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STAINLESS STEEL WELDED / SEAMLESS PIPE

DIMENSION AND WEIGHT

DIMENSIONS

unit: inch / lb

SCHEDULE	5S	10S	40S	80S	10	20	30	40	60	80	100	120	140	160	STD	XS	XXS
SIZE O.D.	Wall / In Wgt / Ft																
1/4" 0.540			0.088 0.43	0.119 0.54				0.088 0.43		0.119 0.54					0.088 0.43	0.119 0.54	
3/8" 0.675			0.091 0.57	0.126 0.76				0.091 0.57		0.126 0.76					0.091 0.57	0.126 0.76	
1/2" 0.840	0.065 0.54	0.083 0.68	0.109 0.86	0.147 1.10			0.095 0.76	0.109 0.86		0.147 1.10				0.188 1.32	0.109 0.86	0.147 1.10	0.294 1.73
3/4" 1.050	0.065 0.69	0.083 0.87	0.113 1.14	0.154 1.49			0.095 0.98	0.113 1.14		0.154 1.49				0.219 1.96	0.113 1.14	0.154 1.49	0.308 2.46
1" 1.315	0.065 0.88	0.109 1.42	0.133 1.69	0.179 2.19			0.114 1.48	0.133 1.69		0.179 2.19				0.250 2.87	0.133 1.69	0.179 2.19	0.358 3.69
1 1/4" 1.660	0.065 1.12	0.109 1.82	0.140 2.29	0.191 3.02			0.117 1.95	0.140 2.29		0.191 3.02				0.250 3.80	0.140 2.29	0.191 3.02	0.382 5.26
1 1/2" 1.900	0.065 1.29	0.109 2.10	0.145 2.74	0.200 3.67			0.125 2.39	0.145 2.74		0.200 3.67				0.281 4.90	0.145 2.74	0.200 3.67	0.400 6.47
2" 2.375	0.065 1.62	0.109 2.66	0.154 3.69	0.218 5.07			0.125 3.03	0.154 3.69		0.218 5.07				0.344 7.53	0.154 3.69	0.218 5.07	0.436 9.11
2 1/2" 2.875	0.083 2.50	0.120 3.56	0.203 5.85	0.276 7.73			0.188 5.45	0.203 5.85		0.276 7.73				0.375 10.11	0.203 5.85	0.276 7.73	0.552 13.82
3" 3.500	0.083 3.06	0.120 4.37	0.216 7.65	0.300 10.35			0.188 6.71	0.216 7.65		0.300 10.35				0.438 14.46	0.216 7.65	0.300 10.35	0.600 18.76
3 1/ 2" 4.000	0.083 3.50	0.120 5.02	0.226 9.19	0.318 12.62			0.188 7.73	0.226 9.19		0.318 12.62					0.226 9.19	0.318 12.62	
4" 4.500	0.083 3.95	0.120 5.67	0.237 10.89	0.337 15.12			0.188 8.74	0.237 10.89		0.337 15.12		0.438 19.18		0.531 22.72	0.237 10.89	0.337 15.12	0.674 27.8
5" 5.563	0.109 6.41	0.134 7.84	0.258 14.75	0.375 20.97				0.258 14.75		0.375 20.97		0.500 27.29		0.625 33.27	0.258 14.75	0.375 20.97	0.750 38.91
6" 6.625	0.109 7.66	0.134 9.38	0.280 19.15	0.432 28.84				0.280 19.15		0.432 28.84		0.562 36.73		0.719 45.78	0.280 19.15	0.432 28.84	0.864 53.66
8" 8.625	0.109 10.01	0.148 13.52	0.322 28.82	0.500 43.79		0.250 22.57	0.277 24.93	0.322 28.82	0.405 35.97	0.500 43.79	0.594 51.43	0.719 61.28	0.812 68.39	0.906 75.39	0.322 28.82	0.500 43.79	0.875 73.1
10" 10.750	0.134 15.34	0.165 18.83	0.365 40.86	0.500 55.25		0.250 28.3	0.307 34.56	0.365 40.86	0.500 55.25	0.594 65.03	0.719 77.75	0.844 90.13	1.000 105.11	1.125 116.73	0.365 40.86	0.500 55.25	1.000 105.11
12" 12.750	0.156 21.18	0.180 24.39	0.375 50.03	0.500 66.03		0.250 33.69	0.330 44.18	0.406 54.03	0.562 73.84	0.688 89.46	0.844 108.32	1.000 126.67	1.125 140.98	1.312 161.77	0.375 50.03	0.500 66.03	1.000 126.67
14" 14.000	0.156 23.28	0.188 27.99	*	* *	0.250 37.06	0.312 46.04	0.375 55.08	0.438 64.03	0.594 85.84	0.750 107.13	0.938 132.08	1.094 152.2	1.250 171.81	1.406 190.88	0.375 55.08	0.500 72.77	
16" 16.000	0.165 28.17	0.188 32.05	*	* *	0.250 42.45	0.312 52.76	0.375 63.16	0.500 83.55	0.656 108.51	0.844 137.89	1.031 166.37	1.219 194.23	1.438 225.73	1.594 247.54	0.375 63.16	0.500 83.55	
18" 18.000	0.165 31.72	0.188 36.10	*	* *	0.250 47.84	0.312 59.49	0.438 82.92	0.562 105.65	0.750 139.47	0.938 172.52	1.156 209.9	1.375 246.42	1.562 276.79	1.781 311.39	0.375 71.25	0.500 94.33	
20" 20.000	0.188 40.15	0.218 46.49	*	* *	0.250 53.23	0.375 79.33	0.500 105.11	0.594 124.26	0.812 167.96	1.031 210.82	1.281 258.49	1.500 299.15	1.750 344.29	1.969 382.72	0.375 79.33	0.500 105.11	
24" 24.000	0.218 55.89	0.250 64.01	*	* *	0.250 64.01	0.375 95.50	0.562 142.00	0.688 172.9	0.969 240.58	1.219 299.36	1.531 370.83	1.812 433.41	2.062 487.65	2.344 547.21	0.375 95.50	0.500 126.67	
30" 30.000	0.250 80.18	0.312 99.85	*	* *	0.312 98.85	0.500 159.01	0.625 197.91								0.375 119.76	0.500 159.01	
36" 36.000					0.312 120.03	0.500 191.35	0.625 238.34	0.750 285.00							0.375 144.01	0.500 191.35	

Highlighted Produced by Ta Chen Stainless Pipe Co, Ltd. * SEE STD WALL **SEE XS WALL

