



WOS - Wellpad Optimization System



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WOS

Wellpad Optimization System

The WOS in its design of a modular shelter under controlled environment and temperature, is composed by the necessary subsystems for monitoring, control, operation and production clusters optimization, through the control of multiple artificial lift systems (ESP, PCP, Rod Pumps & multiphase pumping MPP). In this way, ensuring an integral solution for processes associated with upstream Production.

The WOS as a state of the art of the production clusters or well pad, is based in functional application for oil production optimization "The AVAS (Added Value Application & Solutions)": Quick diagnostics charts (IPR Chart, Nomographic, Dinagraphic, Polar, etc), advanced controls for ESP, PCP, Rod Pump (SRP) and multiphase pumping (MPP) as the intelligent well optimization control (IWOC). The system also allows real time optimization of the well and production cluster, the remote operation (monitoring and control) of all the subsystem included within.

The WOS complies efficiently with electrical standards of quality and energy (IEEE 519) within its architecture: power quality, real time monitoring harmonics and sine wave filtering.

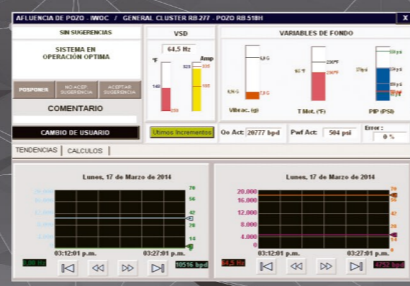
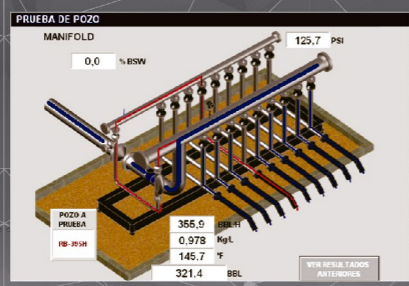
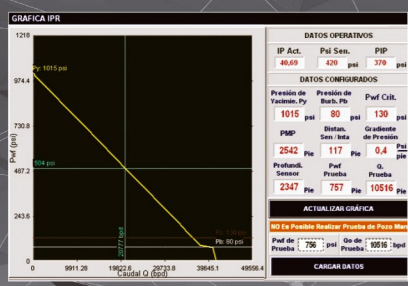
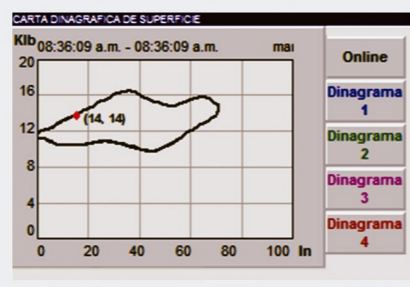
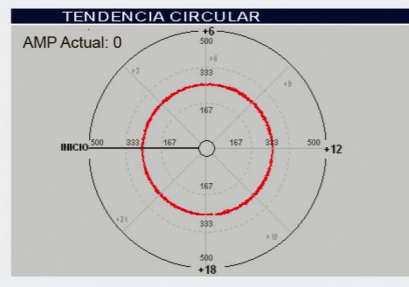
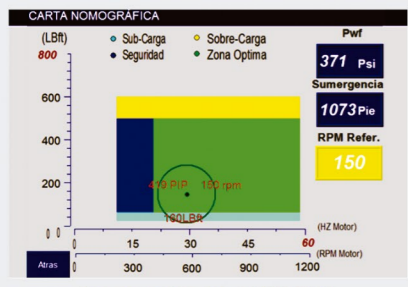
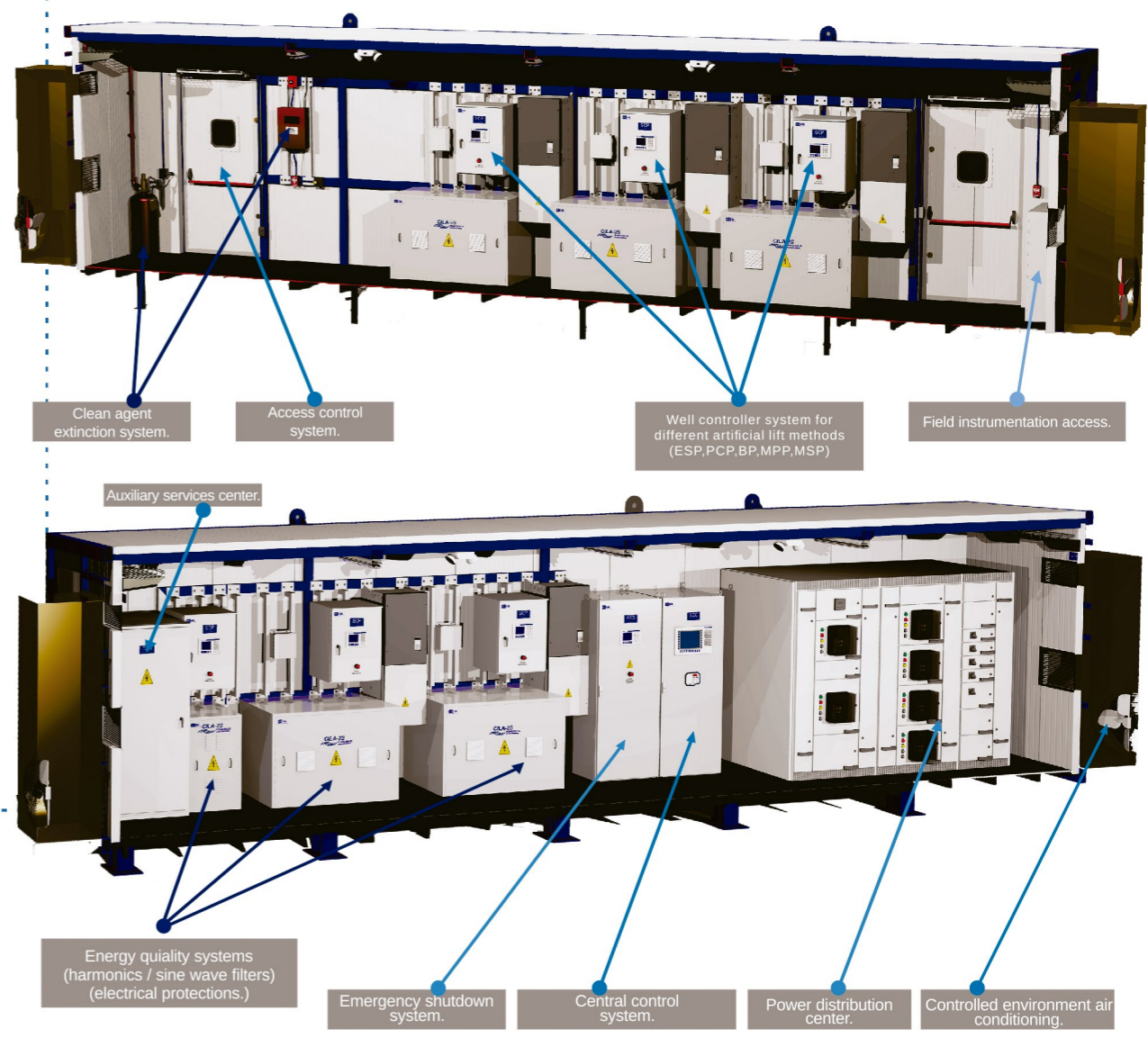
This subsystems of the WOS are designed in a standard and modular concept in order to work together with a suite of application of the CILA 2S (intelligent controller for artificial lift system) making it the best technology for the advanced control of production clusters.

