Porosity and permeability measurements of the rocks are essential for reservoir description and determination of the potential of hydrocarbon storage and production. These two main properties are also used in geotechnical studies and other non-petroleum applications. The amount of pores in a rock and their configuration determines the rocks porosity and permeability. The porosity of a material is defined as the ratio of the volume of open space (pore volume) to the total volume (bulk volume). The permeability of a material is a measure of the ease with which a gas or liquid can move through the porous media.

Porometer

Helium porosity can be measured on sidewall samples, drill cuttings and standard plug samples, up to full diameter cores. The equipment specifications are:

•Capabilities for manual calculation as educational tool using panel mount sensors and gauges

•Software for easy and fast calculations

•Digital data acquisition system

•Grain density measurement

Gasperm

Steady-state gas permeability can be measured, including Klinkenberg slip factor . Permeability can be measured on various plug sizes. The equipment specifications are:

Specifications

•Digital data acquisition system.

•Software for easy and fast calculations.

•Using different size of cores (up to full diameter cores).

•Measuring the permeability from 0.01 mD up to 10 Darcy.

•Capabilities for manual calculation as educational tool using panel mount sensors and gauges.

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