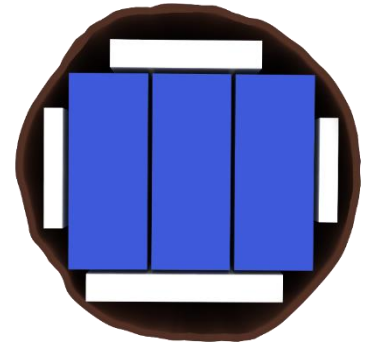


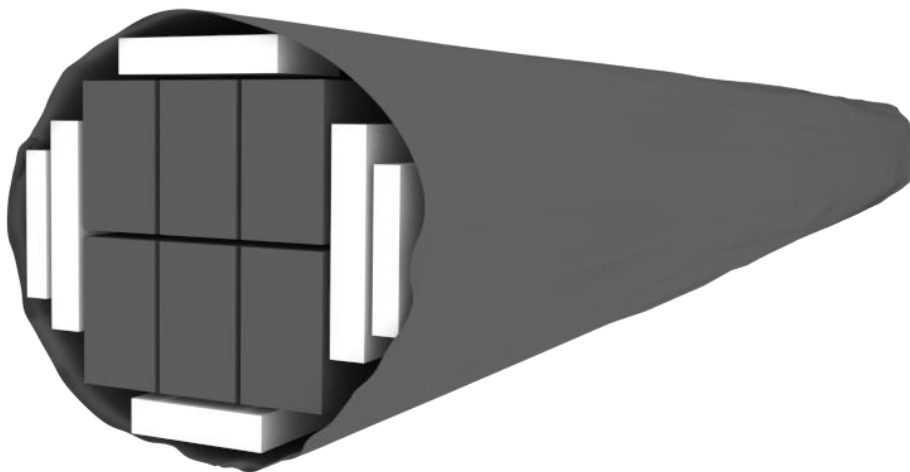
JORO-optima3D

Cutting pattern optimization

DATA SHEET



Use optimization potentials



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JORO-optima3D

Information

Measuring data of the high resolution true shape scanner **JORO-3D**

are the basis for the new optimization

JORO-optima3D.

The high number of information on the log allows the maximum product yield in several steps of optimization.

- ✓ **main product** – Determination of optimum.
- ✓ **side boards** – All sideboard combinations are calculated to maximum product yield.

In further steps, all data for sawline control can be given to the log after running through the scanner.

- ✓ **separated quality requirements**
- ✓ **different wane regulations**
- ✓ **product related specifications**
- ✓ **main product and side boards calculated separately**

This application provides the opportunity to cut flexibly and profitably.

The adjustable system parameters, such as

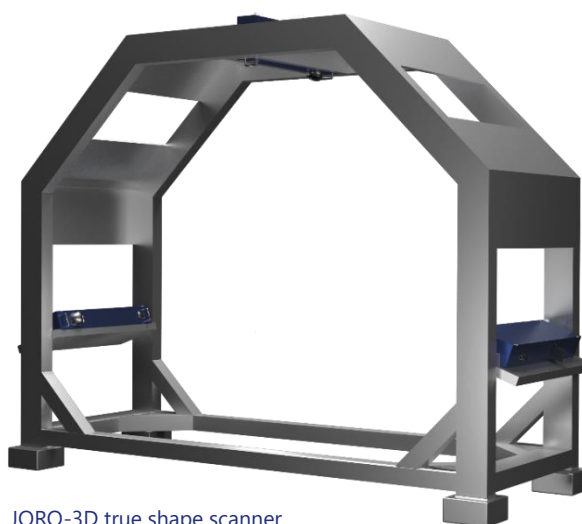
- ✓ **primary breakdown**
- ✓ **secondary breakdown**
- ✓ **asymmetric cut**
- ✓ **cant circular run**
- ✓ **chipper canter jump**

define the options for side board optimization.

