



Core Aging System



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.



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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 insolated and kept during weeks for aging.

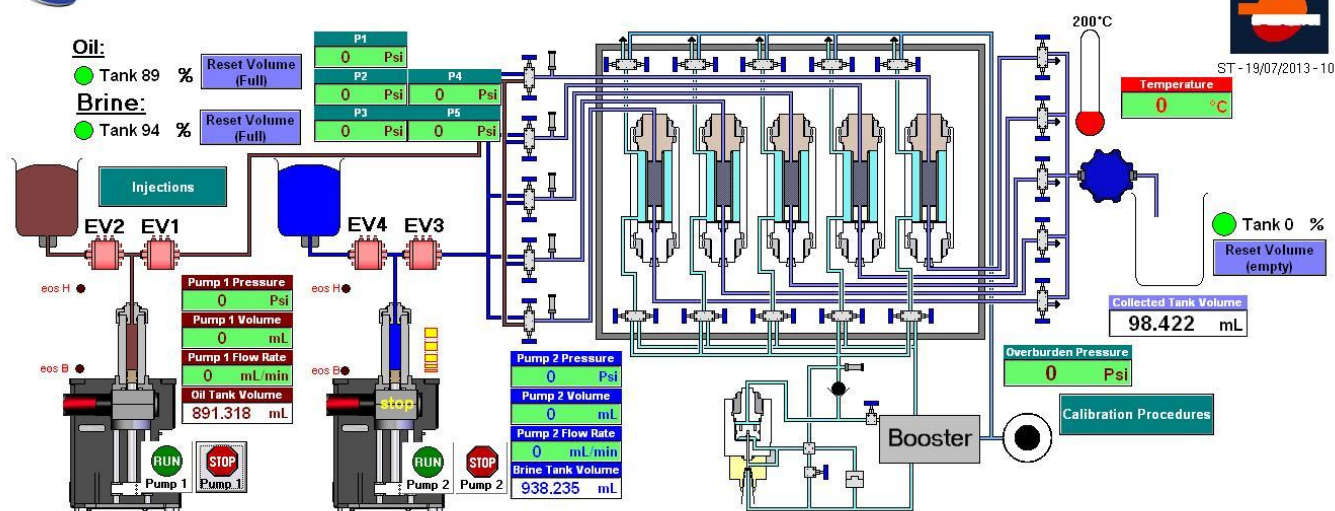
Others

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



Core Sample Aging System



ST-19/07/2013-10