



# SELVAM COLLEGE OF TECHNOLOGY, NAMAKKAL

## DEPARTMENT OF MECHANICAL ENGINEERING

### SELVAM RESEARCH LAB - SPECIAL EQUIPMENTS DETAILS

S.No	Equipment name	Make	Specification
1	Squeeze Casting Machine (Magnesium and Aluminium)	Swam Equipments, Chennai	Adjustable Melting Temperature with digital Indicator:100 - 1000° C, Variable Stirrer Speed arrangement with Digital Indicator: 100 – 1500 RPM, Preheating Reinforcement Furnace with digital Indicator: 100 - 500° C, Motorized Bottom Pouring closing/ opening set up with Inert Atmosphere Motorized Stirrer Height Adjustment
2	Vacum Bag Setup	Selvam Composite Material Research Lab (SCMRL)	Mould Size: 270X 270 mm, Vacuum Film: 55 Micron thickness, Vacuum Film: 1000 mm width, Breather cloth: 1mm thickness, Peel Ply fabric: 1000 mm width, Sealant Tape: 10mm width, Spiral wrap: 12mm Dia, Perforated Release Film: 1000mm width
3	Pin On Disc Apparatus, (Wear and friction test)	Contech Micro Systems Peenya, Bengaluru, Karnataka	ASTM G99 Standard, Sliding Speed Range 0.26-10 m/sec, Disc Rotation Speed 100-2000 rpm, Maximum Normal Load 200 N, Wear Track Diameter 10- 140 mm, Frictional Force 0- 200N, Wear Measurement Range 4 mm, Pin Size 3-12 mm diagonal/dia, Disc Size 160 mm x 8 mm thick
4	Olympus Metallurgical Microscope	Olympus/ BX 53 Upright	Focusing Range: 40mm, Inter Adjustment Range: 55 - 75mm, Mechanical Tube Length: 160mm, Eyepieces: WF10X (18mm), WF16X (11mm),

			Illumination: halogen lamp, 6V/20W, Stage Dimensions: 180x145mm, Stage Traveling Range: 30x70mm, Video Trinocular Port: 23mm, Vernier Division: 0.1mm, Head: 30 degree
5	Image Analyzer	ARTCAM 300MI & Metal Plus Software	Pro Metal 7.7.3 Image Analysis, Fully Automatic, Simultaneous Processing of multiple images
6	Hot Plate Magnetic Stirrer	Torson Model No.:6030	Max. Stirring Capacity (H <sub>2</sub> O) – 2 Liter, Dimension-32 x 24 x 12 cm, Stirring Speed 100-1000 RPM, Liquid Temperature - ambient to 150°C, Material Type- Ceramic
7	Electronic Micro Balances	Model No.: IN201L, Infra Instruments Pvt. Ltd Chennai	weight capacity 200 gm to 0.001 gm, Pan: Stainless steel dia 90 mm, Power: 12 volt AC adaptor, Air shield case fitted, Re-chargeable battery optional
8	Metallographic Abrasive Cutter	Metallurgist & Foundry Engineers/ Model Modern Cut -I, Modern Metallurgical & Scientific Services, Chennai	Double Vise design, Top Cover FRP, 50 Hz, 415 Volts, Maximum Size Dia 60 mm and 2800 RPM cutting, Motor power controlling by C/S controls and waterproof concealed, Fluorescent lamp House Unit, 1/10 H.P Coolant Motor Power and two high flow water Jets, Flow adjusted by ball Valve and cut off wheel Size: 250x1.5x31.75 mm, Control Voltage: 220V AC
9	Mounting Presses	BAINMOUNT (MPH 007) Supplier: Chennai Metco Pvt Ltd, Chennai.	High speed mould heater with built-in water cooling coils, Built in Hydraulic system, 1200 Watts Mould Heater, Provision to accommodate 1 1/2" and 2" dia. 1 1/4" dia. Standard Quick heater, Digital Temperature indication / control, Timer and buzzer for Heating and Cooling cycles

10	8" Double disc two speed Grinder/Polisher Machine	Bainpol VTD 8" (PMV009) Supplier: Chennai Metco Pvt Ltd, Chennai.	Rigid table top corrosion proof FRP cabinet, 8" disc polisher (10" disc optional), 0.5HP AC Motor, Corrosion resistant wash bowl, Free flow drain system, Flexible water jet with control valve, Aluminium Disc 8" Dia (Interchangeable), S.S Holding Ring (Press Type), Holding Band, Power supply : 230 V / 50Hz
11	Digital Balance	Shimadzu Acc AUY220	220g 0.1Mg Accuracy

