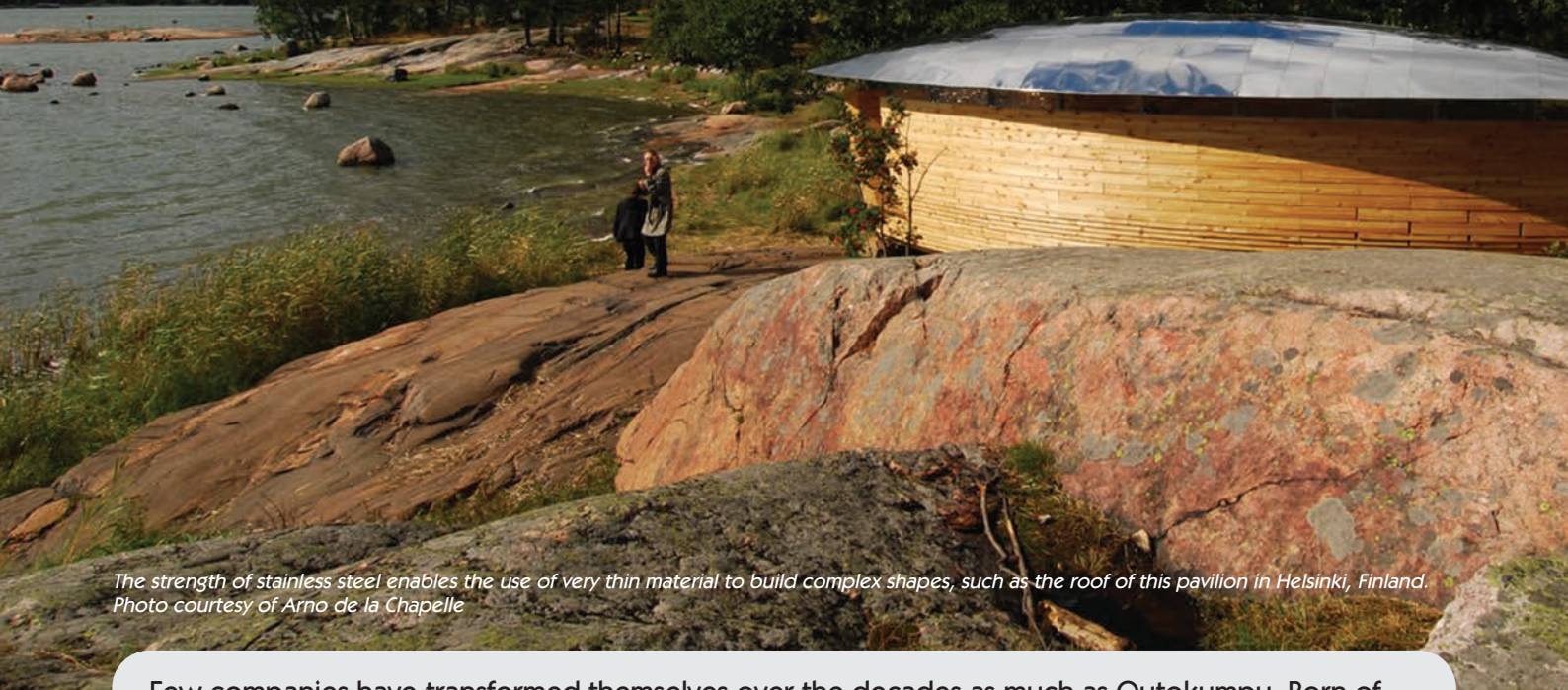


Outokumpu: a customer-oriented company that has given its heart to stainless steel



The strength of stainless steel enables the use of very thin material to build complex shapes, such as the roof of this pavilion in Helsinki, Finland. Photo courtesy of Arno de la Chapelle

Few companies have transformed themselves over the decades as much as Outokumpu. Born of the fusion of a copper mining company, a Swedish steel company and a British stainless steel concern, Outokumpu a few years ago took the plunge and recast itself as an exclusively stainless steel company. Based mainly in Finland, Sweden and the UK, this exceptionally well integrated company has also set up a network of service centres, sales offices and agents throughout the world. The company continues to transform itself, working alongside its customers to expand the use of stainless steel into new areas. Curious to find out how this dynamic company was faring in this highly competitive commercial climate, we visited Outokumpu in Espoo, Finland, to ask Mr. Kari Parvento, Executive Vice President in Outokumpu, where he thought Outokumpu was heading. The vision he shared with us was of a company with strong roots in the past which is committed to working with its customers to achieve growth in a sustainable way.

By David Sear

Preamble

At the opening of our discussion, Mr. Parvento shared an interesting fact: on average, the common citizen will come into contact with 35 applications of stainless steel every day. And it is a sure bet that many of these applications – whether household, transport, infrastructure or industrial – are served by Outokumpu.

