

## **Improving Reciprocating Compressor Efficiency with Diagnostic Software that uses Site-specific and Real-time Data**

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Diagnostic software that continuously monitors and immediately analyzes reciprocating compressor performance has been developed and tested in a variety of field sites. Operating results have shown improved reliability and performance; higher flow rates over time and lower maintenance and life cycle costs. The software applies modified algorithms to actual, current operating data to accurately predict compressor performance and operation. The software instantaneously shows horsepower and cylinder utilization; abnormal temperatures; engine overloads; motor overloads; minimum rod reversal; high rod loads; volumetric efficiency; minimum net ratios and high blow by. The operator is immediately apprised of actions to take to enhance gas flow, reduce maintenance costs and prevent failure. This paper discusses the software performance; reviews the results from various applications; relates the results for operators, mechanics, engineers and financial managers; and discusses system improvements.