

BUCKING THE TREND

and backing British manufacturing

After the success of its debut show at Nemex in April, Bowers Electricals has just been nominated for an award. In this article Electrical Engineering discovers why the transformer business is reaping the rewards of being (and backing) British

With its headquarters in Derbyshire, Bowers Electricals is the UK's largest manufacturer of energy saving, power and distribution transformers.

Designing and manufacturing here in Britain, the company's projects include involvement with everything from small industrial developments to major infrastructure schemes including large scale power stations, government buildings, hospitals, schools and universities, wind and solar farms and work throughout the heavy power engineering industry.

Now part of the Bowers Group, with 80 staff and a £12m turnover, Bowers Electricals supplies new and refurbished power and distribution transformers, HV and LV switchgear and all manner of associated products and services. In April, for the first time in its history, the company exhibited at Nemex and has since been shortlisted for an award which recognises businesses that show excellence in manufacturing.



KEY TO SUCCESS

A vital part of Bowers' success, according to managing director Michael Bowers, is the firm's mix of high tech British heritage and customer service.

"We're fiercely proud that, nearly 70 years since the firm started out, we're still a growing and developing business and without a doubt it's down to the people whom we employ and the company ethics," he said.

"Manufacturing standards here in the UK are among the best in the world and



we're quite unusual in the transformer industry to be making all of our equipment in England, and relying on British materials and suppliers whenever we can. It's not necessarily the most cost effective way to work but with it you get quality and that's precisely what our customers are looking for."

Over the years the team at Bowers has expanded its skillset so that it now doesn't stop at manufacturing – it also offers a full turnkey operation that includes the overhaul, rewind and repair of customer property, ongoing service and maintenance, and expert project management of all developments, regardless of size.

"As well as increasing the breadth of services that we offer, we've also had to stay on the ball in terms of the environment," added Bowers. "With rising electricity prices and growing pressure to reduce carbon emissions, all businesses are looking for cost effective solutions to reduce their energy consumption and our transformers are made with this in mind. Replacing a standard transformer with a state of the art Bowers transformer not only reduces the amount of energy wasted but, in turn, lowers carbon emissions and reduces operating costs."

A combination of the highest grade materials available, together with the most technologically advanced manufacturing techniques, means

Bowers' transformers can save up to £115,000 over the course of a unit's average 25 year lifespan.

THE RANGE

Designing and building transformers up to 25MVA at 33,000V at its recently expanded headquarters in Heanor, Derbyshire, Bowers Electricals uses its in-house facilities and expertise to offer bespoke transformer solutions, which are particularly useful when space is at a premium.

Its range includes affordable and compact standard distribution transformers, the efficient super low loss BEST range and, new for 2014, an amorphous core collection.

The BEST range is the company's flagship. It launched at the beginning of 2010, with the first unit being installed in a large National Trust property.

Featuring an alternative to voltage optimisation – in the form of a standard six position tap changer which is built-in to allow fixed voltage adjustment of up to 7.5% – the BEST range promises a drop in energy losses from the moment it is switched on. It does so thanks to Bowers' use of the highest grade of commercially available low loss core steel and high grade low resistance copper, as well as the use of highly specialist winding techniques – including wire, strip and foil winding.

This combination of materials and expertise enables a substantial reduction in both no load and load losses, when compared to a standard transformer. One of the range's greatest benefits is its compact size too, and if you own a premises with high utilisation factors, don't be surprised to see your electricity bills drop by around £4,500 a year – compared to an equivalent kVA standard transformer – nor if you recover the supply and installation costs in as little as two years.

Above: designing and building transformers up to 25MVA at 33,000V at its recently expanded headquarters in Heanor, Derbyshire, Bowers Electricals uses its in-house facilities and expertise to offer bespoke transformer solutions, which are particularly useful when space is at a premium



Above: managing director Michael Bowers (left) with his father David, the company chairman

Left: a new 8MVA 11kV to 69kV step-up grid transformer installed at a solar farm in Wales

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