

STAINLESS STEEL WELDED PIPE

TYPE 304 SCHEDULES 5S, 10S ALLOWABLE WORKING PRESSURE

ALLOWABLE WORKING PRESSURES FOR A-312 WELDED PIPE

TYPE 304L SCHEDULES 5S, 10S

TEMPERATURE °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 10S	.065 .083	1809 2310	1712 2186	1603 2047	1517 1937	1484 1695	1463 1868	1441 1840	1408 1798	1387 1771	1289 1646	1073 1370	845 1079	683 872	553 706	433 553	347 443	282 360	226 291	184 235
3/4	5S 10S	.065 .083	1447 1848	1389 1749	1283 1636	1213 1549	1187 1516	1170 1494	1153 1472	1127 1439	1109 1417	1031 1317	858 1096	676 863	546 697	442 564	347 443	277 354	225 288	182 232	147 188	95 122	87 111	78 100
1	5S 10S	.065 .109	1156 1938	1093 1834	1024 1717	969 1625	948 1590	934 1567	920 1543	900 1509	886 1485	823 1381	835 1149	540 905	436 731	353 592	277 464	221 371	180 302	145 244	118 197	76 128	69 116	62 104
1 1/4	5S 10S	.065 .109	915 1535	888 1452	811 1361	767 1287	751 1259	740 1241	729 1223	713 1195	702 1177	652 1094	543 910	426 717	345 579	280 469	219 368	175 294	143 239	115 193	93 156	60 101	55 92	49 83
1 1/2	5S 10S	.065 .109	800 1341	757 1269	709 1189	671 1124	656 1100	647 1064	637 1068	623 1044	613 1028	570 956	474 795	374 626	302 506	244 410	192 321	153 257	125 209	101 169	81 137	53 88	48 80	43 72
2	5S 10S	.065 .109	640 1073	605 1015	587 951	538 900	525 880	517 867	510 855	498 835	490 822	456 765	379 636	299 501	241 405	195 328	153 257	123 206	100 167	80 135	65 109	42 71	38 64	34 58
2 1/2	5S 10S	.083 .120	675 976	639 923	598 865	566 818	554 801	546 789	538 777	525 760	517 748	481 695	400 579	315 456	255 388	206 298	162 234	129 187	105 152	85 123	69 99	44 64	40 58	36 53
3	5S 10S	.083 .120	554 802	525 758	491 710	465 672	455 658	448 648	442 638	432 624	425 614	395 571	329 475	259 374	209 302	169 245	133 192	106 154	86 125	70 101	56 82	37 53	33 48	30 43
3 1/2	5S 10S	.083 .120	485 701	459 664	430 622	407 588	398 575	392 567	386 559	378 546	372 538	346 500	288 416	227 328	183 265	148 214	116 168	93 134	76 109	61 88	49 71	32 46	29 42	26 38
4	5S 10S	.083 .120	431 623	408 590	382 553	362 523	354 511	349 504	343 497	336 485	331 478	307 444	256 370	201 291	163 235	132 190	103 149	83 119	67 97	54 78	44 63	28 41	26 37	23 34
5	5S 10S	.109 .134	458 583	433 533	406 499	384 472	376 462	370 455	365 449	357 438	351 432	326 401	272 334	214 263	173 212	140 172	110 135	88 108	71 88	58 71	47 57	30 37	27 34	25 30
6	5S 10S	.109 .134	385 473	364 447	341 419	322 396	316 388	311 362	306 377	299 368	295 362	274 337	228 260	180 221	145 178	117 144	92 113	74 91	60 74	48 59	39 48	25 31	23 28	21 25
8	5S 10S	.109 .148	295 401	280 380	262 356	248 336	242 329	239 324	235 320	230 312	226 307	211 286	175 238	138 187	111 151	90 123	71 96	57 77	46 62	37 50	30 41	19 26	18 24	16 22
10	5S 10S	.134 .165	291 359	278 340	258 318	244 301	239 294	236 290	232 286	227 279	223 275	208 256	173 213	138 168	110 135	89 110	70 86	58 69	45 56	37 45	30 37	19 24	17 21	16 19
12	5S 10S	.156 .180	286 330	271 312	254 293	240 277	235 271	231 267	228 263	223 257	219 253	204 235	170 196	134 154	108 125	87 101	69 79	55 63	45 51	36 42	29 34	19 22	17 20	15 18
14	5S 10S	.156 .188	261 314	246 297	231 276	218 263	214 258	211 254	207 250	203 244	200 241	186 224	154 186	122 147	98 118	80 96	62 75	50 60	41 49	33 39	27 32	17 21	16 19	14 17
16	5S 10S	.165 .188	241 275	228 260	214 243	202 230	198 225	195 222	192 219	188 214	185 211	172 196	143 163	113 128	91 104	74 84	58 66	46 53	38 43	30 35	25 28	16 18	14 16	13 15
18	5S 10S	.165 .188	214 244	203 231	190 216	180 205	176 200	173 197	171 194	167 190	164 187	153 174	127 145	100 114	81 92	65 75	51 58	41 47	33 38	27 31	22 25	14 16	13 15	12 13
20	5S 10S	.188 .218	220 255	208 241	195 226	184 214	180 209	178 206	175 203	171 198	168 195	157 182	130 151	106 119	83 96	67 78	53 61	42 49	34 40	28 32	22 26	14 17	13 15	12 14
24	5S 10S	.218 .250	212 244	201 230	188 216	178 204	174 200	172 197	169 194	165 190	163 187	151 174	126 144	99 114	80 92	65 74	51 58	41 47	33 38	27 31	22 25	14 16	13 15	11 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 12½% manufacturers wall tolerance.

STAINLESS STEEL WELDED PIPE

TYPE 304 SCHEDULE 10S ALLOWABLE WORKING PRESSURE

ALLOWABLE WORKING PRESSURES FOR A-312 WELDED PIPE

TYPE 304 SCHEDULE 10S

TEMPERATURE °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	288	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

STAINLESS STEEL WELDED PIPE

TYPE 304 SCHEDULES 40S, 80S ALLOWABLE WORKING PRESSURE

ALLOWABLE WORKING PRESSURES FOR A-312 WELDED PIPE

TYPE 304 SCHEDULES 40S, 80S

TEMPERATURE °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
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
1 1/4	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
1 1/2	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
2 1/2	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
3 1/2	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	803	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

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 Allowable Working Pressures shown for each size reflect the minus 12½% manufacturers wall tolerance.

STAINLESS STEEL WELDED PIPE

TYPE 304 SCHEDULES 40S, 80S ALLOWABLE WORKING PRESSURE

ALLOWABLE WORKING PRESSURES FOR A-312 WELDED PIPE

TYPE 304 SCHEDULES 40S, 80S

TEMPERATURE °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
	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		
1 1/4	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		
1 1/2	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		
2 1/2	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		
3 1/2	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	1785	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	869	876	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.