

ONE-PIPE GRAVITY STEAM SYSTEMS.

General.

The one-pipe system may be installed in several different ways and involves the use of only one control valve and one pipe connection to each radiator; automatic air valves are used for relieving air the same as on the ordinary two-pipe system. As far as labor is concerned, the increase of one pipe size in the steam supply does not produce an appreciable difference in work of installation and the added cost of the pipe is small; in exchange for this, all return valves, return risers and (to a greater or less extent) all return mains in the basement can be omitted, resulting in a considerable economy over the cost of a two-pipe job.

While not the most satisfactory method in operation, the true and complete one-pipe system throughout involves the use of a single steam main of enlarged size to accommodate the condensation in the bottom of the main, instead of a separate return pipe; the idea also assumes that the condensation will flow in a direction opposite to the flow of the steam which is, of course, not ideal. As a general rule, the smaller the quantity of water so flowing, the less will be the trouble resulting therefrom.

With the true one-pipe system throughout, the steam main, risers and branches all pitch back to a point near the boiler where the condensation is allowed to separate itself and to drop down under the water line, returning to the boiler through the regular return connection. Such a system is seldom used, except for small residences, owing to the large quantities of condensation bucking against the flow of steam in the mains, and the slight modifications necessary to eliminate this difficulty are almost invariably adopted for any work of importance.