
WARRINGTON, UK, FEBRUARY 12, 2010

ABN saves energy costs with ABB drives

Animal feed manufacturer, ABN, is saving over 30% of the power consumed on the applicable motors on its electricity bill for the manufacture of pig and poultry feed products following the installation of 33 ABB low voltage AC drives.

The leading British manufacturer of pig and poultry compound feed, ABN produces 1.7 million tonnes of feed per annum from its ten mills located throughout the UK. The company wanted to look at the energy efficiency of some of its key processes and asked ABB Drives Alliance Partner, Inverter Drive Systems (IDS) to investigate.

ABN's Supply Chain Director Alex Masih says: "We particularly wanted to look at cooler fans, grinders, grinder extractor fans and air compressors. IDS promised us they could achieve significant energy savings."

The existing machines had either no control or a simple damper control on the fan applications. IDS conducted an energy survey at seven of ABN's UK mills involving temporary installation of ABB low voltage AC drives to determine the potential savings. This resulted in a comprehensive spreadsheet with costs, savings and payback times. Power monitoring was carried out before and after the drive installation to verify the predicted savings. The survey revealed a potential to save around 25 percent of the power on the recommended applications.

Following the survey, 33 ABB industrial drives were installed at the mills, with ratings ranging from 7.5 to 200kW. Actual power savings are in the region of 30 percent, while work on variable speed control of cooler fans at the company's Northallerton site has shown potential for a further 23 percent saving. This gives a pay back period of two years.

As well as the power savings, the drives have produced a number of other benefits for ABN. Says Masih: "IDS also helped us achieve better product size control on the grinders. The beaters in the grinding machines produce different sized stock depending on the speed, so using variable speed drives also allows us to vary the size of the feed to suit customers' needs. Using the ABB solution allowed us to retrofit the drives onto our existing grinders rather than buy new variable speed grinders."

Because of the dusty atmosphere produced by the mills, the drives were supplied protected to IP54, with those in particularly dusty areas enclosed in panels offering further protection. Soft starters also allow gradual start up of the grinders. This saved energy by allowing the grinders to be turned off when not needed and turned on again without risking an overload. It also brought a quieter working environment to the production areas.

The drives' own soft start program was also used to reduce any start-up stresses.

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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: Animal feed manufacturer, ABN, is saving over 30% of the power consumed on the applicable motors on its electricity bill following the installation of 33 ABB low voltage AC drives.

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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