INDIAN INSTITUTE OF TECHNOLOGY BOMBAY

MATERIALS MANAGEMENT DIVISION

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TECHNICAL SPECIFICATIONS -

NEW COMPONENTS FOR PUNDIT LAB ULTRASONIC INSTRUMENT FOR MEASUREMENT OF ACOUSTIC EMISSIONS AT IN-SITU CONDITIONS OF TEMPERATURE AND PRESSURE.

S. No.	Technical Specification	Qty
1.	**Manual Saturator** The manual saturator enables the end user to obtain remarkable saturation of clean, dry core samples. Initially, the samples are placed in a wire mesh basket, lowered into the saturation cell and the latter is sealed with a threaded plug. A manual pump is used to pressurize the system up to 2,000 psi. This pressure should be sustained for at least four hours to guarantee maximum core saturation. This is confirmed by a stable reading on the manometer. The apparatus comes fully equipped with: • Saturator cell • Control panel including manometer and valve • High pressure pump • Feed tank • Trap tank • Vacuum pump with manometer and filter in option • Starting kit including tubing and sample basket handle High pressure pump : The manual pump rapidly generates pressures up to 2,000 psi for various liquids, e.g. brine, oil. Saturator cell for plug sized samples : The saturator cell comes with a rigid support, isolating valves, a manometer and a set of plastic disks used to fill the unoccupied cell volume and reduce the duration of the experiment. Specifications : • Cell diameter: 58 mm • Cell height : 300 mm • Wetted materials: 316 Stainless steel • Max saturating Pressure: 2,000 psi • Saturating Fluid: Water, brine, oil or other liquids SPARE PARTS for 2 years operation, 5 ea seals for saturation cell	1
2.	Vacuum pump : Double-stage rotary vane pump for vacuum generation, this component is crucial and must be purchased if no vacuum source is available. It features a nominal flow rate of 2.5 m_3/h and an asymptotic pressure of 10_{-3} mbar and is equipped with a manometer and filter.	1