SAVE ENERGY

AIR COMPRESSOR – DEMAND OPTIMIZER

Smint TIQ

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BENEFIT'S - VALUE

- Real time compressor efficiency monitoring,
- Energy Consumption Vs Volume of Air Delivered
- Compressor Outlet Pressure Vs Demand Side Pressure
- Demand side pressure Vs Demand side flow
- Ambient Temperature Vs Air Pressure
- Ambient Temperature Vs Energy Consumption
- Humidity Vs Wet Bulb Temp. Vs Air Pressure
- Compressor Low efficiency alert,
- Compressor outlet approaching surge point warning
- Anti Surge Valve (ASV) activated
- Compressor Normal Operation
- Compressor outlet flow about to oproaching choke point.
- AIR Optimization
- Analyzing the data and Automatic Report Generation and Emailing.
- System Efficiency Reporting
- Flow volume quantity shall be used to calculate / quantify the main air distribution pipeline leakage.
- Maintains compressor output pressure constant irrespective of the down stream pressure.
- Manages the down stream pressure variation to the minimum level.
- Adjust the demand side pressure variation with fast response and maintains the demand side pressure within the narrow band.

Energy Saving ~8 to 22 %

- Due to reduction in the variation in the down stream pressure – the leakage level is reduced.
- The compressor pressure is maintained constantly irrespective of the down stream demand, this will reduce the air compressor stress level and ensures the longer life time.
- By implementing VFD retrofit with existing compressor with similar ADSO in the compressor outlet shall improve the overall energy saving.
- The Main (Compressor outlet) Demand Side Air Management System keeps the - storage reservoir pressure slightly above the demand side pressure requirements.
- Smint Air Demand Side Optimizer maintains the outlet pressure variation within the Minimum level.

- Increases the performance of the branch air requirement
- Decrease the air surge due to branch air requirement
- Decreasing the air pressure in the compressor outlet – Saves Air Energy
- The decrease in the branch side demand – directly saves compressor Air Energy

SALIENT FEATURES OF - ADSO

- Works with any types of Air Compressors
- Reduces surge Demand & Save Energy, 3 ~ 22 %
- Provides Constant Pressure at the End Use, within +/-1 psig (0.07 Bar)
- Fail To Open System with Auto bypass facility
- Improves control performance of VSD Compressors
- Real Time - Remote Monitoring and Performance analysis report
- ROI < 1 year 6 months

BENEFIT'S - VALUE

- Sizing of Air Storage Unit is according to demand requirements. An optimal air storage strategy will enable a compressed air system to provide enough air to satisfy temporary air demand events while minimizing compressor use and pressure.
- The correct type and quantity of air storage depends on air demand patterns, air quantity and quality required, and the compressor and type of controls being used
- To properly utilize the stored compressed air the pressure in the receiver needs to be stored at a higher pressure than the system pressure.
- This allows the pressure in the demand side to be reduced to a stable level that minimizes actual compressed air consumption. Pressure Flow Controls are added after the primary receiver to maintain a reduced and relatively constant system pressure at points of use, while allowing the compressor controls to function in the most efficient control mode and discharge pressure range

INFORMATION RETRIEVAL

- Browser based monitoring and control
- Web, Mobile – Monitoring system
- Alert, event – messages
- Automatic REPORT generation and emailing
- Discard based Chatbot system
- Without visiting the web service – retrieve any information through discard application.
- AI based performance report and emailing
- Thresholds based alerts
- Trend, event, history – analysis
- Real Time Monitoring and Control