Veneer Visual and Moisture Analyzer R7 - Drying

VISUAL AND MOISTURE ANALYSIS IN ONE INTELLIGENT SYSTEM

Accurate grading by visual and moisture characteristics

Veneer Visual and Moisture Analyzer R7 (formerly known as Mecano VDA+MVA) sorts veneer sheets into different grades according to their visual characteristics and moisture content. Moisture analysis is based on highly accurate microwave technology that measures moisture content through the veneer. The analyzer defines peak and average moisture and creates a moisture map for each sheet. It also allows you to define different moisture content for different areas of the sheet. Accurate moisture analysis leads to increased drying capacity and improved veneer quality.

Veneer Visual and Moisture Analyzer R7 offers different detection technologies to match your needs. You can select the imaging method of the three available models: color, micro, or surface. This analyzer is also equipped with advanced optimization possibilities to boost your production. Patching and composing optimization features analyze the most efficient way to utilize the sheets in the following process phases.

Key benefits

REDUCE THE REJECT RATIO IN THE FOLLOWING PROCESS PHASES

IMPROVE PRODUCTION EFFICIENCY

IMPROVE DRYING CAPACITY

MINIMIZE OVER DRYING

MAXIMIZE VENEER QUALITY

References

Enchapes Decorativos S.A., Endesa

The modernization together with the thorough training has made the Endesa factory more productive and has improved the quality of the produced plywood.

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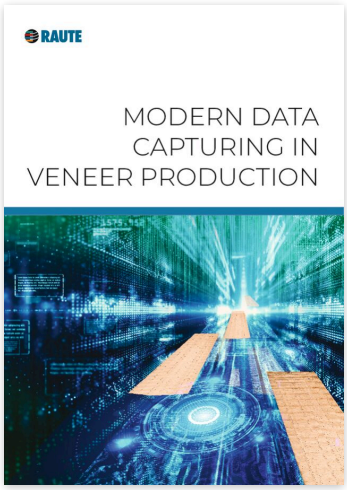

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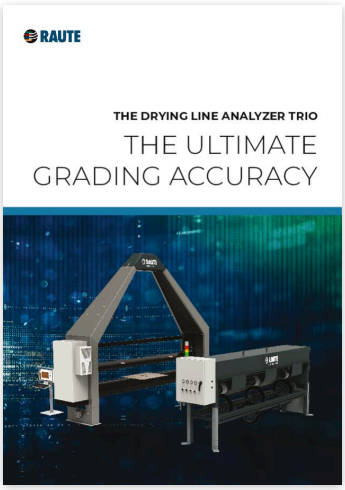

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Technical specifications

	Surface	Micro	Color
Veneer thickness (mm)	0.5 – 4.2	0.5 – 4.2	0.5 – 4.2
Available sizes (ft)	5 - 10	5 - 10	5 - 10
Grading accuracy	>95%	>95%	>95%
Color defects (e.g. Knot, wane)	●	●	●
Micro defects (e.g. Crack, pin hole)	●	●	○
Surface defects (e.g. Roughness, overlap)	●	○	○
Moisture Sensors (pcs)	16 - 24	16 - 24	16 - 24
Moisture Range (mc)	0 - 40%	0 - 40%	0 - 40%
Maximum moisture accuracy (mc)	±0.5%	±0.5%	±0.5%

Analyzers for Veneer Drying

Grade the sheets accurately for the following process phases

At the veneer drying line, accurate grading is essential to keep material flowing efficiently toward the next process phases. The best way to secure consistent, unbiased decisions is to let intelligent analyzers perform the grading for you. In addition to classifying sheets, analyzers collect valuable process data that helps you optimize dryer performance, improve veneer quality, and boost overall profitability.

Modern analyzers grade sheets based on visual properties, moisture content, strength, and density. These capabilities can be delivered through individual systems or through integrated solutions that combine the features of two or even three analyzers into one compact unit, saving floor space, reducing investment costs, and most importantly, improving grading accuracy.

AI takes dry grading to a new level. Conventional vision systems often struggle to distinguish between sound knots, dark knots, loose knots, bark defects, and variations caused by heartwood or grain patterns. These limitations can lead to misgrading, unnecessary patching, and costly panel downgrading.

With AI-enhanced visual grading, these challenging distinctions can now be made reliably. At the drying line, AI accurately separates defects that need patching or composing from those that can be routed further downstream, such as to the panel repairing line. When combined with process simulation features, each veneer sheet can be directed to its most suitable next phase individually.

For example, face-quality sheets that require no patching can be identified directly at the dryer and sent straight to the lay-up line instead of the patching line, streamlining sheet flow and improving end-product quality.

Raute's AI analyzers can be retrofitted to any dry grading line. AI-enabled visual detection can also be combined with moisture grading, strength analysis, and surface property assessment such as waviness and roughness, providing you with better decision-making tools to maximize raw-material value across your mill.

Discover how AI-enhanced dry veneer grading can improve quality, accuracy, and flow in your production.