

# For Outokumpu the sum is greater than the parts





A large-scale investment program for Outokumpu's Tornio plant was launched in 1999 and will come to a close at the end of this year, boosting the annual capacity of the melting shop and the hot rolling mill to 1.7 million tons per year.

By Miel Bingen and Esther Martensen

For Outokumpu Stainless, the last few years have been quite eventful, to say the least. A major internal restructuring program is now approaching completion. It includes streamlining all operations and bringing them together under one name, Outokumpu Stainless. And of course there is the expansion of the company's Tornio steel mill in Finland, which will make the facility the largest hot rolling mill in Europe and the largest cold rolling mill in the world. Stainless Steel World wanted to know more and traveled to Outokumpu's headquarters in Espoo, Finland. Here, we met with Mr Pekka Erkkilä, President of Outokumpu Stainless.

As Mr Erkkilä explains, there is a clear rationale behind the choice for a new company name: "We changed the name from AvestaPolarit to Outokumpu Stainless because we are part of the Outokumpu Group. The Outokumpu brand is very strong and well known worldwide and stands for quality, so that is why we chose the name Outokumpu Stainless." But the changes within Outokumpu Stainless go far beyond a simple name-change and corporate image. Mr Erkkilä continues: "The new name also symbolizes the unity of the company. The merger between Avesta Sheffield and Outokumpu Steel in 2001 has made us a truly international company. Finnish, Swedish, and British company cultures have all melted into one pan-European culture, something our customers will certainly notice."

With the reorganization almost complete, Outokumpu Stainless now operates through three divisions, namely Coil Products, Special Products and North America, with Coil Products as the biggest division of the three. The Special Products division offers a variety of commodities, varying from fittings to precision strip. Mr Erkkilä: "Within this division, we have also merged our tubes and fittings businesses. Under the name Outokumpu Stainless Tubular Products, we combined eight different brands, and can now offer 4000 different tubular products and fittings." The North America division specializes in the local production of special products and the sales and distribution of products from Europe. Mr Erkkilä: "Production in the USA is limited but we are still rather big in certain areas, for example tubes. We are in fact the biggest tube operator in North America."

This restructuring process will enable the company to sus-



End user industries such as the oil and gas industry in which stainless steels have more than proven their worth remain of great importance for Outokumpu Stainless

tain and expand its position as a world leader in the stainless steel business. As Mr Erkkilä states: “We have the broadest product range in stainless steel and are very strong in special grades. We employ leading fabrication technology and our restructuring will further strengthen our position in the market. In addition to our extensive portfolio, we also have a good reputation when it comes to issues such as quality and delivery performance. We will do anything we can to maintain that reputation and further improve it.”

#### WORLD’S BIGGEST MILL

Another aspect of the transformation is the rationalization of the production process and steel mills worldwide. The company’s main mills today are the integrated mills in Tornio, Finland, and Avesta, Sweden. Outokumpu Stainless also operates cold rolling mills in , Sheffield, UK and in Nyby and Kloster, Sweden. The mills in Avesta and in Nyby have both been updated recently but what is more noticeable is the expansion of the Tornio steel mill in Finland. As Mr Erkkilä states: “The Tornio mill has become a very impressive facility. Even colleagues from the industry who visit the mill usually fall silent in admiration.”

A large-scale investment program for this plant was launched in 1999 and will come to a close at the end of this year, boosting the annual capacity of the melting shop and the hot rolling mill to 1.7 million tons. The capacity of the cold rolling mill will be 1.2 million tons, 750,000 tons of which will be cold rolled material and 450,000 tons white hot bands. The expansion makes Tornio the biggest cold rolling mill in the world.

The new cold rolling mill is called RAP5, with RAP stand-

ing for rolling, annealing, pickling. It was commissioned in February 2003. The RAP line is a fully integrated and highly automated production unit in a 800-meter long, 30-meter high building. The new line will enable the Tornio mill to expand its product range with new intermediate rolled products, suitable, for example, for welded tubes. Delivery of white strip from Tornio began in March 2003 and delivery of cold rolled material in August. Mr Erkkilä: “We are currently able to make all the products as planned we could and the quality of these products has proven to be very good. Customer feedback, the most important indication, has been very positive as well.”

Mr Erkkilä continues to explain that because it is a fully integrated production chain, RAP5 offers a highly efficient production process. “Each individual component is a proven technology but putting them together and operating them in one integrated line, that is a novel project, one which we have had to file a number of patents for. Our investment in the RAP line has been reasonably high but ultimately, it will increase productivity and reduce costs dramatically. In this concept, for example, the number of operators per shift is only six.” According to Mr Erkkilä, the biggest challenge for the Tornio mill is to safeguard the constant availability of the RAP. Because it is such a highly complex integrated process, there is always the possibility of a fault, somewhere in the process and if one individual segment of the line is out of operation, the entire line has to be brought to a standstill. “To prevent this as much as possible, we have focused predominantly on preventive maintenance. We have actually bought-in additional know-how from Japan for this purpose, from companies that are operating highly sophisticated integrated lines in the carbon steel industry. The concept of an integrated line has been in use in the carbon steel business for many years.”