TYPE 304L SCHEDULES 5S, 10S ALLOWABLE WORKING PRESSURE

ALLOWABLE WORKING PRESSURES FOR A-312 WELDED PIPE

TYPE 304L
Schedules 5S, 10S

TEMPE RATURE °F			– 425 to 300	400	500	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500
MAX. STRESS			16700	15800	14800	14000	13700	13500	13300	13000	12800	11900	9900	7800	6300	5100	4000	3200	2600	2100	1700	1100	1000	900
NOM. PIPE SIZE	SCH. NO.	NOM. WALL.	ALLOWABLE WORKING PRESSURES PSIG																					
1/2	5S	.065	1809	1712	1603	1517	1484	1463	1441	1408	1387	1289	1073	845	683	553	433	347	282	226	184	119	108	98
	10S	.083	2310	2186	2047	1937	1695	1868	1840	1798	1771	1646	1370	1079	872	706	553	443	360	291	235	152	138	125
3/4	5S	.065	1447	1389	1283	1213	1187	1170	1153	1127	1109	1031	858	676	546	442	347	277	225	182	147	95	87	78
	10S	.083	1848	1749	1636	1549	1516	1494	1472	1439	1417	1317	1096	863	697	564	443	354	288	232	188	122	111	100
1	5S	.065	1156	1093	1024	969	948	934	920	900	886	823	835	540	436	353	277	221	180	145	118	76	69	62
	10S	.109	1938	1834	1717	1625	1590	1567	1543	1509	1485	1381	1149	905	731	592	464	371	302	244	197	128	116	104
1¼	5S	.065	915	888	811	767	751	740	729	713	702	652	543	426	345	280	219	175	143	115	93	60	55	49
	10S	.109	1535	1452	1361	1287	1259	1241	1223	1195	1177	1094	910	717	579	469	368	294	239	193	156	101	92	83
1½	5S	.065	800	757	709	671	656	647	637	623	613	570	474	374	302	244	192	153	125	101	81	53	48	43
	10S	.109	1341	1269	1189	1124	1100	1064	1068	1044	1028	956	795	626	506	410	321	257	209	169	137	88	60	72
2	5S	.065	640	605	587	538	525	517	510	498	490	456	379	299	241	195	153	123	100	80	65	42	38	34
	10S	.109	1073	1015	951	900	880	867	855	835	822	765	636	501	405	328	257	206	167	135	109	71	64	58
2½	5S	.083	675	639	598	566	554	546	538	525	517	481	400	315	255	206	162	129	105	85	69	44	40	36
	10S	.120	976	923	865	818	801	789	777	760	748	695	579	456	388	298	234	187	152	123	99	64	58	53
3	5S	.083	554	525	491	465	455	448	442	432	425	395	329	259	209	169	133	106	86	70	56	37	33	30
	10S	.120	802	758	710	672	658	648	638	624	614	571	475	374	302	245	192	154	125	101	82	53	48	43
3½	5S	.083	485	459	430	407	398	392	386	378	372	346	288	227	183	148	116	93	76	61	49	32	29	26
	10S	.120	701	664	622	588	575	567	559	546	538	500	416	328	265	214	168	134	109	88	71	46	42	38
4	5S	.083	431	408	382	362	354	349	343	336	331	307	256	201	163	132	103	83	67	54	44	28	26	23
	10S	.120	623	590	553	523	511	504	497	485	478	444	370	291	235	190	149	119	97	78	63	41	37	34
5	5S	.109	458	433	406	384	376	370	365	357	351	326	272	214	173	140	110	88	71	58	47	30	27	25
	10S	.134	583	533	499	472	462	455	449	438	432	401	334	263	212	172	135	108	88	71	57	37	34	30
6	5S	.109	385	364	341	322	316	311	306	299	295	274	228	180	145	117	92	74	60	48	39	25	23	21
	10S	.134	473	447	419	396	388	362	377	368	362	337	260	221	178	144	113	91	74	59	48	31	28	25
8	5S	.109	295	280	262	248	242	239	235	230	226	211	175	138	111	90	71	57	46	37	30	19	18	16
	10S	.148	401	380	356	336	329	324	320	312	307	286	238	187	151	123	96	77	62	50	41	26	24	22
10	5S	.134	291	278	258	244	239	236	232	227	223	208	173	138	110	89	70	58	45	37	30	19	17	16
	10S	.165	359	340	318	301	294	290	286	279	275	256	213	168	135	110	86	69	56	45	37	24	21	19
12	5S	.156	286	271	254	240	235	231	228	223	219	204	170	134	108	87	69	55	45	36	29	19	17	15
	10S	.180	330	312	293	277	271	267	263	257	253	235	196	154	125	101	79	63	51	42	34	22	20	18
14	5S	.156	261	246	231	218	214	211	207	203	200	186	154	122	98	80	62	50	41	33	27	17	16	14
	10S	.188	314	297	276	263	258	254	250	244	241	224	186	147	118	96	75	60	49	39	32	21	19	17
16	5S	.165	241	228	214	202	198	195	192	188	185	172	143	113	91	74	58	46	38	30	25	16	14	13
	10S	.188	275	260	243	230	225	222	219	214	211	196	163	128	104	84	66	53	43	35	28	18	16	15
18	5S	.165	214	203	190	180	176	173	171	167	164	153	127	100	81	65	51	41	33	27	22	14	13	12
	10S	.188	244	231	216	205	200	197	194	190	187	174	145	114	92	75	58	47	38	31	25	16	15	13
20	5S	.188	220	208	195	184	180	178	175	171	168	157	130	106	83	67	53	42	34	28	22	14	13	12
	10S	.218	255	241	226	214	209	206	203	198	195	182	151	119	96	78	61	49	40	32	26	17	15	14
24	5S	.218	212	201	188	178	174	172	169	165	163	151	126	99	80	65	51	41	33	27	22	14	13	11
	10S	.250	244	230	216	204	200	197	194	190	187	174	144	114	92	74	58	47	38	31	25	16	15	13

The Allowable Stress Values used are as shown in Appendix "A" of ANSI B31.3-1993 for welded pipe to ASTM A-312 having a Weld joint factor of .80. Allowable Working Pressures shown for each size reflect the minus 12-1/2% manufactures wall tolerance.

