

AMPTE19 FUNDAMENTALS OF PLASTICS MOULD AND DIE DESIGN

UNIT-1 ORTHOGRAPHIC PROJECTION

- 1.1 Projection of solids- vertical and horizontal surfaces
- 1.2 Inclined Surfaces Curved Surfaces
- 1.3 Sectional views and assembly drawing.

UNIT-2 BASIC PRINCIPLES

- 2.1 Shrinkage- Flash lines
- 2.2 Undercuts-suggested Wall thickness-Draft
- 2.3 Tolerance Moulded holes-threads-radius- Moulded hinges-integral hinge-snap fits
- 2.4 Product design thumb rules- case studies and product design.

UNIT-3 PARTING LINE

- 3.1 Construction of core and cavity-types of gate-types of ejection
- 3.2 Mould temperature control - cooling
- 3.3 Mould alignment Mould ancillary parts.

UNIT-4 TYPES OF MOULDS

- 4.1 Two plate - three plate - split moulds
- 4.2 Machine selection-Principles of shrinkage allowances
- 4.3 Materials for mould parts-life of mould
- 4.4 Mould maintenance- case studies on mould design.

UNIT-5 EXTRUSION

- 5.1 Extruder parts- extrusion screw- design features- design variables.
- 5.2 Injection Moulds for threaded components- automatic unscrewing-
- 5.3 Various unscrewing methods

References Books:

1. Injection Mould -By VDI. Injection Mould Design for Thermoplastic - By Pye, R.G.W .
2. Injection Mould & Molding - By Dym.
3. Injection Moulds – 130 Proven Design - By Gastrow, H.
4. Plastics Product Design Engineering Hand Book - By Dubois, H.