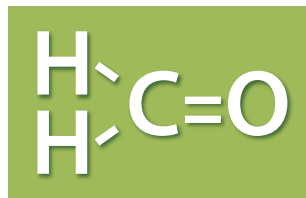


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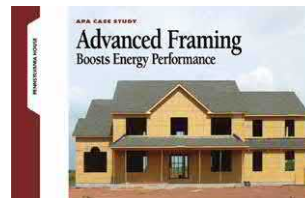
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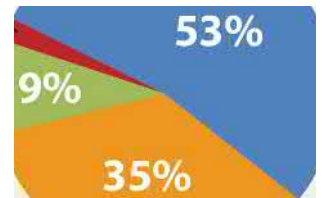
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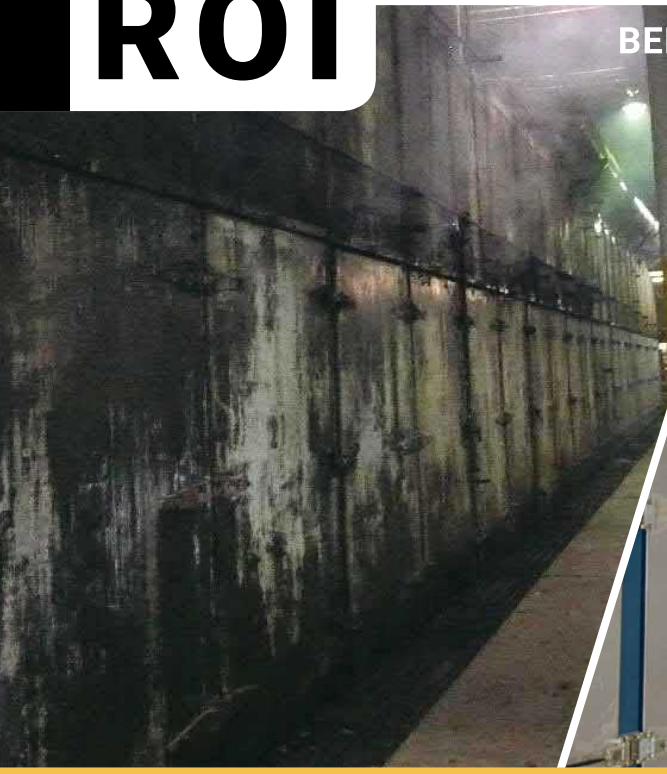
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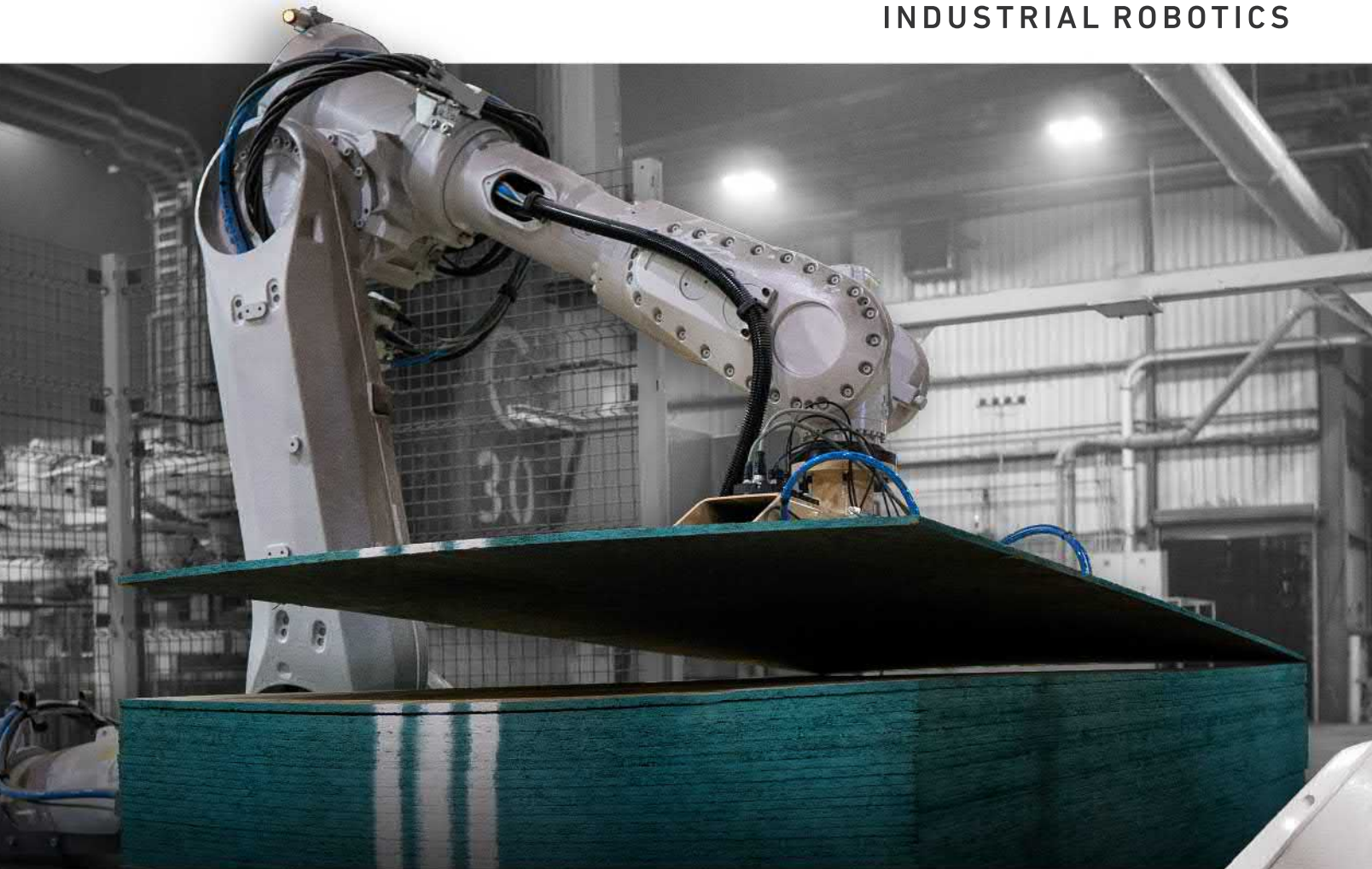
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ENGINEERED WOOD JOURNAL
Volume 22, No. 1, Spring 2019