TYPE 304 SCHEDULE 10S ALLOWABLE WORKING PRESSURE

ALLOWABLE WORKING PRESSURES FOR A-312 WELDED PIPE

TYPE 304
Schedule 10S

TEMPE RATURE °F			– 425 to 300	400	500	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500
MAX. STRESS			20000	18700	17500	16400	16200	16000	15600	15200	14900	14600	14400	13800	12200	9700	7700	6000	4700	3700	2900	2300	1800	1400
NOM. PIPE SIZE	SCH. NO.	NOM. WALL.	ALLOWABLE WORKING PRESSURES PSIG																					
½	10S	.083	2767	2587	2421	2269	2241	2213	2158	2103	2061	2020	1992	1909	1688	1342	1065	830	650	512	401	318	249	194
¾	10S	.083	2213	2069	1937	1815	1793	1771	1726	1682	1649	1616	1594	1527	1350	1073	852	664	520	409	321	255	199	155
1	10S	.109	2321	2170	2031	1903	1880	1857	1810	1764	1729	1694	1671	1601	1416	1126	894	696	545	429	337	267	209	162
1¼	10S	.109	1839	1719	1609	1508	1489	1471	1434	1397	1370	1342	1324	1269	1122	892	708	552	432	340	267	211	165	129
1½	10S	.109	1606	1502	1406	1317	1301	1285	1253	1221	1197	1173	1157	1108	980	779	618	482	377	297	233	185	145	112
2	10S	.109	1265	1202	1124	1054	1041	1028	102	977	957	938	925	887	784	623	495	386	302	238	166	148	116	90
2½	10S	.120	1169	1093	1023	958	947	935	912	888	871	853	841	806	713	567	450	351	275	216	169	134	105	82
3	10S	.120	960	898	840	787	778	768	749	730	715	701	691	662	586	466	370	288	226	178	139	110	86	67
3½	10S	.120	840	785	735	689	680	672	655	638	626	613	605	580	512	407	323	252	197	155	122	97	76	59
4	10S	.120	747	698	653	612	605	597	582	567	556	545	538	515	455	362	287	224	175	138	106	86	67	52
5	10S	.134	674	631	590	553	548	540	526	513	502	492	486	465	411	327	260	202	158	125	98	78	61	47
6	10S	.134	566	530	496	464	459	453	442	430	422	413	406	391	345	275	218	170	133	105	82	65	51	40
8	10S	.148	480	449	420	394	389	384	375	365	358	351	346	332	293	233	185	144	113	89	70	55	43	34
10	10S	.165	430	402	376	352	348	344	335	327	320	314	309	297	262	208	165	129	101	80	62	49	39	30
12	10S	.180	395	370	346	324	320	316	308	300	294	289	285	273	241	192	152	119	93	73	57	45	36	28
14	10S	.188	376	352	329	308	305	301	293	288	280	274	271	259	229	182	145	113	88	70	55	43	34	26
16	10S	.188	329	308	268	270	266	263	257	250	245	240	237	227	201	160	127	99	77	61	48	38	30	23
18	10S	.188	292	273	256	240	237	234	228	222	218	213	211	202	178	142	113	88	69	54	42	34	26	20
20	10S	.218	305	285	267	250	247	244	238	232	227	223	220	211	186	148	118	92	72	56	44	35	27	21
24	10S	.250	292	273	255	239	236	233	228	222	217	213	210	201	178	141	112	88	69	54	42	34	26	20

The Allowable Stress Values used are as shown in Appendix “A” of ANSI B31.3-1993 for welded pipe to ASTM A-312 having a weld joint factor of .80.

The Stress Values at all temperatures above 1000F apply only when the carbon is 0.04% or higher.

TYPE 304L SCHEDULES 40S, 80S ALLOWABLE WORKING PRESSURE

ALLOWABLE WORKING PRESSURES FOR A-312 WELDED PIPE

TYPE 304L
Schedules 40S, 80S

TEMPE RATURE °F			– 425 to 300	400	500	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500
MAX. STRESS			16700	15800	14800	14000	13700	13500	13300	13000	12800	11900	9900	7800	6300	5100	4000	3200	2600	2100	1700	1100	1000	900
NOM. PIPE SIZE	SCH. NO.	NOM. WALL.	ALLOWABLE WORKING PRESSURES PSIG																					
1/2	40S	.109	3034	2870	2689	2543	2489	2453	2146	2362	2325	2162	1799	1417	1145	927	727	581	472	382	309	200	182	164
	80S	.147	4092	3871	3626	3430	3357	3308	3259	3185	3136	2916	2426	1911	1544	1250	980	784	637	515	417	270	245	221
3/4	40S	.113	2516	2381	2230	2109	2064	2034	2004	1959	1929	1793	1492	1175	949	768	603	482	392	316	256	166	151	136
	80S	.154	3429	3244	3039	2875	2813	2772	2731	2669	2628	2443	2033	1602	1294	1047	821	657	534	431	349	226	205	185
1	40S	.133	2365	2237	2096	1962	1940	1912	1863	1841	1812	1685	1402	1104	892	722	566	453	368	297	241	156	142	127
	80S	.179	3183	3011	2820	2668	2611	2573	2535	2477	2439	2268	1887	1486	1201	972	762	610	495	400	324	210	191	172
1¼	40S	.140	1972	1866	1747	1653	1618	1594	1570	1535	1511	1405	1169	921	744	602	472	376	307	248	201	130	118	106
	80S	.191	2690	2545	2384	2255	2207	2175	2142	2094	2062	1917	1595	1256	1015	822	644	515	419	338	274	177	161	145
1½	40S	.145	1784	1688	1561	1496	1464	1442	1421	1389	1368	1271	1058	833	673	545	427	342	278	224	182	118	107	96
	80S	.200	2461	2328	2181	2063	2019	1989	1960	1916	1886	1754	1459	1149	928	752	589	472	383	309	251	162	147	133
2	40S	.154	1516	1434	1344	1271	1244	1226	1207	1180	1162	1080	899	708	572	463	363	290	236	191	154	100	91	82
	80S	.218	2146	2030	1902	1799	1761	1735	1709	1671	1645	1529	1272	1002	810	655	514	411	334	270	218	141	129	116
2½	40S	.203	1651	1562	1463	1384	1354	1335	1315	1285	1265	1176	979	771	623	504	395	316	257	208	168	109	99	89
	80S	.276	2244	2124	1989	1882	1841	1814	1788	1747	1720	1599	1331	1048	847	685	538	430	349	282	228	148	134	121
3	40S	.216	1443	1365	1279	1210	1184	1166	1149	1123	1106	1028	855	674	544	441	348	276	225	181	147	95	86	78
	80S	.300	2004	1896	1776	1680	1644	1620	1596	1560	1536	1428	1188	938	756	612	480	384	312	252	204	132	120	108
3½	40S	.226	1321	1250	1171	1107	1084	1068	1052	1028	1012	941	783	617	498	403	316	253	206	166	134	87	79	71
	80S	.318	1859	1759	1647	1558	1525	1503	1460	1447	1425	1324	1102	868	701	568	445	356	289	234	169	122	111	100
4	40S	.237	1231	1165	1091	1032	1010	995	981	959	944	877	730	575	465	376	295	236	192	155	125	81	74	66
	80S	.337	1751	1657	1552	1468	1436	1415	1394	1363	1342	1248	1038	818	661	535	419	336	273	220	178	115	105	94
5	40S	.258	1084	1026	961	909	890	877	864	844	831	773	643	506	409	331	260	208	169	136	110	71	65	58
	80S	.375	1576	1491	1397	1321	1293	1274	1255	1227	1208	1123	934	738	595	481	377	302	245	198	160	104	94	85
6	40S	.280	988	935	876	828	811	799	787	769	757	704	586	462	373	302	237	189	154	124	101	65	59	53
	80S	.432	1525	1442	1351	1278	1251	1232	1214	1187	1169	1086	904	712	575	466	365	292	237	192	155	100	91	82
8	40S	.322	873	826	774	732	716	706	695	679	669	622	517	408	329	267	209	167	136	110	89	57	52	47
	80S	.500	1355	1262	1201	1136	1112	1096	1079	1055	1039	966	603	633	511	414	325	260	211	170	138	89	81	73
10	40S	.385	794	751	704	665	651	642	632	618	608	586	471	371	299	242	190	152	124	100	81	52	48	43
	80S	.500	1087	1029	984	912	892	879	866	847	833	775	645	508	410	332	260	208	169	137	111	72	65	59
12	40S	.375	688	651	609	576	564	556	548	535	527	490	408	321	259	210	165	132	107	86	70	45	41	37
	80S	.500	917	867	813	769	752	741	730	714	703	653	544	428	346	280	220	176	143	115	93	60	55	49
14	40S	.375	626	593	555	525	514	506	499	488	480	446	371	293	236	191	150	120	98	79	64	41	38	34
	80S	.500	835	790	740	700	685	675	665	650	640	595	495	390	315	255	200	160	130	105	85	55	50	45
16	40S	.375	548	518	486	459	450	443	438	427	420	390	325	256	207	167	131	105	85	69	56	36	33	30
	80S	.500	731	691	648	613	599	591	582	569	560	521	433	341	276	223	175	140	114	92	74	48	44	39
18	40S	.375	487	461	432	408	400	394	388	379	373	347	289	228	184	149	117	93	76	61	50	32	29	26
	80S	.500	649	614	576	544	533	525	517	506	498	463	385	303	245	198	156	124	101	82	66	43	39	35
20	40S	.375	438	415	389	368	360	354	349	341	336	312	260	205	165	134	105	84	68	55	45	29	26	24
	80S	.500	585	553	518	490	480	473	466	455	448	417	347	273	221	179	140	112	91	74	60	39	35	32
24	40S	.375	365	346	324	306	300	295	291	284	280	260	217	171	138	112	88	70	57	46	37	24	22	20
	80S	.500	487	461	432	408	400	394	388	379	373	347	289	228	184	149	117	93	76	61	50	32	29	26