## SQUEEZE CASTING FURNACE



## VACUUM BAG MOLDING SETUP

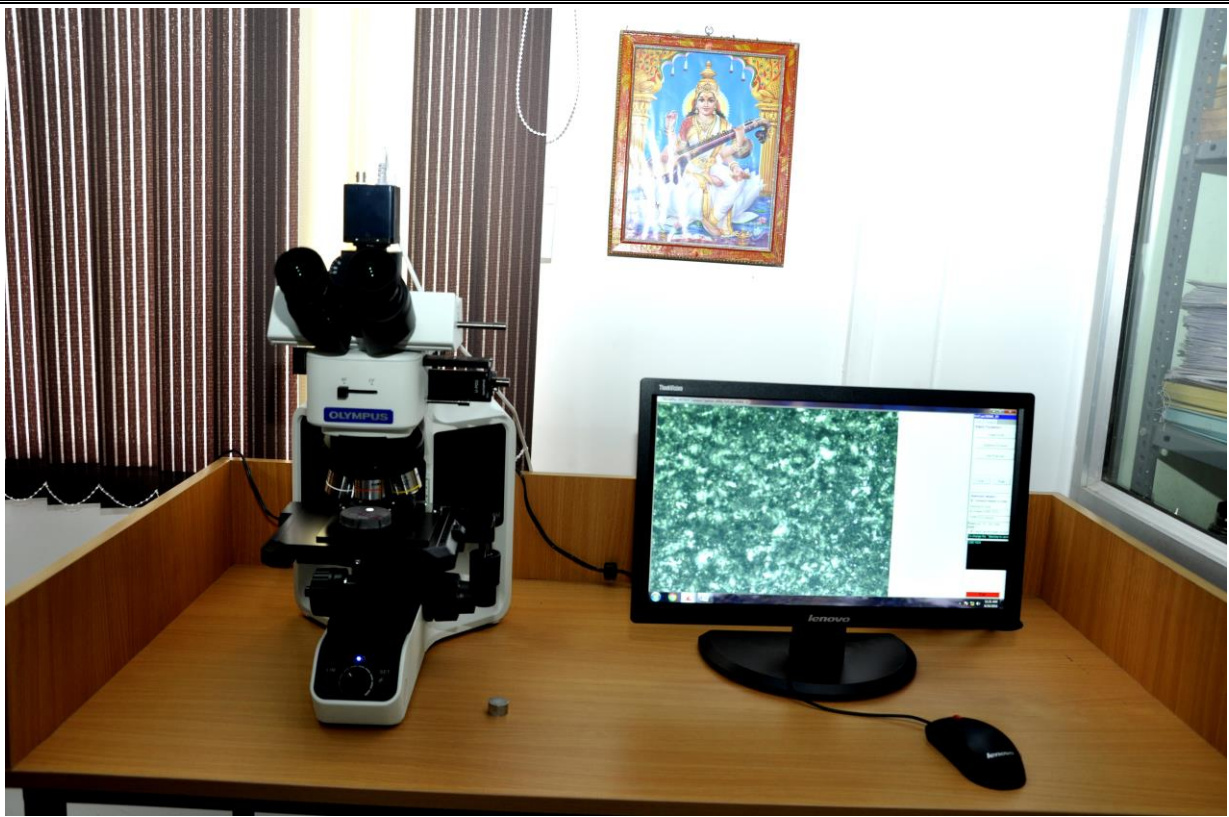


## PIN ON DISC APPARATUS



## OLYMPUS METALLURGICAL MICROSCOPE





### MOUNTING PRESSES



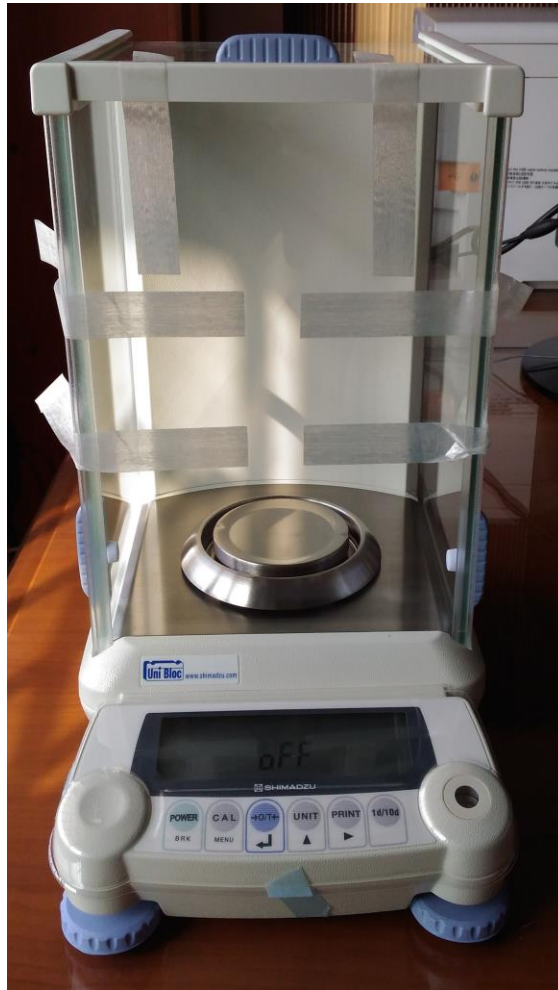
### DOUBLE DISC TWO SPEED GRINDER/POLISHER MACHINE



### HOT PLATE MAGNETIC STIRRER



## ELECTRONIC DIGITAL MICRO BALANCES



## METALLOGRAPHIC ABRASIVE CUTTER

