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MATERIALS MANAGEMENT DIVISION
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Detailed Technical Specifications for Helium Porosimeter

Porosimeter is used to rapidly and precisely determine the effective porosity of core samples. The benchtop instrument is based on Boyle's law to make grain volume measurements on core plugs. The instrument should have an easy user interface with automatic functions for porosity and density determination through isothermal helium expansion.

Core Holder

1. Pressure resistant, leakproof stainless steel holder (SS316 or better)
2. Core diameter to be used 1 or 1.5 inch
3. One whole core matrix cup style core holders (interchangeable)
4. Interchangeable between grain volume or pore volume measurement mode
5. Core length up to 3 inches.
6. Ambient temperature operation
7. Measurable porosity up to 60%
8. Filter discs on either side of core holder

Plumbing

1. Stainless steel SS316 tubing and diaphragm valves for easy and accurate pressure control
2. Ambient temperature operation
3. Pressure transducer (0-200 psi) with linearity and hysteresis of less than ± 0.11 % of full scale.

Other specifications and requirements

1. Core holder and accumulators designed to 4:1 safety factor and tested to 1.5x working pressure.
2. Automated computer-controlled valves for easy and automatic operation
3. Reference volumes incorporated in the system to be used for cuttings, plug and full diameter samples
4. Calibrations to be performed during installation and calibration discs to be provided

5. Computer and related accessories for easy operation, data acquisition and processing from the instrument
6. Software for data acquisition and instrument operation
7. Spare parts for 2 years operation
- 8. Warranty for three years period**

Eligibility Criteria:

1. A similar facility must have been supplied and functional, preferably in India. User reports may be provided and performance demonstration may be sought.