

PRESS INFORMATION

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Birmingham-based B Mason and Sons Ltd, is saving over £16,000 per annum in energy costs *on just one 250kW motor*, since installing an inverter drive package from Deritend. The package, including the cost of the new Siemens MicroMaster inverter, refurbishment of the 250kW motor, and supply and installation of LV equipment, cost £17,000, providing a 12.5 month payback for B Mason, with subsequent energy savings going to offset any future rise in the company's energy costs.

B Mason is the UK's largest manufacturer of precision rolled copper and copper alloy strip, and a major supplier to demanding markets worldwide. In addition to continuous improvement of its plant and processes, the company has a commitment to responsible environmental practice. Recently this commitment led to an energy audit in its strip plant. The audit, undertaken by Deritend, quickly identified one major area, fume extraction, where substantial energy savings could be made.

B Mason has a number of furnaces, all of which use the same extraction and filtration plant. The plant is run from a 250kW motor, which, until recently, was operated at full speed 7-days a week. However, this continuous operation turned out to be unnecessary as all furnaces are not always required to be in operation at the same time.

Deritend applied an energy meter to the 250kW motor and calculated that by reducing the supply frequency by 10%, or 5Hz, substantial savings on the motor operation of around 20% could be achieved. **...more...**

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However, reducing the speed of the motor with its existing starting arrangement was not possible, so a decision was taken by Ray Ullah, B Mason's Maintenance Engineering Manager, to put in for capital to uprate the system to inverter control, using as justification the calculated savings and projected payback data supplied by Deritend.

Following project cost approval, the 250kW motor was removed and refurbished; the motor was rewound specifically to optimise it and protect it for inverter operation. This included the fitting of an insulated bearing. In addition, the motor windings were cleaned re-insulated and fully tested. At the same time Deritend personnel – working offsite so as not to interfere with production - installed the Siemens inverter and new contactors into an additional control panel and provided new cabling.

The total job, including motor refurbishment, and panel assembly, was completed by Deritend during B Mason's 9-day shutdown to minimise disruption. The panel was installed by B Mason, and Deritend then commissioned the drive.

Subsequent to the installation, an energy meter was fitted to the 250kW motor and monthly readings taken. These revealed that the substantial savings calculated by Deritend were actually being realised. Previous to the installation of the inverter system, the yearly running cost of the 250kW motor was £79,680. With the inverter system in place, and the supply frequency reduced by 10%, this yearly figure has been reduced to £63,360, a saving of 20.48% in energy costs. This saving is substantial enough to give B Mason a payback period of 12.5 months for the inverter based system. The savings thereafter will be a boost to the company's bottom line.

"It has performed exactly as promised, and we are really pleased," said Ray Ullah. "Deritend told us that we could expect energy savings of around 20%, and that's just what we got. They also handled the project really well in the pressurised 9-day period of our shutdown. Then they suggested other ways that we could save energy by using different drive belts and the like. All in all a very successful project, and one that not only benefits us as a company, but also the environment, as it helps us to reduce our carbon footprint."

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The Deritend Group Ltd

The Deritend Group Ltd provides UK industry with the widest range of maintenance and management services designed to optimise business activities, improve efficiency and reduce costs.

The Group operates in eight areas of competence: customised asset management, electro-mechanical, maintenance, energy management, product sales, pre-formed windings, induction services and automation & control. These services are brought to customers through a network of national service centres. Staffed by trained professionals, the centres are on hand 24- hours-a-day, 7- days a week to respond to customer needs and provide effective maintenance solutions.

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For further information contact: Helen Holman, Marketing Manager, The Deritend Group Ltd, Cyprus Street Off Upper Villiers Street, Wolverhampton, West Midlands WV2 4PB Tel: 01902 – 392315 E-mail: hholman@deritend.co.uk Web: www.deritend.co.uk

Issued by and electronic versions available from:

Bob Dobson, BDL Matrix Marketing, High Bank, River, Petworth GU28 9AX
Tel 01798 861677 email: bdl.studio@virgin.net www.bobdobson.com