The Allowable Stress Values used are as shown in Appendix “A” of ANSI B31.3-1993 for welded pipe to ASTM A-312 having a weld joint factor of .80. Allowable Working Pressures shown for each size reflect the minus 12½% manufacturers wall tolerance.

TYPE 304 SCHEDULES 40S, 80S ALLOWABLE WORKING PRESSURE

ALLOWABLE WORKING PRESSURES **TYPE 304**

FOR A-312 WELDED PIPE **Schedules 40S, 80S**

TEMPE RATURE °F			– 425 to 300	400	500	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500
MAX. STRESS			20000	18700	17500	16400	16200	16000	15600	15200	14900	14600	14400	13800	12200	9700	7700	6000	4700	3700	2900	2300	1800	1400
NOM. PIPE SIZE	SCH. NO.	NOM. WALL.	ALLOWABLE WORKING PRESSURES PSIG																					
1/2	40S	.109	3633	3397	3179	2979	2943	2907	2834	2761	2707	2652	2618	2507	2216	1762	1399	1090	854	672	527	418	327	254
	80S	.147	4900	4582	4288	4018	3969	3920	3822	3724	3651	3577	3528	3381	2989	2377	1887	1470	1152	907	711	564	441	343
3/4	40S	.113	3013	2617	2637	2471	2441	2411	2350	2290	2245	2200	2170	2079	1838	1461	1160	904	708	557	437	347	271	211
	80S	.154	4107	3840	3593	3387	3326	3285	3203	3121	3059	2998	2957	2834	2505	1992	1581	1232	965	760	595	472	370	287
1	40S	.133	2832	2648	2478	2322	2294	2266	2209	2152	2110	2067	2039	1954	1727	1373	1090	850	666	524	411	326	255	198
	80S	.179	3811	3584	3335	3125	3087	3049	2973	2897	2839	2782	2744	2630	2325	1849	1467	1143	898	705	553	438	343	267
1¼	40S	.140	2361	2208	2066	1936	1913	1889	1842	1795	1759	1724	1700	1629	1440	1145	909	708	555	437	342	272	213	165
	80S	.191	3222	3012	2819	2642	2610	2577	2513	2448	2400	2352	2320	2223	1965	1563	1240	967	757	596	467	370	290	226
1½	40S	.145	2137	1996	1870	1752	1731	1709	1667	1624	1592	1560	1539	1474	1303	1036	823	641	502	395	310	246	192	150
	80S	.200	2947	2758	2579	2417	2387	2358	2299	2240	2196	2152	2122	2034	1798	1429	1135	884	693	545	427	339	265	206
2	40S	.154	1816	1693	1589	1489	1471	1452	1416	1380	1353	1325	1307	1253	1108	881	699	545	427	336	263	209	163	127
	80S	.218	2570	2403	2249	2107	2082	2058	2005	1953	1915	1876	1850	1773	1588	1247	989	771	604	475	373	296	231	180
2½	40S	.203	1977	1849	1730	1621	1601	1582	1542	1503	1473	1443	1423	1384	1206	959	761	593	465	368	287	227	178	138
	80S	.276	2888	2513	2352	2204	2177	2150	2097	2043	2003	1962	1935	1855	1640	1304	1035	806	632	497	390	309	242	188
3	40S	.216	1728	1616	1512	1417	1400	1362	1348	1313	1287	1261	1244	1192	1054	838	665	518	406	320	251	199	158	121
	80S	.300	2400	2244	2100	1988	1944	1920	1872	1824	1788	1752	1728	1658	1464	1164	924	720	564	444	348	276	218	168
3½	40S	.226	1562	1479	1364	1297	1261	1266	1234	1202	1179	1155	1139	1092	965	767	609	475	372	293	229	182	142	111
	80S	.318	2226	2081	1948	1825	1803	1781	1738	1692	1658	1625	1603	1538	1358	1080	857	666	523	412	323	256	200	156
4	40S	.237	1475	1379	1290	1209	1194	1180	1150	1121	1099	1077	1062	1018	900	715	588	442	347	273	214	170	133	103
	80S	.337	2097	1961	1835	1719	1698	1678	1636	1594	1562	1531	1510	1447	1279	1017	807	629	493	388	304	241	169	147
5	40S	.258	1299	1214	1136	1065	1052	1039	1013	987	967	948	935	896	792	630	500	390	305	240	188	149	117	91
	80S	.375	1667	1765	1652	1548	1529	1510	1472	1434	1406	1378	1359	1302	1151	915	727	566	444	349	274	217	170	132
6	40S	.280	1183	1106	1035	970	959	947	923	899	882	884	852	817	722	574	456	355	278	219	172	136	107	83
	80S	.432	1628	1707	1596	1497	1479	1461	1424	1368	1360	1333	1315	1260	1114	886	703	546	429	338	265	210	164	128
8	40S	.322	1045	977	915	857	847	836	815	794	779	763	753	721	638	507	402	314	246	193	152	120	94	73
	80S	.500	1623	1518	1420	1331	1315	1299	1266	1234	1209	1185	1169	1120	990	787	625	487	381	300	235	187	146	114
10	40S	.385	951	889	832	780	770	761	742	723	708	694	685	658	580	461	386	285	223	176	138	109	86	67
	80S	.500	1302	1218	1140	1068	1055	1042	1016	990	970	951	938	899	794	632	501	391	306	241	189	150	117	91
12	40S	.375	824	770	721	675	667	659	642	626	61	601	593	568	502	399	317	247	194	152	119	95	74	58
	80S	.500	1098	1027	961	900	669	676	856	835	818	802	791	758	670	533	423	329	258	203	159	126	99	77
14	40S	.375	750	701	656	615	608	600	585	570	559	548	540	518	458	364	289	225	178	139	109	86	68	53
	80S	.500	1000	935	875	820	810	800	780	760	745	730	720	690	610	485	385	300	235	185	145	115	90	70
16	40S	.375	656	614	574	538	532	525	512	499	489	479	473	453	400	318	253	197	154	121	95	75	59	46
	80S	.500	875	818	766	718	709	700	683	665	652	639	630	604	534	424	337	263	206	162	127	101	79	61
18	40S	.375	583	545	510	478	473	467	455	443	435	426	420	403	358	263	225	175	137	106	85	67	53	41
	80S	.500	778	727	681	638	630	622	607	591	579	568	560	537	474	377	299	233	183	144	113	89	70	54
20	40S	.375	525	491	459	431	425	420	410	399	391	383	378	362	320	255	202	158	123	97	76	60	47	37
	80S	.500	700	655	613	574	587	560	548	532	522	511	504	483	427	340	270	210	165	130	102	81	63	49
24	40S	.375	438	409	383	359	354	350	341	333	328	319	315	302	267	212	168	131	103	81	63	50	39	31
	80S	.500	583	545	510	478	473	467	455	443	435	426	420	403	358	283	225	175	137	108	85	67	53	41

