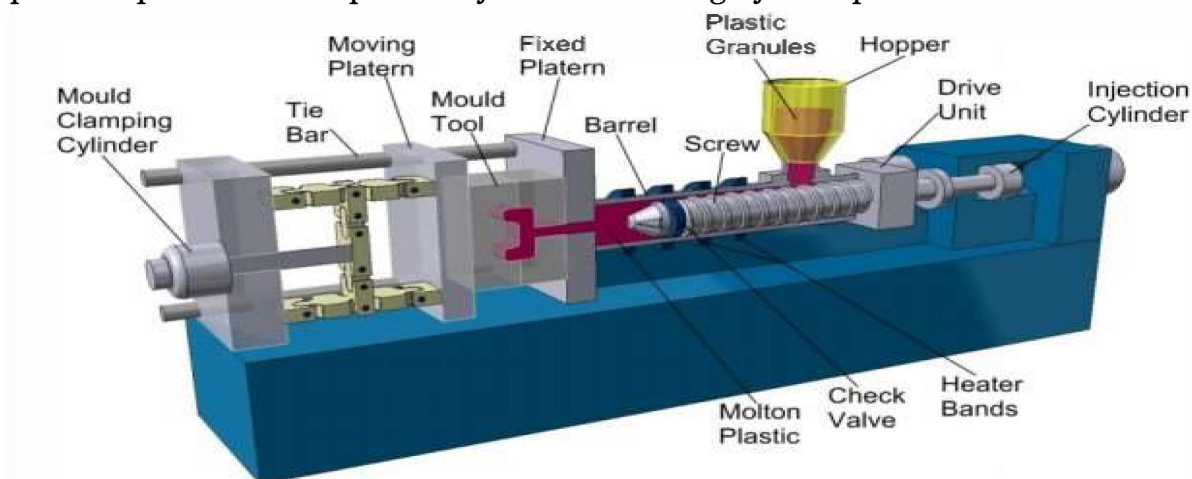


Manufacturing Process & Flow Chart:-

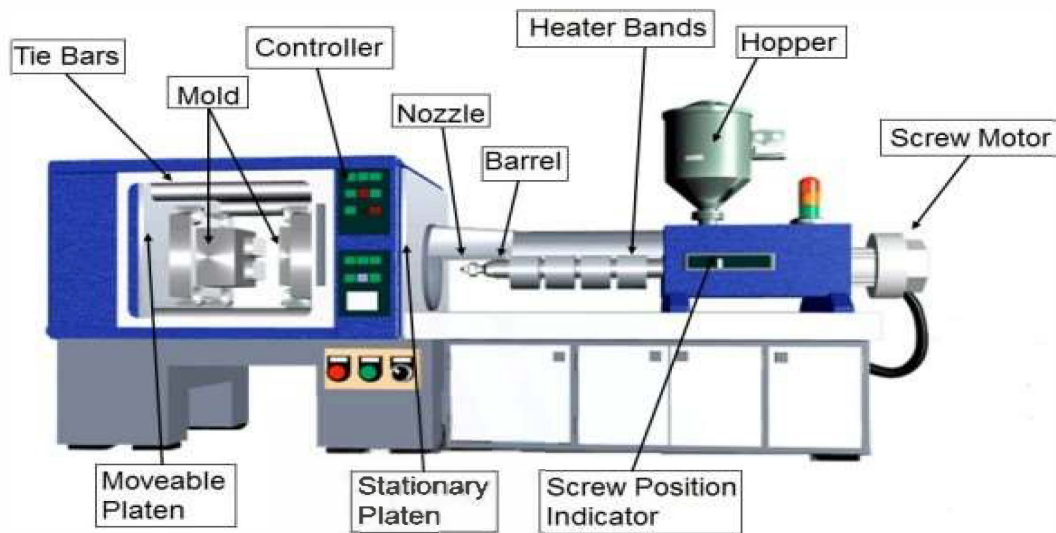
In this injection moulding process, the cold, hard plastic material is loaded into the machine via hopper, plasticized by heating and then injected under pressure into a cold mould, where it sets and is then ejected as the finished products.

INJECTION MOULDING TECHNIQUE :- Plastic granules for the part is fed via a hopper into a heated barrel, melted using heater bands and the frictional action of a reciprocating screw barrel. The plastic is then injection through a nozzle into a mould cavity where it cools and hardens to the configuration of the cavity. The mould tool is mounted on a moveable platen – when the part has solidified, the platen opens and the part is ejected out using ejector pins.



Screw Profile:-

The standard metering screw has three zones with a ring plunger assembly. The feed zone, where the plastic first enters the screw and is conveyed along a constant root diameter, the transition zone, where the plastic is conveyed, compressed and melted along a root diameter that increases with a constant taper, and the metering zone, where the melting of the plastic is completed and the melt is conveyed forward along a constant root diameter reaching a temperature and viscosity to form parts.



Moulds:-

The mould system consists of tie bars, stationary and moving platens, as well as moulding plates (bases) that house the cavity, sprue and runner systems, ejector pins and cooling channels. The mould is essentially a heat exchanger in which the molten thermoplastic solidifies to the desired shape and dimensional details defined by the cavity. A mould system is an assembly of platens and moulding plates typically made of tool steel. The mould system shapes the plastic inside the cavity and ejects the moulded parts. The stationary platen is attached to the barrel side of the machine and is connected to the moving platen by the tie bars. The cavity plate is generally mounted on the stationary platen and houses the injection nozzle. The core plate moves with the moving platen guided by the tie bars. Occasionally, the cavity plate is mounted to the moving platen and the core plate and a hydraulic knock out (ejector) system is mounted to the stationary platen.

FLOW CHART

