

FIG. 33. TOP AND BOTTOM OPPOSITE END RADIATOR CONNECTIONS

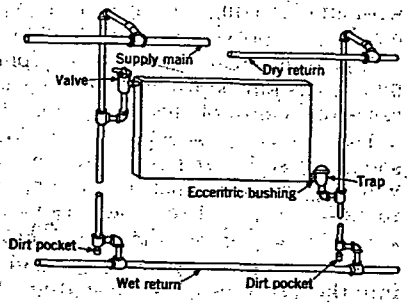


FIG. 34. CONNECTIONS TO RADIATOR HUNG ON WALL

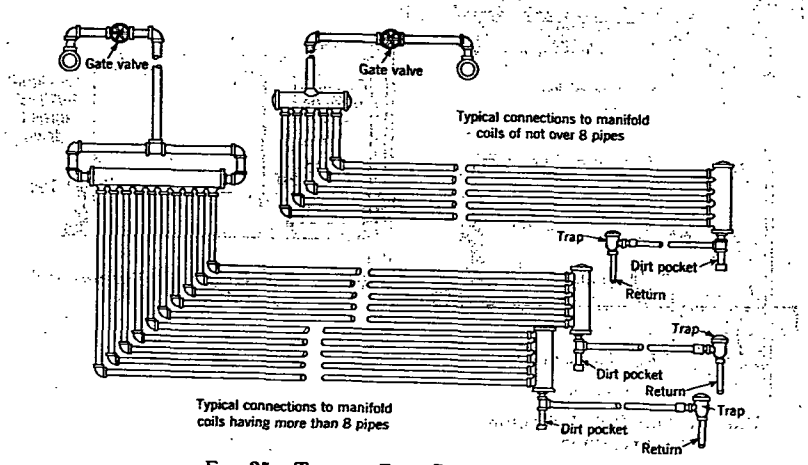


FIG. 35. TYPICAL PIPE COIL CONNECTIONS

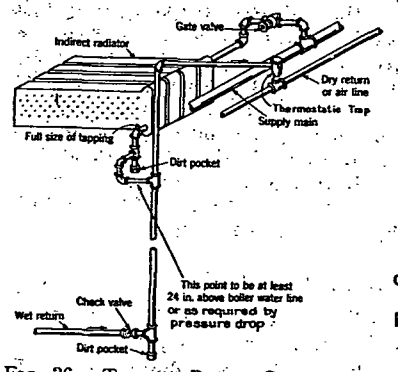


FIG. 36. TYPICAL PIPING CONNECTIONS TO INDIRECT RADIATORS WITH WET RETURNS

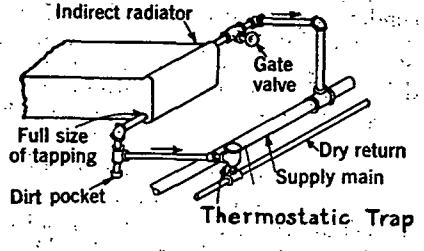


FIG. 37. TYPICAL PIPING CONNECTIONS TO INDIRECT RADIATORS WITH DRY RETURNS

of pipes. To take care of expansion in long risers, either expansion joints of commercial construction or pipe swing joints are used. Anchoring of pipes between expansion joints is desirable.

Two satisfactory methods of making runouts for one-pipe systems for either the up-feed or the down-feed type are shown in Fig. 31. Where the vertical distance is limited and the runouts must run above the floor, the radiator may be set on pedestals or raised by means of high legs. Two methods of connecting a unit heater to a one-pipe steam heating system are illustrated in Fig. 2 and also in Fig. 5 of Chapter 26.

Typical two-pipe radiator or convector connections are shown in Figs. 32, 33 and 34. While the top is the preferred location for the control valve, it may be located at the bottom. Short radiators may be top supply and bottom return on same end. With convectors the control

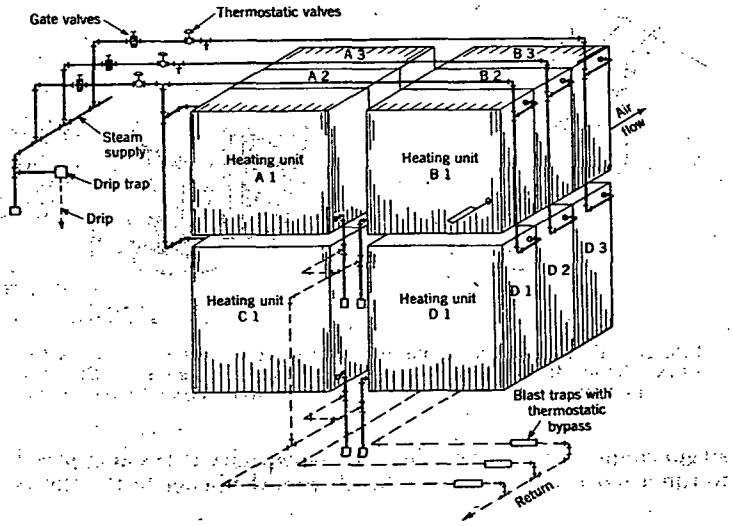


FIG. 38. TYPICAL PIPING FOR ATMOSPHERIC AND VACUUM SYSTEMS WITH THERMOSTATIC CONTROL (CENTRAL FAN SYSTEM)

valve is sometimes omitted and a damper in outlet grille used for heat control. The typical method of connecting pipe coils is shown in Fig. 35 and is suitable for atmospheric, vapor, vacuum, sub-atmospheric, and orifice systems.

Typical pipe connections for indirect radiators and tempering or heating stacks are shown in Figs. 36, 37, 38, 39, 40, 41, and 42.

Where a building is served by a vacuum system or a sub-atmospheric system the stacks should be piped in the usual manner and traps of large capacity, preferably of the combination float and thermostatic type, should be used. In the orifice and *closed* two-pipe systems, traps should be used on the returns so that a pressure above that of the atmosphere may be secured on the heaters.

Each stack should have a separate steam and return connection and trap. Wide stacks are more evenly heated if divided and supplied with two steam connections, one at each end, and a return connection for each