
WARRINGTON, UK, OCTOBER 19, 2011

Pet food company set to save £26,000 per year

ABB high efficiency IE3 class motors are to save a manufacturer of high quality pet foods £26,000 on energy costs for a new odour control facility.

Golden Acres Petfoods, based in Lancashire, makes 5,000 different premium pet food products. As part of an expansion plan, the company will raise production from the current 1,500 metric tons of dry extruded pet food a week to 2,500 metric tons and needed more capacity to extract the hot odorous gas produced during the cooking process.

The company has built an extraction plant that takes odours from the process lines as well as providing general extraction for the production buildings. Three fans have been placed in a purpose built fan house. Two of these fans handle the extraction of the process gas and are powered by two ABB IE3 motors, one of 250 kW, the other of 185 kW. All the building ventilation volumes are brought together to a single fan powered by a 250 kW ABB IE3 motor.

These two airstreams, process gas and building vent air, are brought together into a concrete transfer duct. Here a further three fans, powered by three 110 kW ABB IE3 motor, blow the process gas and building vent air through the wet scrubber.

When fully operational, the system will extract 500,000 m³ of air from the factory every hour.

Ian Barnes, project manager in charge of the development of new buildings and process plant on the site, says: "As well as being required under DEFRA regulations for the pet food industry, we are also keen to be a good neighbour to people living nearby. We proved the technology using a pilot wet scrubber and bio-filtration unit and the chosen technique is approved by the industry as the best available."

The ABB motors represent the first large scale use of IE3 standard motors in the country. Up to 96 percent efficient, they exceed the recently introduced EU MEPS (Minimum Energy Performance Standard) requirements.

Jayne Whittaker, Engineering Director of Golden Acres, explains how she came to recommend ABB IE3 motors for the fans: "Our fan suppliers Halifax Fan originally offered standard efficiency motors. With an energy usage of 908 kW, the total running cost per year would be £411,860.

"We were keen to save as much as energy as possible, so Halifax Fan requested to include ABB IE3 motors. The higher efficiency of the IE3 motors gave a lower energy usage of 851 kW, producing a total running cost per year of £386,013, a saving of nearly £26,000 a year over the standard efficiency solution.

The payback is just under three years when the ECA is taken into account.

"With the high electrical demand of the new production lines, the new facilities will require a 6 MVA supply," says Barnes, "so we are obviously keen to keep our electricity use as low as possible."

Graeme Mount of Halifax Fan says: "Golden Acres was keen that the fans were efficient as possible, so we provided extra high efficiency fans that provide a large air displacement at a slower speed, improving efficiency through lower frictional losses."

Halifax Fan also ensured that the process fans were sized to meet the exact need of the process, allowing the frame size of the fan motors to be kept as low as possible.

“Another factor in favour of IE3 motors is that ABB motors have a much higher build quality and therefore greater service life than standard motors, in addition to being eligible for the Enhanced Capital Allowance,” says Whittaker. “The ABB motors are well suited for inverter operation. Large inverter driven motors require non-conducting bearings and insulation profiles to withstand the additional thermal loads at low speed. Other companies could not give us the same assurance.”

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: ABB high efficiency IE3 class motors are to save a manufacturer of high quality pet foods £26,000 on energy costs for new odour control facility.

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