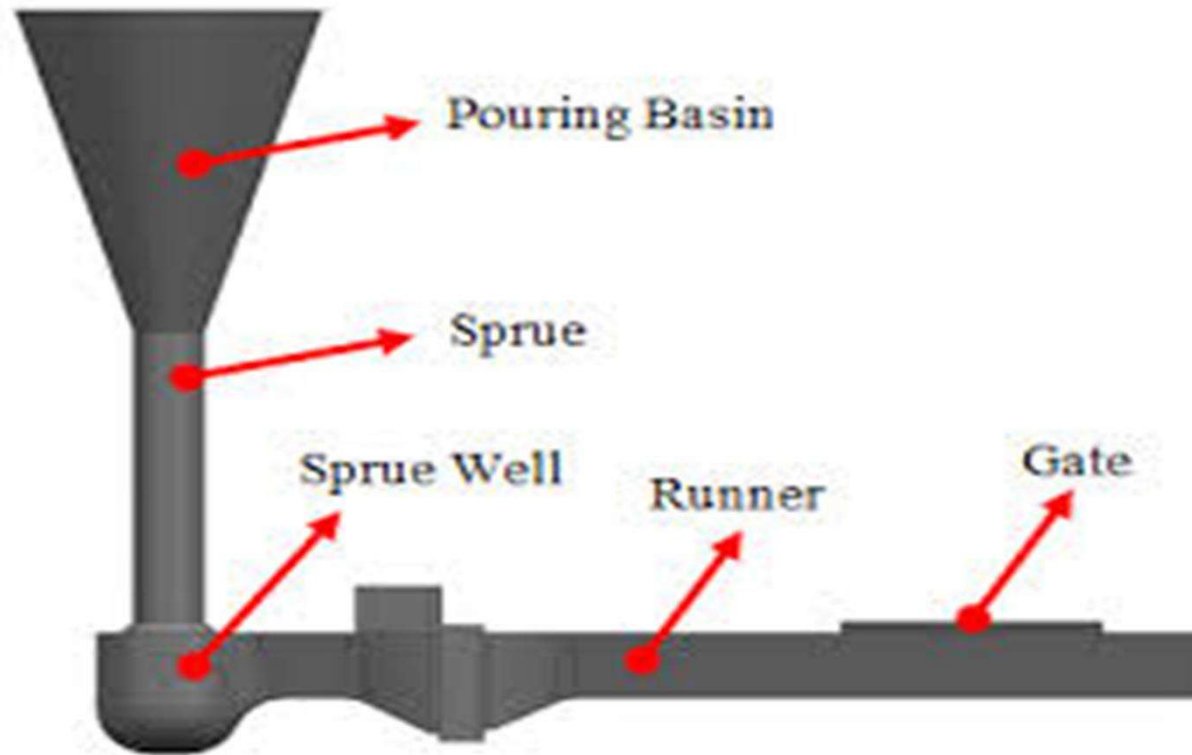
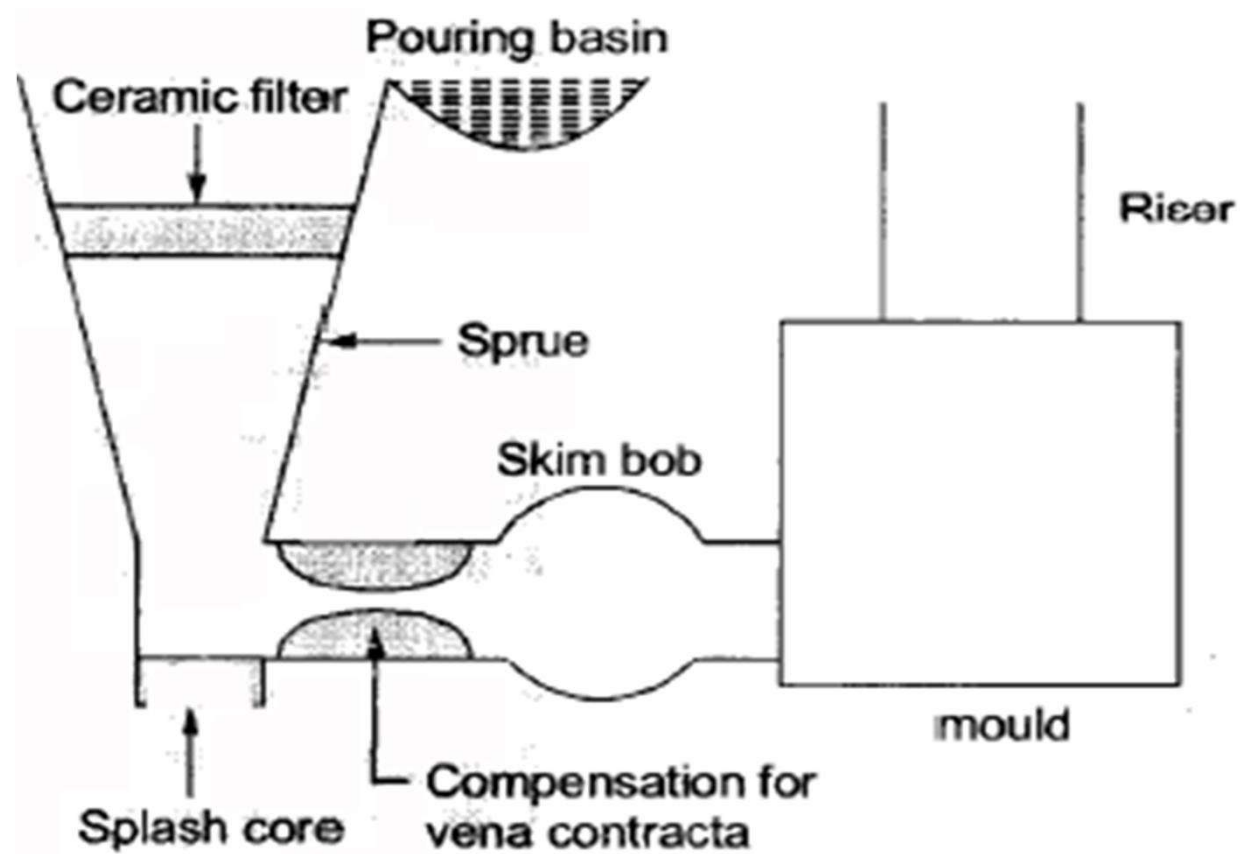


