1. Name of the lab: B. S. Narayan Centre for Structural Integrity Studies

2. Department: Research & Development

3. Location of the lab: Block H

4. Faculty in charge: Dr. Anil Chandra A.R. anilchandraar.mech@bmsce.ac.in

5. Associated with industry, if any:

6. List of Equipments/facilities along with specifications and photographs + software with versions:

   MTS LANDMARK SERVO HYDRAULIC MATERIAL TEST SYSTEM
   MTS LANDMARK SERVO HYDRAULIC POWERPACK
MACHINE SPECIFICATIONS

POWERPACK SPECIFICATION

EXTENSOMETER

COD GAUGE

V SERRATED GRIPS FOR CIRCULAR SPECIMEN (1-19.8 mm dia)

FLAT DIAMOND GRIPS FOR SPECIMENS WITH THICKNESS UPTO 25.4 mm

FRACTURE MECHANICS CLEVIS GRIPS

SOFTWARES:

COMPRESSION PLATEN FIXTURES
7. Major Achievements till date:

- The facility has generated an income of ₹ 5,00,080/- by benefiting a total of 75 users, (26 External, 49 internal users) including faculty, research scholars, UG and PG students.
- Consultancy project of 8 Lakh rupees is approved by Dr. Aruna Kumara P.C., Professor, Department of Mechanical Engineering, MSRIT of which ₹ 2,40,000/- has been received and proportionate work has been completed.
- BSNCSIS Facility user satisfaction survey was conducted and their valuable feedback were collected and documented for performance assessment.
- A Two-day workshop on “Determination of Fatigue Crack growth rate (FCGR) and Fracture Toughness (KIC) of Mild steel and Aluminum alloys”, 30-Nov & 1-DEC 2020.
- Fatigue characterization and facility walkthrough during the One-week workshop on “Advanced Manufacturing” organized by the department of Mechanical Engineering, BMSCE, 1-5 MARCH, 2021.
- Laboratory demonstration and hands-on experiment in performing fatigue tests for M.Tech., MSE 1st SEM students 10- APRIL, 2021.
- Training on JIC Fracture toughness by MTS, 27,28- OCT, 2021.
- Training on IR Camera by FLIR, 02-FEB 2022.

8. Photographs
- Front view / Overall view of the lab
- Demonstrating the activities inside the lab
- Achievements, receiving awards, workshops, demo of the prototype, etc
9. Any other info about the lab:

The B.S. Narayan Centre for Structural Integrity and Studies was established under TEQIP-III Project, March-2020 and is equipped with an MTS Landmark Servo-hydraulic UTM.

MTS LANDMARK SYSTEMS integrate the latest in MTS servo-hydraulic innovation, versatile flextest® controls, proven MTS application software, and a complete selection of accessories to provide highly accurate and repeatable static and dynamic testing across the material testing continuum.

The Test system can be used to perform,

- Quasi-static Tensile & Compression tests
- High Cycle & Low Cycle Fatigue tests
- Fatigue Crack Growth Analysis (FCGR)
- Fracture Toughness Tests - KIC & JIC