

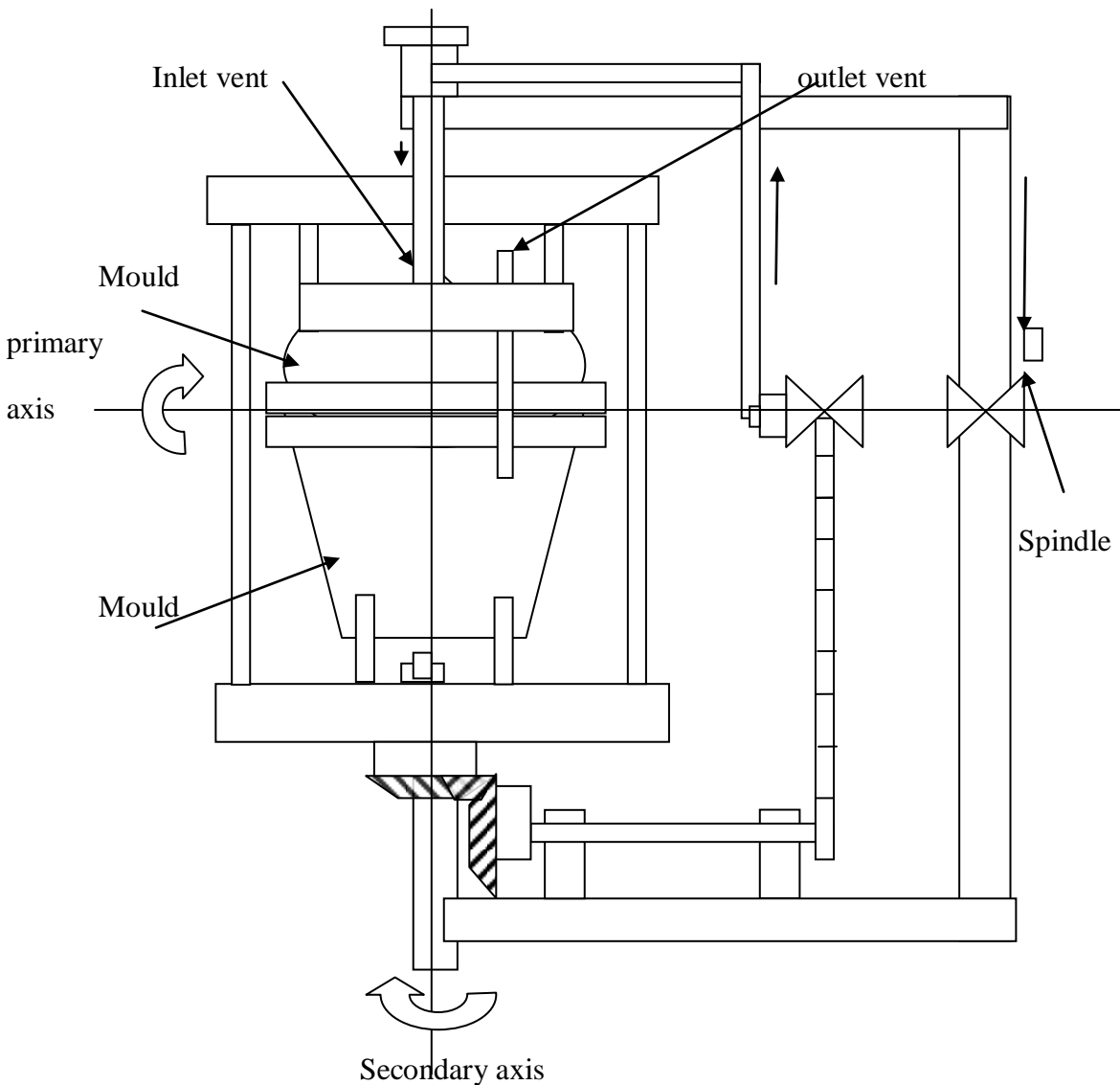
Rotational Moulding

It is used to make thin walled hollow parts

Principle of working

A measured quantity of Polymer powder placed inside the thin walled metal mould. Mould is closed and heated. While heating it is rotated both in vertical and horizontal axis. These axes are mutually perpendicular.

The powder is sintered against the thin wall due to heat while rotating. After some time it is made to cool while still it is rotated. Cooling of mould is done by water or air flow. After getting cooled the rotation is stopped and the mould is removed from mould chamber.



Operation

Most thermoplastic and some thermosetting plastics are formed into large hollow parts into the mould by this rotational moulding.

Measured quantity of Polymer powder placed inside the thin walled metal mould and made to rotate in both axis which is perpendicular with each other and parallel heated. Due to heat sintering takes place and attached to the side walls of thin two half mould shell. After that cooling is done while rotating by air or water. Finally the product is taken out by splitting the two halves of mould shells.

Complex hollow of 0.4 mm thickness mould is done by this rotational moulding. large part of 1.8 x 3.6 m can also be done. Temperature time ratio is most important.

Application

- 1 used in making toys in P.V.C
- 2 To make large container of polyethylene and nylon
3. To make metallic or plastic inserts
4. To make big tanks of various size
5. To make boat , hull, bucket and housings

Two mark question in fifth unit Plastic

Define co-polymerization ?

If two or more polymers are linked in cross way then it is called co-polymerisation

What are the process involved in lamination?

Pressing size cutting wet drying

What are the formed plastics ?

Epoxy, Silicone , Polypropylene, phenolic

What are the two type of plastics ?

Thermosetting plastics

Thermo plastics

What are organic polymers ?

Rubber ,

What type of mould is used to make bottles ?

Blow moulding

What are fillers ?

Mica, Cloth fibre, asbestos

What are the organic natural materials?

Wood coal petroleum and natural rubber

What is polymerization ?

Linking of two or more monomers are called polymerization

What are the types of polymerization ?

Addition polymerization and condensation polymerisation

Define plastics ? what is plastic ?

Organic polymer that can be moulded into any shape applying pressure and heat .