

Maharaja Ranjit Singh Punjab Technical University, Bathinda

Purchase of Apparatus for Engineering Material & Metallurgy Lab at PIT GTB
Garh

Name of Work:

Name of Agency

Sr. No.	Description of Item	Qty.	Unit
1	<p>Practice of specimen preparation (cutting, mounting, polishing, etching) of mild steel, aluminium and hardened steel specimens.</p> <p>Double Disc Polishing Machines</p> <p>Two 200 MM Aluminium discs over which polishing paper or cloth can be stretched</p> <p>Separate Motors for individual disc of ½ HP Variable speed from 50-1500 RPM. Variac</p> <p>Variable Transformer for smooth speed change Single Phase High torque AC Motor</p> <p>Water inlet/outlet for wet polishing. Flexible water jet with control valve. The operation of the machine with 220 V AC Complete Powder Coated Body for Corrosion resistant paper & Polishing Cloth holding Ring. Front control panel with ON-OFF Switch & for change the speed Machine Dimension (LXWXH) : 870X 460 X 570 MM) Weight : 50 Kg Approx.</p>	1	No.
2	<p>Study of the microstructure of prepared specimens of mild steel, Aluminium and hardened steel.</p> <p>(Metallurgical Microscope)</p> <p>Standard Accessories:-</p> <p>Metallurgical Image Analyzer Software, Supplementary lenses. Camera & Software</p> <p>1) Objectives : 5x, 10x, 20x, 40x</p> <p>2) Eyepiece : WF 10 x (paired)</p> <p>3) Camera : CCD or digital camera provision</p> <p>4) Illumination : Light Attachment</p> <p>5) Magnification : 60x to 400x.</p>	1	No.
3	<p>Characterization of hardenability of steel by Jominy End Quench Test.</p> <p>1) Jominy End Quench Apparatus</p> <p>2) Jominy Fixture</p> <p>3) Multiple Purpose (rectified) Lamp 900-950 C</p> <p>4) Mechanical water circulation through water pump with storage and test tank. Standard test piece dimension: length, 100 ± 0.5mm, dia 25mm ± 0.5mm, dia 10mm. Distance from tip of nozzle to the bottom of test piece 12.5 ± 0.5mm approx. Inside vertical water supply pipe. The nozzle, specimen holders and pipes for maintaining specific water head are included Power supply: Single phase 230 Volts 50 Hz A.C. The apparatus is designed in accordance with IS : 3848-1981 & ASTM : A 268</p>	1	No.

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