

**RAJIV GANDHI INSTITUTE OF PETROLEUM TECHNOLOGY JAIS,  
AMETHI**

**Corrigendum -1**

Date: 18/11/2021

**Updated Technical Specification:**

**TECHNICAL SPECIFICATIONS**

**AUTOMATIC UNIAXIAL COMPRESSION TESTER ALONG WITH COMPRESSOMETER**

**Tender No: - RGIPT/JAIS/E-OPN/PEGE/LAB/2021-22/05**

**Dated: 20.10.2021**

- Conforming to Testing Procedures laid down in IS :516/IS: 4031: Part 6: 1988/ASTM C39 for rock specimen
- Microprocessor based touch panel graphic display to control the machine operation and display of data
- Programmable rate of loading (Pace rate) and other sample parameters
- Real time display of load and peak load value with pace rate deviation bars
- Automatic release facility after sample failure
- Automatic strength calculation and display
- Peak stress calculation based on sample type, shape and dimensions
- Storing of results in user defined file with sample parameter and other details
- Transfer of result sheet to USB drive for printing and further analysis
- Safety limits for Overload and Over Displacement ranges

**Note:**

The complete system consists of Load Frame, Hydraulic Pumping Unit, Microprocessor based touch panel display and control system & various height spacers to accommodate different size specimen

**Load Frame Specifications:**

- |   |            |
|---|------------|
| • Capacity  | 1000 kN    |
| • Max. Ram travel                                     | 50 mm      |
| • Vertical Clearance (clearance between platens)      | 340-390 mm |
| • Horizontal Clearance (distance between side plates) | 260-300 mm |
| • Size of platen                                      | 222-256 mm |

**Hydraulic Pumping System:**

Hydraulic pumping system, housed in an elegant console for low noise, consists of multi plunger pump driven by a suitable servo motor operated on 220 V, Single Phase, 50 Hz. This pump gives a continuous non pulsating oil flow to the ram of the loading frame. Pressure switch is provided

for additional safety against overload. Release valve is also placed at a convenient location to release the load manually after sample failure

### **Microprocessor based Touch panel display & Control system:**

Control system provides the digital servo control, Ramp generation for the machine, data acquisition etc. for the continuous operation of the system.

### **Specifications:**

- Automatic pace rate control as programmed in the controller
- Load ranges 0-1000 kN
- Control Channel - Load/Stress
- Least count 0.1 kN
- Supply input: 220-240 VAC, 50 Hz

### **Other features of the machine:**

- ✓ Facility to perform various operations such as TARE, PROGRAMMING, START, STOP etc. from touch panel display
- ✓ Programmable rate of loading (Pace rate) and sample parameters (Shape, Dimension etc.) through touch panel display
- ✓ Standalone system to operate the machine (Start, stop and hold) without computer
- ✓ Microprocessor based touch panel graphic display to control the machine operation and display of data
- ✓ Automatic strength calculation and display
- ✓ On-Line display of Load and Peak load with recording of peak load along other sample details
- ✓ Peak stress calculation based on sample type, shape and dimensions
- ✓ Storing of results in user defined file with sample parameter and other details
- ✓ Real time clock checks to keep automatic track of the date, time and runs
- ✓ Test results can be stored in the electronic unit with unique record no. and can be retrieved and transferred to USB drive for printing
- ✓ Transmission of Data to computer through Ethernet/USB/RS232 Port

### **Optional/Accessory**

#### **Cylindrical compressometer/extensometer**

It has the application for the measurement of

- Modulus of elasticity
- Poisson ratio

It comprises of:

- Arrangement for fixing of NX size rock sample.
- 1 displacement sensors for axial deformation, 10x0.001mm and 1 displacement sensors for lateral deformation 10x0.001mm
- 4 Microprocessor based electronic display unit with USB port and ethernet connection for computer connectivity
- Supporting software for calculation of MOE and poisson ratio.

#### **Warranty and Maintenance**

- Minimum 2 years OEM warranty after Installation
- 1 day training (free of cost)
- The supplier shall be responsible for the installation and commissioning and test run of the equipment to satisfaction of the user.
- A soft copy and hard copy of the operation and maintenance manuals in English must be provided

#### **Special Notes:**

- Manufacturer/authorized supplier's manufacturer should have R & D center duly approved by Department of Scientific & Industrial Research (DSIR) The documentary proof in support of that must be attached
- Manufacturer/authorized supplier's manufacturer should have in house NABL Calibration Facility and NABL testing facility



Dr. Satish Kumar Sinha  
Chairman  
Department of Petroleum Engineering & Geoengineering