



DEPARTMENT OF MECHANICAL ENGINEERING

Severe Plastic Deformation Lab

Machine Name: Ultrasonic Assisted Stir Casting

Make: Swam Equip

Model: 2022

Specifications:

- **Pouring Type:** Bottom Pouring with motorized
- **Retort:** Stainless Steel (SS 310 grade) with Control Atmosphere
- **Melt Capacity:** 02 Kg
- **Maximum Temperature:** 900°C
- **Preheating Furnace:** for Powder (Max temp 500°C)
- **Preheating Furnace:** for metal alloys (Max temp 800°C)
- **Dies for Gravity Casting:** Metallic

Ultrasonic Vibrator Arrangements:

- | | | |
|-------------------------------|---|---|
| ▪ Type | : | Ultrasonic Liquid Processor |
| ▪ Model | : | ULPSM Generator |
| ▪ Ultrasonic Power | : | 2500 Watts with power adjustment of 60%, 70%, 90% & 100%. |
| ▪ Ultrasonic Frequency | : | 20 KHz |
| ▪ Horn Diameter | : | 30mm |





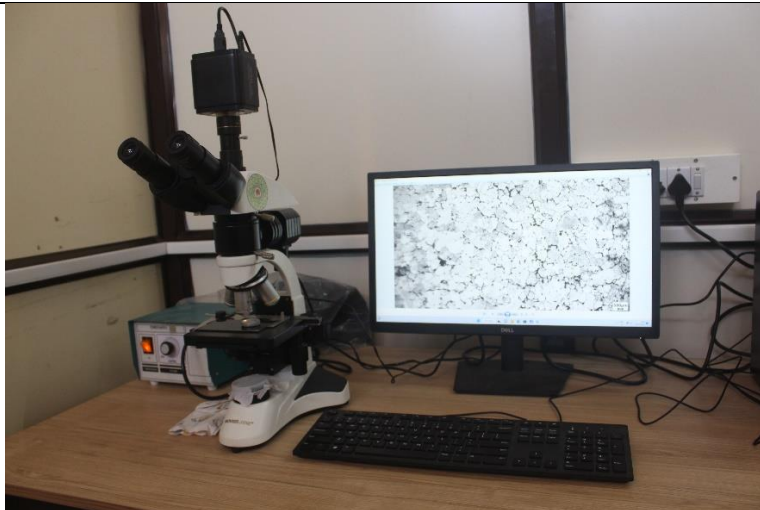
Instrument Name: Optical microscope

Make: Hover labs

Model: 2022

Specifications:

- **Eyepiece:** PL 10X - 20mm
- **Magnification:** 40X-1000X
- **Objectives:** LMPL infinity long working distance metallurgical objective (4X, 20X, 40X, 100X)
- **Mechanical stage:** 4" double layer mechanical stage moving range 105 x 105 mm
- **Head:** Trinocular head inclined 30°, splitting ratio for binocular: trinocular = 100:0
- **Focus:** Coaxial coarse and fine focus
- **Illumination:** Reflected and Transmission
- **Features:** Polarizing and DIC





Machine Name: Muffle furnace

Make: Macro scientific works

Model: 2022

Specifications:

Temperature Range: 900-1400°C

Working Temperature: 100-1100°C

Dimension: 300 X 150 X 150 mm





Machine Name: Digital Travelling Microscope

Microware USB 3D Digital Microscope
Endoscope Magnifier PC Video Camera with Stand
Magnification: 50X to 1000X



Machine Name: Rolling Mill

Yet to be purchased/coming soon

Machine Name: Extensometer

Yet to be purchased/coming soon



Lab Incharge
Dr. R. Seetharam