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**Engineered Wood
Technology Association**
7011 South 19th Street
Tacoma, WA 98466
Phone: 253-620-7237
www.engineeredwood.org

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Terry Kerwood
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Photo courtesy of APA

About the Cover:
APA's \$4.5 million lab renovation, opening this spring, will greatly expand the association's assembly testing capabilities. See story and more photos, page 28.



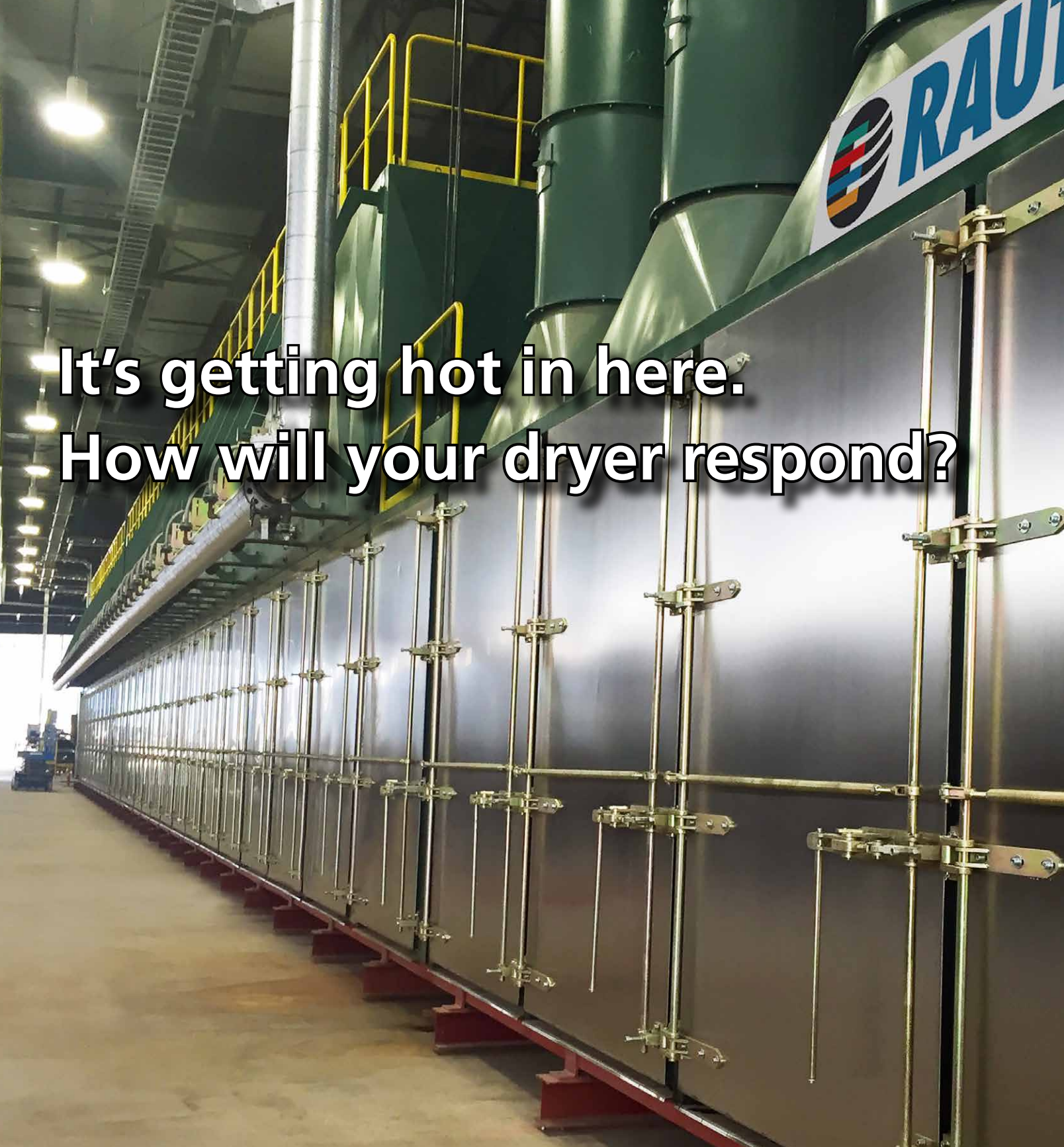
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PRIME *lines*

In this issue...

It seems like yesterday that the housing market took a tumble and single-family housing starts hit bottom at 500,000. It was actually a decade ago, but memories are long when it involves the crash of a marketplace that affected so many in the engineered wood products industry.

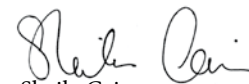
Now, as we start 2019, the marketplace is starting to again look uncertain. Federal census reports are showing new and existing home sales are on a downward trend compared to the strength of recent years, impacted by, among other things, an increase in mortgage rates and a lack of supply. Outlook among industry suppliers is remaining, for the most part, positive in the face of this news: the *Engineered Wood Journal's* annual Business Outlook Survey showed that while fewer EWTA members felt "more" optimistic about 2019 than they were last year about 2018, a large percentage – 81 percent – are at least "the same" or "more" optimistic than they were at this time last year.

