



TECH UPDATE - Lumber Grade Optimization

USNR

USNR 's Lineal High Grader (LHG) and Transverse High Grader (THG) are among the industry's leading automated lumber grading systems, backed by proven experience and satisfied customers, says the company.

The latest features on the LHG are marginal grade logic, per board; hi/low grade, per pack; split/shake merging, per grade; and interface with an external moisture meter.

LHG is the only automated grading system that offers fully integrated MSR/MEL evaluation within its frame, according to USNR.

THG has similar capabilities to LHG. These include full four-face scanning with only two rows of sensors; utilizing proven LHG software to process the data and optimize the solutions; use of BioLuma 2900LVG+ sensors, which is the latest technology; LED lighting modules that offer brightest illumination of boards for vision scanning; and, a high speed, flat lumber transport system.

THG uses the proven technology from the company's LHG and combines it with its latest extra-high resolution BioLuma 2900LVG+ sensor, in a high speed, flat transport configuration.

www.usnr.com

VAB Solutions

Building on over 15 years in the industry, VAB Solutions' Full Grader Planer Mill Lineal Grading Optimizer offers competitive pricing with the fastest return on investment in the industry, says Jessy Ross, sales and marketing coordinator for the company.

The graderless system, sold to more than ten customers at this point, offers a combination of lineal and transverse measurements.

"It also has a user-friendly and complete graphical interface and is a maintenance-free system," says Ross. "The optimizer detects face and edge wane, face and edge skip, warp twist, bow and crook, decay, rot and white speck, splits, shakes and knots."

VAB Solutions offers a free trial run of its technology.

www.vab-solutions.com



Comact

Comact is primarily known for its softwood sawmill solutions, but thanks to new vision technologies marketed in recent years, its scope is expanding with the company's increasing its presence in hardwood mills.

Comact is currently marketing its graderless, 3D and vision scanning technology as GradExpert for the planer mill, EdgExpert for the sawmill edger and TrimExpert for the sawmill trimmer. Comact has more than 50 systems in operation.

The company's vision system is a transverse scanner that optimizes cuts by combining geometrical and vision readings. It can grade according to NLGA standards for softwood or NHLA standards, which are generally used in hardwood. It is also possible to optimize several products at the same time, such as lumber, squares, pallet material and NHLA hardwood grade material. Currently, the softwood species being processed using this technology are spruce-pine-fir, southern yellow pine, Douglas fir, and hemlock. Species in hardwood are sugar maple, yellow birch and oak. Walnut, ash and cherry are under development and will be available soon.

In stressed, dry or dead wood, cracks are a defect that multiplies and this represents a very big challenge. Increasing vision capability from single to double cameras makes it possible to increase detection of these same cracks by more than 50 per cent.

The performances reached by the Comact vision system exceeded 98 per cent at more than 220 boards per minute of the optimal value determined by a team of graders.

www.comact.com

Lucidyne

The American Lumber Standards Committee has certified a new technology platform for strength grading. The method utilizes a "strength grading module" developed by Lucidyne Technologies, Inc. and is installed in a GradeScan automated lumber grading system.

This non-contact technique takes advantage of GradeScan's unique sensor capabilities to identify high-strength candidates. The same technologies consider defect and other fibre characteristics to generate accurate visual grading solutions. A recent doubling of the scanner's resolution now makes it possible to find timber break and other tiny defects.

The first installations will be in Weyerhaeuser's Plymouth, North Carolina mill and Westervelt Company in Moundville, Alabama. The technology will soon be tested at a Weyerhaeuser mill in Alberta followed by application for certification in Canada with successful results.

GradeScan can also be used with existing strength grading systems to provide significant value uplift through an integration of visual and strength grading technologies.

www.Lucidyne.com



Autolog

The Autolog Prograder linear planer mill optimizer has received a major facelift over the last four years. Thanks to its newly designed sensors and software algorithms, the system is now offered to the industry as a fully graderless system.

New 3D sensors together with high definition 3-CCD color cameras and with dense tracheid sensors make the Autolog Prograder one of the most advanced planer optimizer systems on the market today. The high definition color cameras are capable of detecting a pixel measuring only 0.010 by 0.025 of an inch, with the ability to detect all visual defects within that resolution.

The Prograder comes with state of the art technology, including server type grader computers with dual power supplies and hot-swappable hard drives. The color camera's lighting system consists of high power industrial LED light bars linked to a controller, which constantly adjust the level of light hitting the boards.

All sensors are housed in a retractable central module with easy access doors for faster maintenance and service.

www.autolog.com

MiCROTEC

MiCROTEC says forest companies can now push their recovery and value maximization beyond imagination.

The company delivers rock-solid and high-performing multi-sensor scanning equipment for automating, streamlining and optimizing all working processes from timber to molding products.

Sharp and consistent laser 3D analysis from the company's products generate a full 3D reconstruction of timber and lumber for determining lack of material, recognizing dimensional defects and maximizing yield for breakdown solutions.

Color scanning identifies wood faults on the surface of timber and lumber such as knots, pitch pockets and discoloration. If companies are keen to identify blonde knots, grade and sort for quality and, in general, recognize wood defects inside timber or lumber, then MiCROTEC-designed x-ray applications can provide a solution.

MiCROTEC confirmed its role as an innovation leader in this field in 2011 by introducing fully industry-compliant CT-tomography for logs, enabling full 3D virtual reconstruction, evaluation and breakdown of timber, breaking the barriers of value optimization generated by conventional sawmilling.

www.microtec.eu

Prologic+

Even though there is a gradual recovery underway in the forest industry, sawmills still face tight times. To help sawmills weather these difficult times, Prologic+ offers primary or secondary breakdown Geometrical/Vision Scanner equipment. The company uses the latest generation of Hermery sensors to help obtain all geometrical data and visual defects information, such as cracks, splits and holes.



The equipment achieves this by implementing a new type of sensor into its scanner system, the Hermary DPS-4024VE. This sensor combines high density profiles and vision capabilities. Prologic+ linear scanners were already known for their excellent reliability and ease of use, and this improvement builds on that, the company says.

It was about eight years ago that scanning and optimization companies started putting their effort into planer mills because most of the sawing process had already been optimized.

In the planer mills, graders were still needed since grading is one of the most important parts of the process. Since then, the industry has seen new automatic grading systems (graderless) installed in planer mills equipped with HD cameras and scattered laser for 3D profiling. Prologic+ has brought back this technology and implemented it to sawmills, especially in the primary and secondary breakdown process.

There are many benefits to using these new types of TrueShape/Vision linear scanners, according to the company. Scanners can detect defects that were long ignored at primary and secondary breakdown. These defects include cracks, splits, bark, holes and surface knots. For example, log cracks can be detected across the length of the log, and a new rotation can be provided considering this defect or it can chip away the low grade products. This results in less downtime by reducing low grade products handling throughout production. This is just one of the arguments the company makes for its new Geometrical/Vision Scanner for the primary and secondary breakdown process. It also provides new ways to obtain extra profit.

www.prologicplus.com