In addition to the RAP line, the company is also planning to revamp melt shop 1, the old melting line at Tornio, Mr Erkkilä: “We are, for example, reconstructing the entire roof of the melt shop in order to be able to filtrate all off-gases from the meltshop, thereby realizing a world-class standard in terms of emissions released into the air.”

#### OUTOKUMPU FACTOR

All these new developments may seem rather overwhelming but Mr Erkkilä is adamant that when the restructuring process is finished, it will raise the level of service Outokumpu Stainless now offers to its customers even further. To emphasize this commitment, the company has introduced what it calls the Outokumpu factor. Mr Erkkilä describes the Outokumpu factor as “the competitive advantage we aim to provide our customers by helping them enhance the performance of their processes, products and services, taking the term customer focus a step further. We want to find out what our customers’ wishes are, in terms of products and services, and are willing to go to great lengths to realize them.” One example of this is the Padre Arrupe Bridge in Bilbao, linking the city’s Guggenheim museum to the university of Deusto. “Here, we worked together with the customers to



**With many demanding industries such as the chemical industry as customer Outokumpu constantly works on taking the term customer focus a step further**

optimize their manufacturing processes and defined the best steel grade for a stainless steel bridge.”

#### ARCHITECTURE AND AUTOMOTIVE

It is clear that Outokumpu Stainless has great plans for the future. When asked in what direction he feels the company will be heading in the near future, Mr Erkkilä says that he expects a huge increase of the number of applications for stainless steel: “I can see a tremendous potential for stainless steel, especially in the western world, where the costs of human labor are high. Take a sweet water pipeline for instance. Traditionally it would have been built from carbon steel. Today it is made of stainless steel because the repainting of the pipeline is so expensive in Europe for example, that in the long run, a stainless-steel pipe pays off.”

Mr Erkkilä does not believe that it is only its corrosion resistance properties and low life cycle costs that will increase the popularity of stainless steel. He also feels that it is visually attractive, not unimportant for one particular application he expects a lot of in the future: “One application in which I think the use of stainless steel will increase significantly over the coming years is building and construction. Especially in architectural applications where looks are as important as structural integrity, stainless steel will be used more and more.” Outokumpu has already been involved in quite a few construction programs and this market has become important for the company. “AvestaPolarit has actually won a prize for one project it was involved in, namely the Apaté bridge in Stockholm, which is entirely made of duplex stainless steel. The bridge in Bilbao that we talked about earlier is another excellent example of the use of stainless steel in architectural applications. Outokumpu can service this market very well. In addition to the stainless steel itself, we also supply a number of special finishes for stainless steel, for example a fingerprint-resistant finishing for which we have actually won an award as well.”

Additionally, Mr Erkkilä hopes to see more and more stainless steel in the automotive industry. “Stainless steel can be used to make vehicles lighter to reduce fuel consumption and carbon monoxide emissions. Also, the use of stainless steel improves safety because it has very good energy absorption capabilities. At the moment, we are working on a special project with Volvo. We have developed an ultra-high tensile strength stainless steel for the automotive industry, called HyTens<sup>®</sup>, which is light and strong with high-energy absorption characteristics.”

#### BEST IN STAINLESS

In addition to these new applications, the more traditional markets such as oil and gas remain important for Outokumpu Stainless, in which stainless steels have more than proven their worth. Mr Erkkilä: “Fulfilling the needs of all these industries by providing quality products and services is the challenge we have set ourselves for the coming years. Our vision is to be the best in stainless steels, and this is not just a slogan but something we work very hard on. We are also looking into the possibility of targeting a more global market. We aim to increase our market share in Europe, Asia and USA and to expand our product range even further. The stainless-steel market will continue to grow and we intend to both consolidate our position in the market and expand it even further.”

Mr Erkkilä concludes: “All the changes we have undergone over the past few years were designed to sustain and expand the company’s position as a world leader in production, technical support, research and development. I firmly believe this transformation has been very beneficial for our company. We are now stronger in stainless than ever. Our employees, more than 9000, and all branches of the company are working together much better now to the benefit of our clients. It makes the sum of Outokumpu Stainless greater than the parts.”

#### Facts & figures

With a slab-making capacity of 2.75 million tons, Outokumpu Stainless, part of the Finnish Outokumpu Group, is a world-leader in the production of stainless steel in basic and special grades in various dimensions and a number of surface finishes. The company’s market share is about 26% in Europe and 8% worldwide. Outokumpu Stainless operates production facilities in Finland, Sweden, the UK and the USA and has more than 40 sales offices worldwide. Main products are cold and hot rolled stainless steel coils. Other products include precision strip, quarto plates, hot rolled plate, long products, tubes and fittings. Applications include the process industries, building and construction and vehicle manufacturing. Over 9000 Outokumpu Stainless employees were responsible for annual sales of EUR 3.4 billion in 2003. The company delivers its products to more than 70 countries. About 70% of the company sales is within Europe, 19% goes to Asia, 9% to America and the remaining 2% to various other places.