

## Core in Moulding

A core is a body made of sand which is used to make a cavity, recess, projections, under cuts, pits, internal cavity or a through or a blind hole in casting to get desired shape.

Core can be classified according to state of sand of the core

1. Green sand Core
2. Dry sand Core

Core can be classified according to its position in the mould cavity

1. Horizontal Core
2. Vertical Core
3. Balanced Core
4. Hanging Core
5. Drop Core

### **Green Sand Core**

Green Sand Core is formed by pattern itself. When the pattern is taken out from the mould cavity formed in sand it leaves the portion made out of green sand. It serves as a core (as a part) of the mould. This body made out of green sand to get the desired cavity or projection or holes in the mould is called green sand core. This type of core is suitable to make only in vertical openings in the mould.

### **Dry sand Core**

Dry sand core is made separately and positioned in the mould. This is made in dry sand using binders and dried in oven and used commonly in moulds.

#### **1. Horizontal Core**

Horizontal cores are placed horizontally in the mould. It is very common usage in Foundries to make castings. These cores are usually cylindrical in shape. Some times it may have any other shape which is needed to be produced in castings. This core is supported at both ends in the mould cavity. The seats are made by core prints that are designed in pattern itself.

#### **2. Vertical Core**

Vertical cores are positioned vertically in the mould. The two ends of the core rest on the core seat one in cope and other in drag boxes. The major portion of the core rests in the drag box.

#### **3. Balancing Core**

Balancing core is supported and balanced from its one end only. This type of balancing core requires a long core seat. Long core seat prevents the core from falling and not to sag into the mould. This type core is used to make blind hole or recess along horizontal axis.

#### **4. Hanging Core**

Hanging cores are supported at the top of the mould and hung into the mould. It has no support from the bottom of the mould. The support is provided from the seat made in top portion of drag. These cores are used when a cored casting is to be completely moulded in the drag with the help of single piece solid pattern

#### **5. Drop Core**

Drop cores are used when a hole is not in line with the parting surface. It may have to be made at a lower level. The holes may be above or below the parting line of the mould. This drop cores were named as tail core and chair core according to the usage.