

ESAB puts customers' needs first



In 2004 ESAB will celebrate its centenary. For nearly hundred years the company has been the driving force behind many ground-breaking developments within the welding industry.

For some, welding and ESAB could be synonyms. Founded in 1904 by the inventor of the covered welding electrode Oscar Kjellberg, the company has been at the forefront of developments in the welding market for close to a century. In particular service to the customer has traditionally received much attention from the Göteborg, Sweden, based company. Stainless Steel World reports on ESAB's continued effort to serve the market.

By Miel Bingen

Somehow Sweden's second largest city, Göteborg, seems to be blessed with impressively high-quality industry. To the general public it is probably Volvo Car that catches the eye and the top producer of luxury cars is prominently present in Göteborg's streets with four out of five cars being a Volvo. For the welding and stainless steel community, however, it is ESAB that first comes to mind when the words quality and Göteborg are combined. Moreover ESAB will celebrate its 100-year anniversary next year. More than enough reasons for Stainless Steel World to travel to Göteborg to talk to Dr Leif Karlsson and Mr Lars-Erik Stridh. What both men have in common is their close contact with the customer and their focus on solving clients needs. Mr Stridh is Application Support Manager, responsible for global process and application support. He is involved in all fields of activity of ESAB. Mr Stridh, who started off as a welder, can look back on a vast experience within the welding community. Today he holds an EWE degree and has worked as a welding engineer for many years. Leif Karlsson has been with ESAB for over 15 years. He is ESAB's Manager Research Projects for welding consumable development related projects. His main responsibility is co-ordinating ESAB's European research programme but he also works closely together with Mr Stridh in customer support. Dr Karlsson has a particular interest in stainless steel and was one of the winners of AWS's Silver Quail Award for his article on the Three Gorges Programme (Stainless Steel World July/August 2002).

The first thing both men remark when asked what makes ESAB so special is that the company has been around for such a long time. In 2004 ESAB will celebrate its centenary. The company can look back on an extensive expertise gathered through the years and has been the driving force behind many ground-breaking developments within the welding industry. Above all, Dr Karlsson and Mr Stridh both emphasise that ESAB can offer a complete package to the customer. ESAB carries a complete range of consumables, for stainless steels, carbon steels, nickel alloys as well as titanium. Furthermore the company supplies a comprehensive range of welding equipment and excel in providing technical support to the customer. Few companies in the welding business today have access to comparable resources.

