

2.13 31513 PLASTICS PROCESSING TECHNIQUES

UNIT-1

- 1.1 Compression moulding General principles and working of compression molding machine.
- 1.2 Types of compression molding machine, hand operated, automatic, single and multi-daylight machines,
- 1.3 Bulk factor, preheating of molds, cycle time, process variables and their control.
- 1.4 Effect of process variables on product properties,
- 1.5 Compression molding of Semi-conductor and DMC compounds.

UNIT-2

- 2.1 Transfer Moulding Principles of transfer molding.
- 2.2 Types of transfer molding machines, molding cycle,
- 2.3 Theoretical calculation of line pressure, injection ram pressure,
- 2.4 Clamping pressure, pot capacity,
- 2.5 Compression of transfer molding and compression molding.

UNIT-3

- 3.1 Introduction to Pultrusion, hand layup technique.

UNIT-4

- 4.1 Forming Basic principles, method of forming,
- 4.2 Straight forming, free forming, plug assist forming,
- 4.3 Drape forming, matched mold forming, slip forming,
- 4.4 Snap back forming, reverse draw forming,
- 4.5 Limitations and advantages of forming,
- 4.6 Materials for thermoforming, types of heating systems

UNIT-5

- 5.1 Casting Introduction, casting of PMMA,
- 5.2 unsaturated polyesters and phenolic resins

UNIT-6

- 6.1 Calendaring Introduction to calendaring, types of calendars,
- 6.2 advantages, limitations of calendaring and major applications

UNIT-7

- 7.1 Rotational moulding of large containers

UNIT-8

- 8.1 Foam Moulding Definition of molding,
- 8.2 Processes, blowing agents, applications

UNIT-9

- 9.1 Finishing of Plastics Cutting, turning, drilling,
- 9.2 Sanding, polishing different types of welding

Reference book:

1. Injection Moulding- Irwin I. Rubin

