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Linepipe Pressure and Temperature Ratings - Page 1

SEAMLESS CARBON STEEL PIPE to ASTM A106-B, API 5LB & ASTM A53

Maximum allowable pressure / temperature ratings** in kPa for chemical plant and petroleum refinery piping systems to ANSI / ASME B31.3A - 1981

Nominal Size DN	Wall Thickness		Temp C°	-29 to 38 C°	205 C°	260 C°	350 C°	370 C°	400 C°	430 C° *	450 C° *
	Schedule	mm	Stress (SE) in kPa	137800	137800	130221	117130	115752	89570	74412	59943
15	STD	40	2.77	34416	34416	32528	29255	28910	22372	18589	14972
		80	3.73	48092	48092	45446	40878	40396	31260	25969	20918
	XXS	160	4.78	62830	62830	59378	53404	52777	40837	33926	27333
7.47		98245	98245	92836	83507	82522	63857	53053	42739		
20		STD	40	2.87	28070	28070	26526	23860	23578	18245	15158
	80		3.91	39418	39418	37247	33506	33106	25617	21283	17142
	XXS	160	5.56	58152	58152	54955	49429	48843	37799	31398	25293
7.82		83107	83107	78539	70643	69809	54024	44881	36152		
25		STD	40	3.38	26251	26251	24804	22310	22048	17060	14173
	80		4.55	36283	36283	34285	30862	30474	23584	19595	15785
	XXS	160	6.35	52481	52481	49594	44606	44082	34112	28339	22827
9.09		77030	77030	72793	65476	64704	50070	41595	33506		
32		STD	40	3.56	21614	21614	20421	18369	18155	14049	11672
	80		4.85	30178	30178	28518	25651	25348	19616	16295	13125
	XXS	160	6.35	40596	40596	38364	34505	34099	26389	21924	17659
9.7		64601	64601	61045	54906	54266	41988	34884	28097		
40		STD	40	3.68	19444	19444	18375	16529	16329	12636	10550
	80		5.08	27402	27402	25900	23295	23019	17811	14800	11919
	XXS	160	7.14	39738	39738	37599	33816	33416	25858	21483	17308
10.16		58779	58779	55547	49966	49374	38205	31742	25569		
50		STD	40	3.91	16378	16378	15468	13925	13759	10645	8847
	80		5.54	23653	23653	22351	20105	19871	15378	12774	10287
	XXS	160	8.74	38866	38866	36731	33037	32652	25266	20987	16908
11.07		50793	50793	48003	43173	42670	33017	27429	22096		
65		STD	40	5.16	17914	17914	16929	15227	15048	11644	9674
	80		7.01	24818	24818	23447	21097	20849	16129	13401	10797
	XXS	160	9.53	34615	34615	32714	29420	29076	22503	18693	15055
14.02		53081	53081	50159	45116	44585	34498	28662	23088		
80		STD	40	5.49	15558	15558	14969	13222	13063	10108	8399
	80		7.62	21986	21986	20780	18693	18472	14290	11871	9563
	XXS	160	11.13	33079	33079	31253	28111	27780	21497	17859	14386
15.24		46976	46976	44392	39928	39459	30536	25369	20436		
100		STD	40	6.02	13187	13187	12464	11210	11079	8571	7124
	80		8.56	19058	19058	18010	16198	16012	12388	12094	8289
	XXS	120	11.13	25190	25190	23805	21407	21159	16371	13601	10955
16.0		31019	31019	29310	26368	26058	20160	16750	13208		
125		STD	40	6.55	11561	11561	10921	9825	9708	7517	6243
	80		9.53	17060	17060	16122	14503	14331	11093	9212	7421
	XXS	120	12.7	23130	23130	21855	19657	19430	15034	12492	10059
16.0		29407	29407	27787	24997	24701	19113	15881	12795		
150		STD	40	7.11	10550	10550	9928	8924	8819	6828	5370
	80		10.97	16474	16474	15571	14007	13842	10707	8895	7165
	XXS	120	14.27	21745	21745	20553	18486	18265	14138	11747	9460
16.0		28325	28325	26768	24074	23784	18410	15296	12319		
200		STD	20	6.35	7138	7138	6745	6063	5994	4637	3852
	30		7.04	7924	7924	7489	6732	6656	5147	4279	3445
	XXS	40	8.18	9246	9246	8737	7855	7765	6008	4995	4024
60		10.31	11741	11741	11093	9977	9860	7627	6339	5105	
XS		80	12.7	14572	14572	13766	12388	12237	9474	7868	6338
	100	15.09	17452	17452	16488	14834	14655	11341	9426	7593	
	120	STD	18.26	21345	21345	20174	18148	17935	13876	11527	9288
20.62			24308	24308	22971	20656	20415	15799	13125	10569	
XXS		160	22.23	26334	26334	24877	22386	22124	17115	14221	11458
	160	23.01	27340	27340	25838	23240	22964	17769	14765	11892	
	250	STD	20	6.35	5698	5698	5388	4844	4789	3707	3080
30			7.8	7028	7028	6642	5974	5905	4568	3796	3059
XXS		40	9.27	8385	8385	7923	7131	7048	5450	4527	3652
	60	12.7	11596	11596	10955	9853	9736	7538	6263	5043	
	80	STD	15.09	13863	13863	13098	11781	11644	9012	7483	6028
100			18.26	16922	16922	15992	14386	14214	10996	9136	7359
XXS		120	21.44	20036	20036	18934	17032	16825	13022	10817	8716
	140	25.4	23998	23998	16474	20394	20153	15599	12960	10438	
	300	STD	160	28.58	27229	27229	25734	23143	22875	17700	14703
20			6.35	4795	4795	4534	4072	4024	3114	2591	2088
XXS		30	8.38	6359	6359	6008	5402	5540	4134	3431	2763
	40	9.53	7241	7241	6842	6153	6084	4706	3914	3149	
	60	STD	10.31	7854	7854	7421	6676	6601	5015	4244	3417
12.7			9722	9722	9191	8268	8165	6318	5250	4230	
80		STD	14.27	10969	10969	10363	9322	9212	7131	5925	4768
	17.48		13525	13525	12850	11492	11362	8792	7303	5884	
	XXS	100	21.44	16736	16736	15819	14227	14062	10879	9040	7283
120		25.4	20015	20015	18913	17011	16811	13008	10804	8702	
140		28.58	22682	22682	21435	19278	19051	14744	12244	9866	
160	33.32	26740	26740	25273	22730	22461	17383	14441	11630		