

GUJARAT TECHNOLOGICAL UNIVERSITY

DIPLOMA IN PLASTICS ENGINEERING

Semester: 4

Subject Name PROCESSING OF THERMOSETS

Sr.No	Course content
1.	<p>COMPRESSION MOULDING PROCESS</p> <ol style="list-style-type: none"> 1. Basic Principles of Compression Moulding 2. Various Compression Moulding Techniques 3. Compression Moulding Press <ol style="list-style-type: none"> a. Types b. Constructional Details c. Heating System 4. Plastic Materials for Compression Moulding <ol style="list-style-type: none"> a. Material Selection Criteria b. Fillers and Additives c. Range of Moulding Temperatures d. Preheating e. Bulk Factor and Preforms 5. Compression Moulds 6. Moulding Process <ol style="list-style-type: none"> a. Complete Moulding Cycle b. Moulding Cycle V/s Time Diagram c. Process Variables d. Post Curing, Cooling Fixtures and Finishing e. Advantages & Disadvantages f. Trouble Shooting g. Start-up and Shut down Procedure <p style="text-align: center;">Applications of Compression Moulding</p>
2.	<p>TRANSFER MOULDING PROCESS</p> <ol style="list-style-type: none"> 1. Basic Principle of Transfer Moulding Process 2. Types of Materials and Selection Criteria 3. Transfer Moulding Machine <ol style="list-style-type: none"> a. Constructional Details b. Types : Pot Transfer, Plunger Transfer and Screw Transfer 4. Transfer Moulds 5. Moulding Process <ol style="list-style-type: none"> a. Process Steps b. Process Variables c. Advantages & Disadvantages d. Trouble Shooting e. Start-up and Shut down Procedure <p style="text-align: center;">Applications of Transfer Moulding</p>
3.	<p>INJECTION MOULDING OF THERMOSETS</p> <ol style="list-style-type: none"> 1. Basic Principle of Injection Moulding 2. Types of Materials and Selection Criteria 3. Injection Moulding Machine : Constructional Details

	4. Injection Moulds 5. Moulding Process <ul style="list-style-type: none"> a. Process Steps b. Process Variables c. Advantages & Disadvantages d. Trouble Shooting e. Start-up and Shut down Procedure 6. Applications of Injection Moulding Process 7. Comparison with Injection Moulding of Thermoplastics 8. Comparison with Compression and Transfer Moulding Process
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Reference Books:

SR. NO.	NAME OF REFERENCE	AUTHOR
1	Plastic Materials & Processes	Goodman
2	Injection Moulding	Irvin I. Rubin
3	Thermosetting Plastics	J.F. Monk
4	Plastic Engineering Handbook	Berins
5	Injection Moulding Handbook	Rosato & Rosato
6	Moulding of Plastics	Bikales
7	Compression Moulding	Davis
8	Injection Moulding Handbook	Fredoz
9	Injection/Transfer Moulding Of Thermosetting Plastics	Wright