The Allowable Stress Values used are as shown in Appendix “A” of ANSI B31.3-1993 for welded pipe to ASTM A-312 having a weld joint factor of .80. The Stress Values at all temperatures above 1000F apply only when the carbon is 0.04% or higher.

TYPE 316L SCHEDULES 5S, 10S ALLOWABLE WORKING PRESSURE

ALLOWABLE WORKING PRESSURES **TYPE 316L**

FOR A-312 WELDED PIPE **Schedules 5S, 10S**

TEMPE RATURE °F			– 425 to 300	400	500	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500
MAX. STRESS			16700	15500	14400	13500	13200	12900	12600	12400	12100	11800	11500	11200	10800	10200	8800	6400	4700	3500	2500	1800	1300	1000
NOM. PIPE SIZE	SCH. NO.	NOM. WALL.	ALLOWABLE WORKING PRESSURES PSIG																					
1/2	5S	.065	1809	1679	1560	1463	1430	1398	1365	1343	1311	1278	1246	1213	1170	1105	953	693	509	379	271	195	141	108
	10S	.083	2310	2144	1992	1888	1826	1785	1743	1715	1674	1632	1591	1549	1494	1411	1217	885	650	484	346	249	180	138
3/4	5S	.065	1447	1343	1248	1170	1144	1118	1092	1075	1049	1023	997	971	936	884	763	555	407	303	217	158	113	87
	10S	.083	1848	1715	1594	1494	1461	1428	1394	1372	1339	1306	1273	1239	1195	1129	974	708	520	387	277	199	144	111
1	5S	.065	1156	1073	997	934	913	893	672	858	837	817	796	775	747	706	609	443	325	242	173	125	90	69
	10S	.109	1938	1799	1671	1587	1532	1497	1462	1439	1404	1389	1335	1300	1253	1184	1021	743	545	406	290	209	151	116
1¼	5S	.065	915	850	789	740	724	707	691	680	663	647	630	614	592	559	482	351	258	192	137	55	71	55
	10S	.109	1535	1425	1324	1241	1213	1186	1158	1140	1112	1085	1057	1030	993	938	809	588	432	322	230	165	120	92
1½	5S	.065	800	742	690	647	632	618	603	594	580	565	551	538	517	489	421	307	225	168	120	86	62	48
	10S	.109	1341	1245	1157	1084	1060	1038	1012	996	972	948	924	900	887	819	707	514	377	281	201	145	104	80
2	5S	.065	640	594	552	517	506	494	483	475	464	452	441	429	414	391	337	245	180	134	96	69	50	38
	10S	.109	1073	996	925	867	848	829	810	797	777	758	739	720	694	655	565	411	302	225	161	116	84	64
2½	5S	.083	675	626	582	546	534	521	509	501	489	477	465	453	437	412	356	259	190	141	101	73	53	40
	10S	.120	976	906	841	789	771	754	736	725	707	690	672	654	631	596	514	374	275	205	146	105	76	58
3	5S	.083	554	515	478	448	438	428	418	412	402	392	382	372	359	339	292	212	156	116	83	60	43	33
	10S	.120	802	744	691	648	634	619	605	595	581	566	552	538	518	490	422	307	226	168	120	86	62	48
3½	5S	.083	485	450	418	392	383	375	366	360	352	343	334	325	314	296	256	186	137	102	73	52	38	29
	10S	.120	701	651	605	567	554	542	529	521	506	496	483	470	454	428	370	269	197	147	105	76	55	42
4	5S	.083	431	400	372	349	341	333	325	320	312	305	297	289	279	263	227	165	121	90	65	46	34	26
	10S	.120	623	579	538	504	493	482	470	463	452	441	429	418	403	381	329	239	175	131	93	67	49	37
5	5S	.109	458	425	395	370	362	354	346	340	332	324	315	307	296	280	241	176	129	96	69	49	36	27
	10S	.134	563	523	486	455	445	435	425	418	408	398	388	378	364	344	297	216	158	118	84	61	44	34
6	5S	.109	385	357	332	311	304	297	290	286	279	272	265	258	249	235	203	147	108	81	58	41	30	23
	10S	.134	473	439	408	362	374	365	357	351	343	334	326	317	306	289	249	181	133	99	71	51	37	28
8	5S	.109	295	274	255	239	234	228	223	219	214	209	203	198	191	180	158	113	83	62	44	32	23	18
	10S	.148	401	372	346	324	317	310	303	298	291	263	276	269	259	245	211	154	113	84	60	43	31	24
10	5S	.134	291	270	251	236	230	225	220	216	211	206	201	195	188	178	154	112	82	61	44	31	23	17
	10S	.165	359	333	309	290	284	277	271	266	260	254	247	241	232	219	189	138	101	75	54	39	28	21
12	5S	.156	286	266	247	231	226	221	216	212	207	202	197	192	185	175	151	110	81	60	43	31	22	17
	10S	.180	330	308	285	267	261	255	249	245	239	233	227	221	213	202	174	126	93	69	49	36	26	20
14	5S	.156	261	242	225	211	206	201	197	193	189	184	179	175	168	159	137	100	73	55	39	28	20	16
	10S	.188	314	291	271	254	248	243	237	233	227	222	216	211	203	192	165	120	88	66	47	34	24	19
16	5S	.165	241	224	208	195	191	186	182	179	175	170	168	162	156	147	127	92	68	51	36	26	19	14
	10S	.188	275	255	237	222	217	212	207	204	199	194	189	184	178	168	145	105	77	58	41	30	21	16
18	5S	.165	214	199	185	173	169	166	162	159	155	151	148	144	139	131	113	85	60	45	32	23	17	13
	10S	.188	244	227	211	197	193	189	184	181	177	173	168	164	158	149	129	94	69	51	37	26	19	15
20	5S	.188	220	204	190	178	174	170	166	163	159	155	151	147	142	134	116	84	62	46	33	24	17	13
	10S	.218	255	237	220	206	201	197	192	189	185	180	175	171	165	156	134	96	72	53	38	27	20	15
24	5S	.218	212	197	183	172	168	164	160	158	154	150	146	142	137	130	112	81	60	45	32	23	17	13
	10S	.250	244	226	210	197	193	188	184	181	176	172	168	163	158	149	128	93	69	51	36	26	19	15

