

Dust Collector Variable Frequency Drives & Controls

Full Scale Implementation OR Pilot Scale/Study

1. Description of the project: What is the issue and how did you fix it?

We installed variable frequency drives on the drive motors of our dust collectors to address inefficient dust collector operation.

2. Environmental Benefits: Conservation of raw materials or energy, reduction or elimination of emissions, wastes, toxics, water discharges, etc.

We accomplished energy conservation to the tune of roughly 1.5 million kWh annually. These upgrades were applied to 3 baghouses for a total of 240,000 CFM of ventilation control.

3. Other Benefits: Productivity, health and safety, employee morale, etc.

Visited by Pennsylvania Department of Environmental Protection Secretary and others to celebrate the project.

4. Cost Savings: Capital cost, operating cost, ROI or other pertinent cost information.

We received a rebate from Pennsylvania's Act 129 program for \$122,000. Annual savings are around \$100,000.

5. Applicability to other foundries and additional Comments

Yes

6. Applicable Environmental Categories and Foundry Processes. Select all that apply.

Environmental Categories

- Carbon (GHG) Emissions Measurement and Reduction
- Air Quality Water Use and Discharge Waste Management
- Beneficial Use Stormwater Material and Resource Conservation
- Community Engagement

Foundry Process(es) Impacted

- Melt Pour Mold Core sand system/reclaim
- Shakeout Heat Treat Quench Finishing Shipping
- Maintenance Pattern Shop Casting Design
- Management Systems and Metrics
- Other, explain:

7. Add photos to enhance your application, if applicable.