Growing success for electric melting specialist

UK-based Electroglass reports continuing record demand for its all-electric glass melting, boosting and conditioning systems. Richard Stormont and Grahame Stuart spoke to Glass Worldwide about the company’s growing international success.

At the forefront of electric glass melting technology since 1976, Electroglass has been instrumental in the development, design, engineering and supply of electric glass melting and conditioning systems for customers throughout the world. Led by the pioneering expertise of Fred Scarfe, the company’s founders and their successors have built a business that retains the industry’s respect for its knowledge and values 37 years after its creation.

Fred Scarfe founded the business with his brother Jack and Jack Alcock, together with three employees. He spent his entire working life in the glass industry, initially with Beatson Clark, then accumulating 20 years’ experience in electric melting, before founding Electroglass.

Having first entered the field of electric glass melting in 1970, current Managing Director, Richard Stormont joined Electroglass in 1989 and gradually assumed responsibility for running the business. He became a Director in 1990 and has been Managing Director since 1995.

EXPERIENCE MATTERS
Following Fred Scarfe’s retirement and sad death in 2003, Electroglass has managed to retain the feel of a family firm. Impressively, within the past decade, retirement has been the only justification for a member of staff to leave the Benfleet-based organisation. According to Richard Stormont, it is an important advantage that customers are still in touch with the same individuals who commissioned their furnaces 10 or 15 years ago, offering a real degree of continuity. “For example, we are quoting for an important furnace project at the moment and the customer is asking about our historical experience and the background of our engineers” comments Mr Stormont. “When setting out the impressive number of years the key six or seven people involved in the project have been at Electroglass, it became clear that even our newest recruit on the project side has been here for more than five years.”

In total, Electroglass currently employs just fewer than 30 people at its Brunel Rd premises, which occupy an area of 2500m² on the Manor Trading Estate. The company’s longest serving employee joined the company straight from school in 1986.

RECORD PERFORMANCE
A record turnover has been achieved for each of the last two years, thanks largely to the success of Electroglass all-electric melting systems, which have overtaken boosting as the company’s biggest profit contributor. Richard Stormont says that electric boosting equipment orders have also remained strong, however, including a major recent project in Portugal that increased a glass container boosting system from a previous 2.4MW up to 4.5MW. In addition, a complex multi-zone boost system is currently under manufacture for a glassfibre plant in China and smaller systems for Russia and elsewhere.

All-electric forehearth at HITE Industries in South Korea.

Boost system transformer units under assembly.
“The other aspect of electric boosting is the choice a glassmaker has between building a large fuel- or oxy-fuel-fired furnace without boost or a smaller furnace with boosting” explains the Electroglass Managing Director. “There is real interest in the capital cost benefits and operating flexibility of the latter option but again, because of the worldwide economic climate, few new furnaces are currently being built.” Mr Stormont remains confident, however, that boosting technology is definitely not on the way out. “It remains far cheaper to install and run an efficient boosting system to increase capacity, rather than building a new furnace” he maintains.

The company believes that once the industry emerges from recession, there will be an important role for larger boosting systems to play on smaller fuel-fired furnaces especially. “People will acknowledge, for example, that if a total furnace capacity of 300 tonnes/day is required, it can be better to have a 200 tonnes capacity furnace with a 100 tonnes/day electric boost system” says Grahame Stuart.

“At times when production demand is restricted to say 200 tonnes/day, the furnace can still be run at maximum efficiency, instead of inefficiently operating a 300 tonnes capacity furnace with no boosting at 200 tonnes/day,” Mr Stuart contends that boosting systems provide greater flexibility and if another slow period is encountered, in this way efficient furnace operation can still be realised.

The upturn in all-electric furnace orders has been driven primarily by the special glass sector. However, Electroglass has observed greater interest in electric melting for soda lime applications, driven by environmental considerations because the technology generates virtually zero emissions, other than a small amount of gas released by the raw materials.

Also important have been the industry’s constantly changing energy costs and a drive for greater energy efficiency. In recent years, the company reports that many customers have created dedicated teams, whose sole task is to improve energy efficiency and reduce costs in the glassmaking process. “These dedicated teams/individuals did not exist a decade ago” says Richard Stormont.

“Furthermore, the industry in Europe especially is focused on the realisation that the carbon emission framework and carbon tax credit implications will cost the industry a lot of money if the same production situation is maintained” adds Grahame Stuart.

**REPEAT BUSINESS**

The maintenance of long-term customer relationships has been a critical factor in the ongoing Electroglass success story. Repeat business accounts for some 65% of the boosting systems supplied, for example, while more than 50% of the company’s 100+ precision control bubbler system orders have also been from existing clients.

Strong customer loyalty is also apparent with regard to all-electric furnace orders. In India, for example, a customer recently took delivery of its third Electroglass furnace, while another glassmaker in the Middle East has also just ordered its third furnace. “You don’t order something twice, let alone three times unless you are very happy” Richard Stormont observes.