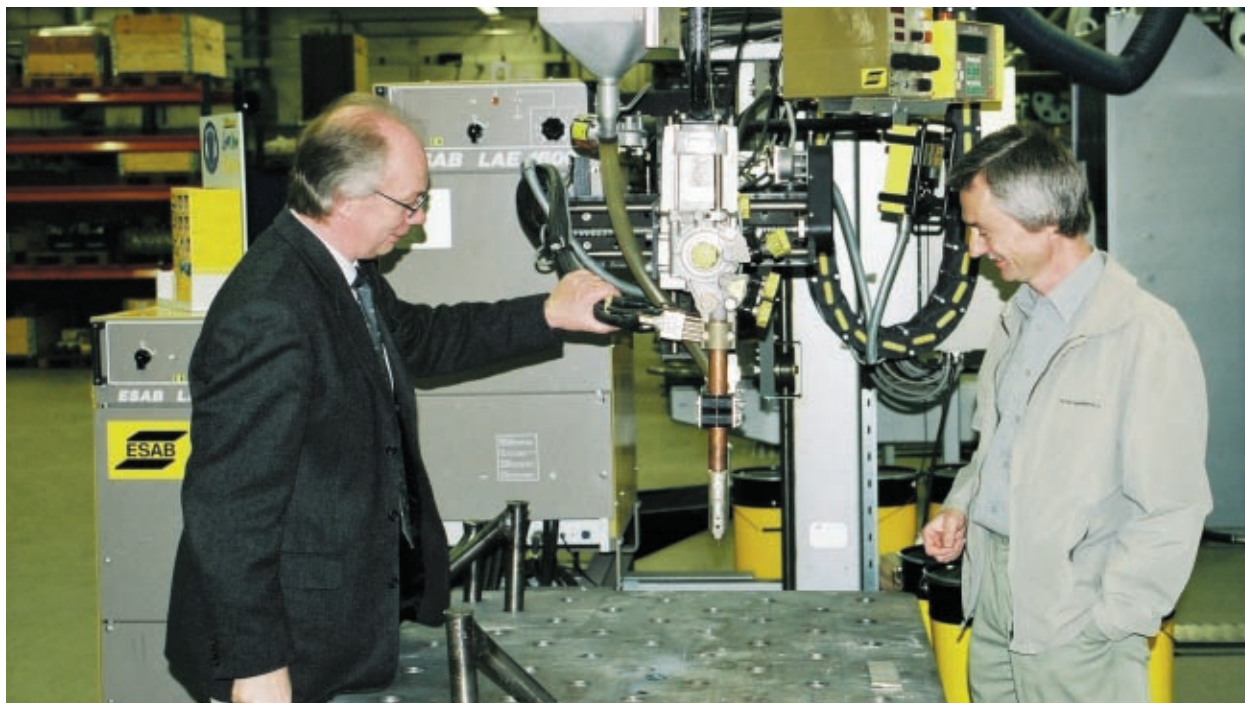
SERVICE TO THE CUSTOMER

Consequently ESAB's approach to the market is not focussed on consumables or equipment but on offering its customers an integrated solution to their welding challenges. Mr Stridh: "We try to see our customers first and foremost as a partner. The success of our customers in solving their welding needs is the basis of our success. Therefore we see it as our responsibility to be an efficient partner who offers a complete solution, and we constantly strive to adapt to changing market circumstances. A good example is the setting up of our Application Support department one year ago, for which I am responsible, as a response to changes in the welding business."

"Customers need more support than ever these days to solve their day-to-day challenges," Dr Karlsson continues. "Cost savings at the users side has in many cases reduced staff and consequently expertise on welding. At the same time it has been more difficult for industries to attract qualified welding experts, as there seems to be less interest in welding and other industrial topics among younger people today. Even though welding procedures have to be developed and problems have to be solved on short notice. Therefore more support is needed and we are doing our best to respond to these changed requirements."

Also the increased globalisation affecting many industries was an incentive for ESAB to restructure its customer support activities, says Mr Stridh. "More and more major customers are organised in an international way. Combined with the challenges posed by changes in the level of expertise of the end user, this was the main incentive for setting up our Application Support department. We have access to both extensive research laboratories and technical expertise from Leif and his colleagues in solving customers' questions. Typically ESAB's research departments gives fundamental input which Application Support then takes to the customer. We also tap into field experiences from other ESAB organisations across the world. ESAB is a very open organisation and there is a great willingness to share information. Rethinking our way of serving the global market has only increased our efficiency in transferring information to our clients."

When it comes to transferring information through ESAB a



Mr Leif Karlsson, Manager Research Projects, Business Area Consumables (right) and Mr Lars-Erik Stridh, Application Support Manager (left) emphasise that ESAB can offer a complete package to the customer including consumables, equipment and technical support.

recent problem brought forward by a European catalytic converter producer is an excellent example. In an exhaust system, immediately after the actual catalytic converter, there is a flange that connects the hot part of the converter to a part where the temperature is significantly lower. The converter tube itself is made out of a ferritic material while the flange itself is made out of mild steel. Thermal expansion, vibrations and the number of parts placed high demands on the connecting weld. Especially fatigue properties posed a challenge. Traditionally the customer used a 1.0mm solid wire for the welding, but this did not always deliver the result the company desired. When the customer contacted ESAB in order to request an alternative solution, ESAB contacted its North American operation for support, as they had gathered significant expertise on the topic of catalytic converters through the years. By making efficient use of North American expertise ESAB was able to offer the customer a solution by using a metal-cored wire that not only improved fatigue properties of the joint dramatically but also increased weldability and reduced cycle time.

GLOBAL OPERATION

Since ESAB's customers operate world-wide, so does ESAB. Organised in five regions (Europe, North America, South America, Asia/Pacific and India) the company has subsidiaries or agents in just about every country on the globe. Even Japan could not resist ESAB's drive to serve the market, and for almost a year Japan has had its own ESAB office with a sales engineer.

