

TABLE 34. PRESSURE LOSSES WITH LOW PRESSURE STEAM

PRESSURE LOSS IN OUNCES PER 100 FT.	PIPE SIZE											
	1"	1 1/4"	1 1/2"	2"	2 1/4"	3"	3 1/2"	4"	4 1/2"	5"	6"	7"
1	54	122	187	386	635	1163	1737	2407	3338	4545	7250	11,208
2	75	173	268	546	898	1644	2456	3475	4742	6428	10,250	15,492
3	94	212	328	668	1100	2013	3078	4256	5781	7872	12,557	18,972
4	109	245	379	771	1271	2325	3474	4914	6676	9091	14,499	21,909
5	121	274	424	862	1420	2599	3883	5492	7462	10,162	16,207	24,487
6	133	300	464	945	1556	2848	4253	6019	8150	11,039	17,728	26,879
7	144	324	501	1030	1688	3081	4587	6458	8745	11,979	19,178	28,979
8	155	348	535	1108	1818	3328	4913	6820	9245	12,858	20,505	30,984
10	177	397	600	1217	2007	3675	5490	7768	10,552	14,371	22,920	34,629
12	188	424	657	1335	2199	4026	6097	8509	11,559	15,741	25,106	37,934
14	203	460	710	1443	2377	4349	6648	9299	12,486	17,002	27,127	40,974
16	217	490	759	1542	2541	4650	6948	9829	13,352	18,181	28,999	43,816
20	243	547	848	1725	2841	5199	7768	10,988	14,917	20,327	32,422	48,989
24	265	600	929	1889	3112	5695	8509	12,037	16,352	22,267	35,515	53,661

No allowance for condensation due to scale corrosion or other factors

TABLE 35. PRESSURE LOSSES WITH LOW PRESSURE STEAM

PRESSURE LOSS IN OUNCES PER 100 FT.	PIPE SIZE											
	1"	1 1/4"	1 1/2"	2"	2 1/4"	3"	3 1/2"	4"	4 1/2"	5"	6"	7"
1	43	97	149	309	508	910	1389	1926	2670	3636	5800	8966
2	57	127	195	404	678	1215	1865	2580	3542	4824	7484	11,473
3	70	156	242	494	816	1510	2260	3160	4342	5872	8966	13,904
4	82	176	283	574	944	1760	2640	3660	5004	6720	10,205	15,577
5	96	219	339	690	1136	2079	3106	4393	5969	8011	11,599	17,527
6	115	259	400	816	1345	2460	3676	5200	7064	9621	14,206	21,466
7	122	276	428	871	1437	2630	3930	5500	7536	10,286	15,343	23,183
8	137	309	480	973	1565	2870	4302	6004	8244	11,286	16,744	25,106
10	160	368	568	1154	1902	3479	5197	7352	9989	13,601	20,085	30,345
12	173	392	607	1233	2033	3720	5558	7863	10,681	14,544	21,999	33,952
16	194	437	678	1380	2273	4159	6214	8790	11,933	16,261	25,937	39,191
24	212	480	743	1511	2489	4556	6807	9629	13,081	17,813	28,412	42,728

Capacities of pipes for various pressure losses in ounces per 100 ft. straight pipe or its equivalent, and 1 lb. initial pressure, steam and condensation flowing in same direction as flow of steam. Capacities of pipes for condensation based on 1 lb. condensation per sq. ft. per hr.

To determine the pressure loss in a pipe of given size, length and capacity: Multiply pressure loss in ounces per 100 ft. by length of pipe divided by 100.

For capacity with initial pressures other than 1 lb. multiply the capacities given in this table by factor for required pressure in Table 37, Column 2.

TABLE 36. LENGTH IN FEET OF PIPE TO BE ADDED TO ACTUAL LENGTH OF RUN TO OBTAIN EQUIVALENT LENGTH

SIZE OF PIPE	ST'D. ELBOW	SIDE OUTLET TEE	GATE VALVE	GLOBE VALVE	ANGLE VALVE
	Length in Feet to be Added in Run				
2"	5	16	2	18	9
2 1/2"	7	20	3	25	12
3"	10	26	3	33	16
3 1/2"	12	31	4	39	19
4"	14	35	5	45	22
5"	18	44	7	57	28
6"	22	50	9	70	32
7"	26	55	10	82	37
8"	31	63	12	94	42
9"	35	69	13	105	47
10"	39	76	15	118	52
12"	47	90	18	140	63
14"	53	105	20	160	72

Example of length in feet of pipe to be added to actual length of run.

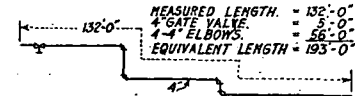


TABLE 37. CONSTANTS FOR VARIOUS INITIAL PRESSURES AND LENGTHS

STEAM PRESSURE GAGE LB.	CONSTANT BY WHICH TO MULTIPLY CAPACITY OF ANY PIPE FOR 1 LB. GAGE STEAM PRESSURE TO OBTAIN CAPACITY OF SAME PIPE FOR PRESSURE IN COL. 1	LENGTH OF PIPE FT.	CONSTANT BY WHICH TO MULTIPLY CAPACITY OF 100 FT. PIPE TO OBTAIN CAPACITY OF SAME SIZED PIPE WITH SAME PRESSURE, AND LENGTH AS GIVEN IN COL. 3
Col. 1	Col. 2	Col. 3	Col. 4
0	0.92	20	2.240
1	1.00	40	1.580
2	1.03	60	1.290
5	1.11	80	1.120
10	1.24	100	1.000
15	1.35	120	0.912
20	1.45	140	0.841
30	1.63	160	0.793
40	1.79	180	0.741
50	1.94	200	0.710
60	2.08	250	0.632
75	2.26	300	0.578
100	2.54	350	0.538
125	2.79	400	0.500
150	3.02	450	0.477
175	3.23	500	0.447
200	3.44	600	0.407
...	...	700	0.378
...	...	800	0.354
...	...	900	0.333
...	...	1000	0.316
...	...	1400	0.267