

ENGINEEREDWOOD

AUTUMN 2021

Journal

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bright industry future,
rooted in science
and passion

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APA President Mark Tibbetts

About the cover photo:

Mark Tibbetts joined APA March 15, 2021 and officially took over the president position July 1, when Ed Elias retired.



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IN THIS ISSUE...

As the end of another year impacted by a global pandemic is nearing, I reflect and appreciate the many connections and conversations that I've had with members and colleagues. No, we have not attended in-person meetings and events as originally anticipated, but what I've experienced is that this industry has strong and long-standing associations. Efforts to reach out and keep the discussions and relationships current is reciprocal. What a deeply connected industry we are all part of. I'm proud to be one of its members.

In this issue, we welcome a new member to the wood industry. APA President Mark Tibbetts comes with years of association experience and nonprofit management and shares his insights on his new role. Turn to page 9 for details.

The APA Research Center has been providing contributions to the industry from the laboratory in West Tacoma, Washington, since 1969. Flip to page 15 to read how laboratory renovations and expanded testing capabilities have been adapted and added to support industry growth and the introduction of new products and applications.

The advancements EWTA members develop provide a variety of innovative ways to support engineered wood manufacturers. This year, nine Innovation of the Year entries have been submitted from EWTA member companies and are featured starting on page 33. In November, APA members will be asked to select one award winner, in addition to a Supplier of the Year in each of three categories: Consulting and Services; Equipment and Tooling; and Materials and Supplies. An updated EWTA member directory is organized by category in this issue to provide an easy reference. Winners will be announced in January and featured in the Spring 2022 *Engineered Wood Journal*.

Looking into the new year, I hope that we can meet in person next fall. The 2022 APA Annual Meeting and EWTA Info Fair is scheduled to be held October 15 – 18, 2022, at the JW Marriott Turnberry Resort & Spa in Aventura, Florida. Watch for details next spring.

That's a short summary of what you'll find on the following pages. Read on for additional industry, association and member news.

Stay safe and healthy and keep those connections strong.



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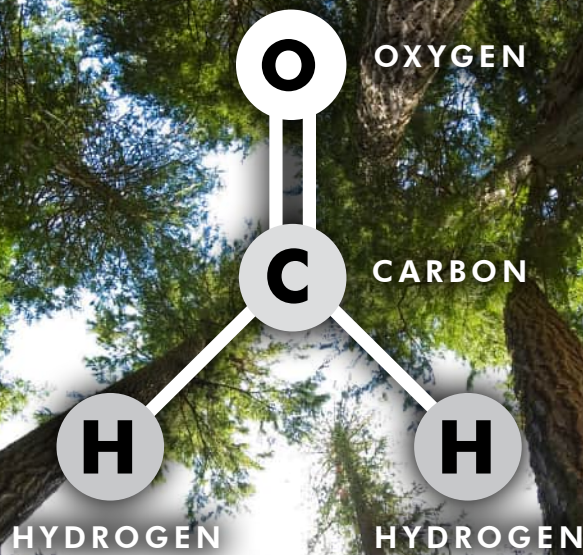
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CANADA PUBLISHES COMPOSITE WOOD PRODUCTS FORMALDEHYDE REGULATIONS

Canada's Ministry of Health and Ministry of the Environment recently finalized and published the Formaldehyde Emissions from Composite Wood Products Regulations. The final document mirrors the U.S. Environmental Protection Agency's Toxic Substances Control Act Title VI and should not present compliance difficulties for APA members.

The regulations specifically exempt products currently within APA's certification scope, including products certified to the prevalent North American standards for structural plywood, OSB, SCL, I-joists, glulam and CLT if moisture resistant adhesives are used. The only exception to this would be if a panel uses medium density fiberboard or particleboard as a core.

The regulations require some additional record keeping on behalf of the manufacturer to document that all adhesives used are moisture resistant. APA will make recommendations at the next scheduled Technical/Quality Advisory Committee meetings on what can be used to satisfy this. All information for documenting conformance to these regulations should be retained for a period of five years, as the ministries may ask for evidence of compliance.

This new regulation goes into effect Dec. 17, 2022.

Florida recognizes APA as product evaluation entity

APA was accredited recently by the Department of Business and Professional Regulation of the State of Florida as a Product Evaluation Entity, which recognizes the APA Product Report as a product evaluation report similar to those issued by code agencies, such as International Code Council-Evaluation Service, International Association of Plumbing and Mechanical Officials and Underwriters Laboratories. APA has also

Continued on next page

held other accreditations in Florida as a Product Certification Agency, Testing Laboratory, Quality Assurance Entity and Validation Entity.

Homebuilding keeps rolling along

Thanks to a jump in multifamily starts, housing starts in the U.S. ran at a seasonally adjusted annual rate of 1.615 million units in August. The average starts rate for July and August is 1.59 million units, in line with the starts rate for the prior three quarters. Builder sentiment in the September survey remained positive, which portends healthy sales and starts through the rest of the year. Job openings in the U.S. in July jumped to a record 11 million, indicating businesses feel good about their future and want to hire people to support growth. Retail sales bounced back in August, although it appears consumer spending will provide a smaller boost to economic growth in the third quarter compared to the first half of the year. Inflation on a month basis compared to last year continued to exceed 5% in August, and mounting

Continued on next page

Retirement Announced

Tom Temple, PotlatchDeltic

Tom Temple, PotlatchDeltic Vice President, Wood Products, retired in October 2021 after serving in this role for 13 years. Temple's career spanned more than 38 years in manufacturing and resource management with forest and wood product companies in Canada and the U.S. He has also provided leadership and professional contributions to many industry associations such as APA, EWTA, the Canadian Wood Council, COFI International Market Access Committee and the BC Forestry Innovation and Investment Advisory Board. Congratulations, Tom!



Tom Temple

Steve Langager, APA

Steve Langager, Certification Operations Manager, will retire after more than 17 years with APA. Langager joined APA in 2004 as a Western Region Quality Auditor before moving to Tacoma to assume management positions in the Quality Services Division. During this time, he served on board and committee positions for ASTM International, Consortium for Research on Renewable Industrial Material (CORRIM) and as staff advisor for APA's Safety and Health Committee. Congratulations, Steve!



Steve Langager

Thank you both for your contribution to the association and the wood industry.

evidence points to the slowdown policy makers at the Federal Reserve have been expecting is less likely to take place. Canada's economic recovery hit a speed bump in the second quarter, as real GDP fell at an annual rate of 1.1%. Based on the July and August estimates, housing starts in Canada will average a seasonally adjusted annual rate of 265,000, down from the second quarter rate of 280,000 units.

Lacey Act Phase Six adds OSB

As expected, the U.S. Department of Agriculture's Animal and Plant Health Inspection Service announced implementation of Phase Six of the U.S. Lacey Act enforcement schedule, which went into effect on October 1. Phase Six adds the following wood products to the list, which already included softwood lumber and plywood:

- HS Code 441012 – Oriented Strand Board (OSB)
- HS Code 4415 – Cases, boxes, drums, containers, pallets, box-pallets

Internationally based member manufacturers of OSB may be required to provide new documentation on the legality of the wood from which the OSB was sourced. First enacted in 1900, the Lacey Act combats trafficking in illegally taken wildlife, fish or plants. In 2008, the act was amended to include plants and plant products, such as timber and paper.



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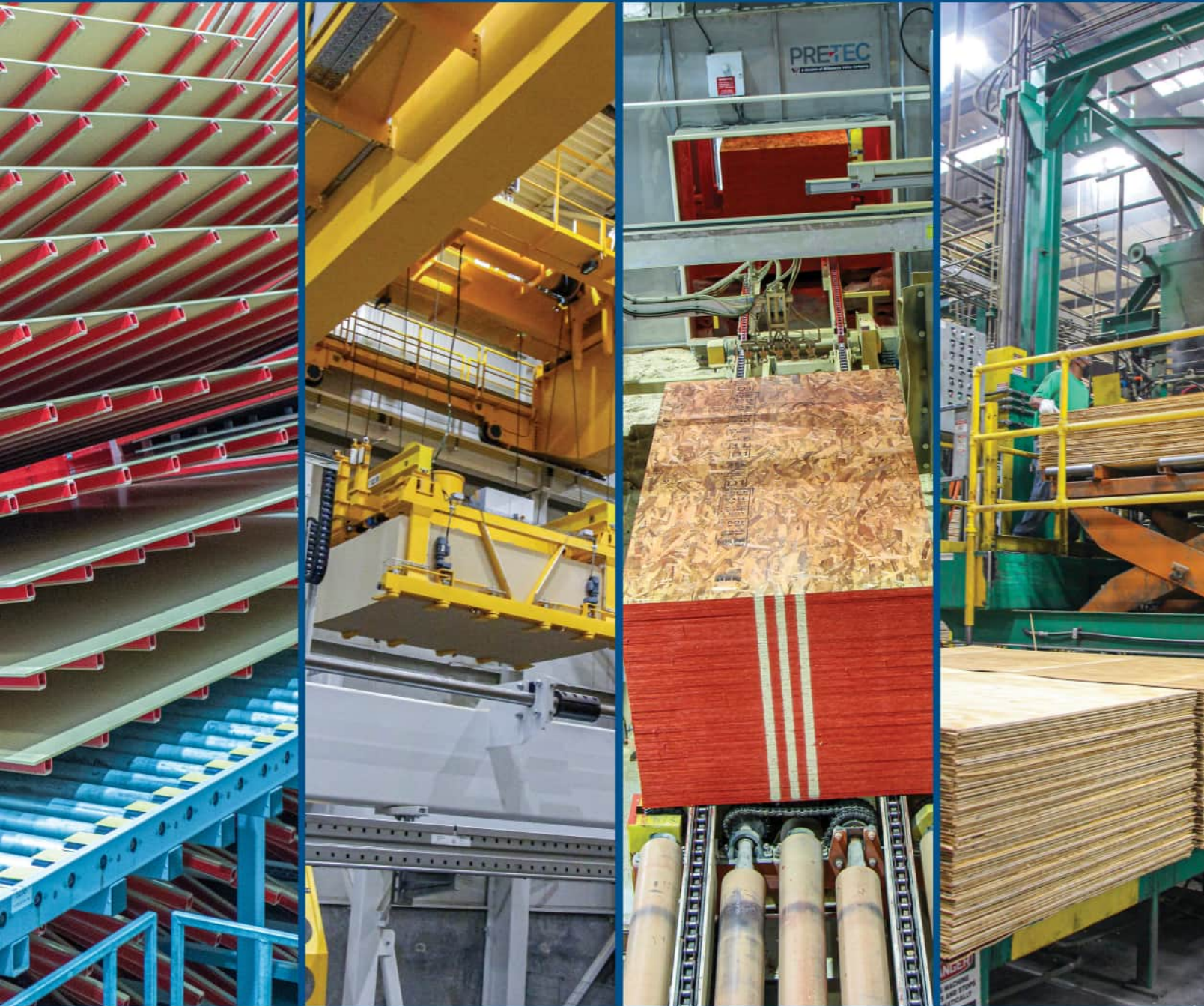
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Mark Tibbetts, APA - The Engineered Wood Association President



NEW APA PRESIDENT INSIGHTS

Mark Tibbetts sees bright industry future, rooted in science and passion

By Tara Mattina, APA Market Communications Director

In full circle fashion, the boy who wielded a hammer and watched home improvement television is now the person who will lead APA – The Engineered Wood Association into the future.

Mark Tibbetts joined APA March 15 and officially took over the president position July 1, when Ed Elias retired. Tibbetts brought with him more than 15 years' experience in association and nonprofit program management, environmental policy and business development, but he came from outside the engineered wood industry.

“I always wanted to work in the construction trades,” Tibbetts said. “I watched ‘This Old House’ when I was in fifth grade. I built backyard forts instead of playing sports. I'm comfortable admitting I was a bit of a geek. I always wanted to build.”

“Our careers can bring us new paths in surprising ways,” he said.

Tibbetts' association career path has included leadership and management positions in the Air Conditioning Contractors of America, Tag and Label Manufacturers Institute, Thermostat Recycling Corporation, National Electrical Manufacturers Association and American Public Works Association.

“Even though I was from outside of the (wood) industry, I knew the APA brand when I applied for the position,” Tibbetts said.

“What I've learned is the influence behind the brand. APA has a powerful voice around building codes and standards, and our work is impactful.”

“That speaks to our research and education and the people we have here,” he said. “It's essential that we maintain that.”

The APA Board of Trustees selected Tibbetts through a lengthy search process after former President Ed Elias announced plans in 2020 to

retire. The board was clear with him, Tibbetts said, that the organization is well run and continues to serve the industry at a high level. His initial task was to spend the first several months getting to know the industry, organization and people more to steward and build on its almost-90-year foundation of strength.

Tibbetts and his family moved this summer from Alexandria, Virginia, to APA's Pacific Northwest base, which has allowed them to reconnect with their outdoors lifestyle and interests.

"From the first interview, I felt APA was a good fit," he said. "It's a pretty good job when you can fish in the morning with colleagues and still make it to work on time. Everybody has been welcoming and helpful as I learn the industry and APA."

Those common interests help reinforce professional relationships. With travel limited

by the pandemic, Tibbetts still has managed to visit several member mills with precautions in his initial months on the job.

"I saw first hand the relationship between APA and its member mills," he said. "Seeing our Quality Services team members interact with staff at the mills reinforced for me that it's a tight-knit community based on relationships."

Tibbetts looks forward to visiting more member mills in other areas and getting to know other people within the engineered wood markets. He sees tremendous opportunities for APA's role in supporting the market for member products. Following years of under building, North America sees strong demand for housing, while climate policies likely will reward more sustainable building material options.

"Wood is good," Tibbetts said. "Communities, consumers and the construction industry



APA's expanded research center includes concrete block strong walls with anchors and a 4-foot-thick reinforced strong floor to accommodate full-scale multi-story structural assembly testing.



APA's research center in Tacoma, WA is a demonstration of wood's strength.



thick reinforced strong floor, 10 strong wall blocks with anchors, twin 5-ton cranes and whole range of new equipment to accommodate full-scale multi-story structural assembly testing.

With planning for full-house testing underway, Tibbetts reflected on the real-world application of APA's work.

"The design of our new home, with its open living areas and natural light from lots of windows, is a direct outgrowth of APA's research," he said. "We love our new home, and every morning is a reminder of our impact."

Tara Mattina (tara.mattina@apawood.org) is Market Communications Director for APA – The Engineered Wood Association.

recognize wood's low carbon footprint and its affordability as a building material."

A recent \$4.5 million investment in expanded capabilities at APA's research center in Tacoma, Washington, supports innovative design and construction using wood structural panels, engineered wood products and mass timber assemblies. The expansion raised a portion of the roof to 40 feet high and added a 4-foot-

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APA Research Center, built in 1969, continues to renovate to meet market innovations.



INDUSTRY CONTRIBUTIONS THROUGH RESEARCH AND TESTING

A historical overview of the APA Research Center

By BJ Yeh, Ph.D., P.E.

APA – The Engineered Wood Association’s Research Center has long been recognized as one of the leading wood research facilities in North America. That position has strengthened over the years as facility expansions provide support for new and existing research and testing on engineered wood products and construction systems for the industry.

Today, the Association’s 42,000-square-foot research center is a state-of-the-art laboratory equipped with modern research and testing equipment and staffed by experienced engineers, wood scientists and engineering technicians.

WHERE IT BEGAN – PLYWOOD PANELS AND GLULAM BEAMS

Built in 1969, the original 37,000 square-foot APA Research Center was constructed for testing of typical-sized 4-foot by 8-foot plywood panels. As the demand for full-scale tests on modern engineered wood products grew, the building was renovated in 1990 to accommodate other engineered wood products, such as 6-foot deep by 72-foot long glulam beams.



2006: APA Research Center extension expands testing capability to include single-story house tests and provides additional test material storage.

FULL-SCALE WALL BRACING AND COMBINED SHEAR AND WIND UPLIFT TESTING

With the trend toward full-scale structural testing, an extension designed for single-story house tests and test material storage was added to the research center in 2006. The research center extension was completed amid heated debates for wall bracing requirements under the International Residential Code (IRC). APA conducted several series of full-scale single-story house tests to support APA and industry position on the revisions of wall bracing requirements that were eventually published in the 2009 IRC. Subsequent tests continued for a few years until the completion of 2012 IRC.

APA focused on full-scale combined shear and wind uplift tests in 2007 and 2008 to show the superior performance of wood structural panels (plywood and OSB) when compared to other competing materials. Results obtained from those studies supported the 2008 publication of

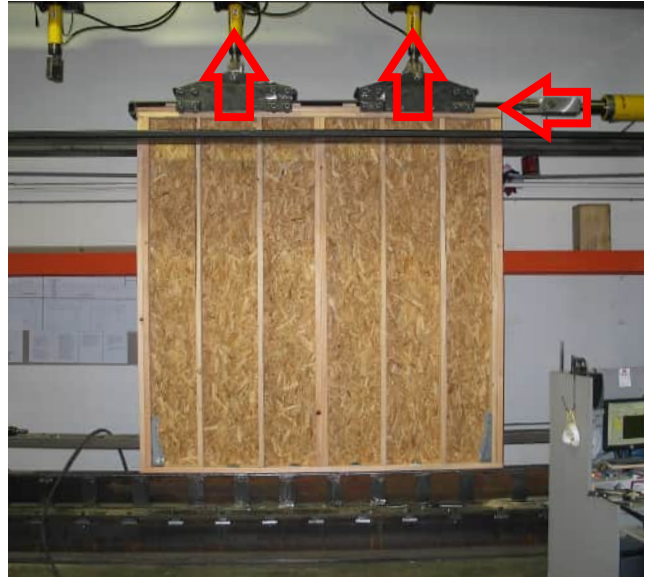
APA System Report SR-101, *Design for Combined Shear and Uplift from Wind*, which was also adopted by the 2008 ANSI/AWC Special Design Provisions for Wind and Seismic (SDPWS).

