

What are the various types of Thermoplastic mouldings ? explain Injection plastic moulding ?

Thermoplastic mouldings

1 Injection Moulding 2 Blow moulding 3 Rotational moulding 4 Film blowing 5 Sheet forming process

1 Injection Moulding Working principle

Molten thermoplastics is injected into a mould under high pressure.

To achieve high speed moulding of thermoplastics injection moulding process is used.

High pressure is attained by using plunger system.

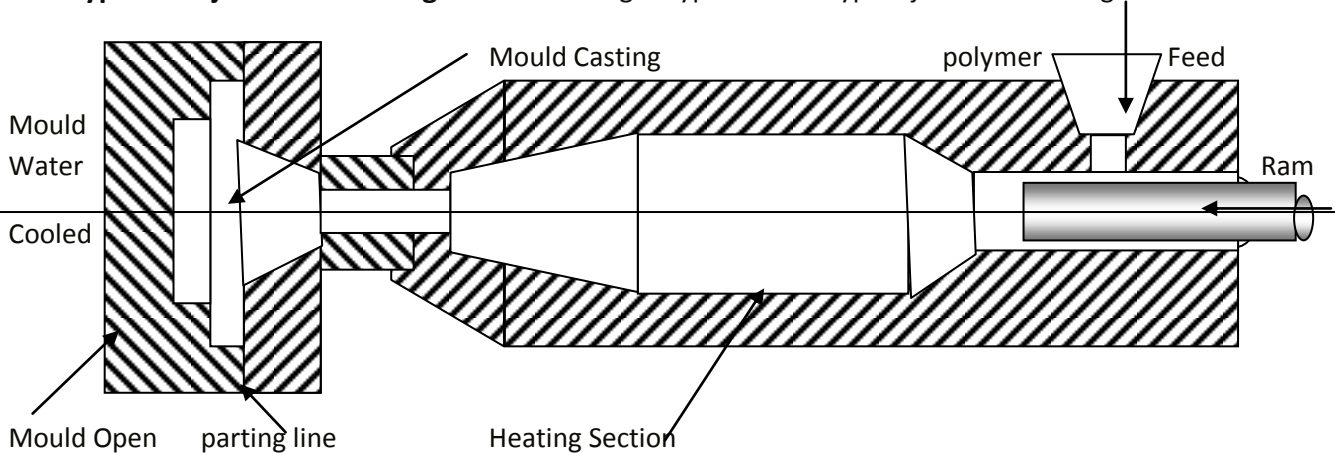
Operation

Mould material is loaded into hopper. Then it is transferred to heating section by feeding device.

The temperature is raised to 150 to 370 °C . The material melts in high temperature.

The molten material forced by injection ram or by plunger through nozzle and sprue in a closed mould to form the part.

Two types of Injection Moulding 1. Ram or Plunger Type 2.Screw type injection Moulding



Ram or Plunger type Injection moulding machine

There are two units in this machine

1 Injection unit 2 Clamping Unit

So to take out the finished mould component it may be splitted.

Operation

Polymer is filled in a hopper. – Filled polymer goes to heating section – Polymer gets melted - Pressure increased. – Heated mould material is injected with pressure by ram movement – The melted mould travels through nozzle - So the heated plastic mould material is (made to fill) forced to fill the mould cavity. Due to pressure created by ram the filling of the mould cavity done properly – To get solidification mould is water cooled. – The required shape is obtained. - The casting of plastic component is taken out by splitting mould open.

Application :

1. To make solid plastic components