Looking at ESAB from an applications point of view the range of applications is close to exhaustive. Shipbuilding has traditionally been very important because of the volume

involved. Also the processing, oil & gas, pulp & paper and fabrication & civil construction industries are part of ESAB's bread and butter. An industry that has been very interesting in recent years is the automotive industry. ESAB has invested significantly in the development of new consumables for exhaust systems, and the market is of great importance for the company because of the high number of cars produced every year.

On a totally different scale are supermartensitic stainless steels. ESAB has been at the forefront of developing consumables for the material and participated in several projects. Today the company carries a number of matching consumables within its product portfolio. After solving the more fundamental questions with regard to welding development, work now focuses on improving productivity of the welding and maintaining quality. ESAB sees supermartensitic stainless steels as an interesting niche market that might turn out to be slightly more interesting in the long run when the high-strength characteristics of the material are fully recognised. The material might be ideal for applications such as high-strength tubes and pipes and pressure vessels where it may very well be capable of competing with clad materials.

YEARS TO COME

Looking ahead, one topic is on everyone's mind in the welding community: automation. The major driving force behind the development of automated welding is again the human factor. Operators increasingly find it difficult to attract qualified staff. Therefore many involved in the welding business are looking for ways to replace welders. One way to go is to develop advanced sensing systems that can

replace a welder's expertise. "We are talking about very advanced equipment here that in many respects is more similar to computer games than to traditional welding and ESAB is at the forefront of these new developments", Mr Stridh says.

At the basis of these developments is the quality of consumables, Dr Karlsson emphasises. "Developing high-quality consumables remains one of the most important aspects of welding, maybe even more so for automated welding as disturbances in robotic welding equipment are extremely costly to the customers. In fact you simply cannot automate production unless there is a reliable and high-quality consumable. Therefore issues such as stability, security, feedability and the actual welding process itself are extremely important. In the past, solid stainless wires have shown some sub-optimal performance in robotic equipment. Therefore we have been working on a new surface finish for our solid wires. We changed the properties of a whole product area and created a mat surface finish. In the end the results were very positive. We were able to increase both the productivity and the reliability of our robotic welding systems significantly and can offer a top product to the market today."



Automation is on the mind of close to everyone in the welding community and ESAB is at the forefront of these new developments.

F A C T S & F I G U R E S

Following his invention of the covered welding electrode back in 1904, Oscar Kjellberg founded ESAB. Today the company produces consumables and equipment for virtually every welding and cutting process and application. Almost 100 years of continuous research, development and manufacture have made ESAB a world leader in welding, cutting and also an international supplier of products, know-how and services.

ESAB's customers are found in the offshore, ship-building, power, process, transport, vehicle, and construction industries. ESAB has a strong position in all of its major markets. The group is organised in five regions: Europe, North America, South America, Asia/Pacific and India and is represented in almost every country by subsidiaries or agents. In 2002, the ESAB group – owned by Charter plc of London – had a total turnover of GBP 581.9 million and 6700 employees world-wide.

INNOVATIONS

Other innovations ESAB is working on include high-tech developments such as hybrid welding. The process combines both laser and MIG welding process into the same equipment, resulting in better penetration and increased welding speed. Again the benefit is found in an increased productivity, and ESAB has a test rig set up at its Göteborg facilities that has achieved some very promising results. Another new development of great importance for the welding of stainless steels is the addition of cold wire to submerged arc welding. During the welding a cold wire is fed into the weld pool. Consequently more material enters the weld pool and therefore fewer beads are needed and there is a reduced risk of overheating.

To conclude, ESAB seems to be on the ball, and the spirit of innovation fostered by founder Oscar Kjellberg remains alive even after close to hundred years. For many users, however, it is ESAB's customer-oriented approach that could well be the primary reason for trusting ESAB's expertise. Mr Stridh: "What strikes me the most about hundred years of ESAB is that so many customers have shown their trust in our products. A hundred years of ESAB means a hundred years of customer confidence. A confidence we feel is our greatest asset."