Family values at the heart of furnaces company

Continuing our series of company profiles of German companies in the lead up to this year’s glasstec, Greg Morris met with Nikolaus Sorg Managing Partner, Alexander Sorg. He is the fifth generation of the Sorg family to lead the company and explains how family values have contributed to its success.

Today, Sorg’s furnaces can be found in glass factories around the world. It has recently celebrated installations in places as far afield as Iran, Mexico and the UK, as well as its native Germany. But it was not always so. The company was formed in humble beginnings in 1872 in Thuringen in the former East Germany by Nikolaus Sorg. It was started at a time when glass manufacturing was becoming an industrialised process thanks to the Siemens regenerative process and to the rise of the railway system in Germany, which made the movement of raw materials easier. It suffered a setback as a result of World War Two and the break-up of Germany. It had to move to the other side of Germany, to its current home of Lohr am Main where Emil Sorg re-started the business from scratch. Emil chose Lohr because some glass works was based there. The company began to become an international business in the 1960s and 1970s under the leadership of Helmut, Karl-Heinz and Klaus Sorg.

Alexander Sorg represents the fifth generation of the business and is involved in the operative business, while his father and uncle are still involved but in a background role.

Today the group employs 450 people around the globe with 200 of those based in Lohr. It exports worldwide and has offices in USA, Thailand, India

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and China but still retains its family values.

“We are conscious of the long term importance of the relationship with our customers. A furnace lifetime can be 15 to 20 years and throughout all of that time we want to perform a good service to our customers. We don’t hit the ground and run away, it is a cradle to grave service.

“The family values of being involved for a long time in the business have helped establish a good relationship with our customers.

“Glass is an old industry and we have known many customers for decades, or even longer. We have known some, such as Heinz Glas and Wiegand Glas, for more than 100 years.”

The business
Nikolaus Sorg is an engineering company for glass melting furnaces. It is divided into three businesses. Its raw materials business, EME supplies batch houses and cullet return systems, Nikolaus Sorg is its engineering company, while its Sork Keramics Service (SKS) division offers installation, maintenance and repair services for refractories on and around furnaces and forehearts.

Altogether, the three companies specialise in the hot end of the glass manufacturing process, from the raw materials intake to the well-conditioned glass.

The company serves most sectors of the glass manufacturing industry, including tableware, technical, float and fibre glass, but it is container glass which makes up about 60% of its business. Sorg’s staff are encouraged to experience a variety of sectors and not limit themselves to just one particular area, such as container or tableware.

Mr Alexander Sorg said: “Different sectors require different solutions and one sector can learn form the other, cross application is a good source for innovation. That’s what makes Sorg different compared to some in-house design departments of some large groups.

“Some in-house design engineering departments never exchange with the outside world or with different furnace types, and this compromises their learning of new solutions.

“Customers tend to stick with one solution they know and would not choose a different solution that another customer would apply in the same sector. We know them all and we can combine them in the best way.

“We believe that this is a good argument as to why even large groups should consider an independent furnace company rather than their internal departments, we have the knowledge from talking to everyone.”

R&D
Sorg’s R&D department has helped introduce equipment that has become industry standard, such as the deep refiner on furnaces used by almost all the major container manufacturers such as Owens-Illinois (O-I) and Ardagh.

Sorg has recently changed its company slogan to ‘Value by Design’ and this expresses the strategy of the company. It creates value with intelligent design and engineering processes.

Another strength is its know how and capabilities. The company is fiscally reliable and has an integrated strategy when it comes to engineering and installations. Mr Sorg stated its strategy forms the two sides of the same coin.

“Some companies only provide engineering, others only installation and service but we combine it, we are unique. It means we can provide a good service throughout the life cycle of the furnace. This results in an advantage for the customer in that he has only one point of responsibility.”

When it comes to installations, the furnace, naturally, has to be optimised in terms of energy efficiency and the environment. Container glass industry furnaces are the most optimised in the world because there are so many of them.

The end-port regenerative furnace is the most standardised in the world. But, even so, every customer is different and every factory has a specific layout so each furnace must vary. A customer has specific requirements in terms of glass quality or the environment and Sorg must meet these personalised requirements.

The environment has become a huge talking point in the past decade.

Sorg pioneered pre-heating technology to help reduce energy consumption and since then pre-heating has become industry standard.

Sorg’s LoNOx melter was introduced in the 1980s to reduce NOx emissions and is still in use today and, according to the company, still sets the standard. The company has also launched cullet pre-heating and installed numerous applications. Up until now, only German customers have opted to go the extra mile for batch and cullet preheating.

Its batch preheating process has reduced CO2 emissions by 15% compared to the best-in-class generative end port fired furnace. “This is a significant reduction and has had a strong impact on the further development of the glass industry.”

Its recently launched Batch3 concept for batch handling at the furnace offers further potential to reduce energy consumption and to reduce NOx emissions.

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Europe has set ambitious CO₂ reduction goals for industry. In the glass industry, the discussion of electric melting furnaces compared to fossil fuel furnaces has become a talking point. Sorg is prepared for this and recently celebrated the contract signing of its 99th electric melter. But it is unclear what will happen in the future because electric furnaces have not achieved the same capacities compared to fossil fuel furnaces.

A typical electric furnace’s capacity will be up to 200 tonnes per day compared to 500 tonnes per day for a fossil fuel furnace. Its R&D focus will be on increasing the capacity of its electric melters as well as reducing the energy consumption of fossil fuel furnaces.

A third focus is the integration of control strategies into glass melting furnaces to make the operation completely automatic, eliminating the human impact on the control of the furnace during a pull or colour change.

**Trends**

The container sector has had a wave of consolidation in the past year, with big-money acquisitions involving the likes of O-I, and Verallia. Per capita consumption of container glass is still strongest in Europe and USA.

The modernisation of existing furnaces is an important part of Sorg’s business so the western world is important for the company. Naturally, Germany is an important market for the company but consolidation in the country’s glass sector has meant Sorg has to look globally for new markets.

Two emerging markets that now have thriving glass industries are Thailand and South Korea and both require long-term furnace capacities. Mr Sorg said: “We serve customers globally wherever they are, and our aim is to meet the challenges and commercial goals of our customers. We serve a solution that allows them to minimise their total cost of ownership. Investment cost is only 1/10th of total costs of a furnace’s operational lifetime of approximately 12 years.

“In five years time we want to expand our leadership position in the market. We want to strengthen and expand and this will require a lot of work.

“There will be no ground-breaking changes in our strategy, it is clear though we have to intensify our efforts. Globalisation has brought much more competition. The way we went in the past is a good basis for us to build up success in the future.”

Nikolaus Sorg, Lohr am Main, Germany

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