



Sparks Dynamics and Stanley Black & Decker find Money in Compressed Air System Inefficiencies, Results in a \$15,000 BGE Energy Rebate

Customer Profile

Founded in 1843, Stanley Black & Decker is the world's largest tools and storage company, the world's second largest commercial electronic security company, and a world leading provider of engineered fastening systems, with unique and powerful growth platforms in the oil & gas and infrastructure industries. Stanley Black & Decker is committed to improving the sustainability of their operations, their products, their communities, their suppliers and their customers through the corporate ECOSMART™ strategy - identifying ways to ensure it stays ahead of climate-related influences and reduces the environmental impact of its operations. Stanley Black & Decker's Hampstead plant typically operates three shifts per day, 360 days per year. They contacted Sparks Dynamics to implement an Industrial Internet of Things (IIOT) project to reduce energy expense and enhance reliability.



"Implementing the Sparks Dynamics ReMASTER Cloud Monitoring and Analytics Solution will save our plant over \$25,000 in compressed air expense annually"

-Ann Fagan, Plant Manager

Stanley Black & Decker, Hampstead, MD

The Solution

The ReMASTER Compressed Air Monitoring system was installed in August 2016 to monitor the Hampstead plant's two 200 HP compressors. This system is capable of monitoring compressed air system key performance indicators (KPIs) on a continuous basis and streaming that information to a cloud server which can be accessed by Stanley Black & Decker personnel and Sparks Dynamics. This information was collected into a database which was scanned by data analytics to detect anomalies, with alarms and graphs available for viewing using Sparks Dynamics' ViewMaster Software. The average annual compressed air electricity expense was estimated to be approximately \$140,000. This is based on an electric rate of \$.08 per KWh and an estimated compressed air energy consumption of 1,768,000 KWH. It was discovered that compressed air flow spikes were due to excess high pressure air used to blow off/ clean machines. The implementation phase of Energy Conservation Measures (ECMs) for the Compressed Air System included:

- Identification and correction of misapplications of compressed air to include- air guns, excess blow offs and pressure regulator settings
- Identification and repair of compressed air leaks on an ongoing basis
- Control System review and potential reduction of system pressure and fine tuning of compressor pressure set points to maximize efficiency.

The Results

Pre and Post ECM system monitoring has verified that the implementation of the ECMs is saving over \$25,000 and over 300,000 KWH per year. These savings will be increased as the continuous leak management policy is implemented. Analytics have been developed that continuously run on the data streams to ensure the system maintains an efficient performance envelope.

Contact Us

To discover how we can put our expertise to work for you, call us today at **1-443-543-5420** or email us at **Info@sparksdynamics.com**

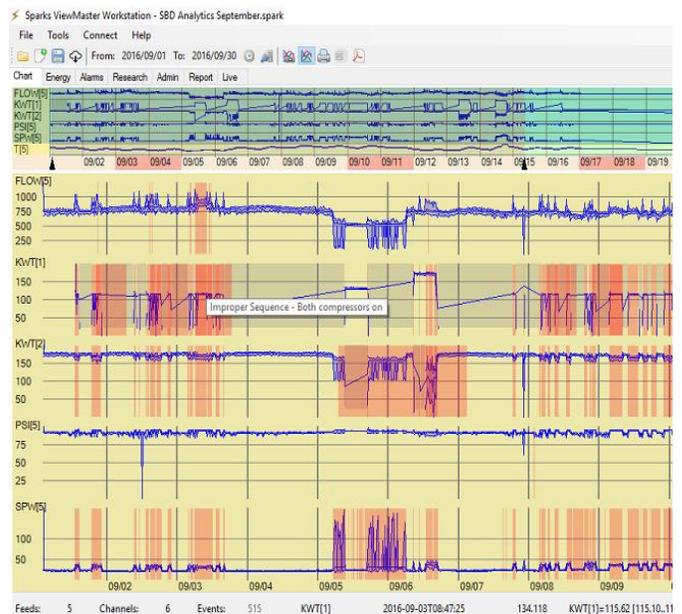
Technical Scope

ReMASTER Remote Monitoring System

- Combination mass flow, temperature, and pressure meter
- Multi channel KW meter
- Honeywell Tridium SCADA system
- Modbus integration to measurement devices and control panels
- KPIs Streamed to Sparks Dynamics virtual servers running on Microsoft Azure cloud application platform
- Specially developed compressed air system analytics
- ViewMaster Energy Management Analysis Tool
- Automated Operator Log Generator

Benefits

- Reduction in Energy Consumption by 300,000 KWH
- Energy cost savings of over \$25,000 achieved per year
- Received \$15,000 BGE Energy Rebate
- Less than a six month simple payback



Sparks Dynamics ViewMaster Software



Sparks Dynamics is a compressed air management company that provides audits, remote monitoring and analytics services that notify and recommend corrective actions, enhanced control algorithms, equipment sourcing and energy financing.

www.sparksdynamics.com