FORCE TRANSFER AROUND OPENINGS (FTAO) TESTS

In 2009 and 2010, APA conducted a series of full-scale shear wall tests to provide recommendations for the design of wood-framed shear walls with the methodology of force transfer around openings (FTAO) when wood structural panels are used. This study was a collaboration between APA, the USDA Forest Products Laboratory and the University of British Columbia, under partial funding support of the USDA and the Engineered Wood Technology Association (EWTA). The test results provide recommendations for FTAO design when shear walls are constructed with wood structural panels in high seismic zones such as California, Oregon and Washington.



2006: APA Research Center full-scale single-story house test in process.



2007-2008: A full-scale combined shear and wind uplift test assesses the superior performance of a wood structural panel-sheathed wall.



2009-2010: A full-scale shear wall test supports the use of wood structural panels with a large wall opening.

FULL-SCALE IN-GRADE STRUCTURAL GLULAM TESTING

From 2011 through 2015, APA conducted the full-scale in-grade testing for structural glued-laminated timber (glulam). Results obtained from those tests validated the current glulam design values and responded to the occasional criticism of the lack of systematic full-scale glulam performance data.



I-JOIST DIAPHRAGM DESIGN VALUES

In 2016, APA conducted a series of full-scale (24-foot by 24-foot) diaphragm tests with I-joint framing on behalf of APA I-joint members. The tests were used to establish the diaphragm design values for common diaphragm configurations used in light-frame wood construction. Results obtained from these tests served as the recognition of I-joint diaphragms for APA I-joint members in APA Product Reports or the evaluation reports (ESRs) jointly issued by the ICC Evaluation Service (ICC-ES) and APA.



2011-2015: A portion of the glulam beams used for the full-scale in-grade glulam tests validates current glulam design values.



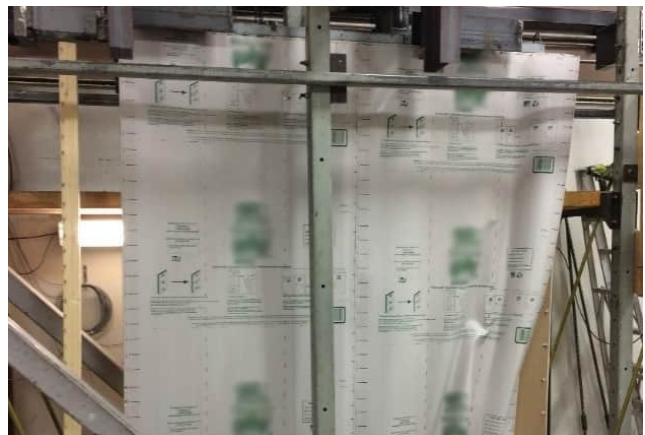
2016: Testing of a full-scale (24-foot by 24-foot) diaphragm using I-joint framing to establish diaphragm design values in light-frame wood construction.

FULL-SCALE SHEAR WALL TESTING OF FLEXIBLE STRUCTURAL SHEATHING

APA conducted full-scale shear wall tests from 2015 through 2018 on eight flexible structural sheathing materials randomly sampled from the marketplace. Similar tests were also independently conducted at Clemson University and the University of Oklahoma. Results obtained from a combination of about 90 full-scale shear wall tests showed a substantial deficiency (up to 42%) to the published design values for the tested flexible structural sheathing materials. This information is documented in the APA Product Advisory SP-1186, Performance of Flexible Structural Sheathing (Independent Evaluations of Published Design Values).

APA RESEARCH CENTER HIGH-BAY LABORATORY

Recognizing the trending demand for more full-scale, or even three-dimensional (3D) assembly tests to reflect the growing complexity in timber structures, APA members authorized the construction of a high-bay laboratory at the APA Research Center in 2018. This new laboratory was completed in 2019 by deconstructing a 70-foot by 75-foot (5,250 square-foot) section of the research center and constructing a new 40-foot-tall open floor (no columns between exterior walls) high-bay laboratory from the ground up. The building itself is a demonstration of wood's strength. It is built with laminated veneer lumber studs and purlins and glulam columns supporting a roof structure framed with curved glulam beams. Wood structural panel sheathing was used on the walls and roof, and OSB lap siding was used as the exterior cladding.



2015-2018: Testing of full-scale shear walls with flexible structural sheathing randomly sampled from the marketplace.

The high-bay lab was constructed with a 4-foot-deep heavily reinforced concrete floor slab using 28 tons of steel rebar and 830 tons of concrete. There are 868 floor inserts with a 100,000-pound capacity each on the floor at 2 feet on center. The lab's ceiling height can readily accommodate a two-story structure for testing.

APA HISTORY

APA was founded in 1933 in Tacoma, Washington, as the Douglas Fir Plywood Association (DFPA). Its name was changed to American Plywood Association (APA) in 1964 with the introduction of southern pine plywood.



2019: Concrete block strong wall in the new APA Research Center high bay.

Looking Ahead

The recent and ongoing upgrades to APA's research and testing facilities assist APA in setting the industry's highest performance standards as it continues to support innovative design and construction of timber structures using wood structural panels, engineered wood products and mass timber assemblies.

Currently, a study plan is under development at APA to conduct 3D assembly tests by 2023 to better characterize the performance of wood buildings framed with engineered wood products and sheathed with wood structural panels.



2019: Framing of the new APA Research Center high-bay laboratory

The organization name was changed again in 1994 to APA – The Engineered Wood Association to more accurately reflect the geographic range in both the U.S. and Canada and the product mix of plywood, oriented strand board (OSB), structural glued laminated timber (glulam), structural composite lumber (SCL) and wood I-joists manufactured by its members. The research center at the present campus in Tacoma opened in 1969. The headquarters office building on the same campus opened in 1979.

Dr. Borjen Yeh (borjen.yeh@apawood.org) is Director of Technical Services at APA – The Engineered Wood Association.


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HOMEBUILDING LEADS U.S. ECONOMY OUT OF RECESSION

By Joe K. Elling

There is little doubt that a year ago at this time, few were expecting the home building industry to have bounced back as quickly as it did following the coronavirus outbreak and the ensuing recession. However, the extraordinary actions taken by the Federal Reserve that led to the rate on a 30-year fixed-rate mortgage to fall to less than 3% in the second half of 2020 prompted a boom in the demand for new and existing homes that carried through into the first half of 2021.

Disruptions in the building materials supply chain and challenges securing skilled construction labor have slowed the home building production process in the second quarter, so the supply side of the new home equation could not keep up the surge in demand. Hence, new home prices have been on an upward trend through 2021. The median sales price of new homes sold in the U.S. was \$374,900 in the second quarter, up 16.1% from the second quarter of 2020.

STRONG GROWTH CONTINUES IN 2022

Despite inflation accelerating into the 4% to 6% range, which was not a surprise, Federal Reserve Chair Jerome Powell in recent testimony said the Federal Reserve is poised to continue with its policy of targeting the federal funds rate near zero and expanding the size of its balance sheet by \$120 billion per month to support low long-term interest rates. On the fiscal policy side, the Biden administration is intent on following a policy set that supports income support to drive up aggregate demand. The combination of

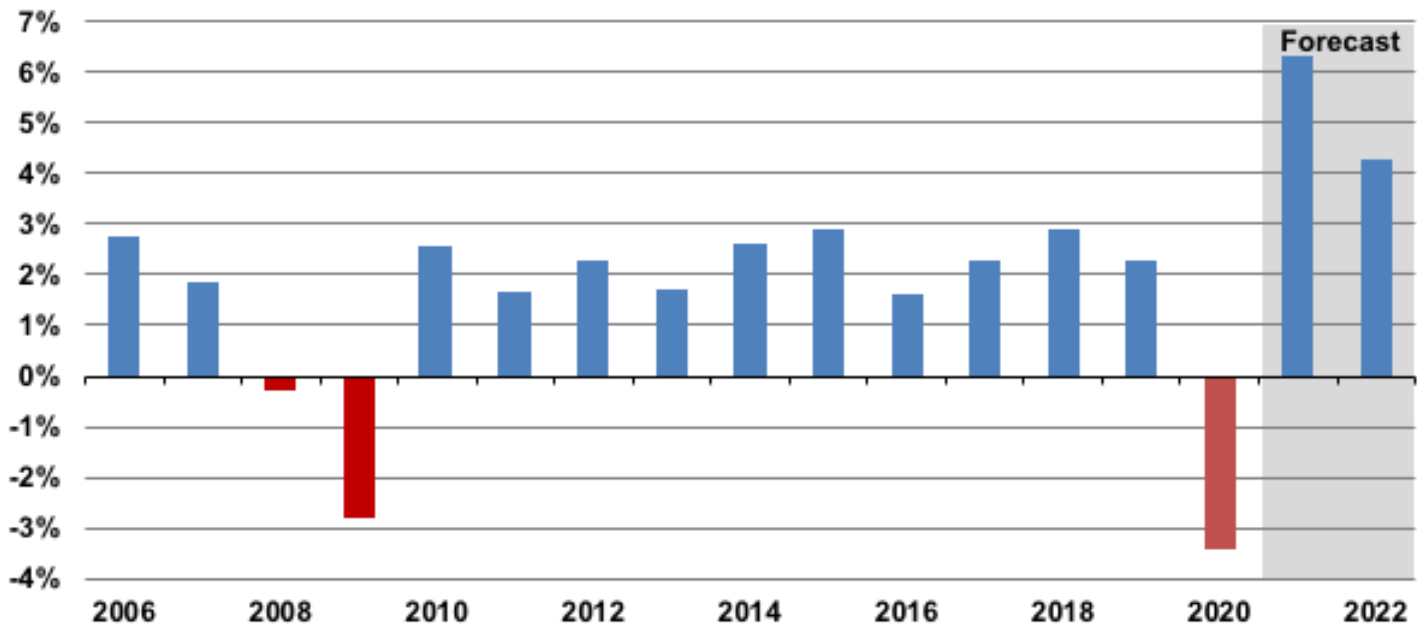



Figure 1. U.S. Real GDP Growth – Annual
 Source: Bureau of Economic Analysis. APA Forecast.

easy monetary policy and deficit spending points to the economy growing 4% to 5% in 2022, after growing roughly 6.5% in 2021. (See Figure 1.)

STARTS NEAR 1.6 MILLION UNITS IN 2022


The consensus is that any change in Federal Reserve policy will not start until the fourth quarter of 2021 and will be gradual. Job growth will continue with the economic expansion, which points to household growth of 1.2 million to 1.3 million. Adding in the components that drive the demand for new housing units, the demand for new housing units will again be near 1.6 million units in 2022. (See Figure 2.) The mix between single-family and multifamily is also expected to stay relatively unchanged, with single-family and multifamily starts near 1.15 million units and 450,000 units respectively. The historically low rate on a 30-year fixed rate mortgage has enhanced the ability of new buyers



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to step up into bigger homes, which gained attractiveness because of the shift to more people working at home. Based on Census Bureau, the average size of new homes is on a path to be up 2% to 3% from that of 2020, the first increase in new homes built since 2015. New home size is projected to be up again in 2022, but less so than in 2021 due to deteriorating affordability driven by higher home prices. (See Figure 3.)

RISKS TO THE FORECAST

The unprecedented set of forces at work means we cannot ignore the risks to the forecast. First, it is not clear how the spread of the Delta variant could impact business operations going forward and impede the economy, especially in the southern U.S. where vaccination rates are the lowest and where over half of the housing starts take place. Second, vaccination rates are lower outside of the U.S. and these countries are more vulnerable to coronavirus and variant outbreaks that could extend delays in the production and shipments of building materials exported to the U.S. Anecdotal reports from home builders state construction time is already two months or longer due to delays in the receipt of windows, garage doors, appliances and other new home components. Third, the prevailing feeling among policy makers at the Federal Reserve is that higher inflation is transitory. There is merit

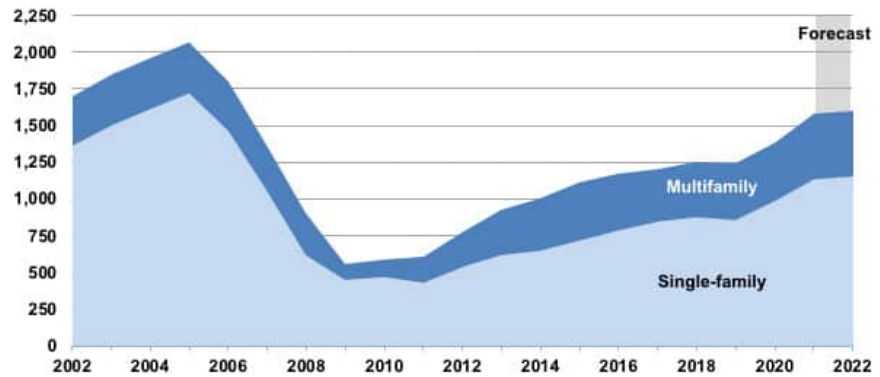


Figure 2. U.S. Housing Starts (Thousands)
Source: Census Bureau. APA Forecast.

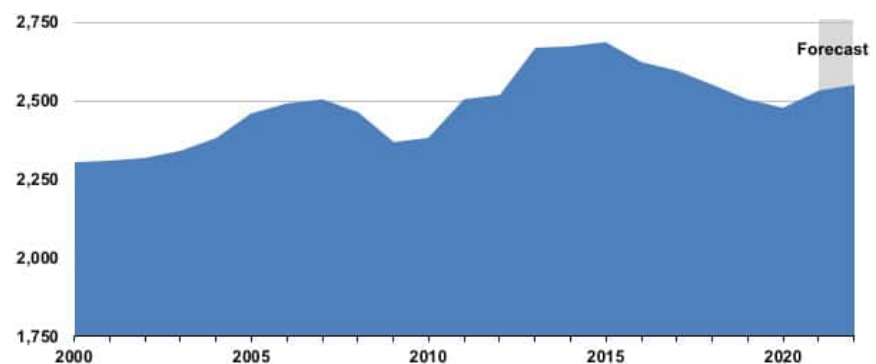


Figure 3. Average Size per Single-family Start, U.S. (Square Feet)
Source: Census Bureau. APA Forecast.

to the arguments made. However, it is also hard to ignore the rapid growth in the money supply driven by the easy monetary policies pursued by the Federal Reserve and other central banks. Should inflation in the U.S. not follow the Federal Reserve's expected path, policy makers at the Fed may move earlier to enact measures that lead to higher interest rates than assumed driving the 2022 forecast.

Joe K. Elling (joe.elling@apawood.org) is Director of Market Research for APA – The Engineered Wood Association.



