

revolutionary technology
unmatched performance

innovative



LightSORT™ Green Veneer Moisture Measuring Technology

Veneer drying will
never be the same

Available from

WESTMILL™
MACHINE AUTOMATION 

A revolution in veneer drying

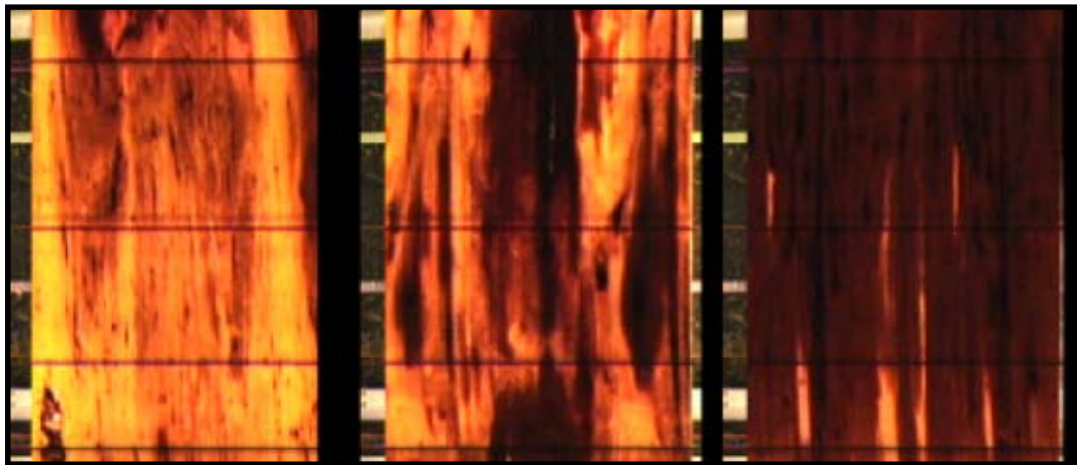
Westmill Machine Automation Ltd. is pleased to introduce our new **LightSORT™ Green Veneer Moisture Measuring Technology**, a quantum leap forward in the accurate calculation of green-veneer moisture content. Once mills begin installing this new technology next year, it will render existing Radio Frequency (RF) sensor heads obsolete.

Adopters of this exciting new technology can expect:

- precision-tuned drying times, leading to greatly reduced over-dry and re-dry rates
- reduced energy consumption and costs
- increased overall dryer production

The technology was co-invented by Dr. Chunping Dai of Forintek Canada Corporation and developed together with Westmill Machine Automation Ltd. (with funding support from the National Research Council's IRAP program). Westmill has been granted exclusive world-wide development and distribution rights for the **LightSORT™** Technology (U.S. patent approved, world-wide patents pending).

According to Dr. Dai, Forintek and the Forintek member mills chose Westmill over others because of their close working relationship with both Forintek and the industry in developing veneer drying technologies, because of Westmill's capacity to further develop this technology, and because Westmill presented the strongest commitment towards the project.



Light passing through heavy sap (left), light sap (middle) and heart wood veneer (right) determines the exact moisture content.

How it works

LightSORT™ is based on cutting-edge CCD camera and patent-pending LED light-transmission technologies. First, the system pulses a specific light wave through the veneer. A highly sensitive CCD camera gathers the wave, which is then transferred through complex algorithms that determine the exact peak and average moisture content of each sheet – **no matter what saturation, species and thickness**. In basic terms: the higher the

moisture content, the more light that passes through.

LightSORT™ technology works extremely well on veneers with high moisture content (greater than 40%) – a chronic problem for Radio Frequency sensor heads, which require consistent contact with the veneer. With **LightSORT™**, the costly mis-sorting of veneers will be a thing of the past.

