	INDIAN INSTITUTE OF TECHNOLOGY BOMBAY **MATERIALS MANAGEMENT DIVISION** **Powai, Mumbai - 400076**

Technical specifications of Constant-rate-strain (CRS) Thermal Consolidation Apparatus

RFx No. 6100000874 (Reference No. 1000018221)

Detailed Description:

1. The proposed equipment should be capable of performing both constant-rate-strain (CRS) and conventional consolidation tests on soil and other geomaterials under sub-zero and elevated temperature within the range of −20°C to 99°C.
2. Temperature in the confinement chamber and that at the ends of the specimen should be measured, displayed, and recorded automatically.
3. The equipment should be capable of applying both CRS (at a maximum rate of up to 100 mm/min or more) and constant stress (up to 4 MPa) on the sample.
4. Precise automated control, for temperature, load, and displacement adjustments to maintain constant stress or strain rate on the sample, should be an integral part of the load-displacement mechanism.
5. Control of defining a loading history prior to a test will be considered as an added advantage. The equipment should facilitate testing under both initially isotropic and anisotropic stress conditions.
6. Automated pore pressure and pore water volume change measurement should be an integrated part of the equipment.
7. **Moreover, the equipment should be supplied with sample preparation kit and integrated data acquisition system.
8. At least 3 years (5 years is preferred) onsite maintenance services and warranty has to be quoted.