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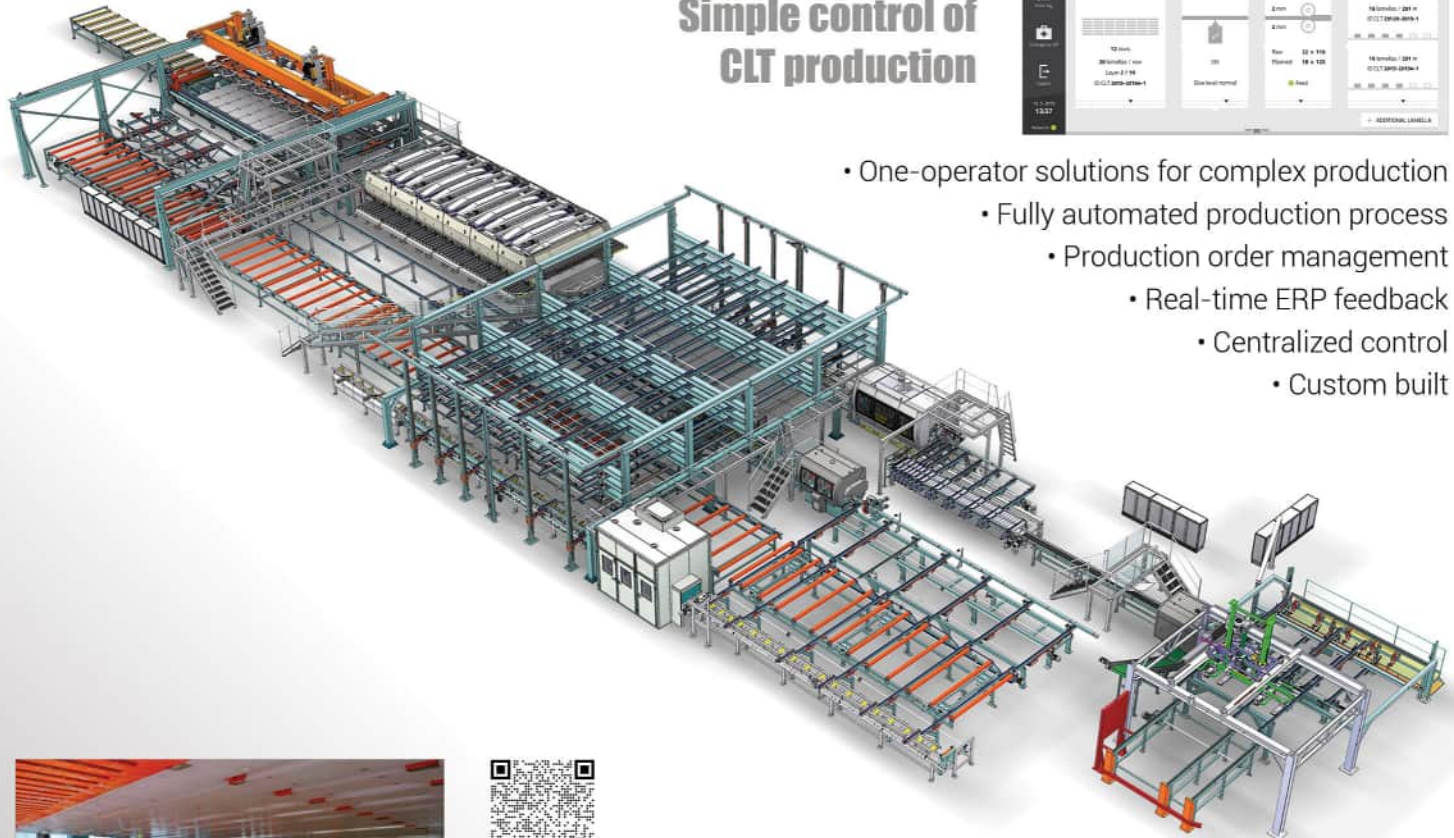
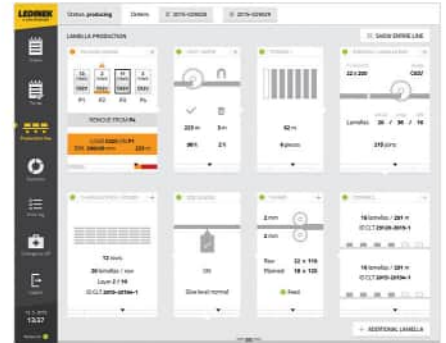
Robust designs and quality components provide many years of consistent production and minimal maintenance expenses.

FULLY AUTOMATED CLT LINES



X-LAM Manager

Simple control of CLT production



- One-operator solutions for complex production
- Fully automated production process
- Production order management
- Real-time ERP feedback
- Centralized control
- Custom built



X-PRESS

Patented CLT press

- Uniform areal vertical pressure up to 120 PSI at full width
- Pneumatically driven pressure buildup through flat tubes
- High productivity through automatic sequence control
- Stack compression in length- and crosswise direction
- Perfected 3rd gen, low energy use, low maintenance



LEDINEK
INNOVATIVE • POWERFUL • DURABLE

IDENTIFYING USDA CERTIFIED BIOBASED PRODUCTS

Labeling Program Includes Engineered Wood Products

By Steve Langager

As marketplace awareness to the environmental benefits of engineered wood products grow, several tools are available to the industry allowing the advantages to be showcased. The BioPreferred label is one of these tools.

The BioPreferred program was authorized in the 2002 Farm Bill and reauthorized and expanded in the 2018 Farm Bill. The intent was to further decrease the country's reliance on non-biobased materials, increase markets for agricultural products, of which forests are a part, and provide a reduction of the negative environmental and health affects of the nonrenewable products they replace. The program looks at and measures the amount of



“new” carbon within each product seeking to be listed on the federal government’s catalog of biobased products. New carbon originates from plants and other renewable materials, whereas fossil fuel-based carbon is not considered new. The amount of new carbon is determined through testing at an independent third-party laboratory and monitored by the USDA.

Biobased products which have undergone testing can use a BioPreferred label identifying

An Economic Impact Analysis of the U.S. Biobased Products Industry

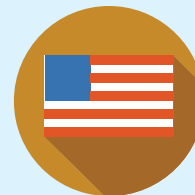
USDA Rural Development commissioned the report, *An Economic Impact Analysis of the U.S. Biobased Products Industry*. The report demonstrates that the biobased industry is a substantial generator of economic activity and jobs, and that it has a significant positive impact on the environment.



CONTRIBUTED A TOTAL OF
\$470B
VALUE ADDED TO THE
U.S. ECONOMY



GENERATED
2.79
JOBS IN OTHER SECTORS
OF THE ECONOMY FOR
EVERY BIOBASED JOB



SUPPORTED A TOTAL OF
4.6M
AMERICAN JOBS THROUGH
DIRECT, INDIRECT, AND
INDUCED CONTRIBUTIONS



Biobased products
displace about **9.4 million**
barrels of oil a year.



Biobased products have the potential to
reduce greenhouse gas emissions by an
estimated **12.7 million metric tons of CO₂**
equivalents per year.

Additionally, 1.65 million jobs directly supported the biobased product industry, resulting in another **2.96 million spillover jobs** — those indirect jobs in related industries and induced jobs produced from the purchase of goods and services generated by the direct and indirect jobs.

An Economic Impact Analysis Of The U.S. Biobased Products Industry: Report Release 2021

Source: USDA Rural Development, U.S Department of Agriculture, July 2021. www.biopreferred.gov

it as a USDA Certified Biobased Product, displaying the percentage of new carbon in the product. The United States federal government has mandatory purchasing requirements for biobased products, providing a preferred status over petroleum non-biobased products.

Currently, all engineered wood products within the scope of APA's certification are eligible to

use the BioPreferred label. This includes OSB, plywood, glulam, LVL, LSL, rim board, CLT and I-joist. Several other engineered wood manufacturers have sought out and acquired labeling privileges.

Steve Langager is the Certification Operations Manager, Quality Services Division at APA – The Engineered Wood Association.

who holds it all
together while
keeping up with
demand?

—
isoset™ structural adhesives
for engineered wood applications



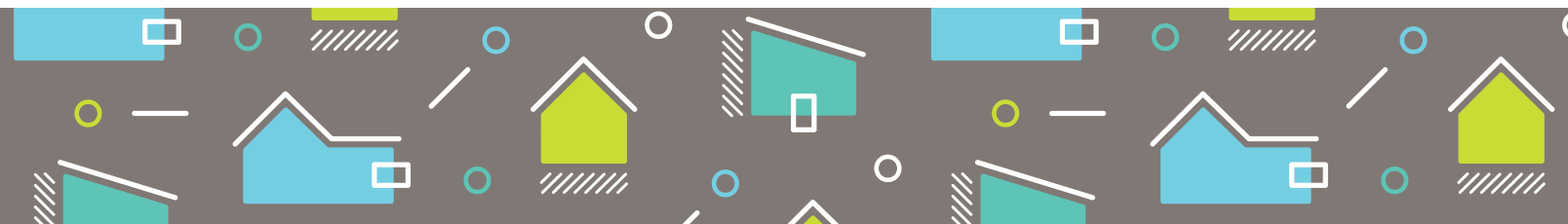
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 **Ashland™**
always solving





2021 SUPPLIER AWARD CANDIDATES

Annual Recognition for Innovation and Excellence

EWTA members are recognized every year for innovative practices and excellence in service by APA members who are invited to select the 2021 award winners via an electronic ballot. Votes for the Supplier of the Year Awards are cast based on quality, service and delivery. The winners will be announced in January and highlighted in the Spring 2022 Journal.

Following are nine Innovation of the Year entries (in alphabetical order, by company) and a list of the Supplier of the Year candidates sorted by category. Additional information about the awards program is available on EWTA's Supplier Awards webpage at www.engineeredwood.org/awards.

2020 SUPPLIER AWARD WINNERS

Supplier Of The Year:

Equipment and Tooling:
Raute

Materials and Supplies:
Arclin - Performance Applied

Consulting and Service:
BMI Contractors Inc.

Innovation Of The Year:

Fagus GreCon

Click below for more information on last year's winners.

[VIEW WINNERS ►](#)

Innovation of the Year Entries

The Innovation of the Year Award recognizes a company providing a new technology, product or service that has demonstrably reduced production costs, increased productivity, improved product quality or in some other way provided a bottom-line benefit to APA members.

The information for each entry is as claimed by the applicant. EWTA and APA make no claims as to the veracity of the information, nor do they endorse any particular entry.

INNOVATION OF THE YEAR ENTRY A

HP600+ Resin System

Entered By: Arclin - Performance Applied

Date of First Use: January 2021



Benefit 1: Reduces hot press cycle times by 5% to 15% on average, increasing mill throughput and reducing unit production costs on press-bound constructions.

Benefit 2: Reduces adhesive spread rates by 8% to 15% on average, reducing applied adhesive costs and incrementally improving tolerance to elevated veneer moisture content.

Results: Several mills have converted to the Arclin HP600+ technology so far in 2021. Those mills, including business captured from competitors, on average have recognized a panel throughput improvement of 9.8% with a glue spread rate reduction of 8.0%, all while sustaining or improving on-grade.

Description: The HP600+ technology combines our Fast Cure Resin System and Low Spread Technologies to produce a “super resin” that significantly reduces spread rates and hot press cycle times, all without a corresponding reduction in dryout tolerance. The HP600+ technology is the proven plywood and LVL market leader in performance.

INNOVATION OF THE YEAR ENTRY B

The Belt Conveyor

Entered By: Bruks Siwertell

Date of First Use: Q1 2021



Benefit 1: Air-supported belt conveyor has a totally enclosed design that protects the environment from dust emissions and reduces any material losses to a minimum.

Benefit 2: Reduced maintenance and operating costs

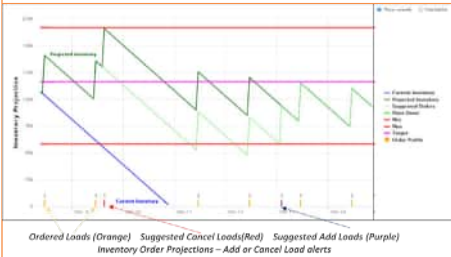
Results: We have innovatively combined the use of air-cushion technology with our standard belt conveyors to create The Belt Conveyor, offering our customers a high-capacity, completely enclosed conveying system with minimal equipment wear and very low operating costs as a result of reduced friction in the conveying line.

Description: The Bruks air-supported belt conveyor offers an extremely smooth ride surface, eliminating the bumpiness characterized by traditional idler-supported belt conveyors. Therefore, material is discharged in the same condition as when it was loaded onto the belt. The Belt Conveyor is totally contained, preventing any material degradation and dust. Installs to date include Packaging Corporation of America (Counce, TN & Wallula, WA mills), and Barrette-Chapais (Quebec, Canada).

INNOVATION OF THE YEAR ENTRY C

Customer Inventory Tracking and Prediction Service (CIT)

Entered By: Georgia-Pacific Chemicals LLC (GPC) Date of First Use: August 2020



Benefit 1: Utilizes actual adhesive usage to predict and optimize order profiles easily.

Benefit 2: Reduced costs, downtime and quality issues. Ultimately, smoother operations.

Results: Saved tens of thousands of dollars in lost production and rushed or canceled order costs.

Description: CIT, a proprietary technology, tracks and predicts resin inventory, displaying it via a web-based desktop/mobile dashboard accessible only by a mill's personnel. Each mill's unique operational data is used to predict inventory levels based on demand and to place, move or cancel orders as needed for optimal efficiency.

INNOVATION OF THE YEAR ENTRY D

Veneer Welder (Composer) Model: VWU-A70 with Veneer Clipping Scan Analyzer Model: GAIA VeCS

Entered By: Hashimoto Denki Co., Ltd.

Date of First Use: April 2021



Benefit 1: Increased productivity by detecting the open and non-open defects in veneer by the line sensor camera with AI evaluation.

Benefit 2: Increased veneer quality by automatically clipping defects with higher precision by analysis from AI evaluation.

Results: Achieves higher level of composed veneer grading which increases the composed dry veneer quality and labor productivity.

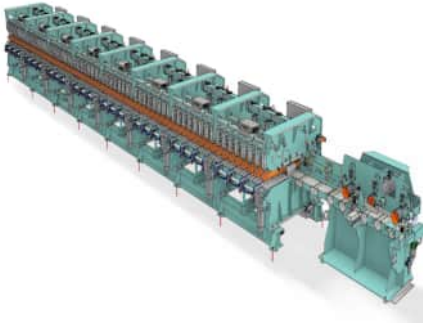
Description: The VWU-A70, with the GAIA VeCS Scanner, is a high-quality dry veneer composing system with scan analyzer that increases labor productivity. Dry veneer is analyzed by the line sensor camera and grades its quality by the AI system and then composed according to the factory's production plan.

INNOVATION OF THE YEAR ENTRY E

Z-PRESS - Edge gluing press for fast assembly bonding of solid wood laminations in cross laminated timber (CLT) production

Entered By: LEDINEK ENGINEERING d.o.o.

Date of First Use: First half of 2020



Benefit 1: Allows fully automatic assembly of EGPs into CLT element prior to pressing (no disarray due to EGP instead of single boards).

Benefit 2: Allows fully automatic destacking of elements pressed at the same time (no between board glue percolation, no foil between elements).

Results: Omission of manual intervention during CLT element stacking assembly and as a result much shorter press times, more capacity, true full automation of the whole CLT production line, less operators. Omission of separation problems after pressing multiple CLT elements at once (no between board glue percolation). Easier interim storage and manipulation due to stacking possibilities of the EGPs, better dimensional tolerances through EGP in all dimension directions and accordingly less excess wood waste at trimming to final dimension on CNC routers and sanders. Better wood yield and improved visual surface quality of CLT elements due to closed micro fissures between boards in EGP.

Description: Edge gluing press for upgraded autonomy in Next Gen CLT productions by bonding otherwise loose board layers of a CLT element prior press-gluing into homogenous easy manipulable layers and elimination of all problems occurring due to loose boards which represent the "Achilles' heel" to achieve full automation reliability of the existing CLT productions.

INNOVATION OF THE YEAR ENTRY F

Raute R5 Panel Repair Station

Entered By: Raute

Date of First Use: November 2021



Benefit 1: Process Automation

Benefit 2: Production efficiency and quality

Results: Up to 20% savings in panel repair material and significant labor savings.

Description: The newest development, Panel Repair Station R5, is the compact solution for automated panel repairing. This station fits into the same space as the traditional manual repair cell, doesn't require special foundations and only needs one part-time operator. Most manual panel repair lines require two to eight personnel.

INNOVATION OF THE YEAR ENTRY G

Smart Wax

Entered By: Smartech

Date of First Use: 2018



- Benefit 1:** Better quality boards
- Benefit 2:** Huge savings
- Results:** Between 10% and 30% yearly savings on raw material

Description: SMARTECH’s pioneering SmartWax System transforms the way wax is used. The SmartWax System transforms the wax material into a wax suspension and provides unmatched cost savings for engineered wood manufacturing, while promoting improved product quality and superior control.

INNOVATION OF THE YEAR ENTRY H

AddVantage Chop/Rip Defect Detection Using Artificial Intelligence (AI)

Entered By: USNR

Date of First Use: Q4 2020



- Benefit 1:** AI defecting is extremely accurate and consistent
- Benefit 2:** Multiple species change-overs with a click of a button
- Results:** Customer replaced six automated scan lines in under a year with six AddVantage systems running this new AI platform

Description: AddVantage uses four-sided, multi-spectral color vision with Deep Learning AI to locate, size and classify 100% of visual defects, bringing a much higher degree of accuracy and consistency to solutions. False defects are virtually eliminated by labeling the ground truth in the images. Startups are reduced from weeks to days.

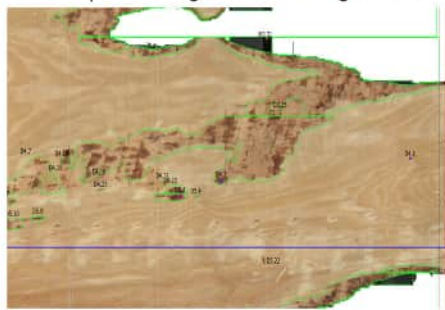
INNOVATION OF THE YEAR ENTRY I

Wane Detection In Veneer Using Deep Neural Networks

Entered By: USNR

Date of First Use: January 2021

Deep Learning Net Detecting Wane



- Benefit 1:** Finding cambium/wane areas without strong visual signature
- Benefit 2:** Reduces false wane detection
- Results:** Increase of 2.3 million bdft on grade

Description: Deep Learning is an advanced application of Deep Neural Networks (DNNs) used to identify defects in veneer. Wane/cambium defects are labeled and a DNN is trained, which is then applied in real time to green veneer. Optimizer decisions are then made to clip the veneer and send sheets to an appropriate sort or to the trash.

Supplier of the Year Award Candidates

APA members will choose Supplier of the Year winners in three categories (Consulting/Services, Equipment/Tooling and Materials/Supplies) based on quality, service and delivery. Below is a list of candidates, which includes all EWTA members.

To recognize the outstanding service of so many members, the EWTA Advisory Committee implemented a new rule in 2019 that no member is eligible to win two consecutive years. The 2021 Supplier of the Year winners are highlighted below.

