

## Compact 800

### Just the right size and price for Elektrokoppar



Photo: Charlotte Carlberg Bång

**Elektrokoppar now keeping a better check on processes – both at home in Helsingborg and in China. A strong contributing factor is ABB's Compact 800. "It's given us improved insight into what's going on," says Thomas Roslund at Elektrokoppar.**

Elektrokoppar is one of the classic companies in the south district of Helsingborg, Sweden. The story begins in 1799 when Count Eric Ruuth founded a sister company that would much later become Höganäs AB.

The company's structure would change orientation several times before Elektrokoppar came about in 1953, with 75 percent of the company owned by Asea/ABB and 25 percent by Ericsson. The company is now owned by the Liljedahl Group.

Elektrokoppar manufactures rolled and profiled wire for cables. The majority of the copper comes from Boliden. Six days a week, a copper train arrives in Helsingborg from Norrland.

"It's a train with about 500 tons of copper cathodes aboard," says Thomas Roslund, who heads the company's electrical department. The raw materials are extracted from the Aitik mine, among others, just outside Gällivare. They are refined at the Rönnskär mill in Skelleftehamn before being sent to us. The copper cathodes, which weigh about 50 kilos, arrive in Helsingborg in compartments with 10 tons in each."

#### ABB major customer

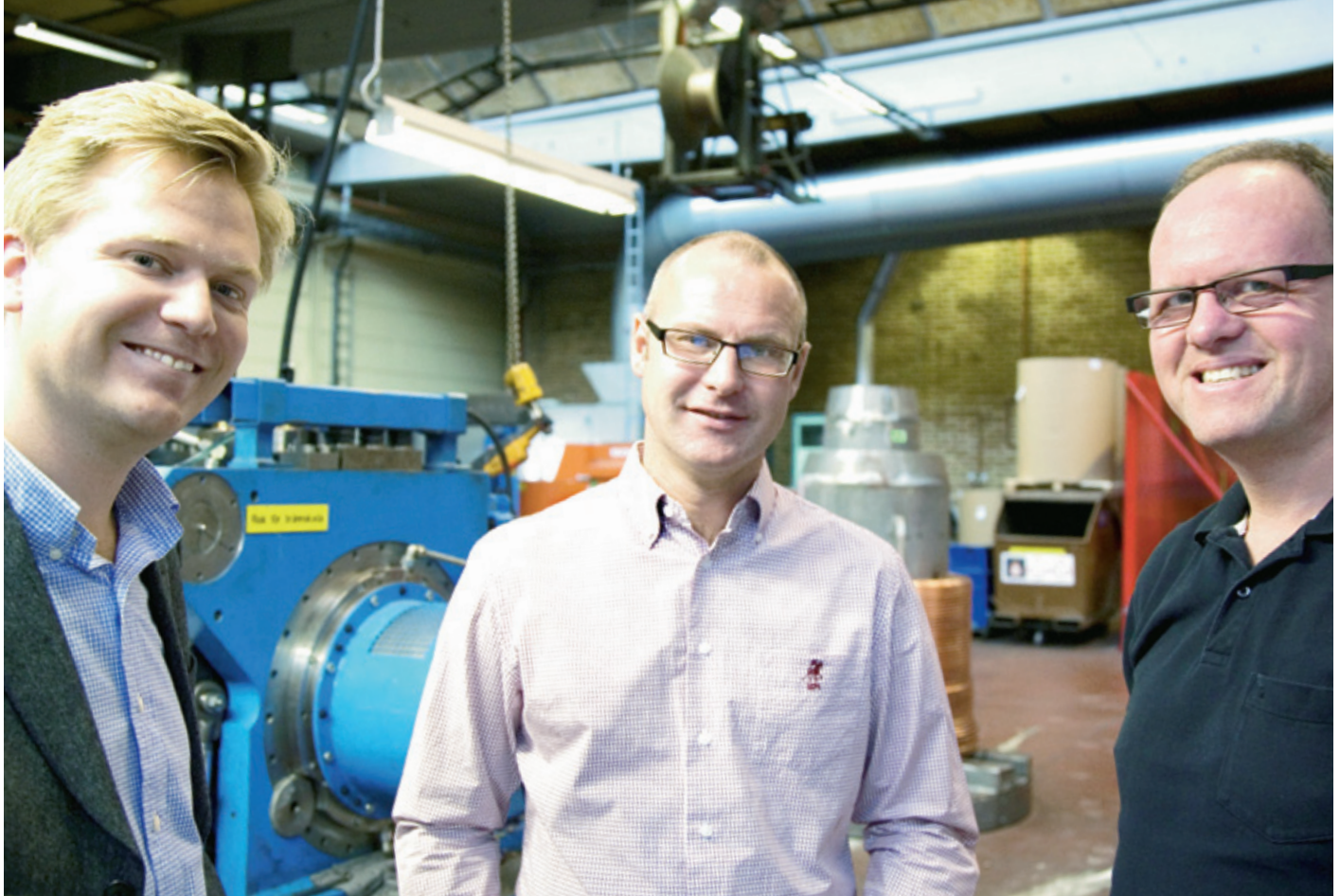
Making a round of the plant, the intensive heat and molten metal dominate the interior.