**Wood processing
electronics**

Log optimizer

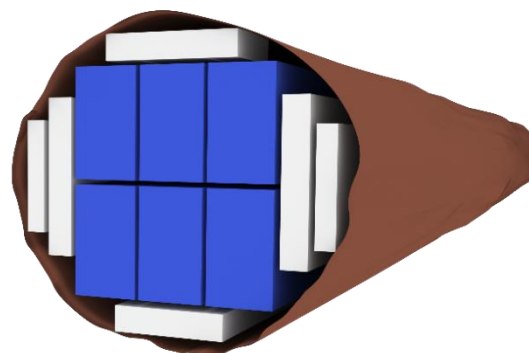
Software for sawmills



JORO-3D true shape scanner.



Optimization in several steps.



3D model of an overall optimized log.

Advantages

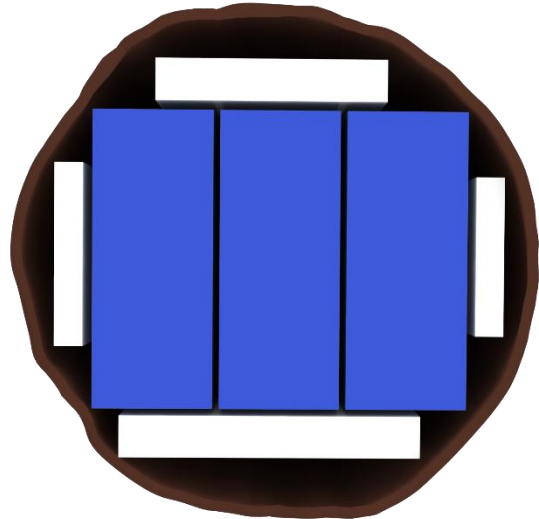
JE: „Determination of maximum yield of a long-log starts before cutting it.“

What advantage does the log optimization provide?

→ Valuation of all products

- ✓ **main product**
value optimized/output optimized
- ✓ **lateral boards**
value optimized
- ✓ **residuals**
value optimized

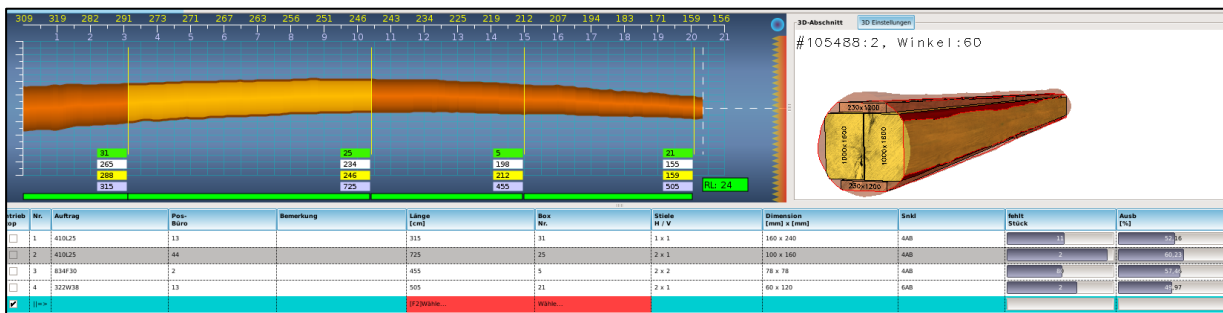
- ✓ order control precise to time
- ✓ calculation on the raw material input
- ✓ production control and influence of the value starts on the arrival of the logs



Cutting pattern example

In recent years, the raw-material wood got more exploited and the process got more separated. Thinking about pulp mills, timber industry (MDF, OSB, ...), sawmill products (glued wood, finger jointing, solid wood, ...) and wood used for power generation (pellets, chips, ...). Good reasons to decide early in the value adding chain what the wood can be used for.

Considering main product, lateral boards and residuals that can be sold, the long-log is optimized for cutting. Specification for main product and lateral boards can be set by the customer in parametrized databases.



Optimized long-log with classified cuts.