CONSULTING AND SERVICES

**BMI Contractors, Inc.*

CMA engineering Inc.
Evergreen Engineering, Inc.
Hansen-Rice, Inc.
Hunt, Guillot & Associates LLC
KTC Industrial Engineering Ltd.
Mid-South Engineering
Nondestructive Inspection Service
Panel World Magazine / Hatton-Brown Publishers, Inc.
Union Pacific Railroad
University of Tennessee, Center for Renewable Carbon

EQUIPMENT AND TOOLING

A-Lert Construction Services
Altec Integrated Solutions Ltd.
ANDRITZ Inc.
Argos Solutions LLC
Baumer Inspection GmbH
BETE Fog Nozzle, Inc.
BID Group
BRUKS-SIWERTELL
Brunette Machinery Company Inc.
CECO Environmental: Adwest Technologies, Fisher-Klosterman, HEE-Dual
Clarke's Industries, Inc.
Coil Manufacturing, Ltd.
Connexus Industries Inc.
Con-Vey

**2020 Supplier of the Year Winners*

COSTA Sanders LLC
Dieffenbacher Customer Support, LLC
DO2 Industriel
Dürr Systems, Inc.
Electronic Wood Systems, N.A.
Fagus GreCon, Inc.
Flamex, Inc.
FROMM Packaging Systems
Globe Machine Manufacturing Company
Grenzebach Corporation
Guardian Chemicals Inc.
HASHIMOTO DENKI Co., Ltd
HAWE Hydraulik
H.B. Fuller
HexArmor
IBC, International Bar Coding Systems & Consulting Inc.
IMAL-PAL Group
IMEAS Inc.
Itipack Systems
KADANT Carmanah Design
Kimwood Machinery, Inc.
Koch Knight, LLC
LIMAB North America
LDX Solutions (Dustex |Lundberg)
LEDINEK
Matthews Marking Systems
Meinan Machinery Works, Inc.
Mereen-Johnson LLC
Mill Machinery LLC
MINDA North America, LLC
MSK Coverttech, Inc.
NESTEC, Inc.

Nextwire
Nicholson Manufacturing Ltd.
Radian Robotics
**Raute*
REA JET
Samuel Packaging Systems Group
Siempelkamp LP
Signode Packaging Systems
SMARTECH (TIP)
SonicAire
SparTek Industries
Spraying Systems Co.
Stiles Machinery
Sweed Machinery, Inc.
Taihei Machinery Works Ltd.
TSI
USNR
Venango Machine Company, Inc.
Veneer Services, LLC
Westmill Industries USA Corp.

MATERIALS AND SUPPLIES

**Arclin - Performance Applied*

Ashland Specialty Ingredients
ATCO Wood Products Ltd.
Axalta Coating Systems
BASF - We create chemistry
Bates and Company, Inc
Chem-Trend LP
Clarke Veneers and Plywood
Coastland Wood Industries Ltd.

Covestro LLC
Dominion Chemical Company, Inc.
Evertree
Franklin Adhesives & Polymers
Fusoni
Georgia-Pacific Chemicals LLC
Henkel
Hexion Inc.
Huntsman Polyurethanes
Idemitsu Lubricants America Corporation
Intertape Polymer Group
JAX, Inc.
Lonza Wood Protection
McLube Release Agents & Lubricants
Northwest Adhesives, Inc
OCI Melamine Americas
Owens Corning® - WeatherPro®
Paneltech
Permapost
Sansin Corporation (The)
SASCO - Polymer Solutions Group, LLC
Siemer Milling
Stratachem Solutions Group LP
Walker Emulsions
Wanhua Chemical (America) Co., Ltd.
Willamette Valley Company

2021 EWTA MEMBERS

The Engineered Wood Technology Association (EWTA), the related nonprofit supplier organization of APA – The Engineered Wood Association, serves as a networking and information transfer vehicle between North America’s engineered wood product manufacturers and their product, equipment and service providers.

EWTA membership falls under four categories:

- Consulting and Services
- Equipment and Tooling
- Materials and Supplies
- APA member manufactures (all members of APA are automatically members of EWTA)

The following directory provides a list of 2021 EWTA members organized by category and includes company descriptions and contact information. Visit www.engineeredwood.org/member-directory-contacts for the online directory and additional filter options. It’s just one of many tools designed to help members connect with each other and the industry.

For more information about the benefits of membership or for a membership application, visit www.engineeredwood.org/-about or contact LaDauna Wilson at ladauna.wilson@apawood.org.



CONSULTING AND SERVICES

EWTA members in the Consulting and Services category provide support in one or more of the following subcategories: Energy Management; Engineering Services; Industrial Construction and Installation; Industry Communication/Research; Maintenance/Inspection; On-Time Performance Systems; Plant Design and Construction; Project Management; Recruiting and Staffing; Software/Computing/IT; Specialty Services; Value-Added Services/Treating/Embossing. [Go to the online Consulting and Services directory](#)

BMI Contractors, Inc.

BMI Contractors Inc, is a machinery installation contractor specializing in the wood products industry for nearly 40 years. We operate across North America and have installed complete plywood, OSB LVL and I-Joist facilities. We have replaced, rebuilt or modernized individual machinery lines including over 100 veneer dryers and a significant number of plywood presses LVL presses and OSB presses. We pride ourselves in innovation and are responsible for completing three veneer dryers that were rolled into place after their construction. Our crews are ready to assist you in achieving your goals for timely, efficient, safe and cost-effective plant improvement projects.

Contact:

David Brown - President
Phone: 503-375-2222
Email: dbrown@bmicontractors.com
4375 Turner Rd. SE, Salem, OR 97317
www.bmicontractors.com

CMA engineering Inc.

Since 1986, CMA engineering Inc. has accomplished a number of projects in the manufacturing end of the forest products industry, including the conceptual design, budget preparation, process engineering, detail engineering (mechanical, electrical, civil and structural), equipment procurement, project management, construction management, PLC/HMI programming and start-up of board plants (OSB, Particleboard and MDF), plywood and veneer mills, bioenergy plants, engineered wood product plants and sawmills.

CMA engineering Inc. continued:

Contact:

Claude Malette - P. Eng.
Phone: 705-360-5525
Email: cma@cmaeng.com
60 Wilson Avenue, Suite 101
Timmins, ON P4N 2S7 Canada
www.cmaeng.com

Evergreen Engineering, Inc.

Evergreen is a multi-discipline (mechanical, electrical, civil/structural and environmental) engineering firm. From project planning and feasibility studies through detailed engineering, construction management, maintenance and process consulting, to start-up and commissioning support, Evergreen can handle any project in your mill. Our wood products experience includes OSB, LVL, I-Joist, Particleboard, MDF, Hardboard, WPC, Pulp & Paper, Lumber, Plywood, Chemical and Resin plants. "Our mission is to provide customized support to move our client's vision to reality by delivering practical engineering solutions, displaying project leadership and contributing technical expertise."

Contact:

Aaron Edwards - Director, Industrial Business Development
Email: aedwards@eeeug.com

Eugene Office:

Phone: 541-484-4771
1740 Willow Creek Circle, Eugene, OR 97402-9152

Evergreen Engineering, Inc. continued:

Atlanta Office:

Phone: 404-267-1471

8607 Robert Drive, Suite 100, Atlanta, GA 30350

Everett Office:

Phone: 888-484-4771

13322 Evergreen Way, Suite 201, Everett, WA 98204

www.evergreenengineering.com



Hansen-Rice, Inc.

HRI – Industrial solutions, from concept to commissioning. Experienced, trusted, long-term industrial GC partner: Safety (Current EMR .71 and under 1 for over 20 years), open-book cost transparency, speed to market, certainty, critical path control, risk mitigation, Assured Delivery Program, and single-source accountability. Proven nationwide: Capital projects for engineered wood, pulp & paper, bioenergy, recycling, and related industries. HRI deploys a strong team of content experts (deep EWP experience), proven engineering partners, dedicated program managers, and competent project leadership to collaborate with Owner/Clients throughout the project. Master planning, site evaluations, project management. HRI: Your fully integrated industrial contractor.

Contact:

Jason McIntosh - Director, Industrial Programs

Phone: 318-243-1116

Email: jmcintosh@hansen-rice.com

1717 E. Chisholm Dr., Nampa, ID 83687

www.hansen-rice.com

Hunt, Guillot & Associates LLC

Hunt, Guillot & Associates, LLC (HGA) is a multi-disciplined project management and engineering design firm. HGA has been serving the forest products industry since the firm's founding in 1997. HGA continues to provide expertise to the Engineered Wood Products, LVL, I-Joist, OSB, Plywood, Particleboard, Glue Lam and Lumber industries. Services provided include project management, feasibility studies, preliminary engineering, detailed design engineering and on-site technical support services.

Contact:

Sam Costanza - Vice President

Phone: 318-255-6825

Email: scostanza@hga-llc.com

603 Reynolds Drive (PO Box 580), Ruston, LA 71270

www.hga-llc.com

KTC Industrial Engineering Ltd.

"Great projects start here." Expertise, experience, and proven track record second to none. Our staff has designed 24 greenfield plants and completed over 600 projects in the engineered wood industry over the past 30 years. KTC utilizes the latest technology and proven methodology to provide complete engineering while supporting the project management team with accurate budgets and schedules. We are now taking the risks out of projects with Dynamic Process Modeling, Advanced Project Tracking technology, and 3D design with augmented reality (AR) construction support.

Contact:

Jan Karnik - President

Phone: 604-592-3123

Email: jan.karnik@kcteng.ca

#218-12877 76th Avenue

Surrey, BC V3W 1E6 Canada

www.panelboard.net



Mid-South Engineering

Mid-South Engineering is a full service, consulting engineering firm that provides a broad range of professional engineering services. Our multi-disciplined staff has served industrial, government, and commercial clients since 1969 with a particular expertise within the forest products industry. With offices in Arkansas, North Carolina, Maine, and British Columbia, Mid-South can serve clients across all of North America. Our services include Engineering, Project Development, Project Management, and Construction Services. We welcome projects from small troubleshooting efforts to large greenfield plant installations, as Owner's Engineer or as part of a turn-key project.

Contact:

Scott Stamey - Vice President
Phone: 919-481-1084
Email: scott.stamey@mseco.com
200 Mackenan Drive, Cary, NC 27511
www.mseco.com

Nondestructive Inspection Service

Nondestructive Inspection Service (N.I.S.) was incorporated in 1960. Since that time we have taken preventative maintenance to higher levels of predictive maintenance while saving our customers costly unpredictable down time, on all types of process equipment along the entire production line. We are the established leader in applying our knowledge of NDT and perfecting inspection procedures to exceed industry standards. In the case of wood processing and construction board plants, over the last 30 years we have developed, tested and implemented significant innovations on the standard inspection techniques to shrink costly inspection downtime and overcome the issues of inspecting difficult-to-reach parts of the equipment.

Nondestructive Inspection Service continued:

Contact:

Ed Hauldren - VP of Operations
Phone: 304-562-6835
Email: ed@nisforndt.com
2825 US Route 60 East (PO Box 220)
Hurricane, WV 25526
www.nisforndt.com

Panel World Magazine / Hatton-Brown Publishers, Inc.

Panel World publishes six issues per year for domestic and international readership with emphasis on mill project startup articles. Product coverage includes structural and non-structural wood products. Panel World also hosts the biennial Panel & Engineered Lumber International Conference & Expo (PELICE).

Contact:

Rich Donnell - Editor
Phone: 334-834-1170
Email: rich@hattonbrown.com
225 Hanrick Street (PO Box 2268)
Montgomery, AL 36104
www.panelworldmag.com

Union Pacific Railroad

Union Pacific Railroad, a principal operating company of Union Pacific Corporation, is one of America's most recognized companies. We provide a critical link in the global supply chain by linking 23 states in the western two-thirds of the country by rail. We serve many of the fastest-growing U.S. population centers, operate from all major West Coast and Gulf Coast ports to eastern gateways. We connect with Canada's rail systems and are the only railroad serving all six major Mexico gateways. We provide value to roughly 10,000 customers by delivering products in a safe, reliable, fuel-efficient and environmentally responsible manner.

Union Pacific Railroad continued:

Contact:

Cori Bumgardner and Carey Wilcox - Managers
Marketing | Industrial
Emails: cabumgar@up.com or cawilcox@up.com
1400 Douglas Street, Omaha, NE 68179
www.up.com

University of Tennessee, Center for Renewable Carbon

The Center for Renewable Carbon is a state-of-art research facility at The University of Tennessee. The CRC has nine faculty conducting research on forest products, sustainable biomaterials and bioenergy, <http://renewablecarbon.tennessee.edu/>. The laboratories include wood composite laboratory steam-injected presses, destructive testing lab, conditioning chambers, dry kiln laboratory and new laboratory capabilities for sustainable biomaterials preprocessing, pretreatment research, thermochemical and biochemical conversion, and product analysis. Also, unique analytical capabilities for nanotechnology sustainable biomaterials are available. The CRC has M.S. and Ph.D. concentrations in Sustainable Biomaterials and Wood Science Technology. The CRC provides world-class industry training programs in SPC/Lean, DOE, and data mining.

Contact:

Timothy Young - Ph.D. - Professor
Phone: 865-946-1119
Email: tmyoung1@utk.edu
2506 Jacob Drive, Knoxville, TN 37996-4570
www.spc4lean.com

Go to the online Consulting and Services directory for additional details.

EWTA EXPANDS ITS SOCIAL MEDIA PRESENCE

More people are turning to social media, and EWTA is adding resources to connect with members and others in the engineered wood industry. Look for EWTA on LinkedIn, Facebook and Twitter in the coming months as those accounts are developed and expanded.

VIEW WEBSITE ►



Stay connected now

Sign up for the EWTA *Connections* e-newsletter or you can access any issue anytime on our website.

VIEW NEWSLETTERS ►

APA ON SOCIAL MEDIA

Follow APA to stay up to date on the latest research, publications, webinars and more at www.apawood.org



EQUIPMENT AND TOOLING

EWTA members in the Equipment and Tooling category provide products and support in one or more of the following subcategories: Accessory Tools/Equipment; Controls/Electronics/Optimization/Automation; Custom Equipment/Tooling; Dryer Systems; Environmental; Fastening/Fasteners/Hardware; Finishing Line Systems; Grading/Scanning; Hydraulics/Hydraulic Systems; Labeling/Marking/Bar Coding; LVL, Laminate & Other EWP Equipment; Material Handling Equipment; Panel Handling Equipment; Panel Production Equipment; Panel Repair/Patching; Presses and Press Lines; Primary Processing Equipment; Quality Control Equipment and Systems; Resin Application Equipment/Spray Lines; Safety Equipment and Supplies; Sanding and Finishing Equipment; Stranders/Debarkers/Logging; Support Equipment; Veneer Processing and Drying; Wax/Material Application Systems; Wrapping, Strapping and Packaging. [Go to the online Equipment and Tooling directory.](#)

A-Lert Construction Services

A-Lert Construction Services was established in 1979 and specializes in design, manufacturing as well as installation of equipment in the wood and grain industries. We offer everything from single and triple-pass rotary dryer drums, flash tube and steam tube dryers with the ability to process both organic and inorganic materials across a wide variety of manufacturing industries. We also offer the process piping, trommel screening, conveying and Cleanaire systems often needed with these systems as well. A-Lert serves as a specialty fabricator and replacement parts supplier for all existing M-E-C systems.

Contact:

Jordan Stewart - Sales Manager
Phone: 620-607-4035
Email: jstewart@centurionind.com
120 West Madison, Fredonia, KS 66736
www.centurionind.com



Altec Integrated Solutions

Altec designs and manufactures precision machinery and advanced controls equipment. We create innovative solutions to solve the toughest application demands in the veneer and plywood manufacturing

Altec Integrated Solutions continued:

industry and amusement park industry. With our facilities in Coquitlam, BC and Diboll, Texas, we continue to expand our products and services, setting new benchmarks for innovation and integration.

Contact:

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Coquitlam, BC V3K 6T1 Canada
www.alteconline.com



ANDRITZ Inc.

With a comprehensive range of technically advanced products and more than half a century of experience, ANDRITZ Wood Processing Global Product Group can supply a customized system for all the stages of your log handling, debarking and wood and bark processing operations worldwide. ANDRITZ is specialized in supplying complete systems including total project management, all relevant process equipment and control/automation systems. Our range covers all sizes of plants. Our globally organized project group can take responsibility for

Andritz continued:

all stages of your project: Design, Manufacturing, Transportation, Erection, Commissioning, Start-Up, Staff Training. The level of each project service can be structured to match your specific project requirements.

Contact:

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www.andritz.com

Argos Solutions LLC

Argos offers a full range of innovative optical inspection and process control systems that replaces manual grading and patching of wood products. Argos provides the latest technology of vision-based scanning systems for plywood, composite and furniture industry. With more than 30 years of experience, Argos Solutions have installed over 400 systems in more than 30 countries. Argos is a single source supplier for inspection and grading after the press, sander, cut-to-size, including edge inspection systems, and automatic patching systems for plywood and parquet panels.

Contact:

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2013 Castleburg Drive, Apex, NC 27523
www.argossolutions.no

Baumer Inspection GmbH

Baumer Inspection GmbH specializes in optical surface inspection systems. In over 35 years of quality service, we have installed more than 750 systems world-wide and are a leader in scanners for fully automatic inspection and process control. Baumer

Baumer Inspection GmbH continued:

Inspection offers inspection systems for particle boards, wood fiber boards (MDF, HDF), paper, film and foils, flooring and surfaces of furniture panels as well as edge inspection systems. Our highly skilled and motivated team always pushes the limit of what is possible to bring you the newest innovation in vision technology for the wood working industry.

