



## Raute introduces production-proven AI defect detection for engineered wood manufacturing

**AI helps veneer, plywood and LVL manufacturers make more consistent production decisions while improving recovery and reducing waste.**

Raute has deployed AI-enhanced defect detection in production environments to improve how veneer, plywood and LVL production lines identify and utilize raw material. The solution enables earlier and more consistent production decisions, helping mills improve recovery, reduce waste, and optimize energy use.

In veneer-based engineered wood production, defect detection has a direct impact on how efficiently raw material can be utilized. It influences grading, clipping, routing and repairing decisions throughout the process. When detection is inaccurate or inconsistent, it leads to unnecessary waste, reduced recovery and inefficient use of energy in downstream stages.

Raute's analyzers are industrial systems used to measure, grade and classify veneer and panels at different stages of production. They provide real-time quality data to support production decisions across the process. By combining visual defect detection with measurements such as moisture and strength properties, analyzers create a consistent foundation for data-driven and increasingly automated production.

AI-enhanced defect detection strengthens this role. By combining industrial machine vision with deep learning models developed specifically for veneer-based engineered wood production, analyzers can identify defects more consistently under different wood species, surface characteristics and production conditions. The systems generate detailed defect maps for individual sheets, supporting more precise and repeatable decisions.

Demand for this capability is growing as manufacturers work with a wider mix of raw materials. AI-based defect detection in Raute analyzers is built on more than 50 years of analyzer development and extensive experience from veneer processing across over 50 wood species. This provides a strong foundation for applying the same approach to both commonly used and more specialized materials.

*"More variable raw materials mean that mistakes made early in the process become increasingly costly later on," says **Markus Sirviö**, responsible for analyzer business development at Raute. "When detection becomes more consistent, mills can improve recovery and avoid inefficiencies that would otherwise carry through the entire production process."*

Raute analyzers can be applied at multiple points in production, including green veneer inspection after peeling, dry veneer grading after drying, and panel repairing and grading. Early-stage defect detection is particularly important, as it helps prevent low-quality material from entering energy-intensive processes such as drying and hot pressing.

As engineered wood producers work to improve efficiency with increasingly variable raw materials, AI-enhanced analyzers are becoming an established part of production. Their role is shifting from inspection to enabling consistent, data-driven decision-making across the production process.

### **Raute in brief - MAKING WOOD MATTER**

Raute is the partner to future-proof the wood industry. Our technologies cover different production processes with supporting digital and analytics solutions for engineered wood products. Additionally, we offer full-scale service concept ranging from spare parts to regular maintenance and modernizations. Our innovative hardware and software solutions are designed to support our customers' efficient consumption of natural resources. In mill-scale projects, Raute is a global market leader both in the plywood and LVL industries. Raute's head office and main production is located in Lahti, Finland. The company's other production plants are located in Kajaani, Finland, the Vancouver area of Canada, and in Pullman, WA, USA. More information about the company can be found at [www.raute.com](http://www.raute.com).



FURTHER INFORMATION:

Markus Sirviö, Senior Director, Business Development Analyzers, tel. +358400509018