

Design of a Mold Making Shop

Introduction about plastic injection mold making shop

A traditional mold-making machine-shop consists of physical resources and human operators. Key resources required for mold-making are NC machines, die-spotting machine, measuring machines, CAD and CAM software systems etc. A mold-making process may be regarded as a series of information/physical transformation

Steps involved in mold making

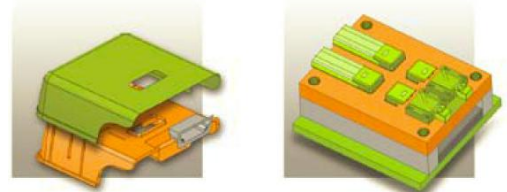
1. Customer order

- compute lead time based on customer orders and manufacturing capabilities
- compute manufacturing cost
- give quotation to customer
- Confirm customer order



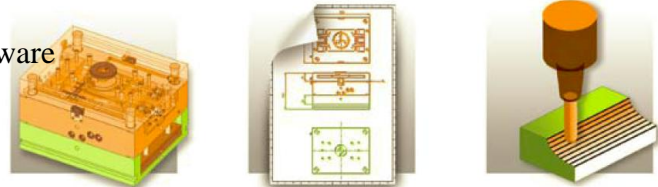
2. CAD

- 3D CAD model based on customer design
- 3D mold design using CAD software
- Generate BOQ (Bill of Quantity) to manufacture/purchase material



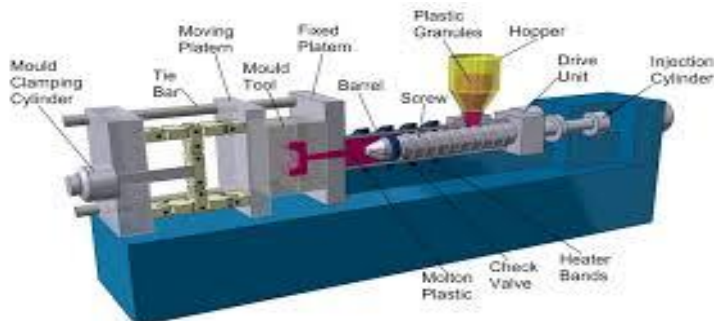
3. CAM

- Tool path generation using CAM software
- Mold manufacturing/machining



4. Mold testing on injection molding

- Mold parts assembly
- Mold testing on injection molding machine
- delivery to customer



Assignment

- Keeping in view of current machine tools/CNS/CAD/CAM facilities available in MED/IED: please design and injection mold making shop.
- How you will inter-connect all these facilities while they physically remain at different locations?
- Please design and draw layout of your virtual mold making shop showing different facilities/equipments inter-connect.
- Suggest any software to buy/install for CAD/CAM/networking in our laboratories.
- Based on our current mold making capabilities, please identify which molding machine we should buy to test the manufacturing molds. (size/capabilities/capacity/type)
- Identify our target market.