The *Journal* recently sat down with APA President Ed Elias and APA Director of Market Research Joe Elling to discuss the state of the industry, and while the year ahead may bring challenges, there's also plenty to look forward to.

"As the marketplace slows, APA is taking this opportunity to develop tools and education to position our members to be ready for the next peak," says Elias. This preparedness is taking shape in an increasing number of webinars and videos on building techniques produced by APA staff, as well as APA Builder Tips and case studies in PDF format designed to provide comprehensive information in an easily digestible digital format.

This digital information, which builders and designers can access and download via APA's website, is in response to the changing ways people want to receive informational content. In this issue, Chanel Studebaker, APA's advertising, public relations and social media specialist, details how the association has kept up with the times. One surprising statistic: when APA's website launched in 1998, it garnered 3,000 visitors a month. In 2018, more than 50,000 users visited APA's family of websites, where they were able to watch videos and download information on a staggering number of topics.

Read more about APA's digital offerings in Studebaker's story, "Can You Hear Me Now?" starting on page 16.



Sheila Cain

Editor, *The Engineered Wood Journal*
scain@engineeredwood.org

APA Bronson J. Lewis Award Goes to Mary Jo Nyblad

Mary Jo Nyblad, former APA Board of Trustees member, EWTA Advisory Committee member, and retired vice-president of commodity sales and transportation at Boise Cascade, was the 2018 recipient of the Bronson J. Lewis Award at APA's Annual Meeting in San Antonio, Texas, last fall. The award recognizes individuals for their leadership and outstanding contribution to the engineered wood industry. It is dedicated to the late Bronson Lewis, who served for 24 years as secretary and then executive vice president of APA.

Nyblad spent her 35-year career in the wood products industry promoting the use of wood in building structures. At Boise Cascade, she held various sales and marketing leadership positions in structural panel sales, commodity lumber sales, particleboard sales and wood products transportation. She most recently served as the vice-president of commodity sales and transportation.

Nyblad was an active member of many industry associations, including the North American Wholesale



Mary Jo Nyblad, center, with wife Colleen Lambertz, receives the Bronson J. Lewis Award from 2018 APA Board Chairman Jim Baskerville.

Photo courtesy of APA

Lumber Association and the Pacific Northwest Association of Rail Shippers. At APA, she served as chairman and vice-chairman of the Board of Trustees, as well as chairman of the

APA Finance Committee and Marketing Advisory Committee. For EWTA, she served as chairman of the association's Advisory Committee.

Three New Trustees Join APA Board

Three new trustees have been elected to the APA Board of Trustees, filling vacancies created by retirements and new executive assignments.

Mark Dubois-Phillips, senior vice president, Sales, Marketing and Logistics for Norbord, has extensive management experience in the forest products and energy sectors. Before joining Norbord, he spent 14 years at International Forest Products Ltd. (Interfor).

Roy O. Martin III is president, CEO and CFO of Martin Sustainable Resources LLC, Martin Timberlands LLC

and Marco LLC. He also is the director and co-founder of Indigo Minerals LLC, a Houston-based oil and natural gas exploration company.

Allan Bradshaw, vice president of engineering for Weyerhaeuser, oversees a team of engineers responsible for planning and construction of capital projects for Weyerhaeuser's 34 mill systems, enhancement of existing manufacturing technology and oversight of proprietary product code reports and quality control.

Trustees leaving the APA board include Bruce Alexander, Norbord; Jonathan Martin, Martin Sustainable Resources LLC; and Adrian Blocker, Weyerhaeuser.

Boise Cascade Acquires Arling Lumber

Boise Cascade announced an agreement to acquire Arling Lumber, headquartered in Cincinnati, Ohio. Arling is a third generation, family-owned and operated wholesale distributor of lumber, plywood, OSB and engineered wood products.

Boise Cascade has been a supplier to Arling Lumber for more than 45 years.

In Memoriam

L. Clary Anthony, Sr.

L. Clary Anthony, former president and CEO of APA member company Anthony Forest Products of El Dorado, Ark., died Sept. 20,



2018, at the age of 93 in Shreveport, La. Mr. Anthony was born Oct. 1, 1924, in Hopeville, Ark. He enjoyed hunting, golfing and spending time with family. He served in the Navy and also served as chairman of the Southern Forest Products Association in 1993. Mr. Anthony is survived by his wife of 19 years, Frankie Sayers Anthony; son Luther

L. Clary Anthony, Sr.

“Mark” C. Anthony Jr. and wife Sharon of Atlanta, Texas; daughter Lynda J. Anthony of Shreveport, La.; seven granddaughters and many nieces and nephews. He was also preceded in death by a wife, June Henderson Anthony, his parents, four brothers and two sisters.

William A. “Bill” Baker

Bill Baker, an APA employee who worked in the association’s Technical Services Division, died October 25, 2018. He was 78. Mr. Baker was born in Seattle on Dec. 29, 1939. He earned his professional engineering degree from the University of Washington, and his early employment included a job with Weyerhaeuser. He later designed airplane components for

Boeing before moving to Tacoma, Wash., and joining the team at APA. Mr. Baker is survived by his wife of 35 years, Gracie Baker; his sister Bonnie O’Neil; his son, William T. Baker; and his daughters Karen Baker, Kelley Jean Baker, and Jennifer Jensen.

Kenneth Wayne Eeds

Kenneth Wayne Eeds, 67, died Sept. 6, 2018, in Roseburg, Ore. He was born Dec. 11, 1950, in Lebanon, Ore. Mr. Eeds worked at APA as a Quality Auditor, retiring from the association in 2010 after 33 years. He is survived by his wife, Cheryl, of 46 years, and daughters Mandy Eeds of South Carolina and Megan Jewell of Roseburg.

