ABB was selected to supply a new quality measurement system that has provided the Vida Paper’s Lessebo mill with the improvements needed to make the mill more competitive. The QCS monitors and controls paper production, based on System 800xA technology and new Network Platform scanner. 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 245 employees. When Vida acquired the Lessebo mill in the summer of 2006, 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. 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 and chose ABB.

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.

Vida Paper recently made a significant investment that has greatly enhanced both product quality and production efficiency.
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.

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.

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.

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 recouped 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.

After seeing the positive results on two of the machines, Lessebo’s PM3 operators 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 PM3. The system will be integrated into the new existing System 800xA.

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