# GATING SYSTEM





# Pouring basin

- It is the conical hollow element or tapered hollow vertical portion of the gating system which helps to feed the molten metal initially through the path of gating system to mold cavity. It may be made out of core sand or it may be cut in cope portion of the sand mold. It makes easier for the ladle operator to direct the flow of molten metal from crucible to pouring basin and sprue. It helps in maintaining the required rate of liquid metal flow.

# Sprue

- It is a vertical passage made generally in the cope using tapered sprue pin. It is connected at bottom of pouring basin. It is tapered with its bigger end at to receive the molten metal the smaller end is connected to the runner.

# Runner

It helps to feed molten metal without turbulence to the runner which in turn reaches the mold cavity through gate. It some times possesses skim bob at its lower end. The main purpose of skim bob is to collect impurities from molten metal and it does not allow them to reach the mold cavity through runner and gate.

# Gate

- It is a small passage or channel being cut by gate cutter which connect runner with the mould cavity and through which molten metal flows to fill the mould cavity. It feeds the liquid metal to the casting at the rate consistent with the rate of solidification.

# RISER

Metals and their alloys shrink as they cool or solidify and hence may create a partial vacuum within the casting which leads to casting defect known as shrinkage or void. The primary function of riser as attached with the mould is to feed molten metal to accommodate shrinkage occurring during solidification of the casting. As shrinkage is very common casting defect in casting and hence it should be avoided by allowing molten metal to rise in riser after filling the mould cavity completely and supplying the molten metal to further feed the void occurred during solidification of the casting because of shrinkage. Riser also permits the escape of evolved air and mold gases as the mold cavity is being filled with the molten metal. It also indicates to the foundry man whether mold cavity has been filled completely or not. The suitable design of riser also helps to promote the directional solidification