
WARRINGTON, UK, JUNE 19, 2012

ABB drives cut £10,000 off energy bill for steel maker

An ABB industrial drive is saving nearly £10,000 a year on energy costs for a steel production plant in South Yorkshire.

The Tata Steel plant at Stocksbridge supplies steel for the aerospace, oil and gas industries amongst others. An important part of the finishing process is the scarfer. Taking in lengths of steel ingots/blooms up to 6 metres long and weighing up to five tons, the scarfer uses a propane burner to remove impurities from the steel. The impurities, in the form of waste gases, are then removed by an exhaust fan, run by a 132 kW motor.

As well as saving energy costs of around £9,700 per annum, the new drive application also saves 82,500 kg of CO₂ and cuts energy use by 165,000 kWh. Following installation, the ABB drive achieved a payback time of less than one year.

Originally, the fan was run constantly at full speed, with its output constricted by a damper. This was controlled by a PLC that signalled the damper to open when more air flow was needed, when scarfing was in progress. This was wasting a lot of energy and was identified by Patrick Frain, Tata's electrical section engineer for the billet mill, as a prime candidate for a variable-speed drive. "Halcyon Drives (an ABB Drives Alliance member) was recommended to us," says Frain.

Halcyon Drives proposed a 132 kW ABB industrial drive. This is set to run at two speeds, 30 percent on standby duty and 100 percent during scarfing. Running at 30 percent means there is minimum delay when the motor is ramped up to full speed to extract the gases from the scarfer.

Tata needed the drive panel to be housed outside near the scarfer, as the distance to the existing plant room would mean a prohibitively long cable run. To protect the drive from the weather, Halcyon constructed a panel to IP55, incorporating internal thermostatically controlled heaters to prevent condensation. The panel features a side mounted air-to-air heat exchanger, for dispersing heat generated from the inverter and protection from high summertime ambient temperatures.

"The project has been a great success and continues to provide significant energy and CO₂ savings for the business," says Frain.

ABB (ABBN: SIX Swiss Ex) is a pioneering technology leader in power grids, electrification products, industrial automation and robotics and motion, serving customers in utilities, industry and transport & infrastructure globally. Continuing a history of innovation spanning more than 130 years, ABB today is writing the future of industrial digitalization with two clear value propositions: bringing electricity from any power plant to any plug and automating industries from natural resources to finished products. As title partner in ABB Formula E, the fully electric international FIA motorsport class, ABB is pushing the boundaries of e-mobility to contribute to a sustainable future. ABB operates in more than 100 countries with about 147,000 employees. www.abb.com



Caption: An ABB industrial drive is saving nearly £10,000 a year on energy costs for Tata Steel's plant in South Yorkshire.

—

For more information please contact:

Layla Hewitt

Marketing Communications

Phone: 01925 741517

Email: layla.hewitt@gb.abb.com

ABB Ltd.

Daresbury Park

Daresbury

Warrington WA4 4BT

Emma Jenkinson

Armitage Communications

Phone 020 8667 2218

Email: emma.jenkinson@armitage-comms.co.uk