



General Features

The core aging system consists in saturation at reservoir conditions with brine and then with crude oil so as to restore its reservoir wettability. The oven for temperature reservoir conditions contains as many as you want core holders.

| Specifications | |
|---------------------------------|-------------------------|
| Working Pressure | 700 bar |
| Working Temperature | Ambient to 200°C |
| Pore Pressure Circuit | 690 bar |
| Sample Size Diameter | Adjustable upon request |
| Sample Length | Adjustable upon request |
| Number of Samples | Adjustable upon request |
| Core Holder Wetted Parts | Hastelloy |

The principal is first saturation of a cleaned core plus with brine. After saturation is completed the pores remain water, this water is displaced by oil injection leaving water films on the pore walls.

Core Aging System by



During several weeks the core containing crude oil and connate water is left at reservoir conditions pressure and temperature. The wettability changes on oil-invaded pores. The wettability changes are dependent of the stability of the water wet films, trapped between the pore core surface and the oil. The pore walls can only become oil-wet if contacted by oil due to the rupture of these films. The core will have a mixed wettability state status.

Each core holder is connected to the confining pressure circuit with one insulating valve and one purge valve with quick fastens fittings to facilitate operation. In pore circuit, each cell has two valves. Each core holder is connected also to a pore injection circuit with insulating valves. The pore pressure circuit is supplied with a back pressure regulator adjustable manually from 20 to 690 bar. The cell is pore pressure insulated and kept during weeks for aging.

Others

This system is composed of:

- Reservoir Condition Oven
- Core Holders
- Automated Overburden System
- Dual Piston Syringe Pump
- Accumulators
- Back Pressure Regulator
- Automatic Data Acquisition Module
- Differential Pressure Transducers

