Bergkvist Insjön

Bergkvist-Insjön

High-Permormance Scanner Systems for Saw Line

Bergkvist Insjön (Sweden) is one of the most innovative sawmills. Its main customers are post-processing industries in Europe as well as in Japan.

Bergkvist Insjön is internationally well-known for its high quality levels regarding special drying, sorting and its highly accurately cut products.

For the Insjön sawmill, EWD installed a high-performance sawing line with speeds up to 200 m/min. Unlike conventional sawing lines which are based on a fixed cutting pattern, this new system excells with its high flexibility showing the following features:

- Various side boards at primary breakdown in horizontal or angular position
- Curve sawing at secondary breakdown concerning profile chipper, profile cutter as well as ripping
- Various side boards at secondary breakdown

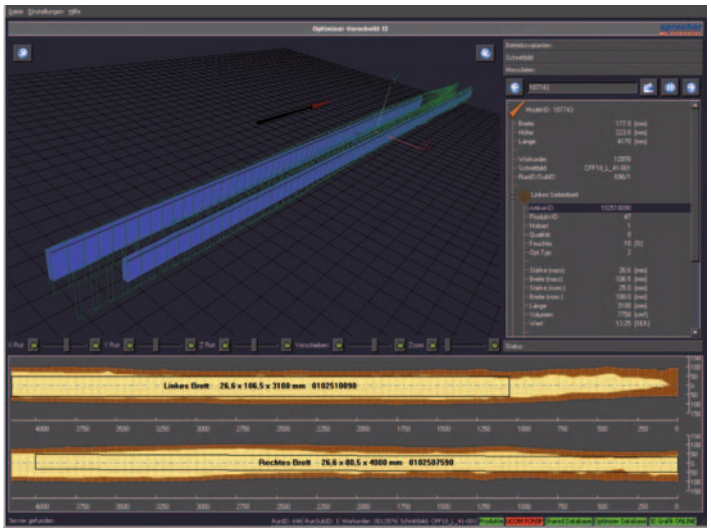
In order to achieve highest possible yield, which is the primary customer objective, an expert had to be found for providing the required sophisticated measuring systems.

Due to its high standards and high reliability, Bergkvist decided for Sprecher Automation's SPRESCAN 3D-400.

Moreover, the Austrian product excells in terms of speed and accuracy as well as with the optimising software with its wide functionality range and its convincing 3D visualisations.

Eventually, six SPRESCAN 3D-400 true shape scanner systems were implemented in the new sawing line.

Log rotation
(1 x SPRESCAN 3D-400)
Here, SPRESCAN 3D-400 measures the raw material before sawing and calculates the optimum position of the logs based on the 3D log images by taking into account the yield-optimised cutting patterns. The calculation of the rotation data acts as the basis for rotation control.



Side board optimisation

Side board optimisation for primary breakdown
(2 x SPRESCAN 3D-400)
Two profile chippers together with primary breakdown saws produce 2 x 2 side boards.

sprecher automation

There are two cascaded SPRESCAN 3D systems for the inner and outer side boards. Each scanner captures the board wanes. The optimising software then calculates the proper side boards based on specific wane calculation rules.

Depending on the optimising results, side boards can be now produced at positions between 0 – 1.5° to the longitudinal axis of the machine - an outstanding novelty.

Curve calculation for EWD ArcoLine®
(1 x SPRESCAN 3D-400)
After model turning, a SPRESCAN 3D system provides the data required for curve sawing at secondary breakdown.