Recently it has become something of a vogue for companies to consolidate their stainless steel operations. In this respect

Outokumpu is ahead of the curve by several years. Outokumpu started out in 1910 as a copper ore company, but since its acquisition of the Sheffield stainless steel works its roots also extend back to the birth of stainless steel. The third principal strand is the Avesta works based in Sweden. In the 1990s Outokumpu started to concentrate more on special metals and exited the mining industry. Shortly after it had completed its acquisition of AvestaPolarit in 2002, it committed itself to becoming the number

one stainless steel company in the world. By 2006 it had completely relinquished its activities in non-stainless steel metals, mining and technology. The company then started to expand its stainless steel activities, a process that continues to this day. Today most of the production is concentrated at the vast Tornio works in Finland (chromite ore mine, ferrochrome works, melt shops, hot and cold rolled coils and sheets), special coil facilities at Avesta and Nyby in Sweden, a melt shop at Sheffield, UK, and quarto plate facilities



at Degerfors in Sweden and New Castle in the USA.

Listening to customers

Outokumpu's recent history demonstrates that its commitment to stainless steel is total. What are the factors driving this passion for stainless? According to Mr. Parvento, it is because in today's world it is the special properties of stainless steel, especially its sustainability, that has most to offer the customer. "Our customers gave us a clear message," he says. "They wanted sustainability, quality and delivery accuracy, and they were also looking for the knowledge that would help them find the right solution, and they wanted to work with people who were easy to deal with." Mr. Parvento describes Outokumpu as a "customer-oriented company," and its success is surely due to this ability to see through its customers' eyes. Outokumpu is close to its customers also in a geographic sense: apart from several service centres in Europe and one that has recently opened in Shanghai, it also has a



Committed to sustainable growth: Mr. Kari Parvento, Executive Vice President in Outokumpu.

world-wide network of distributors and agents. It is flexible in the way it handles sales, dealing either directly or through its distributors and partners.

Sustainability

Both for Outokumpu and its customers, sustainability is high on the agenda. Mr. Parvento: "We believe that stainless steel can give sustainable solutions, which is good for the customer and good for society."

Of course, the long-term benefits of stainless steel, including its recyclability, durability and low life-cycle costs, are well known. What is special in Outokumpu's case is that it uses a great deal more scrap than its competitors: some 90% of its stainless steel comes from recycled

material. Mr. Parvento, who has also worked in the metals and steel recycling industry for several years, is keen to stress the 100% recyclability of stainless, which gives it a clear advantage over, say, plastics. But he also lists other examples of sustainability: "47% of our electricity comes from renewable sources. In addition, we have managed to reduce our carbon footprint by 40% since the 1990s. This includes a 25% reduction in CO² emissions between 2000 and 2010." A further 20% reduction is envisaged for 2020.

Outokumpu's integrated supply chain also helps it to minimize its transport footprint. From its harbour next to the Tornio works near the border with Sweden, the goods are transported to Terneuzen in the Netherlands, from where they are further transported to service centres and partners all over the world. The ships return with a cargo of scrap to be recycled. Tornio is also home to the ferrochrome melting works, which is supplied by the chromite ore mine at Kemi, the only one of its kind in the EU. Outokumpu's serious commitment to sustainability is also demonstrated by its efforts to improve waste recovery and material efficiency at the Sheffield melting shop. Slag was re-used in the production of asphalt, and limestone was replaced by waste refractory material in the manufacturing process. These achievements helped it gain the first ISSF Sustainability Award (May 2011).



Outokumpu benefits from having an integrated production and supply chain. Its Kemi mine in Finland is the only chromium mine in the EU.



Outokumpu Duplex LDX 2101® stainless steel reinforcement bars (rebar) were used in critical sections susceptible to corrosion, in two columns at the bases of the breakwaters on the Brisbane Gateway Bridge, Australia. Photo courtesy of Leighton Abigroup Joint Venture ABN.

Applications

Outokumpu's business falls roughly into commodity materials (austenitics, ferritics) used in everyday applications and the more specialized grades (duplex, nickel alloys) used mainly in process industries. The commodities side caters for the European market only, while the specialized grades are exported throughout the world. The more special the material, it seems, the further it can travel! Outokumpu supplies a vast range of industries ranging from cutlery, catering and household items to infrastructure, transport, oil & gas, chemical, pharmaceutical, pulp & paper and so on. Mr. Parvento identifies three fundamental factors driving growth in the stainless steel market: urbanization (including infrastructure, building and household items), energy (especially renewables and nuclear) and clean water (desalination and water treatment). He points out that world population will reach 7 billion in October of this year: most of these 7 billion will live in cities and all of them will need energy and drinkable water.

