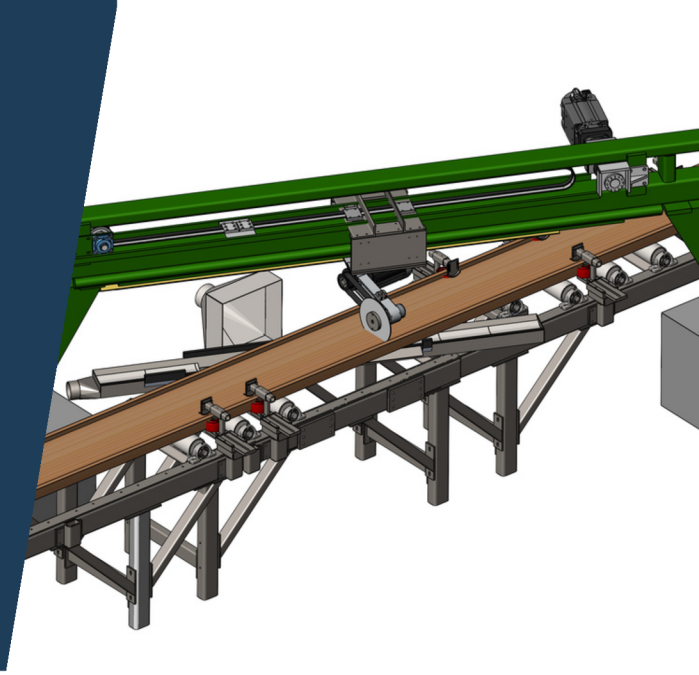
Applied Motion
SYSTEMS

ENGINEERED WOOD PRODUCTS

Automation integration for LVL, I-joist, and veneer processing lines



The Challenge

EWP lines run hard.
Most control systems weren't built for it.

Heat, wood dust, and continuous press schedules that don't stop. Many of these lines still run on photo eyes, timers, and pneumatics that degrade predictably in service. On one LVL layup line, an hour of downtime cost $50,000. The line wasn't broken. It was limited.

AMS has worked in EWP since the mid-1990s: LVL layup, I-joist, finger joint, continuous press, and veneer processing.

READ THE CASE STUDY

Key Capabilities

- Position-based veneer sheet coordination replacing photo eye and timer logic
- LVL layup line optimization: sequencing, lap control, and press feed coordination
- I-joist web feeding with consistent force and position control at line speeds up to 1,000 fpm
- Flying saw coordination at full production speeds on I-joist, finger joint, and continuous press lines.
- Veneer placement system upgrades including veneer tracking and motion control, robotic placement and pneumatic-to-linear-motor knockdown conversions.
- Mechanical drivetrain analysis and upgrades before any software work begins
- HMIs and alarm structures built for operators and plant electricians across every shift

More Throughput

Position-based coordination paired with a mechanical overhaul produced a 20% throughput increase across 89 axes. Payback: four months.

Veneer Placement Upgraded

Inconsistent actuators were causing misalignment and downstream quality problems. AMS engineered a replacement system that integrated directly with the existing Rockwell ControlLogix PLC.

In EWP Since the Mid-1990s

LVL, I-joist, finger joint, and veneer processing. These are problems we've solved before.

We start with mechanical engineering because the controls can only deliver what the drivetrain allows.

Most EWP control problems have a mechanical root cause. Before we write code, we analyze the drivetrain and evaluate wear mechanisms. The 20% throughput gain came from improving the mechanical foundation first.

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