METALLURGY AND MECHANICS OF SOLIDS LAB

List of Experiments:

(A) METALLURGY LAB:

1. Preparation and study of the Microstructure of pure metals like iron, Cu and Al.
2. Preparation and study of the Microstructure of Mild steel, low carbon steels, high – C steels.
3. Study of the MicroStructure of Cast irons.
4. Study of the Micro Structure of Non-Ferrous alloys.
5. Study of the Microstructure of Heat treated steels.
6. Hardenability of steels by Jominy End Quench test.
7. To find out the hardness of various treated and untreated steels.

(B) MECHANICS OF SOLIDS LAB:

1. To determine the Tensile Strength of specimens.
2. To determine the values of Bending stress and young's modulus of elasticity of a simple support at the ends and carrying a concentrated load at the centre.
3. To determine the modulus at rigidity of a given specimen.
4. To find the Rockwell Hardness of test specimen.
5. To determine the stiffness and modulus at rigidity of spring material.
6. To determine the breaking stress of the given material by testing apparatus.
7. To study the Impact testing machine and perform a Charpy Impact test.