
WARRINGTON, UK, FEBRUARY 15, 2006

Energy from waste plant saves power with ABB drives

A waste incineration facility in London has reduced the electricity consumption of its boiler fans by over 50 percent since installing ABB drives.

London Waste's plant at Edmonton, in North London, receives domestic waste from a number of North London local authorities, as well as commercial and clinical waste, and uses this as fuel to generate electricity.

"The fans that bring air into the boilers to assist combustion were driven by 735 rpm slip ring motors running at full speed, with the airflow controlled by pneumatically actuated dampers," explains Richard Hobson, Electrical Engineering Manager at the plant. "However, the type and age of the equipment made the airflow difficult to control, leading to large increments between damper positions."

As part of the company's programme to improve environmental performance, Hobson approached ABB Drives Alliance partner Mid Kent Electrical (MKE), as one of a number of companies to look at improving the process by installing variable speed drives. Following an energy audit of the application, MKE proposed controlling the motor with a 55kW variable speed drive from ABB. This form of control would remove the air damper in favour of variable speed of the fan motor. To reduce costs, Hobson asked MKE to use the new drive with the existing motor with its slip rings linked out, rather than replacing the motor.

An energy audit was carried out to compare the new control equipment with the old one. The result of the audit showed that energy consumption had been cut by more than 50%, giving an expected payback of less than two years based on current consumption, as well as reduced CO₂ emissions.

MKE supplied a turnkey package with all components, installation and modification to the existing switchgear and motor. In addition, MKE supplied training at its Sittingbourne works for London Waste employees, to familiarise them with the new ABB drive.

Since the first installation, two further drives have since been installed, providing better control and greater savings.

Under the new variable speed control, the new ABB motor needs to draw only 22A compared with the 53A drawn by the old motor, figures confirmed by Hobson's own tests. "Our operations staff also report that control of the boiler is now much more precise," says Hobson.

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 variable speed drives are saving over 50% of the energy drawn by the boiler fans at a waste incineration facility in North London.

—
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