

ProdDiag for ESP — ESP Well Diagnosis



Electronic current cards are often used to identify how Electronic submersible Pumps (ESP) are working. ProdDiag for ESP uses neural network (NN) technology to compare prior current card readings to present readings as a means of determining whether problems exist and how to diagnose them. Using ProdDiag for ESP will ultimately help reduce production downtime associated to ESP failures.

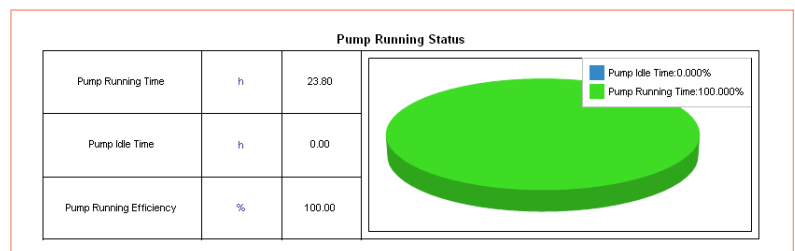
Main Functions

Convenient and flexible management of the performance samples curves

- 16 types of ESP performance sample curves provided
- Allows to create user-defined sample curves
- Supports picture and digital format

Performance diagnosis

- Diagnoses electronic current card data
- Recognizes electronic current card and transform it to the digital format
- Applies neural network technology to diagnose ESP performance
- Supports weekly and daily electronic current card analysis



Diagnosis Result

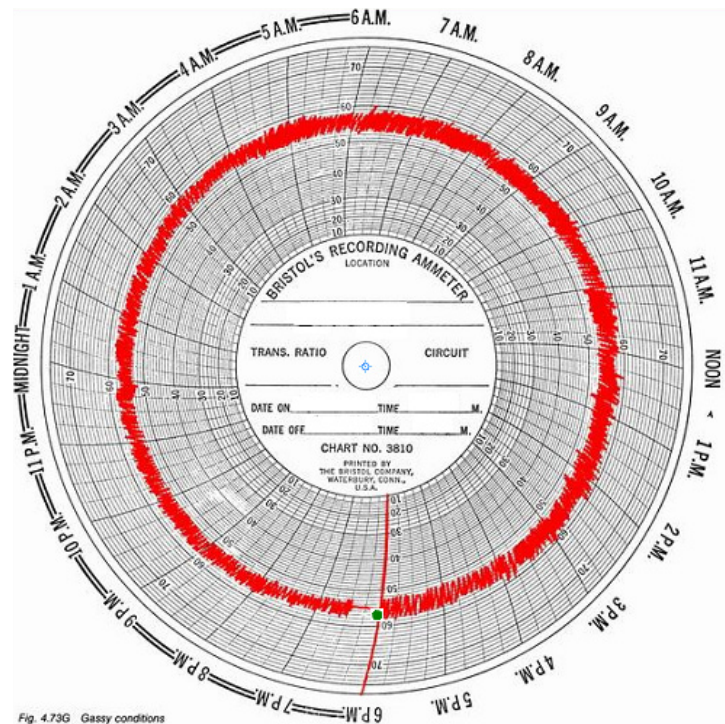
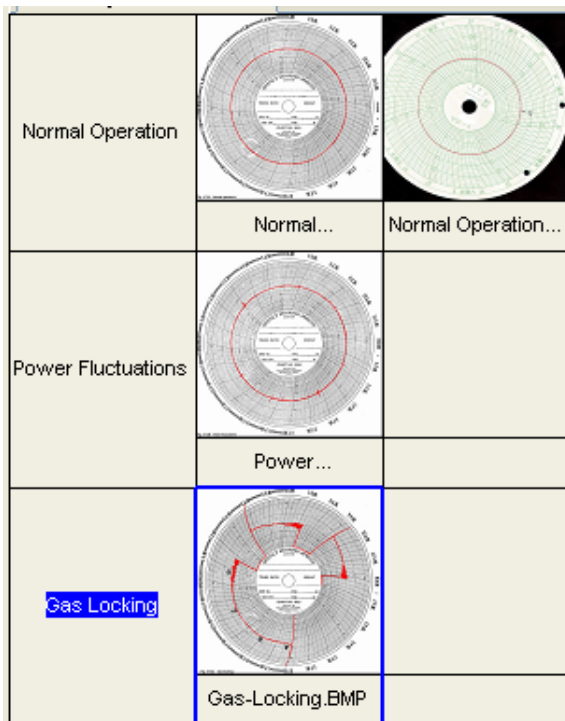
ID	Performance Type	Similarity	ID	Performance Type	Similarity
1	Normal Operation	0.006124	2	Power Fluctuations	0.015645
3	Gas Locking	0.006125	4	Pump Off	0.007833
5	Fluid Pump Off	0.011266	6	Short Cycle	0.006259
7	Gassy Condition	0.996232	8	Low Power Shutdown	0.006487
9	Safety Shutdown Failure	0.009455	10	Short Delay	0.004517
11	Overload Shutdown	0.023215	12	Debris Condition	0.004665
13	Manual Restart	0.010381	14	Loading Fluctuations	0.002734
15	Abnormal Current Chart	0.015457	16	Sand Condition	0.000298
Neural Network Analysis Result			Gassy Condition		



ProdDiag for ESP — ESP Well Diagnosis

Main Features

- Uses neural network technology to ensures accurate and reliable recognition
- Offers numerous current curve samples
- Easy and flexible operations
- Applicable to digital current data format



PEOffice® is a PC/network-based software platform for integrating oil and gas reservoir management, production analysis and design. PEOffice® provides systematic computations and comprehensive analysis for reservoir model management, reservoir performance analysis, production problem diagnosis, optimized design of production parameters and analysis of oil/gas gathering and transportation system. PEOffice is widely utilized by petroleum engineers onsite and in the back office to resolve production problems and to manage oil and gas field development.

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