to accommodate miscellaneous other services or provide underground passage between buildings.

BUILDING SERVICE CONNECTIONS

Most district heating companies enforce certain regulations regarding the consumer's installation, partly to safeguard their own interests but principally to insure satisfactory and economical service to the consumer.

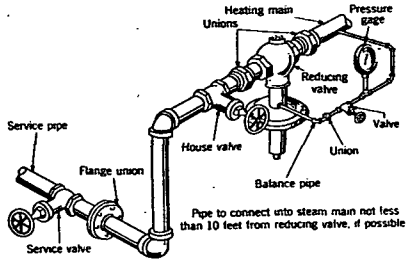

FIG. 2. CONNECTIONS FOR REDUCING VALVES OF SIZE LESS THAN 4 INCHES

There are certain fundamental principles that should be followed in the design of a building heating system which is to be supplied from street mains. Although some of these apply to any building, they have been demonstrated to be especially important when steam is purchased.

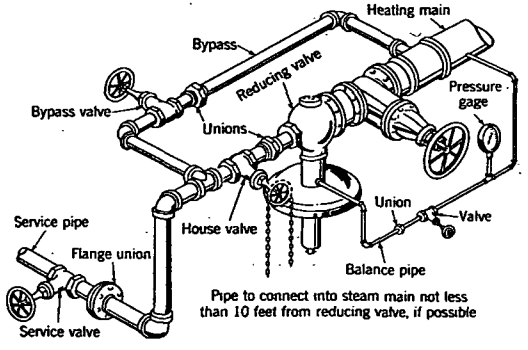

FIG. 3. CONNECTIONS FOR REDUCING VALVES OF SIZE 4 INCHES AND LARGER, AND FOR EXPANDED VALVES

Figs. 2 and 3 show typical service connections used for low pressure steam service. As shown in Fig. 2, no by-pass is used around the reducing valve on sizes less than 4 in. Fig. 3 illustrates the use of a by-pass around reducing valves 4 in. and larger. This latter construction permits the

operation of the line in case of failure in the reducing valve. In the smaller sizes, the reducing valve can be removed, a filler installed, and the house valve used to throttle the flow of steam.

Fig. 4 shows a typical installation used for high pressure steam service. The first reducing valve, usually furnished by the utility company,

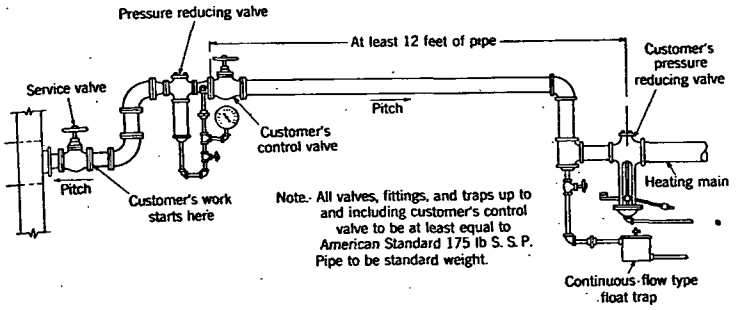

FIG. 4. STEAM SUPPLY CONNECTION WHEN USING CONDENSATION METER

effects the initial pressure reduction. The second reducing valve, usually furnished by the customer, reduces the steam pressure to that required.

1. Provision should be made for conveniently shutting off the steam supply at night and at other times when heat is not needed.

It has been thoroughly demonstrated that a considerable amount of heat can be saved by shutting off steam at night. Although there is, in

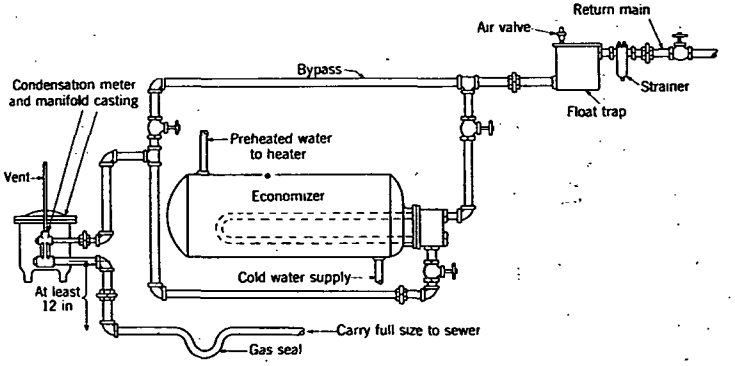

FIG. 5. RETURN PIPING FOR CONDENSATION METER

some cases, an increased consumption of heat when steam is again turned on in the morning, there is a large net saving which may be explained by the fact that the lower inside temperature maintained during the night obviously results in lower heat loss from the building, and less heat need therefore be supplied.

Steam can be entirely shut off at night in most buildings even in very