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BETE Fog Nozzle, Inc.

BETE's FlexFlow® Spray Systems and Electric HydroPulse® Automatic Spray Nozzles provide solution confidence for precise applications of resin, wax, water, and release agents during engineered wood production. Addresses problems involving overspray or under-spray to ensure production efficiency for chips, mats, cauls, or belts.

Contact:

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50 Greenfield St., Greenfield, MA 01301
www.bete.com

BID Group

The privately-owned BID Group has over 35 years of experience in providing industry leading solutions for its highly valued customers in the wood processing industry. As one of the largest integrated suppliers to the wood processing industry and the North American

BID Group continued:

leader in the field, BID Group is your one-stop source for comprehensive and innovative solutions that exceed our customer expectations. The ability to provide a complete, smart connected, turnkey manufacturing facilities that includes engineering, project management, installation, startup, and after sales service furthers the BID Group companies' strategic value to its customers.

Contact:

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BRUKS-SIWERTELL

Bruks-Siwertell is a market-leading supplier of dry bulk handling and wood processing systems. With thousands of installations worldwide, our machines handle your raw materials from forests, fields, quarries and mines, maintaining critical supply lines for manufacturers, mills, power plants and ports. We design, produce and deliver systems for loading, unloading, conveying, storing, and stacking and reclaiming dry bulk materials, alongside equipment for chipping, screening, milling and processing wood for the biofuel, board, sawmill, pulp and paper industries.

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5975 Shiloh Road, Suite 109, Alpharetta, GA 30005
www.bruks-siwertell.com

Brunette Machinery Company Inc.

Specializing in wood processing machinery and material handling systems for the Forestry and Biomass industries: CBI Grizzly Mill, BioSizer®, Chippers for Pulp-chips or Micro-Chips, Electric Log Sweeps, Log Decks, Log Singulators, Rotary Debarkers, Vibrating Conveyors. Custom engineered solutions to take control of your fiber supply and get more from your mill.

Contact:

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8717 - 132nd Street, Surrey, BC V3W 4P1 Canada
www.brunettemc.com

CECO Environmental: Adwest Technologies, Fisher-Klosterman, HEE-Duall

Adwest Technologies provides high efficiency Regenerative Thermal and Catalytic Oxidizers (RTOs and RCOs) for engineered wood, OSB, MDF, laminating, veneer drying, and resin VOC abatement. Adwest can provide compact 2 chamber RETOX RTOs as well as multi chamber RTOs up to 400,000 SCFM flow rates. Our Fisher-Klosterman, Inc (FKI) division provides ultra-high efficiency cyclones and venturi scrubbers for boiler and wood manufacturing applications, while HEE-Duall provides Bioreaction biofilter and scrubber systems for VOC abatement. We also service, rebuild and relocate RTOs, RCOs, Biofilters and scrubbers for the wood products markets including Smith, Pro-Environmental and all other brands.

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Clarke's Industries, Inc.

Clarke's provides a broad range of products for the Panel Board Industry. The products include Material Storage and Metering Bins, PyroGuard Spark Detection and Extinguishment System, Hi Speed Abort Gates, Back draft Dampers and Explosion Venting, Waste Wood Processors, Rotary Screens and Classifiers, Rotary Airlocks/Feeders, Fans, Dust Collection and Pneumatic Conveying Systems.

Contact:

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Coil Manufacturing Ltd.

Coil Manufacturing is the leading manufacturer of rotary drum blenders and spinning disc atomizers for resin application in the engineered wood industry.

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Connexus Industries Inc.

Connexus industries Inc. Manufacturers and distributes specialized chain, attachments and sprockets for OSB manufacturing plants. We also are manufacturers of Laharco Laser Diodes and Rens-Metal Shark Metal Detectors. Locations in Atlanta, Quebec, Portland & Vancouver. Formerly Viking Chains, l'ANCO Products and Lacey Harmer Inc.

Connexus Industries Inc. continued:

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Con-Vey

Con-Vey is a leading manufacturer of material handling equipment and a proven, high quality supplier offering innovative solutions to customers in nearly 20 countries. Con-Vey designs and manufactures complete systems for automated material handling, wood panel processing, packaging, and laminating, including feeders, stackers, and conveyors. Con-Vey also specializes in beam presses, robotics, and PLC control systems. For more information on Con-Vey's innovative solutions, visit CON-VEY.COM or contact Product Manager for Panel Products, Brent Hensley, at brent.hensley@con-vey.com.

Contact:

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COSTA Sanders LLC

Building on 60+ years of experience manufacturing industrial calibrating, sanding and polishing equipment, Costa's large panel series machines continue a tradition of rugged world-class machinery that made Costa an industry leader in the field of industrial sanding-calibrating equipment. These "super duty" solutions are engineered and manufactured

COSTA Sanders LLC continued:

to the highest quality standards, in modular frames, with the right combination of working units, motors, and feed speeds that best fits the industrial process of today and tomorrow. Costa Sanders offers machine solutions engineered expressly to fit each client's own manufacturing environment and production needs - whether particleboard, fiberboard, plywood, OSB, or CLT. Our sanding systems are capable of processing up to 145" wide panels with thicknesses up to 13" at the required industry production speeds.

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Dieffenbacher Customer Support, LLC

Dieffenbacher is an international group of companies specializing in the manufacturer of press systems and complete production systems for the wood, automobile and supplier industries. As an independent fifth generation family company, we have stood for continuity, tradition and reliability for over 140 years. Our Wood business unit plans and implements complete solutions for the manufacture of wood-based panels, such as particleboard, MDF, OSB and LVL plants.

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DO2 Industriel

The DO2 Rapid Wrapper Automatic packaging system offers outstanding performance. Over the years, DO2 keeps improving and can now automatically wrap panels, engineering wood, finish products and an I-joist solution is on its way. Each wrapper is built to fit the mill production in term of speed and package dimensions with a lot of flexibility. The wrapping machine's electrical, mechanical and pneumatic components, its design, the programming structure and tactile interface have all been designed for easy use and no-hassle operations. All of the wrapper's components are robust and maintenance-free. Built with durability and efficiency in mind, the wrapper will optimize your plant's production on a daily basis.

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Dürr Systems, Inc.

Dürr Systems, Inc. offers multi-pollutant clean-air solutions to the engineered wood products industry that meet stringent emissions regulations: wet scrubbers and wet electrostatic precipitators for high-efficiency particulate, blue haze and condensed salts removal for dryers and press vents; ultra-high-efficiency RTO/RCO systems for VOC abatement, and SNCR systems for NOx control. The Dürr Systems aftermarket group also provides upgrades, parts, and service for every make of air pollution control equipment for the engineered wood products industry.

Dürr Systems, Inc. continued:

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Electronic Wood Systems, N.A.

EWS North America was founded in 1993. We are a leading supplier of quality control measuring systems for the wood composite panel board industry, including: Thickness Gauges, Blow Detection, Press Protection Devices, Spark Detection & Extinguishment Systems, Mass (WPUA) Measuring, non-contact Weigh Scales and Density Profile Measuring Systems.

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Fagus GreCon, Inc.

Fagus GreCon, INC. Since 1911, Innovation is Our Tradition. MEASURING SYSTEMS: Improves your bottom line. Check out the full range of in-line measuring systems: thickness gauges, blow & delamination detector, moisture meters, raw density profile. Weight per unit area across the whole production width at the mat former and after the press. Detect surface defects on décor panels and flooring. SPARK DETECTION & EXTINGUISHING SYSTEMS: Provides safety for your production. Detect sparks and extinguish them before the filter. Detect heat buildup in silos, bag houses and storage bins. Outlined in NFPA 69, 654 and 664 standards. Factory Mutual Approved.

Fagus GreCon, Inc. continued:

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Flamex, Inc.

Flamex Inc. is a leading supplier of customized industrial process fire prevention and protection equipment. We specialize in the protection of facilities that handle combustible dusts that utilize pneumatic dust collection and air filtration systems. To address the process fire hazard inherent in various industrial applications, our company pioneered the utilization of a new technology in North America by introducing the FLAMEX Spark Detection and Extinguishing System in 1977 and the MINIFOG PressProtect System in 1997 for the protection of Industrial Presses. The flexibility of these systems allows their use in other hazardous areas such as Thermal and Hydraulic oil rooms where AFFF Foam Fire Fighting systems can be utilized for further protection.

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FROMM Packaging Systems

FROMM Packaging Systems for the lumber Industry consists of heavy-duty machinery. Our equipment covers all packaging solutions for the forestry industry (timber, plywood, MDF, HDF, chipboard etc) with strapping machines, wrapping and waterproof machines. We develop and produce a wide variety

FROMM Packaging Systems continued:

of systems for unitizing and palletizing goods for transport: strapping machines and systems, pallet stretch wrapping machines, together with all necessary consumables. Established in 1947, the Swiss company pursues a policy of logical vertical integration while upholding traditional values such as proximity to customers, quality consciousness, continuity, independence and environmental awareness, which are the reasons for decades of success.

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Globe Machine Manufacturing Company

Globe Machine offers single machine centers along with complete systems to the following industries: OSB, MDF, particleboard, plywood, strawboard, moulded door skins, membrane presses, siding, LVL, laminate flooring and sheet plastics. Globe Machine is the leader in the supply of automated I-joist assembly systems and has achieved a leadership role in the cement fiberboard industry and moulded door skin lines. For 100 years Globe Machine has served the forest products industry.

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Tacoma, WA 98421
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Grenzebach Corporation

Grenzebach is a leading global manufacturer and supplier of drying systems for the veneer and building materials industries with over 400 dryer installations worldwide. Our veneer product line includes jet and longitudinal dryers, infeed and outfeed systems, and veneer grading and stacking systems. Grenzebach has completed extensive rebuilds and upgrades on all makes and models

of veneer, wallboard, and ceiling tile dryers. Grenzebach Service supplies complete parts and service (on-site and remote) for all building materials drying systems.

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Guardian Chemicals Inc.

Providing solutions, results and meaningful service has earned Guardian Chemicals Inc. the enviable industry reputation as the "go to" people for chemical technology and services. Our extensive research and development group, in house ISO 14001 certified manufacturing and products like our revolutionary patented PRESSGUARD series release agent technology for MDI resins in continuous and multi-opening presses, keep us at the forefront of the engineered wood industry. From W.E.S.P. and Scrubber treatment technology, process chemicals and defoamers to maintenance chemicals, odor control and corrosion prevention, Guardian's wood group provides our partner clients with a complete package along with the flexibility to adapt products to the specific needs of each individual application and customer.

Guardian Chemicals Inc. continued:

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Hashimoto Denki Company, Ltd.

Hashimoto Denki Company, Ltd was established in 1946 in Nagoya, Japan, the Japanese woodworking machinery capital. Our company specializes in manufacturing machinery for high-efficient and value-added plywood and veneer production, ranging from veneer lathe lines to panel sizing lines. We offer machinery for total plant operation of veneer, plywood and LVL, serving the worldwide marketplace.

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HAWE Hydraulik

HAWE Hydraulik is a well-respected, worldwide, German based company with offices in over 20 countries. HAWE's primary business is providing high quality hydraulic components through modular design and energy efficient solutions. HAWE offers a full range of products from high pressure valving to custom hydraulic units and manifolds to complete hydraulic systems including motion controls. We are a complete solutions provider.

HAWE Hydraulik continued:

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H.B. Fuller

Our fast setting, strong bonding tapes and glues deliver near zero waste veneers. Zero waste = more profit. Our patented rotary applicators are designed to increase production uptime and eliminates costly and ineffective chillers. Our wood team has over 50+ years of market experience to ensure the right solution for hardwood and softwood veneer in the plywood, parquet and LVL markets. Our industry first Dry & Green Welding tapes are a next generation solution for eliminating laps and gaps while further maximizing drier efficiency. Our goal is simple – help you make more money and build better wood products.

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HexArmor

HexArmor is a global PPE (personal protective equipment) manufacturer that uses innovative technologies to build high performing hand protection, arm/body protection and eyewear. At HexArmor, we understand the daily challenges faced by safety teams in the wood products industry. Working to meet growth and operational expectations while keeping employees safe on the job can be a tough balancing act. Injuries are costly. Down time and lost productivity damage company reputations

HexArmor continued:

and slow growth. Let HexArmor help you build a PPE program that keeps you operationally efficient while giving your employees the best opportunity to go home safely to their families.

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IBC, International Bar Coding Systems & Consulting Inc.

IBC, International Bar Coding Systems & Consulting Inc. - An integrated manufacturer of individual piece wood product specific printer applicators. Complete solutions for finished or in-process packs we offer Automated Package labelers (AutoLabeler) for Veneer, OSB, MDF, Plywood, Lumber and EWP. We manufacture tags and labels for any labeling system and are a single source provider for turnkey solutions. We offer Vendor Managed Inventory of consumables and integrated data collection systems across North America. We provide full design, build, onsite service, preventative maintenance, training and consulting on a system wide or mill by mill basis.

Contact:

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IMAL-PAL Group

Established in the 1970's, the Group is a world leader in the manufacture and supply of equipment and systems. It's extensive production program is able to supply complete turnkey plants for the treatment and processing of fresh and recycled wood, in both the

IMAL-PAL Group continued:

wet and dry areas, for production and processing of particleboard, MDF, OSB, Plywood, Pellets, Pallet Blocks and pressed wood-based products in general. IMAL is a leading manufacturer of glue dosing and blending systems and supplies the most innovative on-line and laboratory quality control devices that are found in virtually all the production plants around the world.

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IMAL-PAL Group, Inc.
PO Box 870949, Stone Mountain, GA 30087
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IMEAS Inc.

IMEAS is a world leader in surface finishing solutions, with over 3,000 machines operating worldwide. 2021 marks IMEAS's 55th Anniversary of Innovation and Service to the Wood Products Industry. IMEAS sanding and grinding machines are used to achieve precise surface finish and thickness on a wide variety of products such as plywood, LVL, CLT, composite wood panels, decorative laminates, flooring and solid surface products, etc. IMEAS specializes in extra wide machines - 12' (3.6 meters) and cross-belt sanding for wood products.

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Peachtree City, GA 30269
www.imeasinc.com

Itipack Systems

Itipack Systems has been in business since 1970. We are a manufacturer of automated strapping systems.

Contact:

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Kadant Carmanah Design

Kadant Carmanah provides leading edge technology and equipment to optimize fibre utilization for the production of wood-based panels. Kadant Carmanah's products include SmartDISC Stranders, SmartRING Stranders, Rotary Debarkers and Conveying/Feeding equipment for the oriented strand board market. As a global leader in stranding technology, Kadant Carmanah holds an impressive 80% of this market share.

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Kimwood Machinery, Inc.

World's leading producer of new equipment and OEM parts for Kimwood Sanders, Hogs and Handling Equipment, Stetson-Ross Planers and Moulders, Ferrari Resaws and Tri-State Equipment.

Contact:

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Koch Knight, LLC

A domestic manufacturer and global leader of ceramic media for Regenerative Thermal Oxidizers (RTO). Our media is designed to work in normal to your most challenging application environments. A mixed bed of our FLEXERAMIC® structured media and LPD® random media offers optimal heat transfer and full bed utilization while our GR (Glazed Resistant Alumina) material is produced for OSB Dryer and other applications for the wood products industry. We manufacture our ceramic media domestically and stock over 100,000 cubic feet at our East Canton, Ohio facility at any given time to accommodate current and future customers for quick response and short lead times.

Contact:

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LIMAB North America

LIMAB is the world leader in non-contact laser measuring systems for composite panels and engineered wood products.

Contact:

Tony Godair
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www.limab.com

LDX Solutions (Dustex | Lundberg)

LDX Solutions is a global supplier of air pollution control systems to process industries including the engineered wood products industry. State-of-the-art systems that include the Geoenergy E-Tube Wet ESP,

LDX Solutions (Dustex | Lundberg) continued:

GeoTherm RTO and GeoCat RCO Oxidizers and Geoenergy Wet Scrubbers. Geoenergy systems have provided environmental compliance to the engineered wood products industry on wood dryers, press vents and boilers since 1984.

Contact:

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Redmond, WA 98052
www.lundbergllc.com



LEDINEK

LEDINEK is global leader in Cross Laminated Timber (CLT), Glulam Beam and finger jointed Solid Timber technology. Knowledge of mechanical engineering and practical experience in mass timber solutions gained over decades combined with our SOTA equipment, allows us to equip you with individually optimized complete solutions in engineered wood production. From concept and design, to installation, training and commissioning, we provide the leading finger jointing and panel & beam press technology, state of the art planing, moulding, sawing and splitting solutions, material handling equipment, data flow management and excellent aftersales support for you. We cherish our partnerships - Count on us!

Contact:

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www.ledinek.com

Matthews Marking Systems

Matthews Marking Systems, established in 1850, is a leading supplier of marking and coding equipment for the engineered wood and building products industries. Matthews supplies inkjet printing and labeling solutions for applications including grade marking, nail patterns, traceability and large format logo printing. We also offer a variety of inks, specific to the wood industry, including water based, fast dry and VOC free.

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Cranberry Twp., PA 15206
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Meinan Machinery Works, Inc.

