JuraESP

ESP well management and analysis

For production engineers and production-management roles, JuraESP integrates existing production data and provides anomaly diagnosis, health alerts, and operating-optimization recommendations to support detailed ESP-well management.

Operating context

Managing ESP wells at scale

For ESP wells across multi-well blocks, production engineers must continuously screen operating conditions, locate anomalies, and formulate parameter adjustments.

Current workflow gaps

01 Data from multiple sources is dispersed

Production, equipment, and pump-inspection records are difficult to link

02 Decisions depend on individual experience

Root causes and parameter-adjustment plans are difficult to review

Expected deliverable

An anomaly-well list and parameter-adjustment recommendations

Capabilities and value

01 Reduce manual well-by-well screening

1. Monitor well-group parameters centrally and automatically screen priority anomaly wells so engineers can focus on the wells that require action.

02 Improve the quality of operating-condition analysis

2. Combine multiple parameters, mechanism-based rules, and current-card pattern recognition to help engineers determine the causes of anomalies.

03 Support production-enhancing and energy-saving optimization

3. Compare frequency and wellhead-pressure coordinated-adjustment options and track changes in production and energy consumption within field constraints.

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Workflow and application

Production engineer / Single ESP well or well group / Diagnosis and optimization

Inputs

SCADA real-time data

Production performance data

Equipment and pump-inspection records

Product workflow

1. Link data and screen priority wells
2. Mechanism-based and AI-assisted diagnosis and alerting
3. Parameter optimization and effectiveness evaluation

Outputs

List of priority anomaly wells

Diagnostic and alert information

Parameter-optimization recommendations

Production engineers review diagnostic and parameter-adjustment recommendations; field teams execute them according to procedures and continuously track the effects.

Application example

Operating optimization at an oilfield with more than 3000 ESP wells

Using more than 3000 ESP wells at an oilfield as the scope, the application aggregates production and well-history data; conducts macro assessment, optimized well selection, and coordinated frequency-wellhead-pressure adjustment; and produces parameter recommendations while tracking production and energy consumption.

Adoption and integration

Main modules: monitoring, operating-condition diagnosis, alerting, and operating optimization
Data requirements: SCADA, production, equipment, and pump-inspection data
Responsibility boundary: engineers review recommendations; field teams execute them according to procedures

Discuss a pilot around one well

Single-well diagnosis and parameter-adjustment demonstration
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