

5th Semester	RPL5C201	Plastics Processing Technology Lab	L-T-P 0-0-3	2 Credits
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Sl No.	Name of the Machine	Description of Practical Exercise to be done
1	Hand operated Injection Moulding Machine	(i) Study of Machine in Idle-Run Observation (IRO), Parts, & functions, operating principle, Free sketch of Machine- Moulding Parts.
		(ii) Operation practice to produce moulding on different hand injection moulds.
2	Injection Moulding Semi-Automatic	(i) Study of Machine of all types in IRO. Comparative study of Pneumatic type & Hydraulic type of Machine, Operating Principle - Line-diagrams and specifications
		(ii) Operation practice of Pneumatic & Hydraulic types Cycle-time analysis, observations of Process Parameters
3	Extrusion process on extruders	(i) Study of Extruders in IRO, Free sketch of machines, their parts and parts-function, List of products Manufactured by Extrusion-Process. Study of different types of extrusion process.
		(ii) Operation-Practice by Trainee on setting up of Process parameter to produce Blown-Film on Film-plant, observations on extruder output, size of film produced and technical specifications of machines to be recorded
4	Compression Moulding-Hand Operated	(i) Study of machine IRO Free sketch of parts & study of part-function, comparison of Compression and injection moulding processes.
		ii) Operating Principle of Hand Compression Press, mould setting-procedure & parameter setting, operation practice on different compression moulds, machine Specification
5	Blow Moulding Hand Operated	(i) Study of Hand Blow Moulding machine, Free-sketch of machine parts & study of part-function, machine
		(ii) Die-centering practice by Trainees, operation of Hand Blow Machines, to produce components observations, cycle-time analysis Procedure of operation and observations.
6	Scrap Grinding	(i) Machine Study in IRO, specification, study of parts & function, Line Diagram

		(ii) Operation-practice with different materials and output study in Kg/hour for different materials.
7	Injection Moulding Automatic	Study of machine Parts & function- clamping systems Technical specification of Machine, study of process sequence in Machine, Study & definitions- Definitions of all Processing Parameters & controls.
8	Blow Moulding Semi-Automatic	Technical specification - Mould clamping -, operation practice with different moulds, Familiarization with control switches/ valves cycle-time analysis & procedure of operation
9	Introduction to maintenance	Basic knowledge of Hydraulic & Pneumatic systems, Electrical system, Definition of terms- Hydraulic fluid, viscosity Directional Valves, Resistance, Current, Voltage, Power, Hydraulic Pumps - Types & function, electrical heaters, thermocouples and temperature control parameters and timers, electrical Motors -Types & function.