Established in 1953 in Japan, Meinan develops and manufactures innovative machinery for veneer and plywood production, and holds hundreds of worldwide patents. Meinan's revolutionary "spindleless" lathe drives logs on their circumference with spiked discs instead of spindles, resulting in better veneer quality, higher recovery, and extremely close thickness tolerance. The lathe is part of an automatic veneer peeling line featuring automatic knife changing, automatic stacking, and green composing of random width veneer to save labor costs and increase dryer utilization. Meinan also manufactures scarf composers, grading systems, automatic layup lines, and sanders. Represented in USA by Merritt Machinery, LLC in Lockport, NY.

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U.S. Representative:

Anna McCann, President
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www.merrittmachinery.com



Mereen-Johnson LLC

Mereen-Johnson has been setting the standard for the woodworking and engineered materials industries since 1905 and offers a complete line of Gang Rip Saws, Profiling Machines, Cross Cutting Equipment, Sizing Systems, I-Joist equipment, and related material handling designed for reliable, high speed production with minimal maintenance. Mereen-Johnson also offers a complete line of solid wood processing equipment such as fixed arbor and shifting blade straight line multiple Rip Saws, Rough Mill Optimizing and Material Handling, Moulders, Single and Double End Tenoners, CNC controlled Dovetailers, and Box Clamps.

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Mill Machinery LLC

Mill Machinery is a provider of new and reconditioned machinery to the veneer and panel industries. Mill Machinery's inventory of production machinery includes veneer lathes, veneer stackers, dryers, plywood presses, sawlines, grade bins, panel feeders, sanders, hogs and related support equipment. Mill Machinery's Magnum line of new machinery includes press loading/unloading systems, press platens, hydraulic units, flying saws, panel feeders, panel stackers and conveyors.

Mill Machinery LLC continued:

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 31678 South Highway 213, Molalla, OR 97038
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MINDA North America, LLC

MINDA has been meeting customer needs in the engineered wood industry for more than 40 years, providing leading technology for laminated timber processes. Whether the application requires custom press technology, material handling, data flow management, or overall plant development, MINDA provides specific solutions from concept and design to installation and commissioning. MINDA is a global supplier of flexible, high speed presses for Cross Laminated Timber (CLT), Glulam Beam, and LVL Beam applications. Headquartered in Minden Germany with our latest expansion of a full service manufacturing facility located in Granite Falls, North Carolina, USA.

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 www.minda.com

MSK Coverttech, Inc.

MSK Coverttech is a systems manufacturer that specializes in a variety of End-of-Line Packaging Systems, which include Pallet/Load Automatic Bagging Systems (Auto-Baggers) that provide 5-sided protection for a variety of Engineered Wood Products. With over 4,700 installations world-wide since 1975, a local

MSK Coverttech, Inc. continued:

North American presence based just outside of Atlanta, GA, and with offices and service locations around the world, MSK is ready to serve your End-of-Line Packaging needs.

Contact:

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www.mskcoverttech.com

NESTEC, Inc.

Founded in 1999, NESTEC is a global leader in VOC and HAP emissions control. NESTEC provides innovative pollution management and abatement technologies for a range of industries, including specialty chemicals, wood products, ethanol, and building products. NESTEC's solutions control carbon monoxide, wood dust particulate, condensable organic aerosols, alkali metal containing ash, and water-saturated air streams. NESTEC engineers have treated emissions for over 25 years in plywood, particleboard, oriented strand board (OSB), and wood pellet plants.

Contact:

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Nextwire

Nextwire is a North American company with over 50 years of manufacturing and engineering experience in woven fabrics for the Engineered Wood Industry. Nextwire CleanSheen II caul and press screens have greatly impacted the industry with extended life resulting in lower cost per board foot. Nextwire

Nextwire continued:

can provide these screens with attached tow bars which are manufactured from stainless or plain steel. All caul screens, press screens, and tow bars are manufactured to individual mill site specifications. Nextwire also manufactures preheater, intermediate and tray belts as well as a variety of products in stainless steel and synthetic material.

Contact:

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www.next-wire.com

Nicholson Manufacturing Ltd.

Industry Leader in ring debarking technology since 1948.

Contact:

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9896 Galaran Road (PO Box 2128)
Sidney, BC V8L 3S6 Canada
www.debarking.com

Radian Robotics

Radian Robotics provides the newest and most advanced technology for marking, labeling, barcoding, cardboard application, material handling, and other custom solutions in the wood products industry. Radian uses robotics for stenciling sidewall identification as well as end striping and coding. One system for both applications, with availability to use multiple colors. Radian's innovative cardboard application system places and staples cardboard on all sides of a package, ensuring your products are well protected. Robots present high reliability and minimal

Radian Robotics continued:

maintenance. Our systems come with a guarantee to perform at over 99% reliability. Let your product stand out from the competition.

Contact:

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Raute

At Raute, we have global expertise in wood products manufacturing and we are technology and innovation leaders. Raute invests in advancing the production process of plywood, LVL, and engineered wood products. Raute provides profitable solutions for large mill-wide projects, individual process lines, equipment upgrades, spare parts and service. Raute is your partner in production performance.

Contact:

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www.raute.com

REA JET

REA JET has been a global leader of coding and marking solutions for the engineered wood industry for over 30 years. Whether you are looking to print APA grade stamps, large logos & graphics, 2D scannable barcodes or nail grid patterns, REA JET has flexible and reliable systems designed to run at high speeds and hold up in the harshest environments. Contact REA JET today to learn more about our products, capabilities and all of your traceability needs.

REA JET continued:

Contact:

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Samuel Packaging Systems Group

With over 50 years serving the lumber and forest products industry, Samuel Packaging Systems Group, offers their customers in the Engineered Wood industry a single source supply for all of their strapping, ink jet printing, labeling, and packaging requirements. Samuel's product line includes steel and plastic strapping, pneumatic and manual hand tools, seals, edge protection, fully automated strapping systems. Our industry leading VK-30 strapping head has been used in both new and retrofit applications to convert our customers from steel to polyester strapping. Samuel is a leader in strapping for engineered wood products, and had the first AAR approved polyester strapping. The Product Identification Division provides fully automated systems for ink jet printing for grade and marketing requirements, as well as piece and package labeling for identification, tracking and shipping.

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www.samuelpsg.com

Siempelkamp LP

Siempelkamp is a systems supplier of complete process equipment for the wood-based-panel industry. In addition to the ContiRoll generation 9 Continuous press, Multi-opening presses, as well as sanding, cut to size and stacking lines for the panel board industry, Siempelkamp provides the full range of

Siempelkamp LP continued:

process machinery. With its subsidiaries Sicoplan, the engineering company for complete plant engineering; Pallmann for debarking lines, chippers, stranders, and other size reduction machinery; Buettner for energy systems, dust and multi-fuel burners and dryer systems, the complete process machinery portfolio is covered. Siempelkamp LP provides the service support, modernizations and spare parts for North America.

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Signode Packaging Systems

Signode is a global manufacturer of steel and plastic strapping and the application equipment and accessory products for each. Our protective packaging systems for the Lumber and Panel Industries are centered around the material that ultimately secures loads for handling, shipping and storage, plastic or steel strapping. We offer a full range of application tools, equipment and accessories to complete your strapping system. Our Forest Products Industry sales, equipment service, customer service and engineering departments can help you design the optimum protective packaging system for your application.

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SMARTECH

Smartech is a leading global technology company focused on generating game-changing technologies for production lines of varied manufacturing sectors. With its autonomous manufacturing suite, which enhances operators' work, and smart manufacturing modules

SMARTECH continued:

such as wax & resin reduction technology, press machine optimization, and more, Smartech is trusted by the world's leading manufacturers to supply innovative, high-value technologies that transform their businesses.

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SonicAire

SonicAire engineered combustible dust fan systems provide safety, economic and regulatory compliance solutions to facilities that generate fugitive dust, including wood products and furniture manufacturing and multiple other industries. SonicAire systems robotically reduce fugitive dust accumulation using high-velocity, high-mass airflow that creates an overhead barrier. This proprietary BarrierAire™ technology controls the direction of the dust and forces it to the floor by preventing upward currents and stagnant air that keeps dust in suspension, preventing accumulation of fugitive dust in overhead and hard-to-reach places. Contact SonicAire Sales support at 336-712-2437.

Contact:

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3831 Kimwell Drive, Winston-Salem, NC 27103
www.sonicaire.com

SparTek Industries

SparTek Industries manufactures high quality machinery with the latest cutting edge technology for many industries including Plywood, LVL, Rubber and others. Today's high volume Plywood production Lay-Up Lines place an emphasis on efficiency. SparTek's lay-up lines, Hot and Cold Presses, Loading and Unloading equipment, Glue Application systems and other equipment are designed to meet these demands. Helping customers meet and exceed their production and operating goals is a driving force at SparTek. We are here to help you meet your goals and to do so requires innovative technology and machines designed to work at the highest operating speeds.

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Spraying Systems Co.

Spraying Systems Co. is the world's leading manufacturer of spray technology equipment. Our offering includes a family of PanelSpray® systems for applying release agents, moisture, resin, wax or other various chemistries to wood substrate, mats, cauls or belts. These systems ensure the precise volume of fluid is applied even when operating conditions like wood throughput or line speed change. Our line also includes a PanelSpray System for precise nail marking on oriented strand board and the industry's largest selection of spray products for use in humidifying, marking, cleaning and coating operations. We serve our customers around the world from our 12 manufacturing facilities and 90 sales offices.

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Stiles Machinery

With world-class machinery backed by the nation's largest team of service and support specialists, an extensive inventory of ready-to-ship parts, and the industry's only nationally accredited workforce training program, Stiles is your solution for any challenge and your partner in every success. Headquartered in Grand Rapids, Michigan, Stiles and has regional offices across North America including High Point, North Carolina; Bristol, Pennsylvania; Coppell, Texas; Rancho Cucamonga, California; and Queretaro, QRO Mexico. Stiles is a proud member of the HOMAG Group, the world's leading provider of integrated solutions for production in the woodworking industry and woodworking shops.

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Sweed Machinery, Inc.

SWEED is known in the industry as the superior choice for providing full veneer dryer infeed and outfeed systems, dry, green and random veneer stackers, veneer saws, turners, and hoists. SWEED also specializes in all replacement parts for Raimann and Skoog patchers, and manufactures, sharpens and repairs patcher dies. SWEED provides the latest technology and exceptional craftsmanship; helping processors achieve higher production goals with less downtime. Based in Oregon, USA, and having served the industry for over 65 years, SWEED continues its legacy in offering unmatched quality, customer service, engineering, and technical support.

Sweed Machinery, Inc. continued:

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www.sweed.com



Taihei Machinery Works Ltd.

Taihei is a specialized manufacturer of veneer and plywood machinery, fully committed to the development and production of equipment that meets customer needs. We are driven by the goal of providing proprietary machinery that is second to none to our customers around the world. Taihei is the leading manufacturer of automatic knife grinding and honing machines. Other Taihei products include horizontal hot presses up to 140 openings, veneer jet dryers, veneer stackers and finger jointing equipment.

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TSI

TSI designs and manufactures complete panel finishing lines for OSB, particleboard and MDF. This includes saws with such features as automatic position change and adjustable blade exposure. High-speed sorting and stacking of panels is easily achievable with TSI's "primary stacker" solution. TSI also supplies Heat Energy and Drying and Pollution Control Systems for OSB and

TSI continued:

Particleboard based on Single Pass Recycle technology. The Dryers are proven to increase productivity and reduce emissions compared to other systems. Heat Energy includes Step Grate Furnaces in conjunction with Sigma Thermal and Pollution Control solutions include Wet ESP and RTO systems developed by TSI to work at optimum efficiency with TSI Dryers.

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USNR

With the addition of Ventek's veneer scanning, grading, and handling solutions to USNR's lathe, dryer, and downstream product portfolio, USNR now offers tightly integrated mechanical and optimization solutions for the panel industry. USNR products are known to increase recovery, value, and yield, improving mill profitability. USNR also manufactures machinery for beam lamination, finger-jointing, and presses for the composite board industry. Committed to superior customer service, USNR offers OEM parts, training, and 24/7 support around the globe. 800-BUY-USNR.

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Venango Machine Company, Inc.

Venango Machine and our sister company, Custom Engineering, are complete platen services provider to the forest products industry. We provide new platens for every make of press in the industry for manufacturing of all board products. Our product line includes small specialty platens for lab applications, intermediate sized platens for particle board, OSB, and LVL in both multiple platen and continuous processes. We also provides complete platen-refurbishing programs that include flow and pressure testing, weld repair and re-machining to original specifications. Our technicians also provide assistance in platen change outs and in-press weld repair. Please contact us for all your platen requirements.

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Veneer Services, LLC

We build top-tier solutions for wood processing with a goal to minimize operating costs. We take pride in seeing our customers enjoy the better efficiency and more profits, so much so that even our prototypes are still running. We were the first, and still the only, company to build a voice-activated veneer bundle grading line. We also developed the most accurate debarker/planer system ever built and then built a fully automated butt flare reducer to accompany it. Our chippers are proven to use less energy and produce better chips, and our veneer machine rebuilds have allowed our customers to improve profits while saving them as much as 50 percent over the price of a new machine. We've developed top-performing log decks, log troughs, and waste-handling systems, too. We never stop innovating. Learn more on our website, www.VeneerServices.com.

Veneer Services, LLC continued:

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Westmill Industries USA Corp.

For 47 years, WESTMILL® has remained laser-focused on advancing Veneer Dryer design through continuous innovation. After years of effort and determination, WESTMILL® has emerged as the industry leader in this field. Whether you urgently require a custom component for your dryer's infeed or outfeed, or you need us to provide an entire installed 'turn-key' dryer and stacker line, WESTMILL® will respond immediately with your best interest in mind. Always. WESTMILL® has the necessary consulting and engineering services to help solve any problem. To minimize customers' inventory requirements while keeping your dryer operating in tip-top condition, WESTMILL® has replacement parts available for every make and model of board-dryer with inventory at dedicated warehouses in Oregon, Georgia, and Vancouver, B.C. (WESTMILL® is the largest stocking supplier of replacement dryer parts in the world.) Don't put up with slow service, high pricing, and long deliveries. Instead, call the small company focused on delivering competitive value Dryer Technology. When we say "we've got your back" we mean it. Try us out.

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Go to the online Equipment and Tooling directory for additional details.

MATERIALS AND SUPPLIES

The following EWTA members provide support in one or more of the following subcategories: Adhesives/Resins; Binders/Extenders/Fillers; Chemicals/Additives/Coatings; Lamstock/Lumber; Replacement Parts and Supplies; Specialty Supplies; Strapping and Packaging Supplies; Veneer/Overlays; Wax/Release Agents/Lubricants/Emulsions. [Go to the online Materials and Supplies directory.](#)



Albany International

Albany International is a global advanced textiles and materials processing company founded in 1895. We are headquartered in Rochester, New Hampshire and employ approximately 5,000 people worldwide. Our 26 manufacturing operations are strategically located in 13 countries to serve our global customers. Albany International's core business is production of custom-designed engineered fabrics and process belts, used to manufacture all grades of paper from lightweight technical paper to heavyweight container board. In its family of emerging businesses, Albany belting technologies process unique materials for engineered wood products particularly for wood forming in OSB, PB and MDF/HDF manufacturing. Visit us [@Albint.com](#).

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Arclin - Performance Applied

Based in Roswell, Georgia, Arclin is a leading producer of innovative bonding and surfacing solutions for the building and construction, industrial materials and natural resource markets. Arclin provides bonding solutions for a number of applications including structural wood panels,

Arclin - Performance Applied continued:

engineered wood, composite wood panels, non-wovens and paper saturation. As a world leader in paper overlays technology, Arclin provides high value surfacing solutions for construction and building products, decorative panels and industrial specialty applications for North American and export markets. For more information please visit <http://www.arclin.com>.

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Ashland LLC

ISOSET® adhesives from Ashland have been specially formulated for engineered wood product applications. ISOSET adhesives applied in I-joist, glulam beams and structural finger jointing wood applications provide manufacturers with high-strength, structural bonds. They cure fast, clean up easy and dry in a neutral wood color offering an alternative to traditional phenol-resorcinol-formaldehyde (PRF) - type adhesives. ISOSET adhesives provide excellent resistance to moisture, elevated temperature and creep making them an ideal choice for engineered wood products. Ashland, LLC. (NYSE:ASH) is a Fortune 500 specialty chemical company providing products, services and customer solutions throughout the world.

Ashland LLC continued:

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ATCO Wood Products Ltd.

Located in British Columbia, ATCO Wood Products is a forest management company and a producer of softwood veneer. ATCO specializes in producing custom softwood veneer for plywood and engineered wood products customers in both Canada and the United States.

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Axalta Coating Systems

With a wide range of products and technologies, Axalta Coating Systems is the leader in the Wood Coatings Industry for the Building Products market.

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BASF - We create chemistry

BASF - We create chemistry -- Global supplier of MDI to the wood industry with extensive experience in MDI conversions.

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Bates and Company, Inc.

Bates & Co. is an industry leader in providing various support products to the forest product industry. Extenders and fillers comprise the majority of sales, especially those customers extending phenol formaldehyde adhesives for use in plywood, LVL, and hardwood. Bates has also expanded its scope and reach by forming a joint venture, Bates-Willamette, LLC, with a strategic partner in the industry.

