



Steelworks Pump Process Streamlining Reduces Carbon Footprint and Increases the Bottom Line

Project scope

A UK-based steelworks leveraged Flowserve's Energy Advantage Program (EAP) to identify opportunities to maximize uptime and Mean Time Between Repair (MTBR), while reducing energy and maintenance costs. EAP engineers conducted an extensive engineering assessment on several key hot rolled products for the steelworks' water pump applications, including:

- Dirty water
- Flume flushing
- Run out Table supply
- Run out Table return
- Roll coolant
- Furnace feed
- Cross Spray
- Scrubber System

Methodology

Using Distributed Control System data, in-situ performance testing and system walk-downs, Flowserve EAP engineers established actual needs for each of these pumping services. By taking a holistic view of the complete system requirements, the team identified improvement opportunities related to sub-optimal thermal balances, excess throttling and off-design operation. Extensive Failure Mode & Effects Analyses were conducted for each of the pumping services where Flowserve's expertise as a pump and control valve OEM helped define numerous design, operation and maintenance improvements to further reduce the total cost of ownership.



Quantified and Qualified Benefits

The Energy Advantage Program improved the steelworks' safety, ergonomics, and MTBR; it also reduced unplanned downtime, water, and chemical usage.

Estimated Annual Savings/Reductions

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|---------------------|-----------------------------|
| • Power Consumption | 7200 MWh |
| • CO ₂ | 4320 mt |
| • Electricity Costs | £431,000 \$520,000 |
| • OPEX | £242,000 \$292,000 |

Contact us for further details - EnergyAdvantage@flowserve.com