LightSORT™ Green Veneer Moisture Measuring Technology

Technology comparison

Our new LightSORT™ Green Veneer Moisture Measuring Technology replaces the Radio Frequency (RF) sensors that dominate the industry today. LightSORT™ calculates veneer moisture content in order to pre-sort these sheets prior to the drying process – but with a significantly higher degree of accuracy. Here is a comparison of the two technologies:

	Radio Frequency (RF)	LightSORT™ GVMM
Accuracy in measuring veneer moisture	Lab tests have shown the RF heads are highly inaccurate, even when a sheet is held securely against the sensor head. A small 1mm distance between the veneer and RF sensor affects the reading by 50% – and at the high speeds that green-end conveyors run, it's virtually impossible to keep the wavy veneer in contact with the sensors.	The development of this technology was driven by the inability of the current electrical sensors to accurately measure veneer moisture. The new technology requires no contact with the veneer during the measuring process. Laboratory and mill trials have shown that Westmill's GVMM is two to three times more accurate than RF sensors.
Sorting and drying	With existing technology, veneer drying consumes 80% of a mill's energy costs. Mills today face significant costs in re-drying and over-drying, which creates substantial bottlenecks in the production process – simply because the initial moisture measurement was inaccurate.	Testing at various mills that included Douglas Fir, Pine, Hemlock, Spruce, Balsam Fir and Aspen showed very good results in increased sort accuracy: a conservative 5-10% reduction in drying times.
Costs	A recent Forintek survey of mills showed that each 1% loss in drying production – caused by the inefficiency of the RF sensor heads – is costing the average mill an extra \$150,000 to \$180,000 per year in lost profit.	Benefits include energy savings, increased veneer quality, recovery improvement through reduced dry-stacker losses, and increased 'glue-ability' of the more consistent veneer. Conservatively, we estimate an annual savings of \$750,000 to \$1.8M per mill.

Introduce the new LightSORT™ GVMM technology to your mill
The benefits of this technology far exceed your existing RF moisture sorting technology, and no major modifications are required to introduce it into the existing line. The first LightSORT™ units are expected to be ready for installation by early 2006.

About Forintek Canada Corporation

Forintek Canada Corp. is Canada's national wood products research institute. It supports the forest products industry in optimizing manufacturing processes, extracting higher value products from the available resource and meeting customer's expectations of performance, durability and affordability.



www.forintek.ca

ement advisors, Forintek delivers technological solutions within such areas as lumber, panels, and other value-added wood products manufacturing processes or attributes, drying and protection, building systems, etc.

Based on priorities identified by mill members and gov-

Forintek also conducts market and economic studies and plays a key role in the development of national and international building codes and standards.

www.lightsort.ca



Leading edge, innovative – and backed by the Westmill reputation

Based in British Columbia, Canada, Westmill Machine Automation Ltd. specializes in manufacturing and marketing cutting-edge machine automation systems and services within the plywood, paper making and paper converting industries. We supply advanced machine automation systems that help keep our clients ahead of the competition.

We're always seeking new and better machine system optimization products and methods, along with quality service improvements, in order to help our clients compete and prosper

within the highly competitive global community.

At the same time, we are built on the foundation of the Westmill Group of Companies, which in itself brings a 30-year reputation of successful long-term client relationships.

We are confident that our latest project – the LightSORT™ Green Veneer Moisture Measuring Technology – will revolutionize the veneer sorting and drying process... And we also guarantee it won't be the last innovation you see from us.

Sharing a tradition of quality, a reputation for excellence

The Westmill Group of Companies currently includes Westmill Machine Automation Ltd., Rocky Mountain Motion Control Inc., Westmill USA Corporation and Westmill Industries Ltd. The companies have supplied equipment, parts and service to the Canadian, U.S. and international plywood manufacturing industry for some 30 years.

What We Believe

- Long-term customer relationships and a sense of partnership are essential for success.
- Our people are the foundation of our success. Each staff member is absolutely dedicated to outstanding customer service and to continual improvement.
- Your success is our success. We strive to preserve and develop the long-term customer confidence that is the backbone of our success.

Westmill Machine Automation Ltd.

3063 275A St., Aldergrove, B.C. V4W 3L4 • Tel: 604-607-7020

Toll-free: 1-877-607-7010 • Fax: 604-607-7099

For specific information, contact:

Mike Crondahl, President, crondahl@westmill.com

Brian Martin, General Manager, Automation, martin@westmill.com

www.lightsort.ca