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Core Lab

Acoustic Velocity System, AVMS-350HT

Datasheet

**Special Core Analysis Laboratory (SCAL)/
Rock Mechanics (Acoustic Velocity Analysis)**



Acoustic Velocity System, AVMS-350HT

Acoustic Velocity System, VpVs, is a bench-top system with complete digital PC based state-of-the-art data acquisition system for plug-size samples. These systems determine compression and shear wave velocities on rock samples as a function of confining stress and pore fluid pressure. The systems main elements are an ultrasonic transducer assembly, pressure vessel (Core Holder) and pore pressure intensifier.

The ultrasonic transducer assembly consists of a matched pair of transmit and receive transducers which can propagate a compression wave (P) or polarized shear wave (S) through a saturated (or partially saturated) rock sample. The core handling system includes a 10,000-psig hydrostatic core holders, note only one core holder is integrated in the system at any given time, for 1 inch and 1.5 inch diameter samples with a confining pressure pump and a hydraulic operated pore pressure intensifier system.

The digital data acquisition system includes an advanced, workstation style computer e.g. CoreDuo, with Windows Professional operating system, on-board data communication hardware, digital oscilloscope, pulser/receiver, spectrum analyzer and system control software.

Scope of Supply:

Ultrasonic transducer assemblies, each capable of measuring compressional and shear waves. Pressure vessel capable of accepting the transducer assemblies, with a pressure rating of 10,000 psig. Hydraulic confining pressure system with over-pressurization safety system. Pore pressure intensifier compatible with brine, water, and oil manually operated although an automated system is available as an option. Confining pressure rating 10,000 psig, pore pressure-rating 8,500psig up to 150 Deg C. PC based computer system containing an ultrasonic pulser/receiver, digital oscilloscope, waveform recorder and spectrum analyzer. System operating software includes calibrated digital displays for confining and pore pressures.