

be found from Table 2 by multiplying the capacities found therein by constants given in Table 7.

Example.—What is the capacity of a 140 ft. 4 in. pipe with an initial pressure of 1 lb. and pressure drop of 2 oz. in the 140 ft.?

Solution.—From Table 2 it is found that the capacity of a 100 ft. 4 in. pipe with 1 lb. initial pressure and 2 oz. pressure drop, is 3475 sq. ft. Multiplying this value by 0.841 the constant for a 140 ft. length as given in Table 7 gives 2922 the capacity for the given conditions.

Example.—What is the capacity of a 100 ft. 4 in. pipe with 2 lb. initial pressure and pressure drop of 1 oz.?

Solution.—From Table 2, find 2457, the capacity of the 4 in. pipe with 1 lb. initial pressure and 1 oz. pressure drop. Multiplying 2457 by 1.03 the constant found in Column 2 of Table 7 for 2 lb. initial pressure gives

TABLE 8. PIPE SIZES FOR ONE-PIPE, GRAVITY, LOW-PRESSURE STEAM HEATING SYSTEM, WHERE EQUIVALENT LENGTH OF RUN FROM BOILER OR SOURCE OF SUPPLY TO THE FARTHEST RADIATOR DOES NOT EXCEED 200 FT.

Capacity in Sq. Ft. of Equivalent Radiation

PIPE SIZE INCHES	SUPPLY MAIN DRIPPED AND BRANCHES TO RISERS DRIPPED Steam and Condensate flowing in the same direction.	SUPPLY RISERS Up-Feed	BRANCHES TO SUPPLY RISERS AND RADIATORS NOT DRIPPED	WET RETURN MAIN	DRY RETURN MAIN	RADIATOR VALVE SIZES AND VERTICAL CONNECTIONS
A	B	C	D*	E	F	G
3/4	56	25	20	700	320	20
1	122	98	55	1200	670	55
1 1/2	190	152	81	1900	1058	81
2	386	288	165	4000	2300	165
2 1/2	635	464	260	6700	3800	260
3	1163	799	475	10,700	7000	475
3 1/2	1737	1144	745	10,000	10,000	745
4	2457	1520	1110			
5	4546		2180			
6	7462					

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*Radiator branches more than 8 ft. in length should be one size larger than shown in Col. D.

Note 1.—These tables apply where pipes are properly reamed. No allowances for defective material or workmanship have been made. (Also see Tables 18, 19 and 20).

Note 2.—Capacities based on 1/4 lb. condensation per square foot equivalent radiation and actual diameter of standard pipe.

Note 3.—Extra length to be added to straight run of pipe, for various fittings and valves to determine equivalent length. (See Table 6).

Note 4.—Where it is necessary to drip a steam main, branch to riser or riser, same should be dripped separately into wet return.

Note 5.—Pitch of pipe should be not less than 1/4 in. in 10 ft.; on horizontal branches to radiators, at least 1/2 in. in 10 ft.

2531 as the capacity of the 4 in. pipe with 2 lb. initial pressure and a pressure drop of 1 oz. per 100 ft. length.

Table 8 is a pipe sizing table for small one-pipe gravity low-pressure steam heating systems. This table was designed to meet the requirements of those laying out small systems where the equivalent length of run from the boiler or pressure reducing valve to the farthest radiator is no greater than 200 ft. The capacities are based upon 1 oz. drop in pressure per 100 ft. equivalent length of run excepting where the maximum allowable velocity limits the capacity below this value. The capacities of supply mains as given in Column B are based upon a pressure drop of 1 oz. per 100 ft. equivalent length. The capacities of up-feed risers as given in Column C are based upon the maximum velocity. The

TABLE 9. PIPE SIZES FOR TWO-PIPE, GRAVITY, LOW PRESSURE STEAM, WHERE EQUIVALENT LENGTH OF RUN FROM BOILER OR SOURCE OF SUPPLY TO FARTHEST RADIATOR DOES NOT EXCEED 200 FT.

Capacity in Sq. Ft. of Equivalent Radiation

PIPE SIZES INCHES	SUPPLY MAIN DRIPPED AND BRANCHES TO RISERS DRIPPED Steam and Condensate flowing in same Direction	SUPPLY RISERS Up-Feed	BRANCHES TO SUPPLY RISERS AND RADIATORS NOT DRIPPED	RETURN RISERS	WET RETURN MAIN	DRY RETURN MAIN	RADIATOR SUPPLY VALVE	RADIATOR RETURN VALVE
A	B	C	D*	E	F	G	H	I
3/4	56	30	26	122	700	320	30	122
1	122	56	58	320	1200	670	56	190
1 1/2	190	122	95	670	1900	1058	122	386
2	386	190	195	1058	4000	2300	190	670
2 1/2	635	386	395	2300	6700	3800	386	1058
3	1163	635	700	3800	10,700	7000	635	2300
3 1/2	1737	1129	1150	7000	10,000	10,000	1129	7000
4	2457	2042	1700					
5	4546		3150					
6	7462							

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*Radiator branches more than 8 ft. in length should be one size larger than shown in Col. D.

Note 1.—These tables apply where pipes are properly reamed. No allowances for defective material or workmanship have been made. (Also see Tables 18, 19 and 20).

Note 2.—Capacities based on 1/4 lb. condensation per square foot equivalent radiation and actual diameter of standard pipe.

Note 3.—Extra length to be added to straight run of pipe for various fittings and valves to determine equivalent length. (See Table 6.)

Note 4.—Where it is necessary to drip a supply main, supply riser or branch to a supply riser, same should be dripped separately into a wet return or through an adequate seal into a dry return. Never drip a supply pipe into a dry return except through an adequate seal.

Note 5.—Pitch of pipe should not be less than 1/4 in. in 10 ft.; on horizontal branches to radiators, at least 1/2 in. in 10 ft.