CPA 2019 Leadership Team Takes Office

The Composite Panel Association, a trade association that represents the North American composite panel and decorative servicing industries, has named new members of its board as it undertakes the development of a new five-year strategic plan.

Jim Buffington of Roseburg Forest Products will serve as the 2019 CPA Board chairman, Pat Aldred of GP Wood Products as vice-chairman, and David Smith of Timber Products as secretary/treasurer. Louis Brassard of Tafisa Canada completed his term as CPA chairman at the end of 2018 and now serves as immediate past chairman.

A colorful advertisement for Arclin Performance Applied. The background features a collage of images including a house, a modern building, and abstract patterns of dots and lines. The Arclin logo is at the top right. The main text reads "Industrial & Decorative Surface Overlays" and "ENGINEERED PERFORMANCE" in large, bold letters. Below that, it says "Performance Resins". At the bottom, the contact information "1.877.689.9145 arclin.com" is displayed.

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NEW U.S. REGULATIONS

How is the Industry Responding?

by Sheila Cain

Formaldehyde – particularly that emitted from composite wood products – has long been a topic of conversation in building circles, and discussions have intensified since new national emissions regulations took effect last June. While not all facets of the industry are affected (structural plywood, OSB and structural engineered wood products such as I-joists, laminated veneer lumber and glued-laminated timber are exempt), the regulations are still on the radar of wood product manufacturers, suppliers and industry associations across the board. Many have been preparing for these new rules for years.

About formaldehyde

Formaldehyde is an organic compound found naturally in wood and organic products. It is also used in certain wood adhesives. While the general consensus is that low levels of formaldehyde are harmless, high levels may cause serious health

issues. Formaldehyde can cause a number of symptoms at high levels, including itchy eyes, bloody nose, sore throat, and a persistent cough. If exposure to high concentrations are long-term, formaldehyde may also increase a person's risk of developing cancer.

The California Air Resources Board (CARB) developed regulations regarding formaldehyde levels in composite wood products more than 10 years ago, which applied to panels and finished products sold in California. The wood industry and several nongovernmental organizations sought and supported U.S. legislation for a national regulation that would be compatible with the CARB regulation.

CARB's Air Toxic Control Measure (ATCM) for Composite Wood Products became the foundational guide for the U.S. Environmental Protection Agency's regulations, which now apply nationwide. The regulations focus on the emissions from nonstructural panels like particle-

board, medium density fiberboard and decorative hardwood plywood.

President Barack Obama signed *The Formaldehyde Standards for Composite Wood Products Act* in 2010, instructed the EPA to develop and implement the regulations and gave the industry several years to comply. The first major implementation date was June 1, 2018, which is when composite wood products sold, supplied, offered for sale or imported into the U.S. were required to be certified as compliant with either the EPA TSCA Title VI or CARB ATCM Phase II regulations (see sidebar, *What Wood Products are Exempt and Why?*). The next milestone was just last month, on March 22, 2019. From that date forward, all regulated products must be EPA TSCA Title VI compliant (instead of just one of the two options).

Industry Input: CPA

The Composite Panel Association has participated heavily in the formaldehyde regulations discussion. Founded in 1960, CPA represents the North American composite panel industry on technical, regulatory, quality assurance and product acceptance issues. CPA general members include 30 of the leading manufacturers of particleboard and medium density fiberboard products subject to the EPA's emissions requirements. Its members represent more than 92 percent of the total manufacturing capacity in the U.S., Canada and Mexico.

CPA sponsors ANSI standards related to particleboard, MDF, hardboard, engineered wood siding and engineered wood trim, as well as CPA's Eco-Certified Composite sustainability standard and certification program, which addresses product emissions and imposes stringent and verifiable requirements. On a federal level, the association partnered with the Sierra Club, the United Steel workers and others to propose and draft

Canada Working to (Hopefully) Create U.S.-Compatible Regulations

While the U.S. wood products industry is addressing the U.S. Environmental Protection Agency's nationwide regulations, our neighbors to the north are working to draft similar regulations for Canada.

Health Canada is taking the lead in writing formaldehyde regulations governing composite wood products, with input from a number of industries on both sides of the border. For example, APA – *The Engineered Wood Association* is working with the Canadian Wood Council (CWC), the CPA and the Forest Products Association of Canada (FPAC) to encourage Canada to adopt regulations that are compatible with TSCA Title VI. Industry associations are "very closely following the Canadian formaldehyde regulatory process and are providing technical support and comment when requested," says Jackson Morrill, CPA president, with the goal of seeing final regulation that mirrors TSCA Title VI.

A draft version of Canada's regulatory proposal is expected to be released this spring.

What Wood Products are Exempt and Why?

Structural plywood, OSB and other wood structural panels, as well as other structural engineered wood products, such as wood I-joists, laminated veneer lumber and glued-laminated timber are not included in the scope of the CARB and EPA formaldehyde regulations. These wood products are manufactured for uses such as construction applications and are governed by product standards and building codes requiring they be manufactured with moisture-resistant adhesives only. The structural engineered wood products have low formaldehyde emission levels. That, and the fact that they are used mainly for construction, led CARB and the EPA to exempt them from the scope of wood composite panels as defined in the regulations.

Dealers and distributors can identify exempted structural engineered wood products by the presence of the APA trademark or other agency marks showing compliance to structural standards such as PS 1, PS 2 and ANSI A190. In some cases, APA member mills may supply structural products with no stamp on the product. For those unstamped structural engineered wood products, APA has provided documentation on the scope of production by the APA member mills relative to TSCA VI and CARB.

APA technical literature is available and can be downloaded from APA's website at www.apawood.org (search for APA Technical Note J330).

bipartisan federal legislation to establish the national standard for formaldehyde emissions from composite panel products signed into law by President Obama. The legislation was supported by industry, labor, health care and environmental groups, and it required the EPA to issue implementing regulations.

