1.7 Central heating process

A central heating system provides warmth to the whole interior of a building or portion of a buildingfrom one point to multiple rooms.In cold countries the temperature in winter falls to 0^0C and even goes to below that value. The rooms of the building are kept warm by a central heating system based on the principle of convection. It differs from local heating in that the heat generation occurs in one place, such as a furnace room or basement in a house or a mechanical room in a large building.

The heat is distributed throughout the building, typically by forced-air through ductwork, by water circulating through pipes, or by steam fed through pipes. The most common method of heat generation involves the combustion of fossil fuel in a furnace or boiler.The circulating hot water can be used for central heating.

Common components of a central heating system using water-circulation include:

- A gas supply lines, oil tanks and supply linear distinct heating supply lines.
- A Boiler which heats water in the system.
- Pump to circulate the water in the closed system.
- Radiators which are wall-mounted panels through which the heated water passes in order to release heat into rooms
- Hot water from the boiler rises up passes through the radiation of different rooms. Radiation get heated and radiate heat to the room.
- Hot water also reaches the cold water tank at the top of the building. Convection currents are set up and the building is kept warm continuously at a constant temperature.
- The circulating water systems use a closed loop; the same water is heated and then reheated. A sealed system provides a form of central heating in which the water used for heating circulates independently of the building's normal water supply.

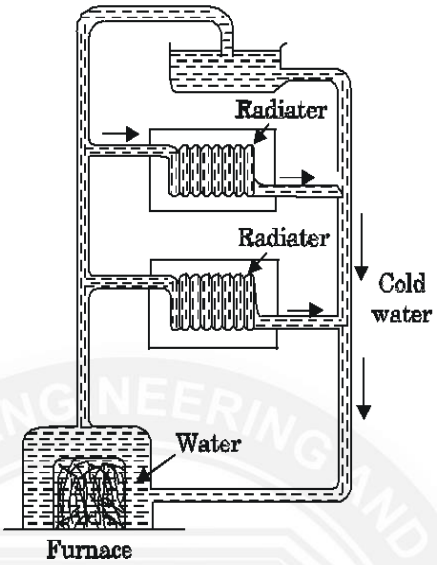

Fig 1.7- Central heating system