Advanced monitoring and control of sucker-rod pumping units
Overview

The Unico RPC Rod Pump Controller provides economical pump-off control of sucker-rod pumping systems. Using sophisticated modeling and control software and a powerful digital signal processor (DSP), the RPC controller computes surface and downhole conditions to best regulate the starting and stopping of the pump via a separate motor controller. Comprehensive monitoring and reporting capabilities provide real-time surface and downhole dynamometer plots, daily gauging, fault and event logging, a user-configurable data sampler, and more. Wireless, radio, cellular, and satellite options allow monitoring at any distance. With optional GMC® Web-based telemetry software, users can monitor multiple fields simultaneously from virtually anywhere in the world. RPC units are rugged and have been designed to withstand the harsh environments of the oil patch.

Features

Hardware

- 115/230 V AC supply input
- Optional 460 V AC supply input
- Weatherproof design
- Rugged Nema 4R polycarbonate enclosure
- Extended temperature range
- Backlit graphic display/keypad
- Mass memory option

Inputs/Outputs

- Three isolated analog inputs
- Two isolated analog outputs
- Twelve logic inputs
- Six logic outputs
- Four configurable I/O points

Sensors

- Polished rod load cell
- Beam position inclinometer
- Tubing pressure sensor option
- Casing pressure sensor option

Communications

- Wired local/remote serial ports
- ANSI and Modbus RTU protocols
- Bluetooth interface option
- MaxStream wireless radio option
- Cellular modem option
- Satellite communication option

Control

- Supports all SRP pump types
- Pump-off control
- Timer controller
- Automatic restart capability
- Utility rate saver
- Adaptive pump fill trigger level
- Automatic counterbalance check
- Oil/belt/gearbox service reminders
- IEC 1131 programmable logic
- Pumping system simulator

Displays

- Surface and downhole dynamometer graphs
- Predicted surface and downhole dynamometer graphs
- Counterbalance assistant
- Gearbox torque
- Rod velocity
- Rod position
- Rod load
- Pump velocity
- Pump position
- Pump load
- Pump fill
- Pump stroke
- Daily fluid production
- Daily leakage loss
- Daily average pump fill
- Daily average pump speed
- Pump intake pressure
- Discharge pressure
- Tubing pressure
- Casing pressure
- Fluid level
- Fluid flow

Data Collection/Reporting

- Well production/performance report
- Time-stamped user-definable data sampler
- Time-stamped event/fault logging

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Unico is a leading global innovator of motion-control solutions for industry. Founded in 1967, the company develops, manufactures, and services variable-speed drives, application-engineered drive products, integrated drive systems, and ancillary products that improve operations by increasing productivity, safety, and equipment life while lowering energy and maintenance costs.