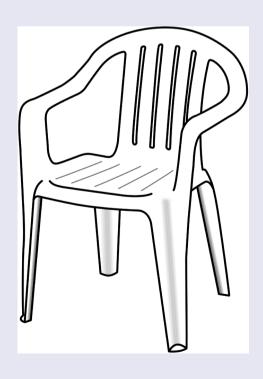
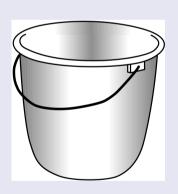


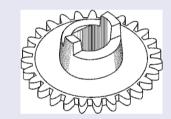
Part 1: Plastics Materials and Technologies.

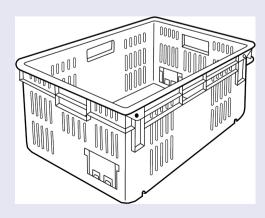
Injection Moulding

- a way to make solid, shaped, individual products
- used to produce a very wide range of different shapes and sizes







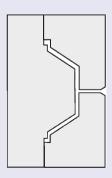


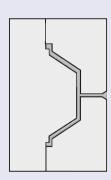


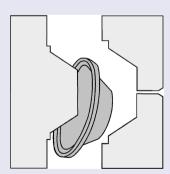
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Injection Moulding

- involves injecting hot, molten plastic into a closed mould
- the mould forms, shapes and cools the plastics material into the required product shape
- the product is ejected from the mould



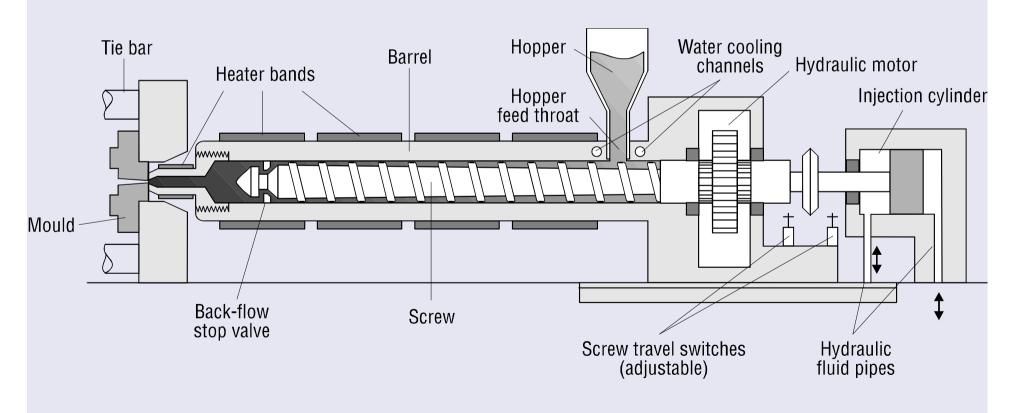






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Injection Moulding Machine principles





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Injection Unit

- Injection unit has an injection screw which rotates in a closefitting fixed steel barrel
- barrel is heated and accurately temperature controlled
- plastics materials are heated, compressed, sheared and mixed as they are moved along the screw
- while the screw rotates the nozzle is blocked and plastics material accumulates at the front of the screw
- the screw is forced back a set distance and screw rotation is stopped
- with the mould shut and clamped, the screw is pushed forward injecting the material into the mould



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