Annexure-V

Compliance report

Note: The bidder is required to mention detailed specifications clearly in column named as Specifications from Bidder against each item as mentioned in below format. Please note that merely mentioning Yes/No in deviation column will lead to disqualification of the bidder.

(I) Electronic Direct Shear Test Apparatus, Large Size (Motorized)

The direct shear test apparatus shall confirm with the requirements of IS: 2720 (PART-XXXIX) BS 1370:7, ASTM D 3080 and IS: 11229 having following features:-

Shear test can be performed on soil/aggregate specimen size of 300 mm 300 mm 150 mm. It shall determine direct/residual shear strength and shall be electrically operated. The direct shear test apparatus consists of [i.e. (1) to (5)]:-

Sr.No.	Specification of e-Tender	Specification of Bidder/Vendor	Deviation (Yes/No)	Remarks
1.	**Loading unit :-** Loading unit shall comprise of pre-calibrated loading yoke with lever system for applying normal load with normal stress capacity of 500 kN/m^2 and shear loading capacity of 50 kN. Loading unit shall have facility to fix the load cell, brackets for holding displacement sensors, lead screw for application of shear stress, V-strips on which shear box housing rests, and counter balancing arrangement. The unit shall comprise of motorized gear box system for 72 different constant rates of strain for shear load ranging from 0.0014 mm/min to 10.16 mm/min and is suitable for carrying out residual shear strength test. Suitable power supply of 415 V, 50 Hz and Three phase, AC supply. The accuracy of applied strain rate $\pm$ 1%			
2.	**Shear box housing:** It shall accommodate shear box assembly in two halves. Shear box housing shall comprise of 1. Pair of ball roller strips			
3.	**Shear box assembly 300 mm, square:** Shear box unit 300 mm, square shall confirm with IS: 11229 and consists of [i.e. (1) to (9)]:- 1. Pair of halves of the shear box with 2 guide pins 2. Spacing screws 3. Pair of plain gripper plates			

	4. Pair of perforated gripper plates 5. Plain grid plates (one for top and one for bottom) 6. Perforated grid plates (one for top and one for bottom) 7. Base plate 8. Top loading pad with lifting handle 9. Additional locking pins			
4.	**Set of weights:**One set of weights to attain normal stress of 500 kN/m^2 through lever consists of [i.e. (1) to (4)]:- 1. Weight for 5 kN/m^2 2. Weight for 10 kN/m^2 3. Weight for 25 kN/m^2 4. Weight for 50 kN/m^2			
5.	**Accessories** that consist of [i.e.(1) to (7)]:- 1. Load Cell 50 kN capacity with calibration certificate, Nonlinearity: ± 0.5% of rated output or better, Rated Output: 2.5 mV/V or better 2. Displacement Sensor (±50 mm), Nonlinearity: Within ±0.3% RO of rated output or better, Rated Output: 2.5 mV/V or better 3. Fixtures for Connecting Load Cell and Displacement Sensors with direct shear apparatus 4. Digital Display System compatible with above load cell and displacement sensors. The complete assembly to be supplied with computer of following specifications. **Computer specifications:** • Operating System: Windows 10 or higher • Processor: I3 or better • RAM: 4 GB or better • Display: 17" screen or higher • Storage Capacity: 1 TB or higher • With keyboard, mouse			

	5. Spirit level (with magnetic base) at least 150 mm long to observe level of lever/yoke. 6. Necessary tool kit 7. Operating & maintenance manual with copy of test form. • **Inclusive of 3 years warranty for the complete assembly**			

(2) Accessories for Existing Advanced Triaxial Testing System

- The AUTOTRIAX 2 AUTOMATIC TRIAXIAL SYSTEM 100 (TRITECH 50 kN, Make: Wykeham Farrance) is installed in Soil Mechanics Laboratory at IITRAM. The following accessories (with applicable softwares) fully compatible with the above mentioned existing Automatic Triaxial system is to be procured. The details of accessories is mentioned below.

Sr.No.	Specification of e-Tender	Specification of Bidder/Vendor	Deviation (Yes/No)	Remarks
1	Extension test accessory for rigid connection to the ram of the banded triaxial cell			
2	Activation code for Stress path software with manual and automatic performance steps			
3	Activation code for Ko software			

- Technical installation, demonstration and training is part of scope of work of vendor.
- Providing software updates and technical support for 3 years duration is included in scope of vendor.