3685	3821	4094	4230
16.687 DO				2690	3180	3670	3920	3920	4410	4650	4650	4650	5380	5380	6120	6610	6850	7340	7580
SD				2500	2900	3400	3600	3600	4000	4300	4300	4300	4900	4900	5600	6000	6300	6700	6900

				MINIMUM YIELD STRENGTH, KSI															
				55	65	75	80	80	90	95	95	95	110	110	125	135	140	150	155
				MINIMUM TENSILE STRENGTH, KSI															
				95	95	95	95	100	100	105	105	110	120	125	135	145	150	160	165
DIA	WEIGHT		WALL	GRADE															
	WN	WPE		K-55	M-65	75	L-80	N-80	C-90	C-95	T-95	HC-95	C-110	P-110	Q-125	135	140	V-150	155
17.875	105.00	104.01	0.562																
	30.567 A		COLLAPSE PRESSURE	1490	1530	1560	1560	1560	1560	1560	1560	0	1560	1560	1560	1560	1560	1560	1560
	16.751 ID		BODY YIELD STRENGTH	1681	1967	2293	2445	2445	2751	2904	2904	2904	3362	3362	3821	4127	4279	4585	4738
	16.563 DD		API INTERNAL PRESSURE	3030	3560	4130	4400	4400	4950	5230	5230	5230	6050	6050	6880	7430	7700	8250	8530
	SD		TEST PRESS 80%	2600	3300	3800	4000	4000	4500	4800	4800	4800	5500	5500	6300	6800	7000	7500	7800
17.875	121.00	119.69	0.650																
	35.174 A		COLLAPSE PRESSURE	2000	2160	2290	2340	2340	2410	2430	2430	0	2430	2430	2430	2430	2430	2430	2430
	16.575 ID		BODY YIELD STRENGTH	1935	2286	2638	2814	2814	3166	3342	3342	3342	3869	3869	4397	4748	4924	5276	5452
	16.387 DD		API INTERNAL PRESSURE	3500	4140	4770	5090	5090	5730	6050	6050	6050	7000	7000	7950	8590	8910	9550	9860
	16.500 SD		TEST PRESS 80%	3200	3800	4400	4700	4700	5200	5500	5500	5500	6400	6400	7300	7900	8100	8700	9000
18.000	94.00	93.54	0.500																
	27.489 A		COLLAPSE PRESSURE	1060	1060	1060	1060	1060	1060	1060	1060	0	1060	1060	1060	1060	1060	1060	1060
	17.000 ID		BODY YIELD STRENGTH	1512	1787	2062	2199	2199	2474	2611	2611	2611	3024	3024	3436	3711	3848	4123	4261
	16.812 DD		API INTERNAL PRESSURE	2670	3160	3650	3890	3890	4380	4620	4620	4620	5350	5350	6080	6560	6810	7290	7530
	SD		TEST PRESS 80%	2400	2900	3300	3600	3600	4000	4200	4200	4200	4900	4900	5600	6000	6200	6700	6900
18.000	105.00	104.76	0.562																
	30.788 A		COLLAPSE PRESSURE	1440	1500	1520	1520	1520	1520	1520	1520	0	1520	1520	1520	1520	1520	1520	1520
	16.876 ID		BODY YIELD STRENGTH	1693	2001	2309	2463	2463	2771	2925	2925	2925	3387	3387	3849	4156	4310	4618	4772
	16.688 DD		API INTERNAL PRESSURE	3010	3550	4100	4370	4370	4920	5190	5190	5190	6010	6010	6830	7380	7650	8200	8470
	SD		TEST PRESS 80%	2700	3200	3700	4000	4000	4500	4700	4700	4700	5500	5500	6200	6700	7000	7500	7700
18.000	117.00	116.09	0.625																
	34.116 A		COLLAPSE PRESSURE	1820	1960	2050	2080	2080	2110	2110	2110	0	2110	2110	2110	2110	2110	2110	2110
	16.750 ID		BODY YIELD STRENGTH	1876	2218	2559	2729	2729	3070	3241	3241	3241	3753	3753	4265	4606	4776	5117	5288
	16.562 DD		API INTERNAL PRESSURE	3340	3950	4560	4860	4860	5470	5770	5770	5770	6680	6680	7600	8200	8510	9110	9420
	SD		TEST PRESS 80%	3100	3600	4200	4400	4400	5000	5300	5300	5300	6100	6100	6900	7500	7800	8300	8600
18.000	128.00	127.32	0.688																
	37.418 A		COLLAPSE PRESSURE	2200	2400	2570	2640	2640	2740	2790	2790	0	2830	2830	2830	2830	2830	2830	2830
	16.624 ID		BODY YIELD STRENGTH	2058	2432	2806	2993	2993	3368	3555	3555	3555	4116	4116	4677	5051	5239	5613	5800
	16.436 DD		API INTERNAL PRESSURE	3680	4350	5020	5350	5350	6020	6350	6350	6350	7360	7360	8360	9030	9360	10030	10370
	16.500 SD		TEST PRESS 80%	3400	4000	4600	4900	4900	5500	5800	5800	5800	6700	6700	7600	8300	8600	9200	9500
18.625	87.50	84.59	0.435																
	24.858 A		COLLAPSE PRESSURE	630	630	630	630	630	630	630	630	0	630	630	630	630	630	630	630
	17.755 ID		BODY YIELD STRENGTH	1367	1616	1864	1989	1989	2237	2362	2362	2362	2734	2734	3107	3356	3480	3729	3853
	17.567 DD		API INTERNAL PRESSURE	2299	2660	3070	3270	3270	3680	3880	3880	3880	4500	4500	5110	5520	5720	6130	6340
