

**CSIR-Central Glass & Ceramic Research Institute
KOLKATA (WEST BENGAL) INDIA**

CORRIGENDUM

REFERENCE NO. : - P/NC/39/SKS/SO(SB)/OTE/23-24(R)

DATE: 13/06/2025

NAME OF EQUIPMENT: INSTALLATION, COMMISSIONING, DEMONSTRATION & TRAINING OF "DIGITAL COMPRESSION AND MOR TESTING MACHINE" [CPP PORTAL TENDER ID: 2025_CSIR_234982_1].

NOTE: The Bids must be submitted in the Central Public Procurement Portal (URL: <https://etenders.gov.in/eprocure/app>) only. Manual/Offline bids shall not be accepted under any circumstances. Bidders should quote in INR only.

CONSEQUENT TO THE PRE-BID MEETING HELD ON 20/05/2025, THE REVISED TECHNICAL SPECIFICATION IS ATTACHED IN ANNEXURE – A GIVEN BELOW:-

Further, the following changes are also made in bid submission and opening dates:-

Bid Submission End Date & Time	10/07/2025 up to 3.30 PM (IST)
Bid Opening Date & Time	11/07/2025 at 3.30 PM (IST)

All other Tender terms and conditions remain unchanged.


13/6/25
Stores & Purchase Officer

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Annexure-A

REVISED TECHNICAL SPECIFICATION

Digital Compression and MOR Testing Machine

Name of the machine: Digital Compression and MOR Testing Machine

Scope of the work: Supply, installation and commissioning

Indented use: Measurement of compressive strength (CCS) and flexural strength (MOR) of the tiles and ceramic samples

Technical Specification:

1. Sample size for MOR:

- i. Separate attachment (3 point bending) for upto 600mm width × 600mm length
- ii. Separate attachment (3 point bending) for bar size 3mm - 25mm width (or higher range) × 20mm - 140mm length (or higher range)

2. Platen size for Compressive strength measurement: Compression platen (2nos- 1 each of top and bottom) with 100mm diameter

The machine should have versatile removable grips and fixtures so that it can be changed quickly to meet variable requirements in compression, flexural mode of operation

3. Two separate loading systems with frames for MOR and CCS, along with single operating software for both MOR and compression test.

4. Load cells, frame capacity and load application system for MOR:

- Four numbers of load cells having capacity of
 - 1) 0.5 kN
 - 2) 5.0 kN
 - 3) 25.0 kN
 - 4) 50 kN
- Accuracy: +/-0.25% or better
- Easily interchangeable as per need
- Tools for changing the load cell must be included
- Frame Capacity should be higher than 50 kN
- Direct servo-motor for load application

5. Separate attachment with frame CCS with load cell capacity of 2000 kN or higher, via using hydraulic system along

- Frame capacity should be higher than 2000 kN with hydraulic system for load

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application

- Load vs displacement indicator with least count of 0.1 kN or less

6. STRAIN MEASUREMENT SYSTEM:

- Displacement and strain measurement systems, along with an extensometer, should be provided and data should be collected through computer interface.

7. 01 number of standard sample should be tested and verified for all load cells. (Calibration certificate for the standard should be provided as per ISO 376 or equivalent by the bidder)

8. **Crosshead speed:** 0.03-500 mm/min or wider range with emergency stop button.

9. Servo stabilizer(3-phase) for 8 KVA or better for the machine operation and PLC, HMI, Motor supply for 20 min or higher power backup with output accuracy of +/- 2-4% or better and response time <1.6 s

10. Operating software:

Controller Cum User Interface

The instrument should be computer connected for operation, data collection and data analysis.

- The control software shall be a true graphical user interface meeting the Microsoft Windows standards
- The testing software along with machine must be able to perform time and displacement based compression and flexural strength testing
- System should include and able to controlling the movement of the crosshead as a function of load, stress, strain in addition to position control
- The software should offer the following calculations: Maximum Peak (all available channels), Minimum Peak (all available channels), Specimen Break Point (all available channels), CCS and MOR

11. Computer, Printer and UPS:

- HP/DELL/Lenovo or equivalent desktop computer
- Minimum configuration: Suitable processor, 16 GB RAM, 2 TB HDD, DVD RW drive, 19 inch. monitor, Operating system: Windows 11 Professional, 64 bit, color laser printer, Microsoft Office, Adobe Acrobat Writer (for PDF conversion of Analysis reports) & UPS, Warranty: Two years
- UPS: 600 VA, Surge protection, Input voltage: 150-290 VAC or higher

12. Training: Two peoples should be trained for two days at site

13. Power supply available at CGCRI, Khurja Centre: 2-Phase 230 V, 50Hz (for computer)

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CGCRI-CENTRAL GLASS & CERAMIC RESEARCH INSTITUTE
100, राधा कृष्ण रोड, मुल्लिक रोड, कोकला- 400 032

and 3-Phase, 415 V, 50 Hz (for machine and stabilizer)

14. Installation, commissioning should be done by the supplier at buyers place (CSIR-CGCRI, Khurja, UP).
15. **Warranty:** One (01) year standard + Two (02) years extended comprehensive warranty should be provided after satisfactory installation of the instrument (from the date of installation)
16. **General Technical Terms:**
 - Bidder should have experience on installation of Digital Compression and MOR Testing Machine/UTM in the reputed organizations
 - Documentary evidence must be provided along with the contact details of users for verification

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