PRODUCTION SSV/ESD SYSTEM

Improve performance with electric-over-hydraulic emergency shutdown control system that enables condition-based monitoring and maintenance.

The mSafe safety valve control system enhances well safety, increases operational efficiency, lowers maintenance costs and maximizes production.

- Manual, remote and automated operations
- Implement condition-based monitoring and maintenance using valve status data communicated via SCADA, telemetry or downloaded from onboard memory

mSafe

c UL us

508A

ELECTRONICALLY ASSISTED HYDRAULIC CONTROL

Field-proven in Latin and North America, the mSafe design integrates electronic control and an electro-hydraulic pump to ensure the safety and performance of hydraulically actuated safety valves used in emergency shutdown applications.

The controller precisely and reliably manages valve position by monitoring hydraulic pressure in the actuator and actuator lines. The acquired data supports condition-based monitoring and maintenance practices that can significantly improve safety and performance.

Real-time and historical data is transferred using the wellsite SCADA system. Months of data can also be saved in onboard memory and downloaded via Modbus RS485 or Hart communication protocols.

ESG

Environmental-Social-Governance

BENEFITS

- Monitors and regulates ESD actuator pressure
- UL 508A Listed and NEMA 1, 3R, 4 and 12 Encloser
- Reduce wellsite visits
- Hydraulic fluid leak detection system
- Partial stroke test
- Full SCADA capability and 2-way telemetry ability
- Available in sizes $2^{1}/_{16}$" 5K to $3^{1}/_{16}$" 10K

PRODUCTION SSV/ESD SYSTEM

Condition Based Monitoring

The mSafe controller's ability to acquire and communicate precise data on even small changes in hydraulic pressure supports condition-based monitoring and maintenance in many ways:

PREDICTIVE VALVE MAINTENANCE

Predictive maintenance is enabled by early detection of small operational anomalies. Partial stroke testing allows diagnosis of potential valve failure without stopping production and with zero emissions. Maintenance is reduced and easier to schedule, and production delays are minimized.

ACUATOR PRESSURE STABILIZATION

Pressure stabilization eliminates progressive valve closure and associated wear with mSafe monitoring and automatically compensating for temperature-induced variations.

LINE BREAK DETECTION

Identifies gradual losses in pressure over time preventing hydraulic releases. Deviation from the pressure gradient prompts an mSafe programmable alarm or valve closure.

SPECIFICATIONS

Base: 36x32 inches (91x81 cm)
Height: 69 inches (175 cm)
Weight: 400 lbs. (181 kg)
Hydraulic outlet pressure: 300 to 2,000 PSI (1 to 138 Bar)
Oil volume: 2 gallon (7.57 L)
Operating temperature: -40°F to 185°F (-40°C to 85°C)
Electric power required: 120VAC
Communications: Modbus RS485 protocall
Accuracy of measurement: +-1%
Response time: +-1%
Internal memory capacity: 6 months minute by minute