"This is where we melt down the copper that comes to us by train," says Thomas Roslund. "It's then cast into wire rod." Winding wire is also manufactured at Elektrokoppar, primarily for the electrical industry. Copper products make up the chief product sector by a wide margin, but a smaller amount of aluminum wire is also manufactured.

One of the largest customers is ABB and the relationship between the companies goes back several years, to the 1950s when Asea was a part-owner of the company. Many of the profiles produced in the machines for continuous extrusion go to ABB High Voltage Cables in Karlskrona.

"We were one of the first companies in the world to master the technology of continuous copper extrusion," says Thomas Roslund.

“The system entails improved communications. It’s easier for the operators to follow what’s happening in the processes.”



With joint efforts and ABB's Compact 800, Henrik Persson, ABB salesman, Elektrokoppar's Tony Hill, head of the production department, and Thomas Roslund, head of the electrical department have made the production at Elektrokoppar more efficient.

#### Settled on Compact 800

A few years ago, it became necessary to assess the control systems for profile production at Elektrokoppar.

“Our first thought was to upgrade our older, existing ABB control systems, utilizing the old software and making changes,” Thomas Roslund says. “But as it turned out, they were so old that this was no longer an option. The oldest components were from the 1980s.”

At this point, Elektrokoppar went shopping for a new system. Because the company previously had good experience of the S800 I/O system, which is used in the rolling mill, they looked at ABB's control system, Automation System 800xA. “But it was too large for us,” says Thomas Roslund. They instead settled on ABB's new compact system. “It was just the right size and more moderately priced.”

#### The small and handy control solution

The Compact 800 consists of an operator workplace – Compact HMI 800, the AC 800M controller and S800 I/O modules. The Compact HMI 800 and Compact Control Builder is designed for somewhat smaller facilities while the comprehensive System 800xA is more adapted to larger processing industries with many machines.

Two years ago, Elektrokoppar bought its first system and thus became the first in Sweden to invest in the Compact 800. “We are very pleased,” says Thomas Roslund. “The system entails improved communications. It’s easier for the operators to follow what’s happening in the processes. Because the system also gathers and documents, we quickly acquired a history that makes it easier to see the opportunities for development.”



Modular AC 800M controllers boasts a broad set of communication functions as well as full redundancy and support for a wide range of I/O systems. A common language runtime supports standard IEC 61131-5 and other programming languages.



And Thomas Roslund should know. He has programmed a large portion of the system and adapted the design to Elektrokoppar's requirements. He is enthusiastic about the benefits of the Compact HMI 800. "It makes production easier to follow," he says. "It's like a continuing journey, where step by step, one gains even more insight into the processes so as to be able to increase productivity. "Insight and obtaining current values, such as for temperature and speed, also influence operating times and tool service life," he adds.

### Six control systems

The first six control systems was soon followed by more. Elektrokoppar now has two systems in operation in Helsingborg. "Furthermore, we're building two more," says Thomas Roslund.

The company also has a plant outside Shanghai. "There is one Compact 800 system there already, and another is on the way from Sweden. Elektrokoppar thus has six systems in all," he says. "We've benefited quite a bit from geographical proximity," says Thomas Roslund. "Both when it comes to support from ABB in Malmö and that certain components and spare parts are stocked there."

Elektrokoppar's products encompass the entire spectrum, from deliveries to major industries to component parts in household appliances, trains, light-rail vehicles, electrical systems for cars, transformers and more.

### Spectacular projects

But it is probably the most spectacular projects that stand out most. Elektrokoppar was – as was ABB – engaged in the 250-kilometer long Baltic Cable project between Germany and Sweden during the 1990s, SwePol Link between Poland and Sweden that was completed in 2000, and not the least, NorNed – the world's longest submarine cable for power transmission, which was put in service last year.

The company hopes to also be able to deliver conductors for Sydälänken. This is a planned electricity line between Hallsberg in Närke and Hörby in Skåne.

"And later, work on E.ON Nord's wind-power park in the North Sea may be getting underway," says Thomas Roslund, who sees an intensive period ahead, both for himself and for Elektrokoppar.

### About Elektrokoppar

The company has 160 employees, who during 2007, produced 160,000 tons of copper products. Elektrokoppar's roots date all the way back to the 1700s, but it became a separate division of Elektromekano in 1920 and a separate company in 1953. Elektrokoppar is now owned by the Liljedahl Group.



Henrik Persson, ABB, and Thomas Roslund, head of Elektrokoppar's electrical department, at one of the operator's stations included in the Compact HMI installation. "The system makes it easier to follow production, and step by step, provides even more insight into processes so as to be able to increase productivity," says Thomas Roslund.

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