CPA has been at the forefront of product emissions for decades; well before CARB issued its Air Toxic Control Measure for Composite Wood Products requirements. CPA formed and led the California Wood Industries Coalition (CWIC) which advocated for six years. Comprised of a diverse group of national and state organizations, CPA formed and led the coalition, which was the primary industry intervener with the CARB on its emissions rules. The association has written several articles for the trade press, spoken at industry trade group meetings, given webinars and even published a pamphlet on TSCA Title VI compliance.

Members were prepared for the recent regulatory changes, says Jackson Morrill, CPA president. North American manufacturers invested millions of dollars in technology upgrades to manufacturing processes and third-party verification systems to ensure their products were compliant with California's stringent standard.

"Thanks to these extensive efforts, CPA's North American member companies were very much ready to meet the TSCA Title VI requirements once finalized, as they were patterned off of California's standard," Morrill says.

CPA is also committed to working closely with the EPA to encourage strong regulatory enforcement that ensures a level playing field for all product manufacturers using composite wood, whether made in the U.S. or imported. Unfortunately, not all importers have made the same universal commitment.

"This not only impacts consumers, but it creates a significant competitive disadvantage for North American manufacturers, who have made major in-

vestments, technology upgrades and supported third-party certification to ensure compliance with these high standards," says Morrill. "Importers that skirt these standards gain a competitive advantage by not incurring these costs."

Industry input: DHA

The Decorative Hardwoods Association (formerly the Hardwood Plywood and Veneer Association) represents members whose products must comply with the formaldehyde standards. The DHA was founded in 1921 and represents the hardwood plywood, hardwood veneer, and engineered hardwood flooring industries. According to its website, DHA members produce 90 percent of the hardwood

CARB's Air Toxic Control Measure for Composite Wood Products (ATCM) became the foundational guide for the U.S Environmental Protection Agency's regulations, which now apply nationwide.

plywood stock panels and hardwood veneer manufactured in North America.

In a press release the association issued last summer after the formaldehyde standards officially took effect nationwide, DHA President Kip Howlett says that all his association's members are compliant with TSCA Title VI, and most are classified as exempt because their emission levels are so low. Sixty-five percent of DHA members manufacture with formaldehyde-free adhesives, he says.

The DHA has been active in supporting regulatory actions against imports of hardwood plywood product from China, much of which is suspected to contain formaldehyde and is not compliant with TSCA Title VI. In 2016, the Coalition for Fair Trade of Hardwood Plywood, of which the DHA is a member, formally filed a petition with the U.S. Department of Commerce and the U.S. International Trade Commission, asserting that such imports were being sold into the U.S. at "dumped prices" below cost to gain an unfair competitive advantage and circumvent formaldehyde emissions requirements. Last September, the Department of Commerce announced that it would initiate an inquiry into such practices.

APA's Efforts

Members of APA - *The Engineered Wood Association* are exclusively manufacturers of structural engineered wood products, which are exempt from the composite wood formaldehyde emission regulations. Even so, APA leaders continue to support CPA, DHA and industry coalitions that advocate for rational assessment of formaldehyde emission risks. The implementation of formaldehyde emission regulations applicable to composite wood products raise marketplace questions, some of which impact APA member products. APA staff develop tools to educate specifiers about structural engineered wood products.

"When fully implemented, the EPA's regulation will be the world's toughest production standard for formaldehyde emissions from composite wood panels."

*Jackson Morrill, President
Composite Panel Association*



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Recently Released Study Shows Low Doses of Formaldehyde not Cancer-causing

A study released earlier this year by researchers at the University of North Carolina Gillings School of Global Public Health examines the cancer-causing potential of inhaled formaldehyde in doses most likely to be experienced by humans, finding that the risk of developing cancer is significantly lower than expected previously.

Kun Lu, PhD, associate professor in the Department of Environmental Sciences and Engineering, led the study, "Evaluation of Inhaled Low Dose Formaldehyde Induced DNA adducts and DNA-protein cross-links by Liquid Chromatography-Tandem Mass Spectrometry," published Jan. 30 in the medical journal, *Archives of Toxicology*.

The research team exposed rats to varying levels of formaldehyde — up to 300 parts per billion — for six hours a day for 28 days by nasal inhalation, then examined their DNA. They found that formaldehyde exposure at this level did not cause detectable levels of DNA damage.

The results may be used to determine what levels of formaldehyde are carcinogenic to what degree, and how likely those doses are to increase cancer risk.

"The study provides important data for regulatory agencies and health organizations to improve cancer risk assessment of formaldehyde at low doses," Lu says.

EWTA Member Involvement

Several Engineered Wood Technology Association (EWTA) members manufacture adhesives that are used in the composite wood panel industry, and they have been active in the regulations discussions as well.

Hexion Inc., for example, supplies resins and adhesives to the panel board market, and has long been an advocate of science addressing issues regarding formaldehyde. In addition, Hexion has taken a leadership role in product stewardship over the years to reduce formaldehyde emissions from wood products.

The company has fully supported the effective implementation of TSCA Title VI, and believes that doing so will create a uniform standard that will level the playing field and ensure that all in the forest products industry would be held to the same standard, regardless of where they are located or marketing their products.

"We firmly believe that today's existing formaldehyde-based resin systems — which meet or exceed all governmental emission standards — are safe and proven," says Mark Alness, Hexion's senior vice president. "Our goal as a resin producer is to offer our customers resin systems that provide cost-effective, reliable and proven performance, while meeting all regulatory requirements."


Hexion was ahead of regulations when it introduced a resin technology

called EcoBind 10 years ago, says Mark Gruenwald, Hexion's corporate director, scientific affairs. This enabled panel board manufacturers to meet stringent standards before they were enacted by regulatory agencies.