Well diagnostics that are based in graph charts.

Control and optimization of wells.	Power Sag control.	Test (Build Up) and first derivative.
Intelligent well optimization control - "IWOC".	Configurable automatic re-start multi-ramps.	Dinagraph chart
Automatic analysis of the direction of rotation in ESP.	Load shedding.	Downhole pressure control.
Intelligent torque control for PCP.	Well test.	Determining level (PSP).
staggered start.	Well productivity chart (IPR).	Backspin control. And More...

Benefits to implement our technology.

- Integral solution for all the systems in Cluster or Well pad to control, supervise, optimize and monitor of the oil production.
- Power quality - Reduced harmonic and improving power factor.
- Sensor integration background to the CILA 2S and WOS.
- Communication with different types of SCADA.
- Simplified infrastructure and recoverable cluster.
- Acquisition platform for selective data improved transition thereof.
- Optimize production of production clusters.
- Mayor Run Life teams as background the surface.
- Optimizing energy use.
- Reduction of staff and time in installation and commissioning of equipment within a cluster.
- Decrease in field development costs model-based cluster.
- Reducing environmental impact.
- Ability to modulate growth.
- Total data integration.
- Colombian and technology transfer.



EQUIPMENTS IN THE WOS.

- WOS Structure or Enclosure containing all equipment associated to the WOS.
- Individual system Well Control (SCP / VFD)
- Cluster system or Centralized Control (SCC).
- Emergency Shutdown System (ESD).
- Access Control System (ACS).
- Clean Agent System (SAL).

- Power Quality equipment.
- System controlled environment (e-Cos).
- Power Distribution Center (PDC).
- Auxiliary Services Center (CSA).
- Regulated power supply system (UPS 240 / 120V).
- Transient Protection System Electric.
- AVA (Added Value Application) Suites.

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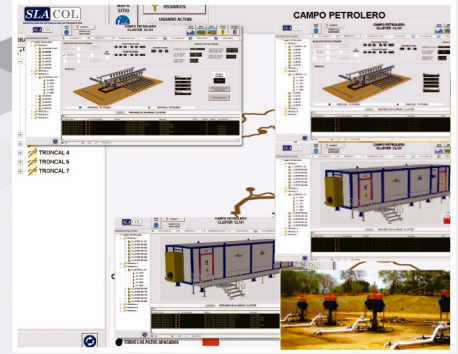
Products Portfolio



Wellpad Optimization System (WOS)



Multiphase Pumping (MPP)



Wells Optimization SCADA (WOS SCADA)



Progressive Cavity Pumping System (PCP)



Intelligent Controller for Artificial Lift Systems /ESP-IM, ESP-PMM, PCP, MPP, ISRP/ (CILA 2S)

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