



JUNE 8-11

2020 SUMMIT

A Virtual Leadership Symposium

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U.S. DEPARTMENT OF
ENERGY



Best of the Betters: 2020 Better Project and Better Practice Presentations

Wednesday, June 10
11:00 am-12:30 pm ET



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Ozinga Brothers

Submit Questions

www.slido.com event code **#bbsummit**
then go to room **“Best of the Betters”**

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SEU Datalogging Project



Potential SEU's

- Air Compressors
- Conveyors
- Central Mixers
- Dust Collection
- Variety of small HP pumps/blowers



FIELD VALIDATION AND DIAGNOSTIC EQUIPMENT PROGRAM



Accurate, reliable measurements of operating data is a critical part of energy efficiency at both the equipment and system level. But plant personnel do not always have access to the necessary instruments, may not know the right tool to use, or lack sufficient justification to purchase one. The Field Validation and Diagnostic Equipment Program helps Better Plants partners address these issues. **The program provides partners with access to various instruments to measure their energy consumption.** Historically, this equipment was used by Experts for In-Plant Training. Now, partners can directly access equipment free of charge.



Instruments Available to Borrow:

Anemometer	Power Logger
Combustion Analyzer	Strobe Tachometer
Digital Manometer	Ultrasonic Leak Detector
Infrared Camera	And Many More!

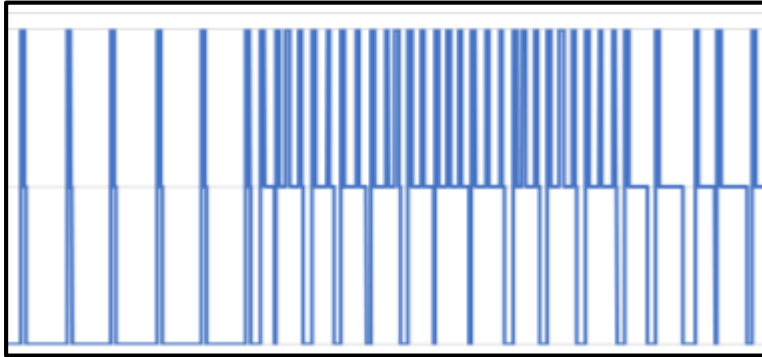
In Picture: Workers using infrared camera at the Charter Steel, Saukville Plant.

Compressor Controls: Load/Idle/Stop

Before:



After:



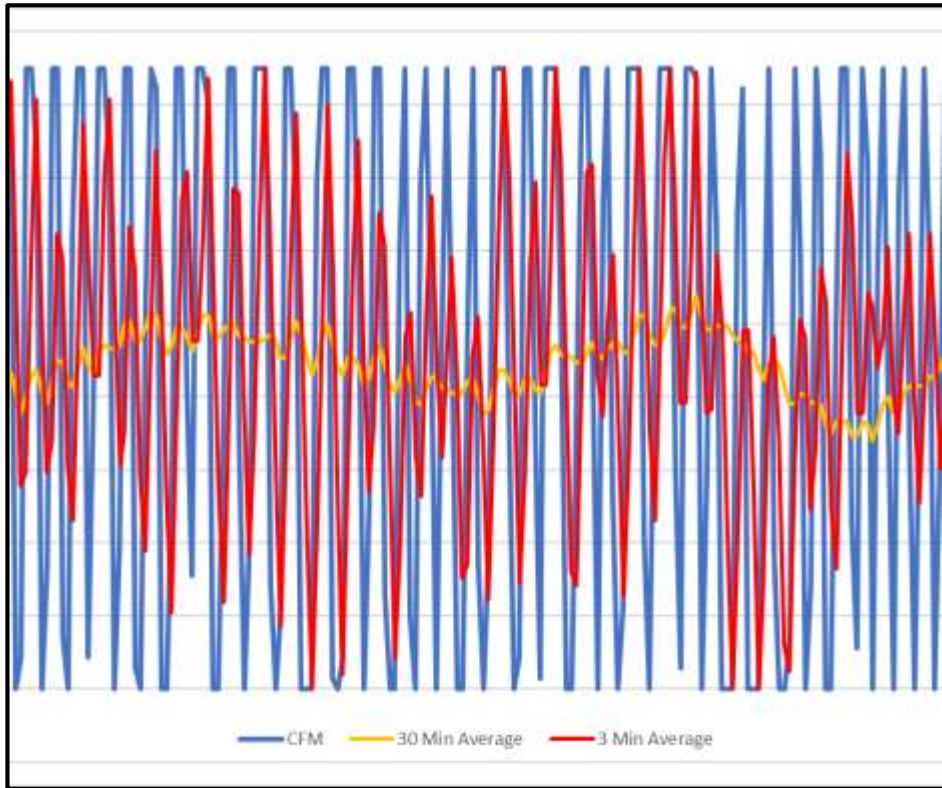
Changes:

- Low pressure set point reduced by 15 PSI
- Compressor control mode changed from Load/Unload to Load/Unload/Stop

Results:

- 68% reduction in compressor run time
- 65% reduction in compressor energy intensity

Air Usage Modeling



- Estimate CFM output by tracking compressor run time
- Datalogging shows compressor is undersized for plant
- Compressor will be moved to smaller plant with failing compressor and replaced with properly sized machine

Conveyor Utilization

Charge Conveyor			
Unloaded Time	Loaded Time	Motor Starts	Utilization Ratio
1.88	0.35	13	16%
1.93	0.24	17	11%
2.41	0.28	19	10%
1.55	0.27	8	15%
1.23	0.19	10	13%
1.67	0.79	9	32%
0.50	0.68	9	58%
0.01	0.23	3	94%
0.17	0.25	6	60%
0.85	0.13	5	13%
0.55	0.07	5	12%
1.78	0.20	11	10%
2.18	0.25	11	10%
0.23	0.01	0	4%
16.94	3.92		26%

- Conveyor is on manual switch, left on if plant is busy
- Average conveyor utilization is 26%
- Will install soft starter and program conveyor controls into plant's batching sequence

Next Steps

- ~~Air Compressors~~
- ~~Conveyors~~
- Central Mixers
- Dust Collection
- Variety of small HP pumps/blowers

