

Wireless Power Meter Enables Commercial Metals Company to Reduce Maintenance Costs and Avoid Shutdowns

APPLICATION

Performance monitoring of three 450 HP Air Compressors

CUSTOMER

Commercial Metals Company (CMC), South Carolina.

CHALLENGE

CMC joined the US Department of Energy Better Plants program in 2012 and has been undertaking many energy monitoring and efficiency projects. The energy efficiency efforts have included installing wireless instrumentation infrastructure at its South Carolina Steel Mill. As part of the ongoing expansion of the wireless instrument network, Emerson Wireless Power Meters were installed to monitor electricity consumption on three compressors to understand and resolve an unstable air supply issue. The team suspected that the backup compressors operated a disproportional amount of time to maintain system pressure but had no recorded telemetry to confirm its suspicions. In addition, CMC experienced numerous compressor and compressor component failures as well as downstream equipment failures related to lack of supply air pressure.

SOLUTION

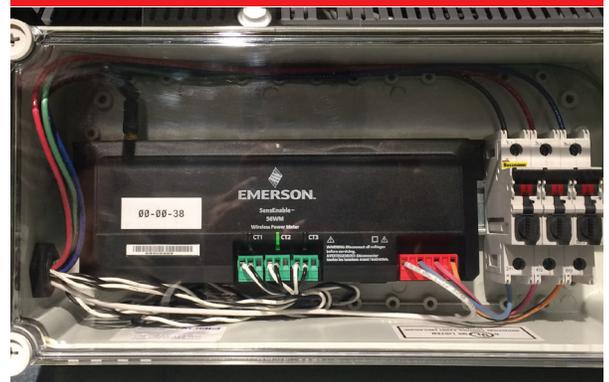
Three WirelessHART™ Power Meters were installed to monitor backup compressors. The Power Meter's small physical footprint and Emerson Wireless technology enabled easy installation and reliable, secure communications. The ability to report and provide alert notification of energy information in real time provided CMC's engineers the information to make better, more actionable decisions. The data indicated that one of the compressors was running 80% of the time while the other two combined were only operating 20% of the time. The Power Meters information was combined with air pressure trends in the SCADA system to identify additional opportunities for operating improvement. With this insight, CMC balanced the load between all three compressors, enabling them to reduce maintenance costs and avoid costly shutdowns.



RESULTS

The Power Meter was able to:

- Identify an unstable air supply issue
- Prove that one compressor was running at 80% while the other two were only handling 20% of the load
- Enable the team to balance the load, reduce maintenance costs and helped avoid costly shutdowns using the real-time insights identified by the Power Meter



Top Image: WirelessHART Power Meter

Bottom Image: Installed WirelessHART Power Meter

For more information visit Emerson.com

