

Volume of Crude Required to Fill a Pipeline

Outside Dia. In.	Inside Dia. in.	Wall Thickness in.	Weight per foot lb	Weight per mile tons	Barrels per foot of line	Barrels per mile of line
2.375 (2in. nominal)	2.067	0.154	3.65	9.636	0.0041504	21.9124
	1.939	0.218	5.02	13.253	0.0036523	19.2841
	1.503	0.436	9.03	23.839	0.0021945	11.5867
2.875 (2½ Nominal)	2.469	0.203	5.79	15.286	0.00592178	31.267
	2.323	0.276	7.66	20.222	0.00524214	27.678
	1.771	0.552	13.7	36.168	0.00304682	16.087
3.5 (3in nominal)	3.124	0.188	6.63	17.503	0.0094805	50.0571
	3.068	0.216	7.58	20.011	0.0091437	48.2786
	3.0	0.250	8.68	22.915	0.0087428	46.1622
	2.938	0.281	9.67	25.925	0.0083852	44.2738
	2.9	0.3	10.25	27.060	0.0081697	43.1360
	2.3	0.6	18.58	49.051	0.0051388	27.1331
4.000(3½ in nominal)	3.75	0.125	5.17	13.649	0.0136606	72.128
	3.688	0.156	6.41	19.922	0.0132126	69.763
	3.624	0.188	7.63	20.143	0.0127581	67.363
	3.548	0.226	9.11	24.050	0.0122286	64.567
	3.5	0.25	10.01	26.426	0.0118999	62.832
	3.438	0.281	11.17	29.489	0.0114820	60.625
	3.364	0.318	12.51	33.026	0.0109931	58.044
4.5(4in. nominal)	4.124	0.188	8.64	22.81	0.0165214	87.23306
	4.062	0.219	10	26.4	0.0160275	84.62553
	4.026	0.237	10.79	28.486	0.0157455	83.13642
	4.0	0.25	11.35	29.964	0.0155428	82.06609
	3.938	0.281	12.67	33.449	0.0150619	79.52683
	3.876	0.312	13.98	36.907	0.0145865	77.01710
	3.826	0.337	14.98	39.547	0.0142200	75.08163
	3.152	0.674	27.57	39.547	0.0096512	50.95843
6.625(6in. nominal)	6.249	0.188	12.89	34.03	0.0379341	200.293
	6.187	0.219	14.97	39.521	0.0371852	196.338
	6.125	0.250	17.02	44.933	0.0364436	192.422
	6.065	0.280	18.97	50.081	0.0357331	188.671
	6.001	0.312	21.07	55.625	0.0349830	184.710
	5.937	0.344	23.06	60.878	0.0342407	180.791
	5.875	0.375	25.03	66.079	0.0335280	177.028
	5.761	0.432	28.57	75.425	0.0322407	170.231
	4.897	0.864	53.16	140.342	0.0232954	122.999

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8.625(8 in Nominal)	8.249	0.188	16.9	44.616	0.0661016	349.017
	8.219	0.203	18.27	48.233	0.06562175	346.484
	8.187	0.219	19.64	51.850	0.0651117	343.790
	8.125	0.250	22.36	59.030	0.0641239	338.603
	8.071	0.277	24.7	65.208	0.0632797	334.117
	8.001	0.312	27.74	73.234	0.0621713	328.264
	7.981	0.322	28.55	75.372	0.0618764	326.707
	7.937	0.344	30.4	80.256	0.0611960	323.115
	7.875	0.375	33.04	87.226	0.0602436	318.086
	7.749	0.438	38.26	101.006	0.0583312	307.989
	7.625	0.5	43.36	114.550	0.0564793	289.211
6.875	0.875	72.42	191.189	0.0459150	242.431	
10.75(10 in. Nominal)	10.312	0.219	24.60	64.944	0.1032988	545.418
	10.250	0.250	28.04	74.026	0.1020605	538.879
	10.192	0.279	31.20	82.386	0.1009088	532.798
	10.136	0.307	34.24	90.394	0.0998029	526.959
	10.062	0.344	38.20	100.848	0.0983503	519.290
	10.020	0.365	40.48	106.867	0.0975312	514.965
	9.874	0.438	48.19	127.222	0.0947102	500.070
	9.75	0.500	54.74	144.514	0.0923462	487.588
12.75 (12 in Nominal)	12.25	0.25	33.38	88.123	0.1457747	769.690
	12.188	0.281	37.45	98.868	0.1442910	761.856
	12.126	0.312	41.51	109.586	0.1428148	754.062
	12.090	0.330	43.77	115.553	0.1419915	749.715
	12.062	0.344	45.55	120.252	0.1413463	746.309
	12.000	0.375	49.56	130.838	0.1398854	738.595
	11.938	0.406	53.56	141.398	0.1384436	730.982
	11.874	0.438	57.53	151.879	0.1369632	723.166
	11.750	0.500	65.42	172.709	0.1341175	708.141
14 in.	13.376	0.312	45.68	120.595	0.1737790	917.553
	13.312	0.344	50.14	132.370	0.1721458	908.930
	13.250	0.375	54.57	144.065	0.1705460	900.483
	13.124	0.438	63.37	167.297	0.16731778	883.438
	13.062	0.469	67.78	178.939	0.1657406	875.111
	13.000	0.500	72.09	190.318	0.1641710	866.823

