

New grinding line at Outokumpu Thin Strip Nyby raises productivity and quality to a new level



In 2007, ABB received an order to design, deliver and install electrical equipment and an operating and control system for a new grinding line at Outokumpu's factory in Torshälla outside Eskilstuna, Sweden. The aim of this new grinding line for specialty steel is to raise the bar in terms of productivity and quality, energy efficiency and personal safety to entirely new levels.

Summary

The new grinding line is part of the company's DASAP project – "Double As Soon As Possible", a project aimed at doubling Outokumpu's production so that the company is able to keep abreast of the rising demands of its customers in the future market.

High productivity and quality, efficient energy utilization as well as improved personal safety are some of the main advantages as a result of the new installation.

ABB's delivery

- Process switchgear
- 800xA control and monitoring system with process panels
- ACS800 MultiDrive and Single Drive systems and an ACSM1 Servo Drive system
- Construction, programming, installation and roll-out, as well as staff training

To control this new grinding line in a highly efficient way, ABB chose the tried and tested control and monitoring system 800xA, which has a central operator interface and process panels embedded within a local control desk.

The ACS800 MultiDrive and Single Drive were chosen as drive systems for the new grinding line. In order to improve regulatory compliance and ensure that the equipment met the customer's performance and quality demands, the drives were supplemented with an ACSM1 Servo Drive system.

ABB also offers future upgrades for the life period of the equipment in question through service-level agreements, among other ways.

Benefits

- The new grinding line makes it possible to increase its production from 34,000 tons in 2007 to 70,000 tons in 2011.
- The new facility uses energy much more efficiently and makes savings on its energy bill thanks to that it is provided with a system for feed back, which ensures that any surplus energy is fed back to the network.
- All its speed controlled motors have energy consumption of maximum 3 MWh/year.
- The new line is highly automated in order to improve personal safety.
- The HMI solution helps operators diagnose the line's status so as to make decisions faster and more easily every step of the way.

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Cooperation

The entire project period, from start to finish, has been characterized by openness, flexibility and responsiveness, and so both parties were very happy with the level of cooperation.

“This is not so surprising, in fact, because we have worked successfully with ABB on many previous occasions,” says Annika Agneson, Electricity Manager at Outokumpu Thin Strip Nyby. The short geographical distance between us and the fact that we speak the same language has also helped our partnership run without friction.

“An active customer and one that feels involved means better focus and shorter decision routes,” says Anders Kullgren, ABB Account Manager for Outokumpu Nyby. This was very much in evidence during the roll-out. Their presence and participation in the work helped ensure successful delivery.

Conclusion

The investment made by Outokumpu Thin Strip Nyby has not only brought improvements to productivity, energy efficiency, environmental awareness and employee safety, it has also raised the bar in all these areas despite the fact that the company was focused on DASAP at the time when it made the decision.

“For us, that means the future is already here. Right now, we can only wait for the market and demand to catch up with us. But when they do, we will definitely be ready,” concludes Annika Agneson.

Customer

Outokumpu Stainless is a leading provider of stainless steel and one of the six largest specialty steel manufacturers in the world. Its customers have very high demands and come from a range of different industries, including the food, household and building industries and manufacturing and processing industries.

The investment in the new grinding mill, which is probably the world's largest grinding mill for cold-rolled specialty steel, shows the company's determination, not only to affirm and consolidate its position among its existing customers, but obviously also to attract new ones.

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