Books are still king at Holmen Hallsta
Vida Paper’s Lessebo mill installed an ABB QCS to improve product quality on two of its paper machines, a third is on order

INVESTING TO COMPETE GLOBALLY

Jan Fjeldså, CEO of Lessebo Mill / Vida Paper AB: “Vida Paper produces fine paper in a market with high demands on quality and service. You have to have the best equipment to produce as efficiently as possible and to ensure the quality of the paper for our customers. To meet these requirements, we are investing in new automation systems for control and monitoring of paper production and automation systems for quality control of the paper”

Lessebo Mill /Vida Paper recently made a significant investment that has greatly enhanced both product quality and production efficiency. ABB was selected to supply a new quality measurement system that has provided Lessebo with the improvements needed to make the mill more competitive. The QCS monitors and controls paper production, based on 800xA technology and new Network Platform measuring platforms. The system manages and controls paper properties such as grammage, moisture, thickness, color and ash content.

“We produce fine paper in a highly competitive market where there are high demands on quality and service. The investment in the new QCS will save us a lot of setup time and waste,” says Lessebo Mill/Vida Paper’s CEO Jan Fjeldså.

Vida Paper’s Lessebo mill, located several miles east of Växjö in Småland, Sweden, is a modern, integrated pulp, paper and energy facility, with nearly SEK 600 million in sales and 245 employees. But when Vida acquired the Lessebo mill in the summer of 2006, after the previous owner, Klippan, went out of business, the mill needed to be modernized so it could compete in the global market.

The new ownership came in with a commitment to make the extensive equipment investments that would update the mill. “Until 2011, we are counting on nearly SEK 200 million in investments in production, the environment and district heating. It is
absolutely necessary in order to meet the high market requirements for quality and service,” Fjeldså says.

Lessebo Mill/Vida Paper is part of Vida Group, the largest privately owned sawmill group in Sweden. Vida Paper produces 55,000 tons/yr of paper and 30,000 tons/yr of sulphite pulp and, with three paper machines, is one of the country’s smaller mills.

“The advantages of having several smaller machines are that it is easier to specialize and adapt. Then you have to have the best equipment to make production as efficient as possible and to secure the quality of the paper for our customers,” says Fjeldså.

**FIVE SYSTEMS REPLACED WITH ONE**

When it came time to replace five old control systems with a single new one containing the latest technology on two of its paper machines, Vida Paper negotiated with several potential suppliers. ABB won the overall order, an investment of nearly SEK 20 million.

Hans Stenberg, ABB’s client manager for Vida Paper, has a long-standing relationship with the Lessebo mill. “Over the years with other owners, there were requests for new systems, but the money was always lacking. This means that some of the older equipment failed to meet today’s demands, which has meant a lot of expensive production stops,” Stenberg says.

A few years ago, Stenberg was tasked, along with ABB’s technical salesperson Hakan Österholm, with investigating and providing a proposal for new quality and efficiency-enhancing systems. Working with Sonny Fransson, operating engineer and project manager at Vida, they analyzed Lessebo’s system needs.

Vida manufactures white and colored uncoated paper for offset printing and digital printing. The paper is delivered in rolls, sheets or office formats.

Says Fransson: “The switch to the new quality system means that we will be able to measure better and therefore able to make quality and color transitions much faster and safer, saving time and reducing waste. This is a very complex color mixing - everything affects the color but the color affects nothing. PPM envelopes, for example, must be exactly the same orange tone every time the customer orders new envelopes. If they are not, then all we can do is throw them away.”

So far, two of Lessebo’s three paper machines have been modernized with ABB’s QCS. The system has been integrated with the existing machine controllers, which provides a uniform system structure and operator environment throughout the mill. It also facilitates the mill’s information management. To make it possible to access production information via the office network, ABB installed thin clients.

**Vida Group facts**

Vida is the largest privately owned group in Sweden for resource-efficient processing of locally produced wood. It has 16 production facilities.

**Activities:**
- Sawn timber processing
- Packaging production
- Pulp paper production
- Pellet production
- Biofuel trade

**Sales:** SEK 4 billion, Lessebo SEK 600 million

**Employees:** 1,200 of which 245 are at Lessebo

**Exports:** approximately 80%, mostly to the Nordic countries and northern Europe.

**Annual production:**
- 55,000 tons of paper
- 30,000 tons of sulphite pulp

**A capacity of:** 80,000 tons of freesheet

Two tons of handmade paper

**Vida Paper produces a smaller volume of paper in a wide range of products, and after a substantial investment now has a modern, updated production facility.**

Pulp & Paper International (PPI) May 2011

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The new quality control system offers many advantages for Lessebo. The mill can now control important paper characteristics more precisely, shorten color transition time and reduce paper waste and line breaks.

But the transition to the new system has not been completely smooth. "It took more time to fine tune than what was promised, but on the other hand it works better now than we dared hope for," says Fjeldså.

Fransson was impressed by all the specialized skills that ABB employed to cope with the startup. "There were specialists logged on in the US who would call in the middle of the night to the operator in Lessebo and say, 'Wait, wait, I'll set it up so you get it right.'"

**INVESTMENT TO BE RECOPED IN THREE YEARS**

Lessebo's order included a guarantee from ABB that productivity would be increased, and that the QCS will be able to generate approximately 500 color conversions over 333 operating days.

"We expect a 35% improvement in color transition by shortening the times significantly. The amount of discarded paper during transitions has decreased from 2.5 tons to 1 ton. Also, there are fewer line breaks and they are down to ABB's guarantee level or better," says Fjeldså. He is especially pleased that Vida Paper has made production more efficient – which will increase profitability. Mill executives calculate that their total investment of SEK 17 million will be recouped in three years.

With the new QCS, the mill does not save energy directly, but Fjeldså points out that it is saved indirectly through reduced waste, which reduces the consumption of energy and raw materials.

Along with updating its systems and machines, Lessebo is working to make employees more involved in the company's long-term strategy process. One method the mill is using to accomplish this is the management team has held personal interviews with all employees to find out what they think is important and what they value at the mill.

"This is important for the strategy work and the talks themselves have also been something of a sur-

Vida Paper is an integrated and environmentally adapted mill with established brands that include Colorit, Kaskad, Lossebo Design and Scandia 2000

Dual monitors: The main unit receives, presents and regulates according to the formula, explains Bernt Brännlund.
prise for us all. Our goal is to create a positive atmosphere in the mill and a feeling that you can influence things,” says Fjeldså.

Lessebo’s PM 3 operators have, in time of writing, already started contacting Fjeldså, to ask when ABB’s QCS can be installed on their machine.

Now Visa has decided to install a complete QCS systems including caliper actuators from ABB on PM 3. The system will be integrated into the new existing 800xA system. **PPI**

**ABB’s delivery**

An 800xA control system with a common aspect system for PM 1, PM 2 and PM 3.

Four Network Platform measuring platforms equipped to measure grammage, moisture, ash content, thickness, color

Induction xP actuator for profile control of the thickness on PM 1

Machine control of grammage, moisture and color.

Profile control of grammage and thickness.

Tate & Lyle is a world leading food and industrial ingredients company, serving a global market from over 30 production facilities throughout Europe, the Americas and Asia.

For more than 100 years, through our complete starch portfolio, we have delivered strength, smoothness, quality and process efficiency to leading paper and board manufacturers worldwide.

We produce paper and board starches in five European plants and support our customer service teams from our Centre of Starch Expertise in the Netherlands.

Our starch engineers and application experts can help you bring better paper solutions to your markets, and help you optimize your processes today, for a better bottom line tomorrow.

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