However, when it comes to applications, Outokumpu is not content to rest on its laurels. The company is actively seeking to expand the areas in which stainless steel can be used. Also, it will not hesitate to suggest a grade that the customer had not thought about but which is better suited to

his or her needs. There have been many cases, for instance, where the customer originally asked for an austenitic grade but in the end was persuaded that lean duplex better suited his or her needs.

Application engineers

Stainless Steel World asked Mr. Parvento what specific steps Outokumpu takes to create extra value for customers. "First of all, we have to ask ourselves what quality means and how stainless steel can play a role in providing new solutions," he replies. "In this respect our application engineers play an important role."

Outokumpu's application engineers work alongside the customer to help create extra value, whether in terms of lower costs or great speed of installation, lighter weight, better corrosion resistance and so on. Clearly therefore, Outokumpu is in the business of offering knowledge as well as materials. An example is provided by the use of duplex coils two metres wide to manufacture storage tanks. The extra width reduces the need for welds, while the use of duplex means you can reduce the thickness and therefore the weight. The result is a lighter, lower-cost product that is faster to assemble. Another example is the use of stainless rebar in bridge building. "In bridges, most of the weathering takes place at the outer sides," explains Mr. Parvento. "Therefore if you

can apply stainless there, you can prevent deterioration and your bridge will last longer." Mr. Parvento also sees potential for stainless steel to improve safety in highway tunnels: in the event of a fire, stainless steel does not burn as easily as concrete. Finally, he cites a partnership Outokumpu has formed with a car manufacturer to develop multi-fuel tanks. The manufacturer had also considered using plastics, until it was shown that a stainless steel tank was five times more rigid, 5% lighter and the production cost was 50% lower.

The question naturally arises: if stainless steel has been around for such a long time, surely people know how to use it and so won't need application engineers? Mr. Parvento (after a pause, smiling): "No, that doesn't always hold true. The world is changing so fast, and new areas for stainless steel use are appearing all the time." With Outokumpu products now being applied in solar power, automobiles and road tankers, it is hard to disagree. "Our application engineers are continually looking into the future," Mr. Parvento continues. "It is not just a question of carbon steel being replaced by stainless. Within stainless itself, austenitics can be replaced by ferritics or by duplex. It is constantly changing. In addition, stainless steel is young compared with carbon steel, and the carbon steel industry

employs application engineers, so why not stainless?”

The future

The thought that stainless steel is about to enter its second century (the year 2013 sees the centenary of the production of Brearley's first “rustless steel”) leads naturally to the question of how Outokumpu sees itself developing in the future.

The size of a company's investment is a good indicator of its confidence. In this respect, Outokumpu scores high, having invested about 400 million euros to double its ferrochrome production within two years. This will allow it to supply not only its own needs but those of other companies. The company is also investing 100 million euros in its special plate facilities at Degerfors, Sweden. Currently 75% of Outokumpu's sales come from the European market (mostly commodities) and only 25% to the rest of the world (mostly specialty stainless steels). Stainless Steel World asked Mr. Parvento whether he thinks this will

change. Clearly, he believes Asia, particularly China, is right out in front in terms of potential: the region is urbanizing fast, and there is a ready market for Outokumpu's specialty products in China's nuclear power stations, for example. (The recent opening of the Shanghai service centre bears witness to this.) He also points out that the US market, though large, is contracting; even Europe's market is more dynamic. For all the talk of economic expansion in Latin America, Mr. Parvento insists that Outokumpu's priority is to grow in Asia. Mr. Parvento is confident Outokumpu can maintain its commodities business in Europe despite the growth of imports from

low-cost countries. “We have to understand where the differences come from,” explains Mr. Parvento. “We have the most modern machinery, as do they, and our processes are not especially labour-intensive. We have lower transportation costs, we use a greater proportion of scrap, and we have a lower carbon footprint.”

Conclusion

Not only is Mr. Parvento sanguine about Outokumpu's future in the European market, he is also confident that about the company's long-term prospects in general. He believes Outokumpu has impressive assets to build on: its knowledge base, its integrated structure, its sustainability programme and its highly developed network of service centres, distributors and partners. Thanks to all these, Outokumpu seems well equipped to achieve its principal aim: to become a global leader of innovative stainless steels and a leading European stainless steel supplier and customer service provider.

Outokumpu basic facts

- Outokumpu Group employs some 8,000 people in more than 30 countries.
- Group sales were EUR 4.23 billion in 2010.
- Production facilities in USA, UK, Sweden and Finland.



Liquid ferrochrome.



Talk about sustainable: this Buddhist temple in Thailand is designed to last over a thousand years. Outokumpu duplex LDX 2101[®] reinforcement bar (rebar) was used in the most critical concrete structures. Photo courtesy of Surachet Amnuaywittayakul