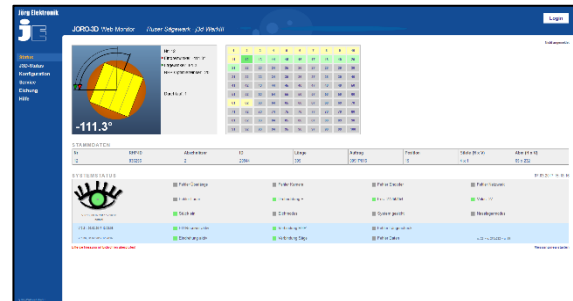
Additional application

Recognition

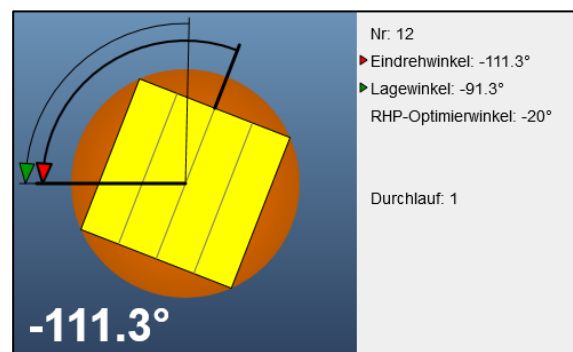
- ✓ Optimization of the whole log on the log yard after measuring
- ✓ Online and offline sawmills
- ✓ Up to 100 logs in Database
- ✓ Recognition in sawmill after second measuring

Rotation optimization

- ✓ Optimization of ideal cutting position already at the log yard
- ✓ Recognition of position angle in the sawmill
- ✓ Specifying of rotation angle



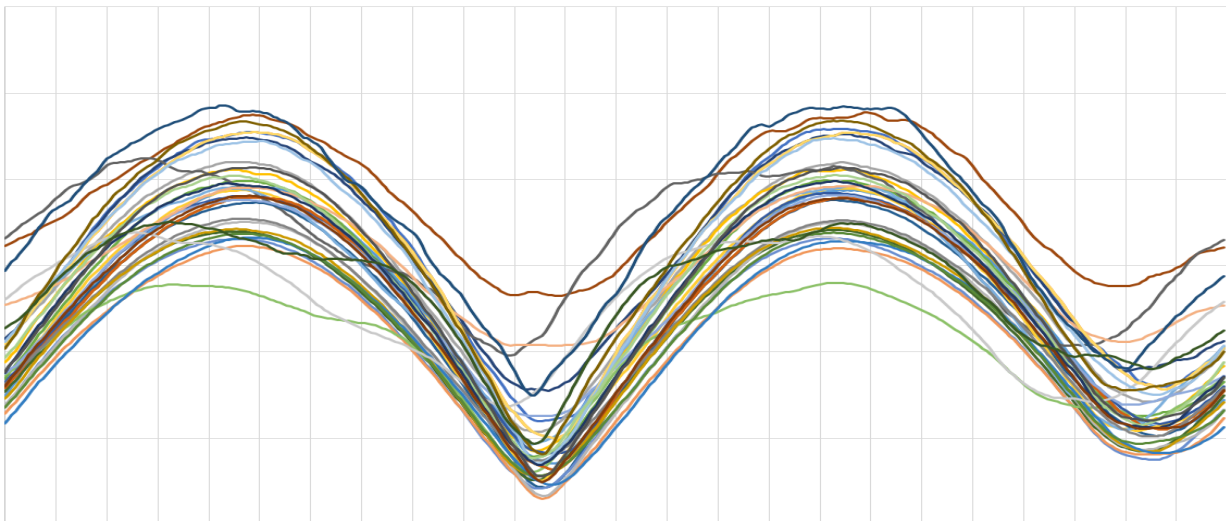
JORO-Webmonitor



Rotation optimization

JORO-optima3D provides **recognition** and **rotation optimization** in the sawmill as additional applications. Therefore, logs are measured and optimized for cutting already on the log yard and a digital fingerprint is attached to them. Measured data are combined with this fingerprint, so all specifications are recovered with the second measuring at the sawmill entrance.

The system operates for cutting patterns and rotation angles, guaranteeing a higher product yield.



Digital fingerprint of a log