

Mechanical Engineering


Facilities & Services provided by dept.


- Sivert type apparatus to **measure gas storing capacity** of metal powder.
- Universal Testing Machine (UTM), Capacity: 40Tonnes to carry out Flexural test (Tensile, compression, bending and shear strength test of wood and steel specimen) to **determine tensile strength, compressive strength & shear strength** of sample.
- Flatness tester to determine the **flatness of the specimen**.
- Ultrasonic flow detector Capacity: 5 to 10 MHz to **detect the presence of defects** in the specimen
- Hardness testing machine to Evaluate Rockwell hardness and brinell**hardness number**
- Impact testing machine, Capacity: 300 Joule to **measure toughness** of metal.(using Izod and Charpy tests)
- Fatigue testing machine (Maximum bending moment= 200 kg-cm, load= 5 to 40 kg, Range= 100 to 200 kg-cm) to **evaluate of fatigue life of metal bars or pipes** in revolutions.
- Torsion testing machine Capacity: 200 N-m to measure **torsion strength** of specimen.
- Surface Roughness tester to **check surface roughness**.
- Fabrication & Civil structures
- Wood working carving, design & prototyping with wood working


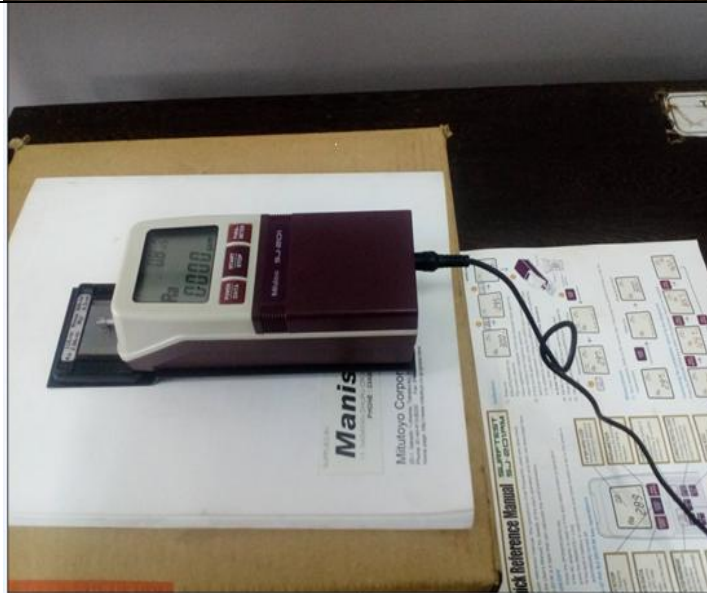
Consultancy areas:-



- Stress analysis
- Solid Modeling
- Material testing & characterization for strength
- Product life cycle analysis
- Fracture mechanics & Failure analysis

Available Equipments in the Department of Mechanical Engineering for consultancy.


Sr. No.	Name of the Equipment	Nature of Testing	Photos
01	Universal Testing Machine (UTM), Capacity: 40Tonnes	Flexural test: Tensile, compression, bending and shear strength test	

02	Torsion testing machine Capacity: 200 N-m	Torsion testing	
03	Fatigue testing machine (Maximum bending moment= 200 kg-cm, load= 5 to 40 kg, Range= 100 to 200 kg-cm)	Evaluation of fatigue life in revaluations	

04	<p>Ultrasonic flow detector</p> <p>Capacity: 5 to 10 MHz</p>	To detect the presence of defects in the specimen	 <p>The image shows a white and blue Ultrasonic flaw detector. It has a small rectangular screen on the left side of the front panel. To the right of the screen is a control panel with several knobs and buttons. The top of the device has a label that reads 'ULTRASONIC AMPLIFIER'. The device is sitting on a dark surface.</p>
05	<p>Flatness tester</p>	To determine the flatness of the specimen	 <p>The image shows a digital flatness tester, specifically a Mitutoyo model. It has a white body with a digital display on the left side showing the number '0.000'. A black probe is attached to the front. The device is resting on a white surface, which appears to be a piece of paper or a manual. The background is a dark surface.</p>

06	Rockwell cum brinell hardness testing machine	Rockwell hardness test and brinell hardness test (Evaluation of Hardness number)	
07	Impact testing machine, Capacity: 300 Joule	Charpy and izod impact test	

8	Sivert type apparatus	To measure gas storing capacity of metal powder	
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9	Surface Roughness tester	to measure surface roughness	 A photograph of a surface roughness tester. The device consists of a black rectangular base unit with a white label on the front. A vertical metal frame is mounted on top of the base, holding a horizontal probe arm. To the right of the base unit, a digital readout (DRO) unit with a green display screen is connected to the system by black cables. The entire setup is placed on a grey lab bench.
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