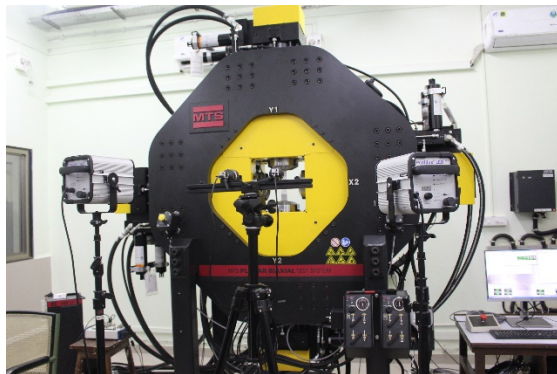


Advanced Mechanical Testing Facility (AMTF)

Department of Mechanical Engineering, IIT Bombay

AMTF is a state-of-the-art central facility housed at the Department of Mechanical Engineering, IIT Bombay which is one of its kind. This facility caters to the needs of fatigue testing ranging from 220N to 250kN load, -120 to 1200 C temperature and uniaxial-torsional-planer biaxial loading. The equipment and accessories in the facility provide for the needs of research and also industrial requirements enabling the Indian researchers and Industries to do complete exploration over various materials.

Prof. Subhasis Chaudhuri, Director, IIT Bombay Inaugurated the facility on January 13, 2020.



The equipment in the facility are:

- Multi-axial Universal Testing Machine: *250 kN Axial, 2000 N-m Torsional*
- Planar Bi-Axial Testing System: *Four actuators 4 X 100kN*
- Servo-hydraulic Fatigue Testing System: *+/-100kN Axial Load capacity, 150 mm actuator stroke*
- Dynamic Mechanical Analyzer: *220N/450 N axial, 150 Hz Cyclic*
- Rotating Bending Fatigue Machine: *20 N-m, 500-10000 rpm, reversed*
- Digital Image Correction (DIC) strain measuring technique: *1 to 1,64,000 fps, Dual Camera, 2D/3D system with mm² to m² FOV*

The equipment is completed with the required fixtures and accessories like Video extensometer, Electronic extensometer, CTOD guage, Environmental chamber (-120° C to +360° C), High Temp furnaces (100-1200), etc.

The facility has the best talent to operate the equipment with utmost precision. AMTF is open to outside institutes and industries under the terms and conditions of the central facility of IIT Bombay.