"The world's toughest production standard"

While TSCA Title VI requirements are stringent, the North American industry has made the mill investments and technical modifications to gain compliance and, as a whole, looks forward to a

uniformly regulated marketplace that can now focus on compliance.

"When fully implemented," says CPA's Morrill, "the EPA's regulation will be the world's toughest production standard for formaldehyde emissions from composite wood panels." 

Sheila Cain (scain@engineeredwood.org) is communications director of the Engineered Wood Technology Association and editor of its Engineered Wood Journal.



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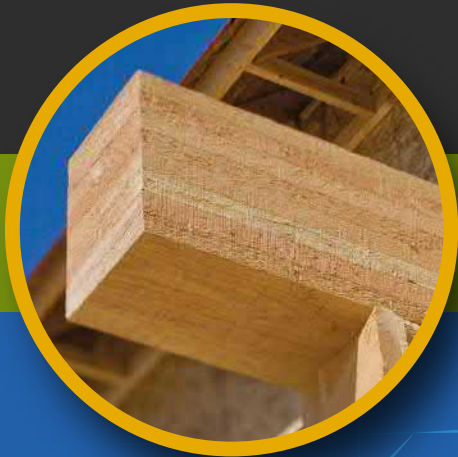


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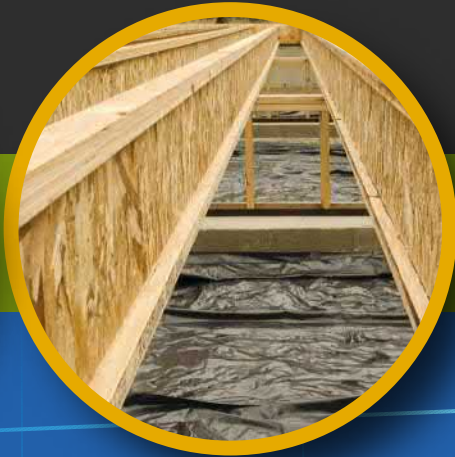
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CAN YOU HEAR ME NOW?

APA Finds New Ways to Break Through Marketing Noise

by Chanel Studebaker

When APA – The Engineered Wood Association first established roots in the Pacific Northwest as the Douglas Fir Plywood Association in 1933, social media, mobile phones, websites, webinars and YouTube videos probably seemed like concepts more suited to Aldous Huxley’s fictional *Brave New World*.

Back then, most Americans got their news from two sources: radio or newspaper. An advertiser could buy a spot on a prominent radio station or run a print ad in the daily newspaper and expect to be seen.

The way people take in information has changed dramatically since then. Newspaper circulation is half what it was during its 1973 peak. And podcasts and

streaming services have altered the listening landscape.

Given that plywood itself was an innovation, it should come as no surprise that from the beginning, the association has sought novel ways to reach audiences among increasing noise in the marketplace.

“The single biggest trait that signals success in marketing is flexibility,” says Tara Mattina, APA’s market communications director. “In my almost 30 years in the communications industry, the way people want information has changed completely since I started my career in newspapers.”

As audience preferences have changed, APA’s communications toolbox through the decades has included vari-

ous mixes of publications, advertising, educational programs and, more recently, digital marketing.

Web-based Programs

APA launched its website in 1998 – the same year that Google was founded. While today’s apawood.org looks completely different than that first website, it marked a shift to electronic communications for much of the association’s marketing efforts.

In the first year, the website received about 3,000 visitors a month. In 2018, more than 500,000 users visited APA’s family of websites.

The primary website, apawood.org, has become the main repository of

APA’S DIGITAL CONTENT

Social Media

APA has a presence on Facebook, Twitter and LinkedIn, and the association’s communications team frequently posts updates on new publications, Builder Tips and industry news. Connect with APA online:

Facebook: facebook.com/APAEngineeredWood

Twitter: @apawood

LinkedIn: www.linkedin.com/company/apa---the-engineered-wood-association



APA’S DIGITAL CONTENT

Case Studies

Sometimes the best way to show products in action is a good example. APA offers a number of case studies on its website, which give real-life examples of how APA products and techniques are used and implemented in projects. This case study details a house in Pennsylvania that used advanced framing methods to boost energy performance.



APA marketing by the numbers (2018)

APAWOOD.ORG

2.2 million page views

2.5 minutes per session

31 percent mobile users

PUBLICATIONS

600 titles

259,255 downloads

1/2 the downloads were Product Reports

12,000 print copies distributed

SOCIAL MEDIA

Facebook: followers up **7** percent

Twitter: followers up **19** percent

LinkedIn: followers up **22** percent

Association information, linking to publications, newsletters, videos and webinars.

“Field services representatives still consult face to face with code officials, designers and builders to educate and promote engineered wood solutions, as they have for decades. But webinars and videos provide an effective way for us to extend our reach,” says Tom Kositzky, director of APA’s field services. “The on-demand versions housed on our website provide a convenient way for people to view the information on their own schedule.”

Since the advent of cell phones and tablets prompted the website’s responsive design, mobile use of the site has grown to more than 30 percent. And, as people become used to scrolling on their phones wherever they happen to be, video will play a larger role to reach people with short, visual informational hits.

Publications

APA’s library of publications has grown to more than 600 titles. These include product reports, construction guides, product standards, research reports, technical notes and green verification reports. A sizable proportion of the Association’s marketing budget used to be dedicated to printing. In 1997, APA printed almost 736,000 copies of about 100 brochures to be mailed or handed out in person. By 2001, the library had grown to 380 publications, with more than half available for download from the website.

Publications remain an important way to communicate the detailed, technical information APA is known for, but most titles now are downloaded from the website rather than printed. In 2018, almost 260,000 titles were downloaded.