	SD		TEST PRESS 80%	2100	2400	2800	3000	3000	3400	3600	3600	3600	4100	4100	4700	5000	5200	5600	5800
18.625	94.50	89.32	0.460																
	26.251 A		COLLAPSE PRESSURE	740	740	740	740	740	740	740	740	0	740	740	740	740	740	740	740
	17.705 ID		BODY YIELD STRENGTH	1444	1706	1969	2100	2100	2363	2494	2494	2494	2888	2888	3281	3544	3675	3938	4069
	17.517 DD		API INTERNAL PRESSURE	2380	2810	3240	3460	3460	3890	4110	4110	4110	4750	4750	5400	5830	6050	6480	6700
	SD		TEST PRESS 80%	2200	2600	3000	3200	3200	3600	3800	3800	3800	4300	4300	4900	5300	5500	5900	6100
18.625	97.70	94.24	0.486																
	27.695 A		COLLAPSE PRESSURE	880	880	880	880	880	880	880	880	0	880	880	880	880	880	880	880
	17.653 ID		BODY YIELD STRENGTH	1523	1800	2077	2216	2216	2493	2631	2631	2631	3046	3046	3462	3739	3877	4154	4293
	17.465 DD		API INTERNAL PRESSURE	2510	2970	3420	3650	3650	4110	4340	4340	4340	5020	5020	5710	6160	6390	6850	7080
	17.500 SD		TEST PRESS 80%	2300	2700	3100	3300	3300	3800	4000	4000	4000	4600	4600	5200	5600	5800	6300	6500
18.625	109.35	108.71	0.563																
	31.947 A		COLLAPSE PRESSURE	1330	1370	1380	1380	1380	1380	1380	1380	0	1380	1380	1380	1380	1380	1380	1380
	17.499 ID		BODY YIELD STRENGTH	1757	2077	2396	2556	2556	2875	3035	3035	3035	3514	3514	3993	4313	4473	4792	4952
	17.311 DD		API INTERNAL PRESSURE	2910	3440	3970	4230	4230	4760	5030	5030	5030	5820	5820	6610	7140	7410	7930	8200
	SD		TEST PRESS 80%	2700	3100	3600	3900	3900	4400	4600	4600	4600	5300	5300	6000	6500	6800	7300	7500
18.625	112.00	111.70	0.579																
	32.825 A		COLLAPSE PRESSURE	1420	1490	1500	1500	1500	1500	1500	1500	0	1500	1500	1500	1500	1500	1500	1500
	17.467 ID		BODY YIELD STRENGTH	1805	2134	2462	2626	2626	2954	3118	3118	3118	3611	3611	4103	4431	4596	4924	5088
	17.279 DD		API INTERNAL PRESSURE	2990	3540	4080	4350	4350	4900	5170	5170	5170	5980	5980	6800	7340	7620	8160	8430
	SD		TEST PRESS 80%	2700	3200	3700	4000	4000	4500	4700	4700	4700	5500	5500	6200	6700	7000	7500	7700

				MINIMUM YIELD STRENGTH, KSI															
				55	65	75	80	80	90	95	95	95	110	110	125	135	140	150	155
				MINIMUM TENSILE STRENGTH, KSI															
				95	80	95	95	100	100	105	105	110	120	125	135	145	150	160	165
DIA	WEIGHT		WALL	GRADE															
	WN	WPE		K-55	M-65	75	L-80	N-80	C-90	C-95	T-95	HC-95	C-110	P-110	Q-125	135	140	V-150	155
18.625	123.40	120.26	0.625																
	35.343	A	COLLAPSE PRESSURE	1690	1800	1870	1890	1890	1900	1900	1900	0	1900	1900	1900	1900	1900	1900	1900
	17.375	ID	BODY YIELD STRENGTH	1944	2297	2651	2827	2827	3181	3358	3358	3358	3888	3888	4418	4771	4948	5301	5478
	17.187	DO	API INTERNAL PRESSURE	3230	3820	4400	4700	4700	5290	5580	5580	5580	6460	6460	7340	7930	8220	8810	9100
		SD	TEST PRESS 80%	3000	3500	4000	4300	4300	4800	5100	5100	5100	5900	5900	6700	7200	7500	8100	8300
18.625	136.00	132.84	0.693																
	39.040	A	COLLAPSE PRESSURE	2090	2270	2420	2480	2480	2560	2590	2590	0	2610	2610	2610	2610	2610	2610	2610
	17.239	ID	BODY YIELD STRENGTH	2147	2538	2928	3123	3123	3514	3709	3709	3709	4294	4294	4880	5270	5466	5856	6051
	17.051	DO	API INTERNAL PRESSURE	3580	4230	4880	5210	5210	5860	6190	6190	6190	7160	7160	8140	8790	9120	9770	10090
		SD	TEST PRESS 80%	3300	3900	4500	4800	4800	5400	5700	5700	5700	6500	6500	7400	8000	8300	8900	9200
18.625	138.00	137.81	0.720																
	40.500	A	COLLAPSE PRESSURE	2250	2460	2630	2710	2710	2820	2870	2870	0	2930	2930	2930	2930	2930	2930	2930
	17.185	ID	BODY YIELD STRENGTH	2228	2633	3038	3240	3240	3645	3848	3848	3848	4455	4455	5063	5468	5670	6075	6278
	16.997	DO	API INTERNAL PRESSURE	3720	4400	5070	5410	5410	6090	6430	6430	6430	7440	7440	8460	9130	9470	10150	10490
		SD	TEST PRESS 80%	3400	4000	4600	4900	4900	5600	5900	5900	5900	6800	6800	7700	8400	8700	9300	9600