Approximately 95% of Electroglass equipment is currently ordered by customers outside the UK company’s domestic market. Within the past 12 months, the electric melting technology specialist has been active in Belgium, Brazil, China, Egypt, France, Germany, India, Indonesia, Japan, Korea, Mexico, Poland, Portugal, Spain, Taiwan, Turkey, the UK and USA. In addition to new installations, an increasingly important part of the business involves the replacement of older...
technology furnaces, originally supplied by other suppliers. Japanese, Korean and Chinese glassmakers are the principal customers for Electroglass draining systems, while a major Japanese glassmaker is one of the largest users of the company’s bubbling systems.

Recent product innovations include the Vertical Splashguard range of electrode holders. These are now available for 50mm, 63mm, 76mm and 104mm molybdenum electrode sizes. Another important development involves the supply of dry electrodes for forehearths. Many customers have ordered these after the successful completion of trials, including those involving forehearths from competitive suppliers. Particular success has been realised in North America, from where several orders have been generated.

A redesigned website was launched in 2012, including a useful section that shows the global travel plans of Electroglass sales staff and engineers, helping customers to pre-plan site visits and questions when the company’s personnel are in the local vicinity.

The latest company literature has also recently been released in Japanese, Chinese and Korean, with plans already in place to launch equivalent European language information for the benefit of customers.

FOREHEARTH SPECIALISATION

Although the company has been designing and supplying electric forehearths since its creation in 1976, the product’s energy cost saving potential is only now starting to be fully realised by many glassmakers. Electroglass has recorded some impressive results on behalf of customers, such as the Korean glassmaker HITE Industries, where existing gas forehearths were replaced. Subsequently, energy costs have been reduced by between 75% and 80% and five years after their installation, HITE reports that the electric forehearths are still performing well.

According to Project Sales Engineer, Grahame Stuart, some have claimed that electric forehearths suffer from electrode and heating element failure but he contends this is not the case with Electroglass systems. “In five and a half years, HITE has lost just three elements out of a total of sixty six. It’s similar to the myth we faced 10 years ago with regard to lifetime and energy consumption of our opal furnaces... they were almost too good to be true” he says. “There’s no catch with our electric forehearths and we have the numbers to back up our beliefs.”

Richard Stormont confirms that discussions are now taking place with many glassmakers on electric forehearth conversions and their energy costs are being analysed. Typically, the company’s programme calculates that often 70% energy cost savings are possible, although there are exceptions in countries where gas is particularly cheap.

“Most glassmakers know very accurately how much gas or oil they use in their melting furnaces but many fail to monitor how much fuel is used in their forehearths” says the Electroglass Managing Director. “Ongoing concerns about energy costs provide us with important growth opportunities. Customers are looking for energy saving and we can provide them”.

The Electroglass forehearth design has received universally positive feedback from customers. Until recently, designs were limited to 36in widths but now the company has developed heating and control systems, as well as differential side-to-side control technology for wider forehearth designs. “We have already supplied and installed up to 48in channel width” Richard Stormont confirms “and also have 54in and 60in options for both distributors and forehearths.” To date, more than 60 electric forehearths and conversions have been supplied and many more successes are anticipated.

CUSTOMER FOCUS

Customer service remains a key strength of Electroglass, while the company’s monitoring performance service has been an important selling point. This complementary service is provided as part of the package, whereby customers are invited to submit regular readings, enabling Electroglass to spot anomalies and trends, before responding with solutions. “The best form of co-operation with customers is when there is two-way communication” says Richard Stormont.

“If we notice an anomaly” adds Grahame Stuart “we will go as far as creating a model to identify the solution.”

R&D remains a priority for the company, recent successes having been realised in the areas of electrode holders, level sensors and probes. “Investment in R&D has definitely increased in the past decade” Mr Stuart confirms. “We are constantly investigating possible improvements, listening to our customers and organically developing services accordingly.”

GLOBAL STRATEGY

When Fred Scarfe established the company four decades ago, the Indian sub-continent, South East Asia and Australia were identified as key markets, closely followed by Japan and China. Today, business is conducted successfully in more than 40 different countries throughout the world.

The Electroglass policy is to retain control of all aspects of its products and customer service and its future strategy is to remain completely independent. “Our strength is in specialisation, not diversification” explains Richard Stormont. “We will continue to develop technologies and design features in the field of electric melting that improve energy efficiency, glass quality and furnace life. Increasing worldwide environmental concerns also mean increasing interest in large-scale electric melting installations.”

This is a particular area on which Electroglass technical developments will be focussed in the future. “We remain resolutely specialised in the electric melting field” Mr Stormont confirms. He is also determined to continue promoting good customer relationships and after-sales services throughout. “We are gaining new customers every year but much of our future growth will still come from existing customers.”

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