



Automation amid a shortage of skilled workers

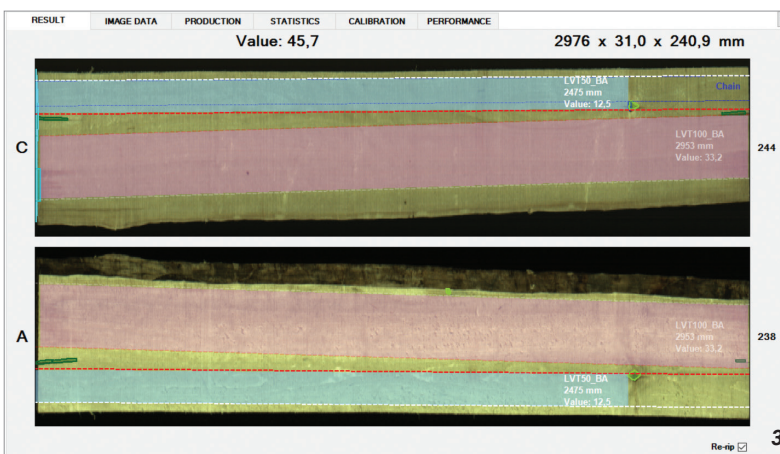
As the demand for skilled labour increases, automation is arguably becoming more and more important in modern woodworking.

Not only are machines and systems increasingly taking over the handling of often-heavy workpieces, but the fully automatic quality evaluation and optimisation of wood materials is also gaining ground. Paul Maschinenfabrik, a manufacturer of woodworking equipment based in Dürmentingen, Baden-Württemberg, Germany, addresses these trends with its scanner solutions for cross-cutting and ripping.

Paul has supplied a rip scanner to Krauss, a birch processing company based in Latvia. Krauss has been involved in the production of furniture parts, mouldings and glued parts since 2001, and takes care of the entire processing from sawn timber to the finished product, as well as the utilisation of wood waste for the production of wood briquettes. The company



- 1 The AB920_SPOT automatic infeed system detects the position of the workpieces and positions them in front of the rip saw according to the scanner's specifications
- 2 The Rip Scanning System detects workpieces from above and below as they pass through
- 3 The scanner can optimise with two different cutting directions on one workpiece



Once a workpiece has been detected and the cutting pattern calculated, it is fed to the rip saw. The automatic, camera-supported AB920_SPOT infeed system detects the position and aligns the workpiece according to the scanner's specifications. The saw blades of the CGL move into position before the board passes through the saw. The climb-cutting CGL technique aims to achieve precise workpiece guidance, ideal cutting quality and minimal saw kerfs. It demonstrates its strengths in the width-cutting of dried hardwoods, but also for other applications. With up to four positioning units in telescopic design, the CGL can offer maximum flexibility and minimum saw blade spacing.

The scanner relieves the operator of the formerly manual evaluation. In addition, the Rip Scanning System divides the workpieces faster and more accurately than an operator can do visually. Paul reported that Krauss was satisfied after the installation of the system, as the production efficiency increased in a short period of time. **P**

was looking for an economical solution to increase yield, quality and performance. For Krauss's application, Paul's designers combined the newly developed Rip Scanning System with a CGL Ripsaw, which was equipped with four movable saw bushes in telescopic design.

The unedged and dried boards are destacked, singulated and detected from above and below by cameras as they pass through the Rip Scanning System in longitudinal direction. The scanner software detects the

previously defined defects as well as the board geometry and optimises based on the stored cutting list. Taking into account the turning and positioning options of the board as well as the adjustment of the saw blades, the software calculates the optimum cutting pattern. If required, two different cutting directions are possible on the same board by means of a re-rip piece, which increases optimisation. Furthermore, the scanner can use the available data to incorporate the optimisation result for a subsequent cross-cutting process.