Advertising Versus Earned Media

Advertising strategies have also cycled through phases. Print ads, the standard for decades, have largely been supplanted by digital ads that allow people to click

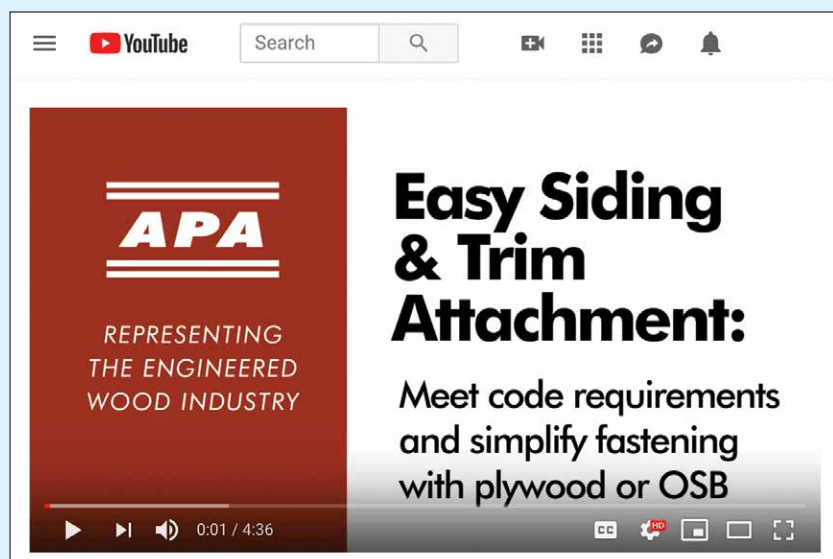
through to specific pages on a website. That seemed like an effective way to target audiences – until recent years.

Generation X and millennials, who grew up in the digital world, say they aren’t swayed by paid advertising. They are driven more by relevant content and third-party endorsements, which makes earned media placements – publicity gained through promotional efforts – more valuable. Pitching stories to industry and trade publications and mainstream media is time intensive, with

APA’S DIGITAL CONTENT

Videos

APA videos, available on YouTube, describe common building techniques in a short, easy-to-follow format. This video describes the basics of siding and trim attachment using plywood or OSB – in under five minutes.



no guarantees that the marketing message stays fully intact, but the payoff can be significant.

APA has used a combination of earned media, sponsored content and paid advertising for years, but the mix continues to shift away from traditional advertising toward producing solid content that can be suggested to editors for publication.

Social Media

The newest additions to the communications toolkit are social media. Once seen as a fun way for classmates and families to stay in touch, such social channels as Facebook and Twitter are increasingly used for commerce.

The shareable nature of these platforms can provide a wider reach at a lower cost. Shifting algorithms drive who sees which posts, however, so professional marketers need to stay informed about changes and use each platform strategically.

“Our profiles on Facebook, Twitter and LinkedIn give us the opportunity to

APA’S DIGITAL CONTENT

Webinars

APA offers a number of web-based seminars, both live and on-demand. This webinar discusses an overview of APA’s free design tool, the Force Transfer Around Openings Calculator, and explains how it can help engineers and code officials in the design implementation of FTAO shear walls.



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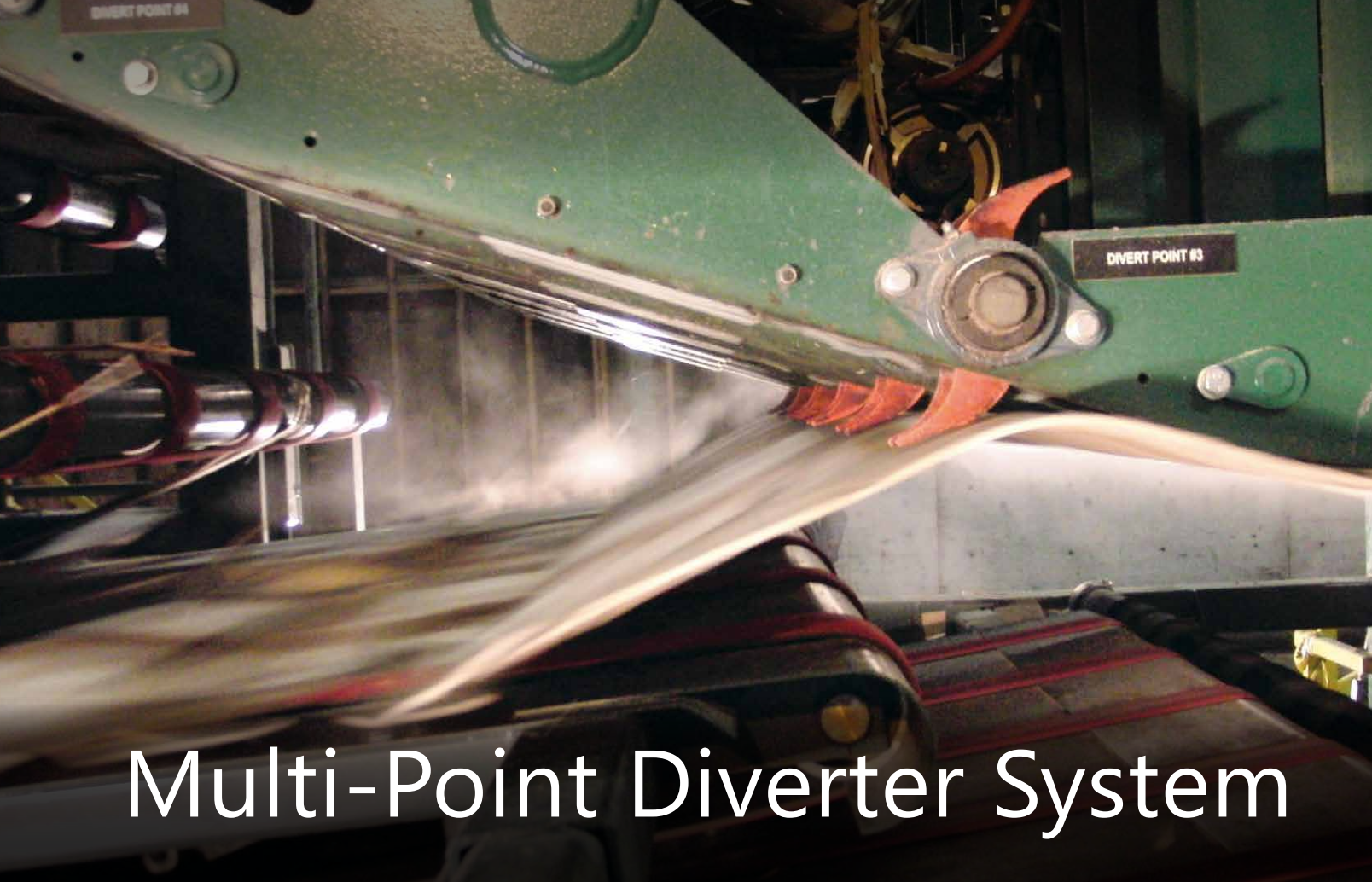
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Customers realize significant recovery and productivity gains in several areas including improved random recovery, reduced sheet width variance, down-time reduction, manpower reduction, and increased production. *Contact us to put this technology to work in your mill.*