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16 in.	15.376	0.312	52.36	138.230	0.2296660	1212.636
	15.312	0.344	57.48	151.747	0.2277580	1202.562
	15.250	0.375	62.58	165.211	0.2259173	1192.842
	15.124	0.438	72.72	191.981	0.2221996	1173.214
	15.062	0.469	77.75	205.260	0.2203814	1163.614
	15.000	0.500	82.77	218.513	0.2185709	1154.054
18 in.	17.376	0.312	59.03	155.839	0.2932308	1548.259
	17.312	0.344	64.82	171.125	0.2911585	1537.317
	17.250	0.375	70.59	186.358	0.2890600	1526.237
	17.188	0.406	76.34	201.538	0.2869858	1515.285
	17.124	0.438	82.06	216.638	0.2848527	1504.022
	17.062	0.469	87.77	231.713	0.2827936	1493.151
17.000	0.500	93.45	246.708	0.2807422	1482.319	
20 in.	19.376	0.312	65.71	173.474	0.3646267	1925.229
	19.312	0.344	72.16	190.502	0.3622966	1912.926
	19.250	0.375	78.60	207.504	0.3599742	1900.664
	19.188	0.406	85.01	224.426	0.3576590	1888.440
	19.124	0.438	91.41	241.322	0.3552772	1875.846
	19.062	0.469	97.78	258.139	0.3529773	1863.720
19.000	0.500	104.13	303.908	0.3506849	1851.616	
22 in.	21.376	0.312	72.38	191.083	0.4438300	2343.422
	21.312	0.344	79.51	209.906	0.4712231	2329.658
	21.250	0.375	86.61	228.650	0.4386597	2316.123
	21.188	0.406	93.69	247.342	0.4361036	2302.627
	21.124	0.438	100.75	265.980	0.4334731	2288.738
	21.062	0.469	107.79	284.565	0.4309323	2275.323
21.000	0.500	114.81	303.908	0.4283990	2261.947	
24 in.	23.376	0.312	79.06	208.718	0.5307850	2802.545
	23.312	0.344	86.85	229.284	0.5279209	2787.422
	23.250	0.375	94.62	249.797	0.5251166	2772.616
	23.188	0.406	102.37	270.257	0.5223196	2757.848
	23.124	0.438	110.10	290.664	0.5194405	2742.646
	23.062	0.469	117.81	311.018	0.5166587	2727.958
23.000	0.500	125.49	331.294	0.5138845	2713.310	

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26 in.	25.376	0.312	85.73	226.327	0.6254880	3302.580
	25.312	0.344	94.19	248.662	0.6223902	3286.220
	25.250	0.375	102.63	270.943	0.6193400	3270.120
	25.188	0.406	111.05	293.172	0.6163071	3254.102
	25.124	0.438	119.44	315.322	0.6132230	3237.820
	25.062	0.469	127.82	337.445	0.6101565	3221.626
	25.000	0.500	136.17	359.489	0.6071380	3205.690
28 in.	27.376	0.312	92.41	243.962	0.7280309	3844.004
	27.312	0.344	101.53	268.093	0.7246308	3826.051
	27.250	0.375	110.64	292.090	0.7213447	3808.700
	27.188	0.406	119.72	316.058	0.7180659	3791.388
	27.124	0.438	128.79	340.009	0.7146894	3773.560
	27.062	0.469	137.83	363.871	0.7114257	3756.328
	27.000	0.500	146.85	387.684	0.7081697	37.136
30 in.	29.376	0.312	99.08	261.571	0.8382917	4426.180
	29.312	0.344	108.88	287.443	0.8346429	4406.915
	29.250	0.375	118.65	313.236	0.8311159	4388.292
	29.188	0.406	128.40	338.976	0.8275962	4369.708
	29.124	0.438	138.13	364.663	0.8240275	4350.865
	29.062	0.469	147.84	390.298	0.8204664	4332.063
	29.000	0.500	157.53	415.879	0.8169695	4313.599
32 in.	31.376	0.312	105.76	279.206	0.9563239	5049.390
	31.312	0.344	116.22	306.821	0.9524264	5028.812
	31.250	0.375	126.66	334.382	0.9486584	5008.917
	31.188	0.406	137.08	361.891	0.9448979	4989.061
	31.124	0.438	147.48	398.347	0.9410239	4968.606
	31.062	0.469	157.86	416.750	0.9372785	4948.831
	31.000	0.500	168.21	444.074	0.8742836	4616.218
34 in.	33.376	0.312	112.43	296.815	1.0821275	5713.633
	33.312	0.344	123.56	326.198	1.0779813	5691.742
	33.250	0.375	134.67	355.529	1.0739724	5670.575
	33.188	0.406	145.76	384.806	1.0699709	5649.447
	3.124	0.438	156.82	414.005	1.0658805	5627.849
	33.062	0.469	167.87	443.177	1.0618620	5606.631
	33.000	0.500	178.89	472.270	0.9947405	5252.230
36 in.	35.376	0.312	119.11	314.450	1.2157025	6418.909
	35.312	0.344	130.90	345.576	1.2113076	6395.704
	35.250	0.375	142.68	376.675	1.2070579	6373.266
	35.188	0.406	154.43	407.695	1.2028154	6350.866
	35.124	0.438	166.17	438.689	1.1984441	6327.785
	35.062	0.469	177.88	469.603	1.1942168	6305.465
	35.000	0.500	189.57	500.465	1.1229688	5929.275

* From handbook section / Pipeline Engineer