The Allowable Stress Values used are as shown in Appendix “A” of ANSI B31.3-1993 for welded pipe to ASTM A-312 having a weld joint factor of .80. Allowable Working Pressures shown for each size reflect the minus 12½% manufacturers wall tolerance.

TYPE 316 SCHEDULE 10S ALLOWABLE WORKING PRESSURE

ALLOWABLE WORKING PRESSURES **TYPE 316**

FOR A-312 WELDED PIPE **Schedules 10S**

TEMPE RATURE °F			– 425 to 300	400	500	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500
MAX. STRESS			20000	19300	17900	17000	16700	16300	16100	15900	15700	15500	15400	15300	14500	12400	9600	7400	5500	4100	3100	2300	1700	1300
NOM. PIPE SIZE	SCH. NO.	NOM. WALL.	ALLOWABLE WORKING PRESSURES PSIG																					
1/2	10S	.083	2767	2670	2476	2352	2310	2255	2227	2200	2172	2144	2130	2117	2117	1715	1356	1024	761	587	429	318	235	180
3/4	10S	.083	2213	2136	1981	1881	1848	1804	1782	1760	1737	1715	1704	1693	1693	1372	1085	819	609	454	343	255	188	144
1	10S	.109	2321	2240	2077	1973	1938	1892	1888	1845	1822	1799	1787	1775	1775	1439	1137	859	638	476	360	267	197	151
1¼	10S	.109	1839	1774	1646	1563	1535	1496	1480	1462	1443	1425	1416	1406	1406	1140	901	680	506	377	285	211	156	120
1½	10S	.109	1608	1550	1438	1365	1341	1309	1293	1277	1261	1245	1237	1229	1229	996	787	594	442	329	249	185	137	104
2	10S	.109	1285	1240	1150	1092	1073	1047	1034	1022	1009	996	969	983	983	797	630	475	353	263	199	148	109	84
2½	10S	.120	1169	1128	1046	993	976	952	941	929	917	906	900	894	894	725	573	432	321	240	181	134	99	76
3	10S	.120	960	926	859	816	802	782	773	763	754	744	739	734	734	595	470	355	264	197	149	110	82	62
3½	10S	.120	840	811	752	714	701	685	676	668	659	651	647	643	643	521	412	311	231	172	130	97	71	55
4	10S	.120	747	721	668	635	623	609	601	594	586	579	575	571	571	463	366	276	205	153	116	86	63	49
5	10S	.134	674	651	604	573	563	550	543	538	529	523	519	516	516	418	330	250	185	138	105	78	57	44
6	10S	.134	566	547	507	481	473	462	456	450	445	439	438	433	433	351	278	210	156	116	88	65	48	37
8	10S	.148	480	464	430	408	401	392	387	382	377	372	370	368	368	298	235	178	132	96	74	55	41	31
10	10S	.165	430	415	385	365	359	350	346	342	337	333	331	329	329	266	211	159	118	88	67	49	37	28
12	10S	.180	395	381	354	336	330	322	318	314	310	306	304	302	302	245	194	148	109	81	61	45	34	26
14	10S	.188	376	363	337	320	314	306	303	299	295	291	290	288	288	233	184	139	103	77	58	43	32	24
16	10S	.188	329	317	294	260	275	268	265	262	258	255	253	252	252	204	161	122	90	67	51	38	28	21
18	10S	.188	292	282	262	249	244	238	235	232	230	227	225	224	224	181	143	108	80	60	45	34	25	19
20	10S	.218	305	295	273	259	255	249	246	243	240	237	235	233	233	189	150	113	84	63	47	35	26	20
24	10S	.250	292	281	261	248	244	238	235	232	229	226	225	223	223	181	143	108	80	60	45	34	25	19

The Allowable Stress Values used are as shown in Appendix “A” of ANSI B31.3-1993 for welded pipe to ASTM A-312 having a weld joint factor of .80. The Stress Values at all temperatures above 1000F apply only when the carbon is 0.04% or higher.