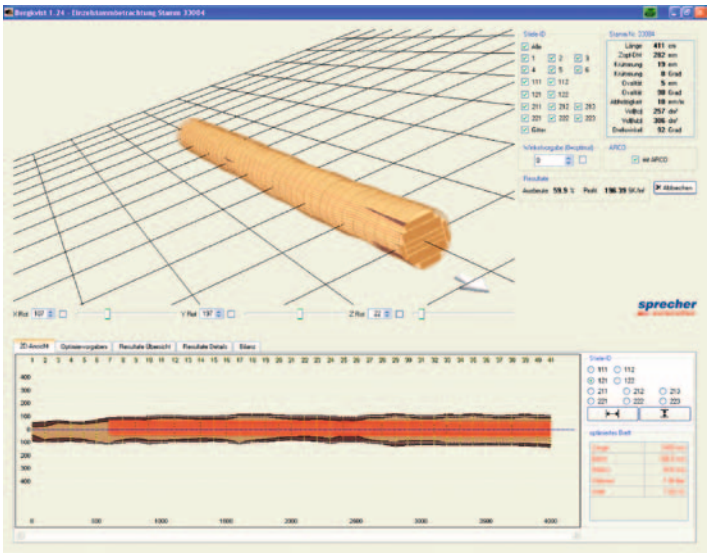
Similar to CNC machines, the newly developed Arcoline® then produces the proper results from the curved logs based on the given profile.

Side board optimisation for secondary breakdown
(2 x SPRESCAN 3D-400)
Two profile chippers together with secondary breakdown saws can produce 2 x 2 side boards.

The optimum side boards are calculated by SPRESCAN 3D-400 scanners together with the optimising software before curve sawing.

As a significant highlight, the SPRESCAN 3D system excells with its high real-time capability. All optimising processes are run within 300 ms.

Simulation software
Beside all implemented scanners plus software, Sprecher Automation expecially developed a software package for cutting simulation with calculation of the real yield.



Saw simulation

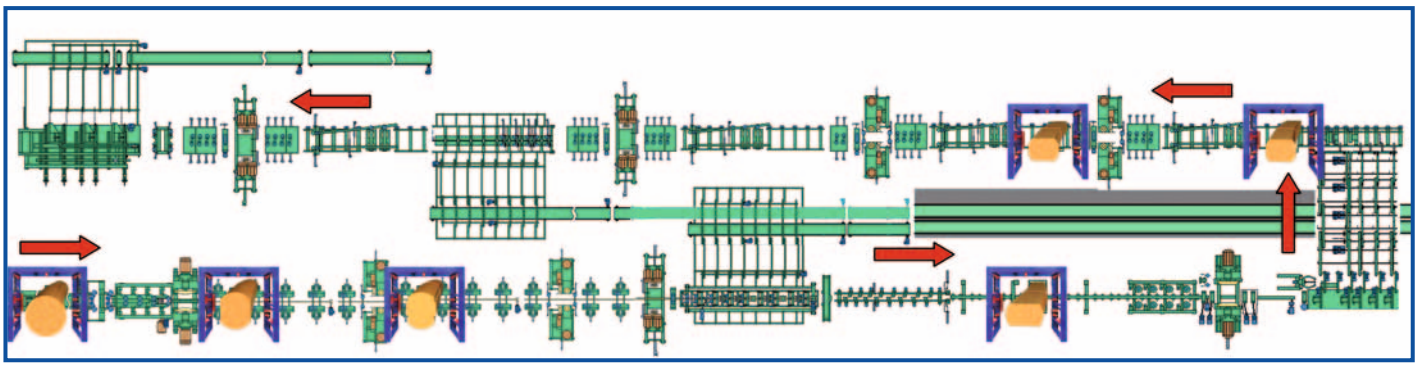
The simulation is based on real scanning data of the 3D measurement systems, the cutting pattern and the optimisation parameters. Yield calculation of simulated cutting is conducted under real conditions.

Log rotation, side board optimisation and curve sawing are all considered by the simulation software. The results are clearly graphically displayed.

This software tool acts as a considerable advancement of cutting calculations.

As a specific feature, the properties of the sawing line can be additionally configured. It therefore allows a direct comparison of the results of fixed cutting and of a flexible sawing line. Furthermore, single logs can be also compared.

As a formal occasion, the new sawing line was presented to the public on June 16, 2006.



Saw line scheme with SPRESCAN 3D-400 scanner systems

12.0.041.02de B

Sprecher Automation GmbH
(Headquarters)

Franckstrasse 51
4018 Linz, Austria

T: +43 732 6908-0
F: +43 732 6908-321

info@sprecher-automation.com

www.sprecher-automation.com