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Chem-Trend LP

Chem-Trend has long been known as a global leader in the development of release agent technology to the world's industries. Our sealers, release agents and lubricants are rapidly gaining acceptance in the wood composites industry, offering significant productivity improvements including increased through-put, improved output quality and definition, cleaner conditions/environment, greater productivity, less downtime and increased costs savings.

Chem-Trend LP continued:

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Clarke Veneers and Plywood

Clarke Veneers and Plywood is an international trading company of wood products, specializing in imports, exports and domestically traded veneers - including hardwood and softwood species for structural panels, in MDO, HDO and other applications requiring clear, sound faces.

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Coastland Wood Industries Ltd.

Coastland has grown from a single line veneer mill to a triple line mill with an offsite drying facility, two barge loading facilities, and three log sorts. Our infrastructure continues to grow as our customers' needs have grown with efficiency, and safety as key drivers. Our facilities compliment the other capacity in our region, resulting in a healthy forest industry that further benefits Coastland and our customers. Quality: We strive to deliver quality in every aspect of our business, it touches everything we do; quality is job security. Our reliable grades allow our customers to accurately control the structural properties of their products.

Coastland Wood Industries Ltd. continued:

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Covestro LLC

Covestro LLC is a world-leading supplier of high-tech polymer materials. Thanks to our global presence and close proximity to our markets, we are the partner of choice for a variety of industries. For manufacturers of composite wood products, consistent product quality and process advantages make Covestro's Mondur® pMDI your natural choice for binding wood composites. Offering extensive R&D and strong technical service, Covestro is your source for binders and binder technology. The excellent property performance of wood composites bonded with Mondur® pMDI products makes them especially suited for use in specialty applications; particleboard, laminated-stranded lumber, moisture-resistant OSB, OSB web-stock and OSB flooring.

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Dominion Chemical Company, Inc.

Wax Products are our expertise. With over 60 years of experience in the wax business, Dominion Chemical offers rare and valuable working knowledge as well as trust and proven abilities to bring solutions, support and alternatives to provide the exact product you want. With locations in Virginia and Georgia, Dominion Chemical's capacity to blend, package and create specialty wax formulations will meet your

Dominion Chemical Company, Inc. continued:

unique needs. We offer an exceptional emulsification process, state of the art blending, compounding, packaging and experienced personnel as well as a full-service wax lab dedicated to your needs for R&D, QC, and general product evaluation.

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Evertree North America Inc.

Evertree North America Inc. is the designer, manufacturer and supplier of bio based and renewable adhesive solutions (both unique bio based adhesive compositions plus innovative application dispensing technology) used in the manufacture of composite wood panels. Our initial product family Green Boost™ delivers significant cost savings to the composite wood products manufacturer through a combination of sizable resin cost savings and several process efficiency improvements. Additional benefits of Green Boost™ include an improved environmental footprint, via reductions in VOC's and emissions of hazardous materials during the manufacture and use of the composite wood product, all while maintaining similar wood composite panel properties.

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Franklin Adhesives & Polymers

Franklin Adhesives & Polymers, a division of Franklin International, manufactures adhesives for the domestic and global wood furniture, millwork and engineered-lamination markets. We have led the way in the innovation of wood adhesives and various types of wood bonds and have developed adhesive solutions for many applications in the wood product manufacturing plant. Under the trusted brand names Titebond, Multibond, ReactITE and Advantage, our products provide superior performance in wood assembly, solid edge and face gluing, engineered product lamination and finger jointing.

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Fusoni

Fusoni develops and manufactures release agents and additives for panel board manufacturing, and also for paper impregnation processes. Our chemicals expertise extends to other industries, such as release applications in bakery, polyurethane systems, and other applications. For almost 40 years we have been serving clients in Europe, Asia, Africa, Australia and the Americas. We add value through chemistry, and work closely with our customers, helping them improve the properties of their products and reducing production cost through excellent release and additive performance. We look forward to working with you to make your products better and your business more profitable.

Fusoni continued:

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Georgia-Pacific Chemicals – Wood Adhesives

Georgia-Pacific Chemicals offers a portfolio of thermosetting resins for plywood, OSB and LVL applications as well as custom-formulated solutions to meet our customers' specific needs. Our innovative new RESI-BOOST® Gen2 adhesive technology, when used with GP resins, has demonstrated significant advantages in increased throughput, lower applications rates and energy savings while maintaining performance, potentially saving or generating millions of dollars per plant. In addition, our Customer Inventory and Prediction Service offers our customers a means of maximizing operational efficiency by optimizing resin order profiles. The GP® Dynamic Microchamber performs formaldehyde emission testing on panels in plants around the world.

Contact:

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133 Peachtree Street NE, Atlanta, GA 30303
www.gp-chemicals.com

Henkel

Henkel is the world's largest Adhesive company. LOCTITE® PURBOND is a world leading brand in Polyurethane and Polyurethane Hybrid adhesives for engineered wood bonding, offering ductile bond lines, zero Formaldehyde, zero solvents with a wide range of open and set times for Glulam, CLT, Finger jointing, and innovative applications, both cold setting and RF/hot pressing. LOC-TITE HB Xxx2 Purbond is the ONLY 1 component, high production adhesive certified to North American Glulam, CLT, Finger Jointing and I-Joist requirements. With a strong North American sales and technical team and a fully equipped wood lab, we can provide the solutions, support and technology to meet the demanding requirements of engineered wood bonding and innovations of the future.

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Hexion Inc.

Hexion Inc. is a leading global source for adhesives, resins, formaldehyde, melamine and derivatives serving a broad range of markets including the forest products, foundry, automotive, construction, composites, electronics and oilfield industries, operating 34 manufacturing plants in North America, Latin America, Europe and Asia/Pacific. The Forest Products division of Hexion Inc. is the global leader in supplying resins, adhesives, wax emulsions and ancillary products to the forest products industry. Customers use our materials to manufacture a wide range of composite and engineered wood products including plywood, particleboard, oriented strandboard, medium density fiberboard, structural beams, cross laminated timber, furniture, mouldings and millwork.

Hexion Inc. continued:

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180 East Borden Street, Columbus, OH 43215
www.hexion.com

Huntsman Polyurethanes

For more than 30 years, Huntsman has been a global leader in the production of MDI-based resin binders for particleboard, medium-density fiberboard and oriented strand board. Our dedicated Composite Wood Products teams are committed to helping our customers reach their goals in all market conditions. There is no added formaldehyde (NAF) with Huntsman's RUBINATE® resins, and can be qualified as exempt under CARB Standards and EPA TSCA Title VI.

Contact:

Richard Tyler - Business Manager
Phone: 470-303-3605
Email: richard_tyler@huntsman.com
10003 Woodloch Forest Drive
The Woodlands, TX 77380
www.huntsman.com

Idemitsu Lubricants America Corporation

IDEMITSU Lubricants America offers engineered wood industry members a full line of proprietary lubricants including high-temperature chain oils, steel belt, rolling rod and bending rod oils approved for use in Siempelkamp ContiRoll®, Küsters/Metso, and Dieffenbacher continuous presses. IDEMITSU also produces PFPE/PTFE grease for high temperature roller bearings, hydraulic, gear, and heat transfer fluids specifically formulated for panelboard presses. IDEMITSU manufactures products in Louisville, KY and has a nation-wide distribution network to serve our customers. IDEMITSU has a team of lubrication

Idemitsu Lubricants America Corporation continued:

and reliability experts that are ready to help improve reliability and reduce lubrication related parts replacement, downtime, and labor costs.

Contact:

Kevin Muehlman - National Accounts Engineer
Phone: 248-727-3738
Email: kmuehlman@ilacorp.com
3000 Town Center, Suite 2820, Southfield, MI 48075
www.ilacorp.com

Intertape Polymer Group

Intertape Polymer Group® (IPG®) is the market leader in protective fabrics with over 25 years of experience in the wood industry. IPG is an integrated supplier and manufacturer of woven coated lumber wrap. IPG's wrap offers the ability to advertise your corporate logo in up to four colors and increase brand awareness throughout the transportation process. Available in various weave strengths and colors to fit your needs.

Contact:

Scott Maw - Director of Sales Woven Packaging - IPG
Phone: 780-224-6569
Email: smaw@itape.com
50 Abbey Avenue
Truro, Nova Scotia B2N6W4 Canada
www.itape.com

JAX

JAX is a full-line lubricant manufacturer with expertise in compounding high-end synthetic and petroleum lubricants for the engineered wood industry. With over 65 years of experience, JAX has earned its reputation as a leader in lubricant technology. JAX lubricants are compounded with the finest raw materials and additive chemistry in the industry. Formulation decisions are based upon performance and quality which ultimately lead to substantial, verifiable cost savings in terms of extended machine life, reduced downtime and increased production. Lubrication

JAX continued:

technology is a continually evolving science. Products that have worked in the past may not be sufficient to provide adequate lubrication in the future. In order to meet the evolving needs of our customers we are constantly analyzing the JAX product line for opportunities to improve value.

Contact:

Justin Claytor - Market Development Manager
Phone: 704-999-7668
Email: jclaytor@jax.com
W134 N5373 Campbell Drive
Menomonee Falls, WI 53051
www.jax.com

Lonza Wood Protection

Lonza Wood Protection is a global leader in the development and supply of innovative technologies to improve the performance of wood products, making them resistant to termites, fungi, fire (flamespread and smoke development), mold and moisture. Lonza offers formulations specifically designed for the treatment of engineered wood, including Permatek® glueline treatments designed to work in harmony with resins as well as water repellents and mold prevention treatments to keep EWPs bright. Additional Lonza products include Wolman® residential preservatives, SillBor® borate treatments, Wolmanac® CCA and Chemonite® ACZA industrial preservatives, Dricon® fire retardants, FrameGuard® mold inhibition, and AntiBlu® anti-sapstain line. With global operations and an unparalleled offering of services and expertise, Lonza is dedicated to the success of its customers.

Contact:

Brian Delbrueck - Head of Business Development, Wood Specialties
Phone: 425-229-3757
Email: Brian.delbrueck@lonza.com
1200 Bluegrass Lakes Parkway, Alpharetta, GA 30004
www.wolmanizedwood.com



McLube Release Agents & Lubricants

McLube Release Agents & Lubricants is a globally recognized leader in the release and lubrication industries headquartered outside Philadelphia, USA. Founded in 1954, McLube Release Agents & Lubricants has remained at the forefront of the release agent, anti-stick, and lubrication markets by providing quality, tailor-made coatings complimented by unparalleled technical assistance and customer service. Our Formulation Chemists have applied their decades of experience in the resin and composites molding industry to develop superior platen sealers and release agents for the tenacious resin binders used in the wood press industry. Contact McLube Release Agents & Lubricants for more information, on-site technical assistance, and samples of our proven formulas. McLube Release Agents & Lubricants is a brand of McGee Industries, Inc.

Contact:

Evan Silo - Technical Representative
Glenn Dublisky - Sr. Technical Representative
Phone: 610-459-1890
Email: info@mclube.com
9 Crozerville Road (PO Box 2425)
Aston, PA 19014-0425
www.mclube.com

Northwest Adhesives, Inc.

Northwest Adhesives, Inc. offers high performing, cost efficient, "pre-coated" tapes for composing wood veneers, parquet flooring or LVL veneer into durable, continuous full sized sheets. When used with Northwest "spot glues" our PS-tapes provide a continuous, more durable wood assembly and improves lay-up efficiency and reduces cost. Some customers also invest in "Re-Coat" where they use both Spot glue and PS-tape together for best holding power. In the late 1990's Northwest Adhesives, Inc. started manufacturing pre-coated strings and tapes to supply to the plywood industry for veneer composing.

Northwest Adhesives, Inc. continued:

Since our beginning we have grown to become a global leader in manufacture, sale and technical service for pre-coated hot melt strings and narrow tapes for veneer composing on Raute, Durand-Raute, Hashimoto, Kuper and PES composers.

Contact:

Bryan Asbury - General Manager
Phone: 360-260-1227
Email: bryan@northwestadhesives.com
4325 S. Lincoln Street, Washougal, WA 98671
www.northwestadhesives.com

OCI Melamine Americas

OCI Melamine is a supplier of melamine. Melamine is used in the manufacture of formaldehyde-based resins commonly found in decorative surfaces, OSB, plywood, MDF boards and other panel products.

Contact:

Rhonda Pizzolato - Customer Service
Phone: 800-615-8284
Email: rhonda.pizzolato@ocimelamine-all.com or
info.melamine@ocinitrogen.com
c/o Advanced Louisiana Logistics - ALL
501 Louisiana Avenue, Suite 201
Baton Rouge, LA 70802
www.ocimelamine.com

Owens Corning® - WeatherPro®

Owens Corning® is the largest supplier of coated woven wrap to the Engineered Wood Industry. Its custom-printed WeatherPro® packaging products are designed to maintain product integrity throughout transportation, inspection and storage of sawn lumber, plywood, OSB, all types of beams, I-Joists and composite wood products. Owens Corning® is a vertically integrated, global manufacturer of innovative coated woven products serving a wide variety of markets. Consistent product quality is achieved by using state-of-the-art equipment along with a strong commitment to partnership with our customers, employees, and suppliers. Owens Corning's global supply chain

Owens Corning® - WeatherPro® continued:

efficiency is achieved by our strategic manufacturing and distribution centers located throughout North America, Asia & Europe.

Contact:

Steve Sahaydak - Sales Leader
Phone: 604-992-3700
Email: Steve.Sahaydak@owenscorning.com
2650 Fassitt Road, Bldg. #200
North Charleston, SC 29406
www.weatherpro-wraps.com

Paneltech

Paneltech is a young and growing, forward-thinking company comprised of people who have common values and share a common goal: providing environmentally responsible leadership in manufacturing the best performing products for industry. Our panel overlays are designed for high performance end uses and superior processability. They are designed to increase the value of the wood products they cover by increasing their durability, enhancing their appearance, and creating uniform surfaces to enhance the product's end use.

Contact:

David Wentworth - General Manager
Phone: 360-538-1480
Email: dwentworth@paneltechintl.com
2999 John Stevens Way, Hoquiam, WA 98550
www.paneltechintl.com

Permapost

Permapost provides custom pressure treating solutions for engineered wood products used throughout the U.S.A. and Asia.

Contact:

David Bond - Chief Operations Officer
Phone: 503-648-4156
Email: david@permapost.com
4066 SE Tualitan Valley Highway (PO Box 100)
Hillsboro, OR 97123
www.permapost.com

Sansin Corporation (The)

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Contact:

Caroline March-Long - Director of Sales and Marketing

Phone: 519-245-2001

Email: cml@sansin.com

111 MacNab Ave., Strathroy, ON N7G 4J6 Canada

www.sansinactoryfinish.com

SASCO Chemical, A PSG Company

Polymer Solutions Group is an innovative manufacturer of proprietary and custom polymer additives, dispersions, and performance chemicals for the rubber, wood, consumer, construction, and medical industries. SASCO's TechKote® Release Agents, Additives, and Platen Conditioners are chemically formulated for all composite and structural panel applications. Together we strive to deliver customer-centric solutions that improve our customers' products, processes and performance.

Contact:

Clancy Redmond - Director of Sales and Business Development

Phone: 734-582-3573

Email: credmond@polymersolutionsgroup.com

827 Pine Avenue, Albany, GA 31701

www.polymersolutionsgroup.com

Siemer Milling

Siemer Millings produces and markets Glu-X. Glu-X is an All-Natural Chemical Free special glue extender milled from wheat, and used expressly as the protein-starch adhesive for the wood panel (plywood) industry. This proprietary product was developed from the trade secret processes with the contributions of plywood manufacturers, master millers, adhesive scientists and cereal chemists.

Contact:

Jay Wallace -VP of Customer Service

Phone: 271-857-2240

Email: jwallace@siemermilling.com

111 W. Main Street, Teutopolis, IL 62467

www.siemermilling.com

Stratachem Solutions Group LP

Stratachem Solutions Group LP provides chemical solutions specifically for the wood products industry. With over 50 years of technical wood products experience, and a world class research and development group, we are prepared to take on tough process issues. We specialize in release agents for continuous and multi-opening presses, as well as environmental equipment chemical solutions. WESP water treatment chemistry, to keep WESPs and RTOs running up to design capacities. We are dedicated to customer satisfaction and understand the importance maintaining the highest levels of process efficiency while decreasing the cost of manufacturing.

Contact:

Mike Larke - General Manager

Phone: 866-489-WESP (9377)

Email: mlarke@stratachemsolutions.com

#155 513 Memorial Blvd., Springfield, TN 37172

www.stratachemsolutions.com

Walker Emulsions

Walker Emulsions is a supplier of high quality, highly effective emulsions for the wood composite industry. We have a selection of emulsions that will fit the needs of high to low temperature pressing and we can make products specifically to match your process.

Contact:

Charles Stout - Eastern North America
 Phone: 803-747-0045
 Email: cstout@walkerind.com

Gregg Hale - Western North America
 Phone: 541-953-5783
 Email: ghale@walkerind.com

Corporate Office:

2800 Thorold Townline Road, Niagra Falls, ON L2E 6S4
www.walkerind.com

Wanhua Chemical (America) Co., Ltd.