TYPE 316L SCHEDULES 40S, 80S ALLOWABLE WORKING PRESSURE

ALLOWABLE WORKING PRESSURES FOR A-312 WELDED PIPE

TYPE 306L
Schedules 40S, 80S

TEMPE RATURE °F			– 425 to 300	400	500	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500
MAX. STRESS			16700	15500	14400	13500	13200	12900	12600	12400	12100	11800	11500	11200	10800	10200	8800	6400	4700	3500	2500	1800	1300	1000
NOM. PIPE SIZE	SCH. NO.	NOM. WALL.	ALLOWABLE WORKING PRESSURES PSIG																					
1/2	40S	.109	3034	2816	2616	2453	2398	2344	2289	2253	2198	2144	2089	2035	1962	1853	1599	1163	854	636	454	327	236	182
	80S	.147	4092	3796	3528	3306	3234	3161	3067	3038	2965	2891	2816	2744	2646	2499	2158	1568	1152	858	613	441	319	245
3/4	40S	.113	2516	2335	2170	2034	1989	1944	1898	1888	1823	1778	1733	1687	1627	1537	1326	964	706	527	377	271	196	151
	80S	.154	3429	3183	2957	2772	2710	2649	2587	2546	2485	2423	2361	2300	2218	2094	1807	1314	965	719	513	370	267	205
1	40S	.133	2365	2195	2039	1912	1869	1827	1784	1756	1713	1671	1628	1586	1529	1444	1246	906	666	496	354	255	184	142
	80S	.179	3183	2954	2744	2573	2516	2458	2401	2363	2306	2249	2192	2134	2058	1944	1677	1220	896	667	476	343	248	191
1¼	40S	.140	1972	1830	1700	1594	1559	1523	1488	1464	1429	1393	1358	1322	1275	1204	1039	756	555	413	295	213	153	118
	80S	.191	2690	2497	2320	2175	2126	2078	2030	1997	1949	1901	1852	1804	1740	1643	1418	1031	757	564	403	290	209	161
1½	40S	.145	1784	1656	1539	1442	1410	1378	1346	1325	1293	1261	1229	1197	1154	1090	940	684	502	374	267	192	139	107
	80S	.200	2461	2284	2122	1969	1945	1901	1857	1827	1763	1739	1695	1651	1592	1503	1297	943	693	516	368	265	192	147
2	40S	.154	1516	1407	1307	1226	1198	1171	1144	1126	1098	1071	1044	1017	980	926	799	581	427	318	227	163	118	91
	80S	.218	2146	1992	1850	1735	1696	1658	1619	1593	1555	1516	1478	1439	1388	1311	1131	822	604	450	321	231	167	129
2½	40S	.203	1651	1532	1423	1335	1305	1275	1246	1226	1196	1166	1137	1107	1068	1008	670	633	465	346	247	178	129	99
	80S	.276	2244	2083	1935	1814	1774	1734	1693	1667	1626	1586	1548	1505	1452	1371	1183	860	632	470	336	242	175	134
3	40S	.216	1443	1339	1244	1166	1140	1115	1069	1071	1045	1020	994	968	933	881	760	553	406	302	216	156	112	86
	80S	.300	2004	1860	1728	1620	1584	1548	1512	1488	1452	1416	1380	1344	1296	1224	1056	766	564	420	300	216	156	120
3½	40S	.226	1321	1226	1139	1068	1044	1020	997	961	957	933	910	886	854	807	696	506	372	277	198	142	103	79
	80S	.318	1859	1725	1603	1503	1469	1438	1402	1380	1347	1313	1280	1247	1202	1135	979	712	523	390	278	200	145	111
4	40S	.237	1231	1143	1062	995	973	951	929	914	892	870	848	826	796	752	649	472	347	258	184	133	96	74
	80S	.337	1751	1625	1510	1415	1384	1352	1321	1300	1269	1237	1206	1174	1132	1069	923	671	493	367	262	189	138	105
5	40S	.258	1084	1006	935	877	857	838	818	805	786	766	747	727	701	662	571	416	305	227	162	117	84	65
	80S	.375	1576	1463	1359	1274	1248	1217	1189	1170	1142	1114	1085	1057	1019	963	830	604	444	330	236	170	123	94
6	40S	.280	988	917	852	799	781	763	746	734	716	698	680	663	639	604	521	379	278	207	148	107	77	59
	80S	.432	1525	1415	1315	1232	1205	1178	1150	1132	1105	1077	1050	1022	986	931	803	584	429	320	228	164	119	91
8	40S	.322	873	810	753	706	690	674	659	648	632	617	601	585	564	533	460	335	246	183	131	94	68	52
	80S	.500	1355	1258	1169	1096	1071	1047	1023	1006	962	958	933	909	877	826	714	519	381	284	203	146	106	81
10	40S	.385	794	737	885	842	627	613	599	589	575	561	547	532	513	485	418	304	223	166	119	86	62	48
	80S	.500	1087	1009	938	879	860	840	820	807	788	768	749	729	703	664	573	417	306	228	163	117	85	65
12	40S	.375	688	638	593	556	544	531	519	511	498	486	474	461	445	420	362	264	194	144	103	74	54	41
	80S	.500	917	851	791	741	725	708	692	681	664	648	631	615	593	560	483	351	258	192	137	99	71	55
14	40S	.375	626	581	540	506	495	484	473	465	454	443	431	420	405	383	330	240	176	131	94	68	49	38
	80S	.500	835	775	720	675	660	645	630	620	605	590	575	560	540	510	440	320	235	175	125	90	65	50
16	40S	.375	548	509	473	443	433	423	413	407	397	387	377	368	354	335	289	210	154	115	82	59	43	33
	80S	.500	731	678	630	591	576	564	551	543	529	516	503	490	473	446	385	260	206	153	109	79	57	44
18	40S	.375	487	452	420	394	385	376	388	362	353	344	335	327	315	298	257	187	137	102	73	53	38	29
	80S	.500	649	603	560	525	513	502	490	482	471	459	447	436	420	397	342	249	183	136	97	70	51	39
20	40S	.375	438	407	378	354	347	339	331	326	318	310	302	294	284	268	231	168	123	92	66	47	34	26
	80S	.500	585	543	504	473	462	452	441	434	424	413	403	392	378	357	306	224	165	123	88	63	46	35
24	40S	.375	365	339	315	295	289	282	276	271	265	258	252	245	236	223	193	140	103	77	55	39	28	22
	80S	.500	487	452	420	394	385	376	368	362	353	344	335	327	315	298	257	187	137	102	73	53	38	29

The Allowable Stress Values used are as shown in Appendix “A” of ANSI B31.3-1993 for welded pipe to ASTM A-312 having a weld joint factor of .80. Allowable Working Pressures shown for each size reflect the minus 12½% manufacturers wall tolerance.

