Pipe Appurtenances:

Pipe appurtenances are components attached in pipe line which aid in proper functioning of pipe network. Role of appurtenances are ceasing, controlling, diversion and regulating flows through the pipe network.

The necessities of the various appurtenances in distribution system are as follows

1. To control the rate of flow of water

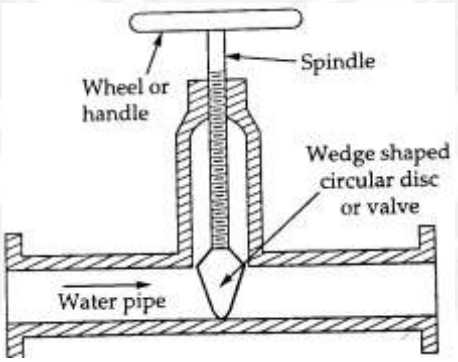
2. To release or admit air into pipeline according to the situation

3. To prevent or detect leakages

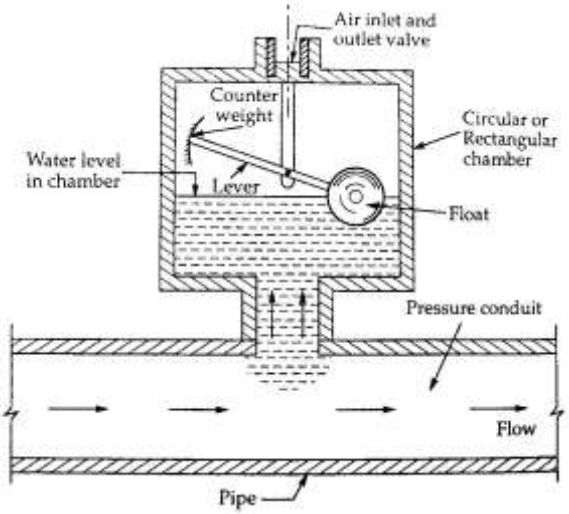
4. To meet the demand during emergency and

5. Ultimately to improve the efficiency of the distribution.

Sluice valve or gate valve:
These are also known as shut off valves or stop valves. They are extensively used in the distribution system to shut off the supplies whenever desired. they are also helpful in dividing the water mains into suitable sections. The spacing of such valves may between 150 to 300 meters. They are also placed at street corners or where two pipe lines intersect. they posses the advantage over most other types of valves, of combining relatively low cost and offering almost no resistance to f low of water when the valve is wide open.

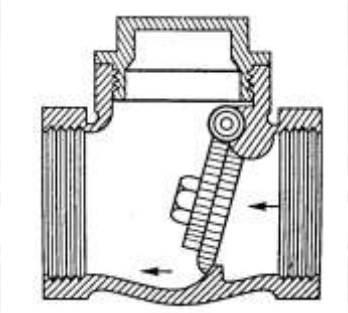


Air relief valves:
The water flowing through the pipe lines always contain some air. This air rises to accumulate at high points, and may interfere with flow. Air valves are also required to discharge air when a main is being filled and to admit air when it is being emptied. The admission of air on emptying the main is of great importance on steel mains, which may flatten if the pressure falls below that of the atmosphere.



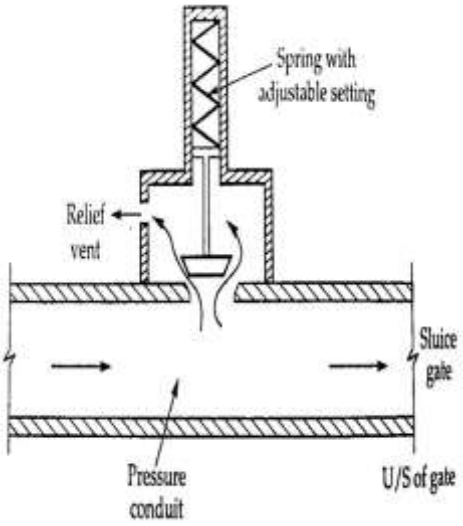
Reflux valves:

Reflux valves are also known as check valves or non-return valves. It is automatic device which allows water to flow in one direction only. They are placed in water pipes which obtain water directly from the pump. When the pump is stopped ,the water in the pipeline does not rush back and damage the pump.



Pressure relief valves

These are also known as automatic cutoff valves or safety valves. They are located at those points where pressure is likely to be maximum. When the line pressure increases above the pre-set valve operates automatically and the pressure is reduced.



Scour valves:

Scour valves or blow off valves or washout valves are ordinary sluice valves that are located either at the dead ends or at lowest points in the mains. They are operated to blow off or remove the sand and silt deposited in the pipe line. They are operated manually.