

Case Westas Group

5% increase in production efficiency with ABB drives



At the Westas sawmill in southern Finland, the long production process is all about conveyor technology. Different pieces are transported; in the beginning of the process, they are heavy logs and then as different smaller pieces. For the process to flow smoothly, the conveyors use variable speed drives for flexible and accurate speed control.

Customer benefits

	Improved production efficiency	Quality end products and reduced waste for better profit using variable speed drives.
	Reliable process control	With the drives, nominal speed increases of 5 to 20 percent are possible to advance accurate speed control without using programmable logic controllers.
	Easy to commission and use	The control panel offers a very simple and direct access to all the drive functions.
	Global service with local presence	Service and spare parts are always close by with ABB's extensive sales and service network.

Pekka Kopra, the Managing Director of Westas Group explains the process: "First we move round pieces, which then are transformed into cants of various shapes and sizes and sorted to different locations on the production line. We have products in various dimensions, hundreds of them. It means that when we have products on a conveyor the speed and feeding has to be adapted to the dimensions of the goods, and this requires different conveyor speeds which can be achieved using high-quality variable speed drives."

The production process for lumber is long; from the forest to the customers the process takes about 3 to 4 weeks. It includes several stages, of which drying and preserving the quality of the final product are the most demanding ones. All production by Westas Group is based on customer orders which steer the whole production process.

Speed control of conveyors is crucial at sawmills as the process is all about material handling technology



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Reliable process control is crucial for lumber production lines

01 Speed control of conveyors is crucial at sawmills that mostly consist of material handling technology.

02 The ACS580-01 wall-mounted general purpose drives are easy to use and configure for various applications such as conveyors, pumps and fans.

03 Log feeding was part of the upgrade investment that improved production efficiency about five percent.

04 Spare parts and service available nearby is a requirement at the sawmill working in three shifts.

Speed control crucial to smooth woodworking process

Conveyors transport the timber first through sorting based on different quality and dimension classes. Once selected, a wheel loader takes the logs to the sawing line where they are conveyed to the debarking unit. After that, the logs are scaled and sorted and finally fed into the cutting line in a correct position.

“The speed and feeding of the conveyors are absolutely crucial, so that the relatively long process will work smoothly. A stop in some part of the process can affect things all the way to the beginning,” says Kopra.

Improved productivity with variable speed drives

Everything counts at a sawmill such as Westas Raunio which produces around 200,000 square meters of lumber annually. Instead of renewing the whole production line from the mid-1990s, the management decided to invest in the automation upgrade to improve production efficiency.

The automation upgrade included log feeding, log metering and saw-line angle metering machines, which were equipped with three units of ABB’s ACS580 general purpose drives. With drives, the

speed of the conveyors is adjusted, and then adapted to the rest of the production process. These small investments instead of a major machinery renewal improved production efficiency about five percent. “The investments can carry us for a few years with the help of this automation,” Pekka points out.

“In our production, raw material is the key, but energy is also one of the components. Any savings we can make on electricity is profit for us in the end.”

For more advanced energy efficiency, ABB’s drives are equipped with built-in energy efficiency calculators monitoring used and saved kWh, CO₂ emissions and money.

Durability and simplicity for effortless operation

A sawmill can be a challenging working environment for variable speed drives. The new drives control motors in locations covered with sawdust and wood chips from production processes and thus require robust design.

As the sawmill is located in rural area, getting help on time is as imperative as the usability of the machinery components that the personnel



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operate. “We work quite independently here in the countryside outside the big urban centers and therefore it’s important that our employees know how to adjust parameters and are well-versed in the drives’ use,” Pekka says.

ABB’s general purpose drives feature control panel as standard, which is equipped with intuitive menus and context-sensitive assistants guiding the users in setup, use and diagnostics. The user does not need to know parameters or use any programming language.

Reliability and high standards matter

The drives help with preventive maintenance by monitoring the drive’s running hours, motor rotation, consumed kilowatts and cooling fan’s runtime, keeping the process running reliably and helping prevent unplanned downtime. However, when maintenance is needed, the service and spare parts need to be available nearby.

“To maintain the replacement parts here at the mill on a reasonable level, our aim is to select high-standard and reliable suppliers, also of the kind who have the capacity to deliver when needed. We run in three shifts every working day and if anything happens, we have to have help and replacement parts close at hand.”



Pekka Kopra,
Managing Director
at Westas Group

Westas Group is the largest, private sawmill company in Western Finland and a partner of forest owners in the international lumber business. The company owns two sawmills; Westas Raunio and Westas Pihlava, which both are over 100 years old and together produce 340,000 m³ high-standard wood raw material annually.

“ABB is a well-known supplier and the image of ABB includes reliability and a high standard of operation, which they proved in our case to be true.”

For more information please contact:

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