TYPE 316 SCHEDULES 40S, 80S ALLOWABLE WORKING PRESSURE

ALLOWABLE WORKING PRESSURES FOR A-312 WELDED PIPE

TYPE 316
Schedules 40S, 80S

TEMPE RATURE °F			– 425 to 300	400	500	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500
MAX. STRESS			20000	19300	17900	17000	16700	16300	16100	15900	15700	15500	15400	15300	14500	12400	9800	7400	5500	4100	3100	2300	1700	1300
NOM. PIPE SIZE	SCH. NO.	NOM. WALL.	ALLOWABLE WORKING PRESSURES PSIG																					
1/2	40S	.109	3633	3506	3252	3088	3034	2961	2925	2889	2652	2816	2798	2780	2634	2253	1780	1344	999	745	563	418	309	238
	80S	.147	4900	4729	4386	4165	4092	3994	3945	3896	3847	3798	3773	3749	3553	3038	2401	1813	1348	1005	760	564	417	319
3/4	40S	.113	3013	2908	2697	2561	2516	2456	2426	2396	2365	2335	2320	2305	2185	1868	1477	1115	829	618	467	347	256	196
	80S	.154	4107	3963	3675	3491	3429	3347	3308	3265	3224	3183	3162	3142	2977	2546	2012	1519	1129	842	637	472	349	267
1	40S	.133	2832	2733	2535	2407	2365	2308	2280	2251	2223	2195	2161	2166	2053	1756	1368	1048	779	581	439	326	241	184
	80S	.179	3811	3678	3411	3240	3183	3106	3068	3030	2992	2954	2935	2916	2763	2383	1888	1410	1048	781	591	438	324	248
1¼	40S	.140	2361	2279	2113	2007	1972	1925	1901	1877	1854	1830	1818	1807	1712	1464	1157	874	649	484	366	272	201	153
	80S	.191	3222	3109	2883	2738	2690	2628	2593	2561	2529	2497	2481	2465	2336	1997	1579	1192	886	660	499	370	274	209
1½	40S	.145	2137	2062	1912	1816	1784	1742	1720	1699	1677	1656	1645	1635	1549	1325	1047	791	588	438	331	246	182	139
	80S	.200	2947	2844	2638	2505	2461	2402	2373	2343	2314	2284	2269	2255	2137	1827	1444	1091	811	604	457	339	251	192
2	40S	.154	1816	1752	1625	1543	1516	1480	1462	1443	1425	1407	1398	1389	1316	1126	890	672	499	372	281	209	154	118
	80S	.218	2570	2480	2300	2185	2146	2095	2069	2043	2018	1992	1979	1966	1863	1593	1259	951	707	527	398	296	218	167
2½	40S	.203	1977	1908	1769	1680	1651	1611	1592	1572	1552	1532	1522	1512	1433	1226	969	732	544	405	306	227	168	129
	80S	.276	2688	2594	2406	2285	2244	2191	2164	2137	2110	2083	2070	2056	1949	1667	1317	995	739	551	417	309	228	175
3	40S	.216	1728	1688	1547	1469	1443	1408	1391	1374	1356	1339	1331	1322	1253	1071	847	639	475	354	266	199	147	112
	80S	.300	2400	2316	2148	2040	2004	1956	1932	1908	1884	1860	1848	1836	1740	1488	1176	888	660	492	372	276	204	156
3½	40S	.226	1582	1527	1416	1345	1321	1289	1274	1258	1242	1226	1218	1210	1147	981	775	585	435	324	245	182	134	103
	80S	.318	2226	2146	1992	1892	1859	1814	1792	1770	1747	1725	1714	1703	1614	1360	1091	824	612	456	345	256	189	145
4	40S	.237	1475	1423	1320	1253	1231	1202	1187	1172	1158	1143	1135	1128	1069	914	723	546	406	302	229	170	125	96
	80S	.337	2097	2023	1877	1782	1751	1709	1688	1667	1646	1625	1615	1604	1520	1300	1027	776	577	430	325	241	178	136
5	40S	.258	1299	1253	1162	1104	1084	1058	1045	1032	1019	1006	1000	993	941	805	636	480	357	266	201	149	110	84
	80S	.375	1887	1821	1689	1604	1576	1538	1519	1501	1482	1463	1453	1444	1368	1170	925	698	519	387	293	217	160	123
6	40S	.280	1183	1142	1059	1006	988	964	953	941	929	917	911	905	858	734	580	438	325	243	183	138	101	77
	80S	.432	1826	1762	1634	1552	1525	1488	1470	1452	1433	1415	1406	1397	1324	1132	895	676	502	374	283	210	155	119
8	40S	.322	1045	1009	936	889	873	852	841	831	821	810	805	800	758	648	512	387	287	214	162	120	89	68
	80S	.500	1623	1566	1453	1380	1355	1323	1307	1290	1274	1258	1250	1242	1177	1006	795	601	446	333	252	187	138	106
10	40S	.365	951	917	851	808	794	775	765	758	746	737	732	727	689	589	466	352	261	195	147	109	81	62
	80S	.500	1302	1257	1166	1107	1087	1061	1048	1035	1022	1009	1003	996	944	807	638	482	358	287	202	150	111	85
12	40S	.375	824	795	737	700	688	671	663	655	646	638	634	630	597	511	404	305	226	169	128	95	70	54
	80S	.500	1098	1060	983	933	917	895	884	873	862	851	845	840	796	681	538	406	302	225	170	126	93	71
14	40S	.375	750	724	671	638	626	611	604	596	589	581	578	574	544	465	366	278	206	154	116	86	64	49
	80S	.500	1000	965	895	850	835	815	805	795	785	775	770	765	725	620	490	370	275	205	155	115	85	65
16	40S	.375	656	633	587	558	548	535	528	522	515	509	505	502	476	407	322	243	180	135	102	75	56	43
	80S	.500	875	844	783	744	731	713	704	696	687	678	674	669	634	543	429	324	241	179	136	101	74	57
18	40S	.375	583	563	522	496	487	475	470	464	458	452	449	446	423	362	266	216	160	120	90	67	50	38
	80S	.500	778	751	696	661	649	634	626	618	611	603	599	595	584	482	381	288	214	159	121	89	68	51
20	40S	.375	525	507	470	446	438	428	423	417	412	407	404	402	381	326	257	194	144	108	81	60	45	34
	80S	.500	700	676	627	595	585	571	564	557	550	543	539	536	508	434	343	259	193	144	109	81	60	46
24	40S	.375	438	422	392	372	365	357	352	348	343	339	337	335	317	271	214	162	120	90	68	50	37	28
	80S	.500	583	563	522	496	487	475	470	464	458	452	449	446	423	362	286	216	160	120	90	67	50	38

The Allowable Stress Values used are as shown in Appendix “A” of ANSI B31.3-1993 for welded pipe to ASTM A-312 having a weld joint factor of .80. The Stress Values at all temperatures above 1000F apply only when the carbon is 0.04% or higher.