Wanhua Chemical is the fastest growing and largest MDI producer globally with best-in-class technology and world-leading state-of-the-art manufacturing sites producing WANNATE® PMDI binder solutions to customers and partners in the Composite Wood Panel industry. Wanhua Chemical is renowned for its high quality WANNATE products and dependable supply chain that Composite Wood Panel producers depend on. Wanhua Chemical has worldwide operations with a local commitment to customers, including ongoing investments in technical resources and infrastructure in North America, further strengthening Wanhua's technical service and supply commitments to the Composite Wood Panel industry.

Contact:

Jacob Sturgeon - General Manager
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 Email: jacob.sturgeon@us.whchem.com
 3803 West Chester Pike Suite 240
 Newton Square, PA 19073
www.whchem.com



Willamette Valley Company

Willamette Valley Company manufactures epoxies, putties and urethanes for upgrading all wood substrates, and also makes a wide range of water based coatings, primers and sealers. Willamette also makes many fillers and extenders for wood adhesives and plywood glues. Pretec, the company's equipment solutions division, specializes in the design and manufacture of advanced fluid systems and the integration of robotic application systems.

Contact:

Tony Vuksich - Vice President
 Phone: 541-484-9621
 Email: tony.vuksich@wilvaco.com
 990 Owen Loop (PO Box 2280), Eugene, OR 97402
www.wilvaco.com

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ON-DEMAND WEBINAR SERIES



2018 IRC Wall Bracing Webinar Series

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JOIN

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EXHIBIT

EWTA's Info Fair supplier exhibition, held in conjunction with APA – The Engineered Wood Association's annual meeting, provides face-to-face opportunities with key decision-makers.

*Looking forward to seeing you
October 15-18, 2022
at Aventura, FL*



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ewta@engineeredwood.org ■ LaDauna.Wilson@apawood.org

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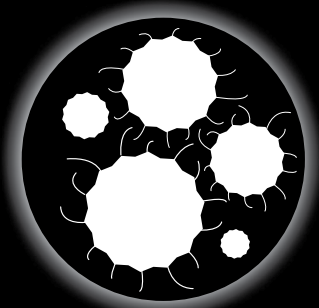
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2020 APA SAFETY AND HEALTH AWARDS

APA SAFETY & HEALTH ADVISORY COMMITTEE MEMBERS

Sam Newbill, Vice-Chairman
Hood Industries

John Myers, Vice-Chair
Roseburg Forest Products Company

Terry Evans
Boise Cascade Company

Chris Fowler
Canoe Forest Products Limited

Dave McGowin
LP

Bryan Kimball
Murphy Company

Peter Quosai
Norbord Inc.

Steve Mckenney
Roseburg Forest Products Company

Terry Secrest
RoyOMartin

Josh Jenkinson
Structurlam Mass Timber Corporation

Steve Walker
Weyerhaeuser

Charles Hartke
APA – The Engineered Wood Association

INNOVATION IN SAFETY AWARD

Equipment-Based Innovation Winner

Resolute-LP Engineered Wood
Larouche, Quebec, Canada

“MINIATURE NESTER”

Jeff Wagner Process-Based Innovation Winner

Boise Cascade Company - Thorsby EWP
Thorsby, Alabama

“LOCK-OUT SIMULATOR TRAINING BOARD”

SAFEST COMPANY AWARD

Companies with three or fewer member mills	Average WIR	Average TIR
PotlatchDeltic Corporation	0.47	0.47
Companies with four or more member mills	Average WIR	Average TIR
Norbord Inc.	4.90	0.84

APA – The Engineered Wood Association recently announced the winners of its 2020 Safety and Health Awards. The APA Safety and Health Awards Program is the premier safety award program for the engineered wood products industry in North America. It encourages and recognizes operational excellence with the goal of reducing injury and illness rates.

Sixty-nine APA-member structural wood panel and engineered wood product facilities in the U.S., Canada and abroad participated in the 2020 program. A total of 17 facilities representing seven APA member companies earned awards in various competition categories. Some mills were multiple award winners. While the program awards are limited to APA members, data are collected from both member and non-member mills in order to provide a broad-based industry performance benchmark. A total of 80 mills reported data for 2020.

PotlatchDeltic Corporation and Norbord Inc. won Safest Company Awards in their respective categories, while the coveted Innovation in Safety Award went to two winners: Resolute-LP Engineered Wood of Larouche, Quebec, for the Equipment-Based Innovation Award, and Boise Cascade Company of Thorsby, Alabama, for the Jeff Wagner Process-Based Innovation Award.

In addition to the Safest Company and Innovation awards, other competition categories include Safety Improvement (2018-2020), Annual Safety and Health Award and 3-Year Safety Award. The annual award, three-year average and safety improvement categories are divided into three divisions based on the type of product manufactured at the mill (plywood; OSB; and glulam, CLT, I-joist, LVL and SCL).

The Equipment-Based Innovation in Safety Award went to Resolute-LP Engineered Wood in Larouche, Quebec, for its Miniature Nester. After a close call with I-joist manipulation at the rework station, the team chief envisioned a simple and compact leverage concept. The I-joist bundles that came from the rework station had been manually nested, as there was no automatic nester. Fortunately, there were no serious incidents, but hazards remained. Deep depth I-joists can weigh 200 pounds or more.

ANNUAL SAFETY & HEALTH HONOR ROLL		
Division I – Plywood	WIR	TIR
1ST PLACE		
PotlatchDeltic Corporation St. Maries, Idaho	0.47	0.47
2ND PLACE		
Murphy Plywood Company Rogue River, Oregon	0.94	0.94
Division II – OSB	WIR	TIR
1ST PLACE		
LP Brasil Ponta Grossa, Brazil	0.00	0.00
2ND PLACE		
LP Chile S.A. Lautaro, Chile	0.00	0.00
Division III – Glulam, I-Joist, LVL and SCL	WIR	TIR
1ST PLACE		
LP Red Bluff, California	0.00	0.00
2ND PLACE		
Anthony Forest Products Company, LLC Washington, Georgia	0.00	0.00

SAFETY AWARDS

3-YEAR SAFETY AWARD (2018 – 2020)

Division I – Plywood	WIR	TIR
RoyOMartin Chopin, Louisiana	2.24	0.54
Division II – OSB	WIR	TIR
Norbord Inc. Nacogdoches, Texas	0.00	0.00
Division III – Glulam, I-Joist, LVL and SCL	WIR	TIR
Boise Cascade Company White City, Oregon	1.82	0.91

SAFETY IMPROVEMENT AWARD (2017 – 2019)

Division I – Plywood	2018 WIR	2019 WIR	2020 WIR
PotlatchDeltic Corporation St. Maries, Idaho	19.37	0.83	0.47
97.6% Improvement	2018 TIR	2019 TIR	2020 TIR
	2.98	0.83	0.47
Division II – OSB	2018 WIR	2019 WIR	2020 WIR
Norbord Inc. Joanna Kinards, South Carolina	6.43	0.70	0.00
100% Improvement	2018 TIR	2019 TIR	2020 TIR
	0.63	0.70	0.00
Division III – Glulam, I-Joist, LVL and SCL	2018 WIR	2019 WIR	2020 WIR
LP Red Bluff, California	18.30	0.00	0.00
100% Improvement	2018 TIR	2019 TIR	2020 TIR
	1.83	0.00	0.00

The Miniature Nester is placed on the I-joist bundle and leveraged to raise the I-joist into the proper location. This innovation has eliminated crushing and entrapment hazards to employee hands in the manipulation process. Operators are now completely outside operations, resulting in zero contact between hands and I-joists. The first tests took place in June 2020, and after conclusive tests, the mill implemented the tool, and positive results were seen immediately. Since implementation, there have been zero related incidents reported.

The Jeff Wagner Process-Based Innovation winner was Boise Cascade Company in Thorsby, Alabama, for its Lock-Out Simulator Training Board. The innovation was sparked by the vision of the plant's safety committee to build a lock-out training board to help new-hire team members understand how to control risks associated with energy sources.

The board is powered through a 120v system and is programmable, allowing the trainer to simulate different scenarios. Each lock-out point has a hidden switch, which is connected to a programmable logic controller. During the verification phase of the lock-out procedure, the control panel will show any mistakes made by a team member when the test button is pressed. The Lock-Out Simulator Training Board was put into effect June 2020 and is now being used for new-hire training, to teach employees where to stand to help minimize the safety impact should an arc flash occur and for supervisors to complete annual refresher training.

Since 1982, the APA awards program honors managers and employees of companies and mills with the lowest Weighted Incident Rate (WIR), which is calculated using the number and severity of recordable incidents reported on

the mill's annual OSHA (Occupational Safety and Health Administration) 300A report. As 2008 was the first year that WIR was used, awards and reports for 2009 through 2020 continue to show Total Incident Rate (TIR), the measure used in previous years.

The 2020 average Weighted Incident Rate (WIR) for the industry was 7.14, an improvement over last year's WIR of 8.11. The 2020 average Total Incident Rate (TIR) was 1.25, a nearly 22% reduction over last year's TIR of 1.60, setting a new benchmark for the mills participating in the program. These 2020 values signify the industry's commitment to injury prevention and the health and well-being of its employees. 2020 marks the fourth consecutive year the average TIR was below 2.00. WIR is calculated using both the number and the severity of recordable incidents.

The 2020 Safety and Health Awards program was the 13th year of the program under a revitalized safety effort spearheaded by the APA Safety and Health Advisory Committee comprised of several APA member company safety professionals. Under the committee's guidance, three main goals were established: make the APA program the premier safety awards program in the industry, encourage the sharing of best practices to improve the industry's safety culture and programs and, most importantly, improve the industry's overall safety performance.

APA is proud of industry progress to develop and implement systems and processes that continue to decrease incidents and improve worker safety. More information on the [APA Safety and Health Awards Program](#) can be found on the Association's website at www.apawood.org.

INCIDENT FREE HONOR SOCIETY

Company/Location	Product	WIR*	TIR**
Anthony Forest Products Company, LLC Washington, Georgia	Glulam	0.00	0.00
LP Brasil Ponta Grossa, Brazil	OSB	0.00	0.00
LP Chile S.A. Lautaro, Chile	OSB	0.00	0.00
LP Red Bluff, California	IJ	0.00	0.00
LP Tomahawk, Wisconsin	OSB	0.00	0.00
LP Two Harbors, Minnesota	OSB	0.00	0.00
Norbord Inc. Grande Prairie, Alberta, Canada	OSB	0.00	0.00
Norbord Inc. Guntown, Mississippi	OSB	0.00	0.00
Norbord Inc. Joanna Kinards, South Carolina	OSB	0.00	0.00
Norbord Inc. Nacogdoches, Texas	OSB	0.00	0.00
Resolute-LP Engineered Wood Larouche, Quebec, Canada	IJ	0.00	0.00

*Weighted Incident Rate (WIR)

**Total Incident Rate (TIR)



DATE SET FOR 2022 EWTA INFO FAIR

The 2022 APA Annual Meeting and EWTA Info Fair is scheduled to be held October 15-18 at the JW Marriott Turnberry Resort and Spa in Aventura, Florida. Details on sponsorship opportunities will be sent to EWTA members by year end, with registration information available in April.

Until then, APA will continue to monitor the safety and feasibility of holding an in-person event and assess members' comfort levels around travel. For more information, contact LaDauna Wilson at ladauna.wilson@apawood.org.

New Chair leads EWTA Advisory Committee



Chris Degnan

After more than 18 years of leadership and professional contributions to APA and EWTA, Tom Temple, who served as the EWTA Advisory Committee chair, retired from PotlatchDeltic.

Chris Degnan, Director of Weyerhaeuser Distribution Commodities and HIW, joined the APA Board of Trustees two years ago and assumes the additional role of EWTA chair position this fall.

We welcome Chris and thank Tom, wishing him the best in his well-deserved retirement.

EWTA Advisory Committee welcomes new members and recommends 2022 budget

The EWTA Advisory Committee met Oct. 1 through video conferencing led by Chair Chris Degnan. The meeting provided an opportunity to hear updates on membership, finances, communication and research projects.

During 2021, three committee representatives changed due to retirements or departures. Kyle Galligan with Hunt, Guillot & Associates filled the position left open with the departure of Jason McIntosh, Brian Delbrueck, with Lonza filled the position left open with the merger of Metriguard and Raute, and Karl Aicher replaces Charles Shurtliff filling the Grenzebach Corporation position.

The committee finalized the association's 2022 budget with an income of \$348,350 and expenses of \$287,000 resulting in a year-end surplus of \$61,350 and cash reserves of \$262,564. The proposed budget includes \$10,000 funding for a

Continued on next page



VIRTUAL APA 2021 GENERAL SESSION SET FOR DEC. 1

The APA General Session Business Meeting is scheduled for December 1, from 11 a.m. to noon PST. The meeting will include the "State of the Industry" and "State of the Association" addresses by APA Chair Roy O. Martin III and APA President Mark Tibbetts.



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formaldehyde study project. Chair Chris Degnan will present the budget to the APA Board of Trustees for approval at its upcoming meeting. The 2022 spring EWTA Advisory Committee meeting will be held in conjunction with PELICE (Panel & Engineered Lumber International Conference & Expo) in March 2022 in Atlanta, Georgia.

New Trustees join APA Board

Three new members have been elected to the APA – The Engineered Wood Association Board of Trustees, filling vacancies created by retirements and changing roles.

Doug Asano, Senior Vice President of Sales & Marketing for Roseburg Forest Products Co., leads sales, marketing, logistics, customer service and fulfillment teams. Asano joined Roseburg in 2020 initially as the Director of Sales Excellence, focused on process and systems improvements and sales training. Before joining Roseburg, he worked at Huber Engineered Woods for more than 16 years in multiple commercial leadership roles, most recently as Vice President of Sales and Marketing. Asano was elected to the seat vacated by Ashlee Cribbs' move to a different company.



Doug Asano

Continued on next page

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 **Georgia-Pacific**
Wood Adhesives

Ashlee Cribb, Vice President of Wood Products for PotlatchDeltic Corporation, has 13 years' experience in various forest products leadership roles, including operating profit center responsibilities. Her areas of expertise include sales, marketing, strategic planning and operations management. Before joining PotlatchDeltic, Cribb was Senior Vice President, Chief Commercial Officer for Roseburg Forest Products. She previously held leadership positions at Georgia-Pacific, including Vice President of Industrial Packaging. She was elected to the seat vacated by Tom Temple's retirement from PotlatchDeltic.




Ashlee Cribb

Pino Pucci, Vice President of Tolko Industries' sales, marketing and logistics, has more than 25 years of industry and leadership experience. Pucci also serves on the Board of Directors for Tolko U.S. Operations, which includes LaSalle Lumber Company LLC and Southeastern Timber Products LLC. He was elected to the seat vacated by Jim Baskerville's retirement from Tolko.



Pino Pucci

"The active involvement of dedicated board members has served the industry and APA well for decades," said President Mark Tibbetts. "We are grateful for the leadership our trustees bring to the Association."



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Using AI, **SmartPress** reduces press cycle time and improves its performance. With the press being a common bottleneck in Engineered Wood manufacturing, SmartPress can dramatically improve the overall line capacity.


Why Choosing Smartech Solutions?





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IMEAS announces management change for North America

Bryan Wolowiecki has joined IMEAS Inc. as President, replacing Nathan Rutherford who is retiring after 14 years of service. Bryan is a veteran of the building products industry, with 28 years in machinery sales and support. IMEAS is a global leader in precision sanding of wood panels, as well as metal polishing in sheet, plate, and coil form. Contact Bryan at b.wolowiecki@imeas.net.

USNR and Wood Fiber Group merge

USNR is a global supplier of sawmill and plywood mill machinery, aftermarket parts, and technical and engineering services. Wood Fiber Group is a supplier of cutting tools, filing room equipment, and critical consumable products to the wood products industry, serving the North American market. This merger creates a single company capable of delivering complete solutions from project conception to building/installing processing lines, to supplying the spare

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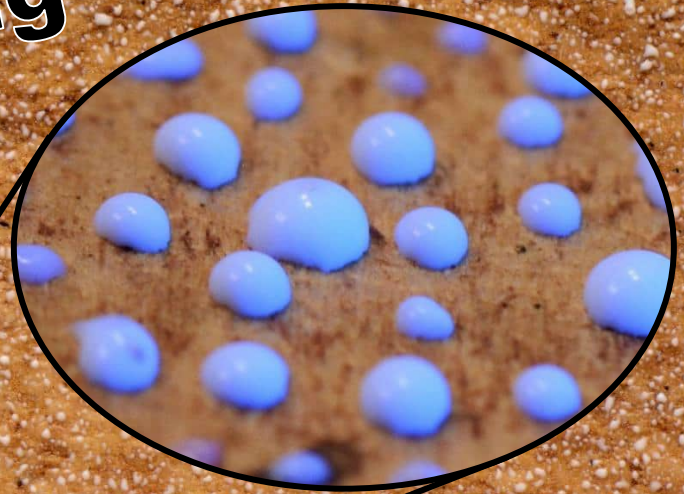
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Altec is pleased to announce we are building the complete lathe deck and operators booth for the new Scotch Plywood mill in Waynesboro, MS. This will comprise of Step Feeder, All Electric Charger, New lathe with all Electric Carriage, Electric back up rolls, and all controls up to clipper including the strip trays. The equipment will all be fully factory tested at our manufacturing facilities. Performance and Delivery are critical and we appreciate Scotch Plywood choosing us as their partner.

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