APA'S DIGITAL CONTENT

Builder Tips

Builder tips on a variety of design and construction topics are available for free download on APA's website. These concise, two-page PDFs describe installation techniques in easy-to-follow steps. This Builder Tip walks builders through the installation of a squeak-free flooring system.



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engage directly with members and other audiences that have questions about what we do,” Mattina says. “Social platforms also allow us to maximize the impact of our advertising, publications and newsletters through wider sharing.”

While the tools APA uses to communicate the benefits of the engineered wood products manufactured by its members have altered over the decades, what hasn’t changed is a strategic focus behind the messages.

“Our Marketing Advisory Committee members and the participants of the market-related subcommittees invest time and effort into identifying the areas where APA can provide the most value,” Kositzky says. “While the tactics in the annual Strategic Marketing Plan have changed over the decades, the end message remains the same: engineered wood is good.”

Chanel Studebaker is the advertising, public relations and social media specialist for APA – The Engineered Wood Association. She can be reached at chanel.studebaker@apawood.org



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MORE OF THE SAME IN 2019?

Annual Business Outlook Survey Shows Mix of Optimism, Caution

by Sheila Cain

A year ago, the majority of EWTA members surveyed in the association's annual Business Outlook Survey had a positive outlook on the year ahead. This year, with 81 percent of members reporting that their optimism level for the coming year is the same or higher than last year, it looks like members are feeling fairly comfortable about their business prospects for the months ahead.

That said, fewer survey respondents this year said they were "more" optimistic about 2019 than they were when asked the same question last year. Last year 70 percent said they had increased optimism for 2018, while this year, only 30 percent said they were more optimistic this year than last. Just 19 percent of respondents viewed the coming year with less optimism than they did last year.

Like every January since 2011, the Business Outlook Survey was sent out to EWTA members at the beginning of the year, with questions designed to capture member perceptions of growth, their companies' employment levels and other business-related issues. Responses are reflected in the charts that accompany this story, which also track and compare survey responses from the past eight years.

How important are the following for recovery:

	Very Important	Important	Unimportant
State of the U.S. housing market	69%	31%	0%
Government regulation	34%	50%	16%
Government economic policy	39%	42%	19%
Marketplace competition	35%	57%	7%
Raw material prices or supply	53.5%	39.5%	7%
Transportation costs	35%	52.5%	12.5%
International exchange rates/trade policies	53.5%	25.5%	21%
Labor issues	25.5%	53.5%	21%
Economic uncertainty	53.5%	42%	4.5%

Members are remaining upbeat about their business projections for the new year. While fewer members this year expected business to improve (44 percent compared to 79 percent last year), a slim majority of 51 percent predicted that business would stay the same. Only 5 percent felt that it would worsen.

Employment outlook steady

Most members indicated that their wood-related business last year improved over the previous year. Seventy-two

percent said that business improved in 2018 over 2017; nearly the same (71 percent) as in last year's survey. Twenty-three percent felt it stayed the same over the previous year, only slightly lower than reported the year before (27 percent). Five percent felt business worsened last year. Three percent of members felt that way the year before.

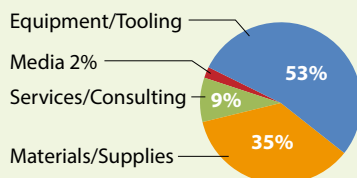
While new and existing home sales nationwide have been on a downward trend since the middle of last year, EWTA member companies' employment levels don't seem to be significantly impacted by the less-than-ideal economic outlook. Forty-four percent of respondents said their employment levels increased in 2018; nearly the same percentage as the year before (45 percent). Fifty-one percent of members surveyed said that employment levels stayed the same last year over the year before, compared to 55 percent who answered the same question in 2018. Just 5 percent of members said their employment levels decreased last year over the previous year.

Looking ahead, members remain fairly optimistic regarding employment levels in 2019. Sixty-seven percent of respondents expect employment levels

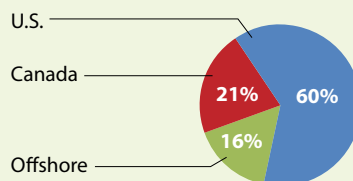
About the Business Outlook Survey

The Engineered Wood Technology Association surveys members each January about their outlook on their businesses and the industry in general. The surveys, sent to member representatives via email, are voluntary and completely anonymous.

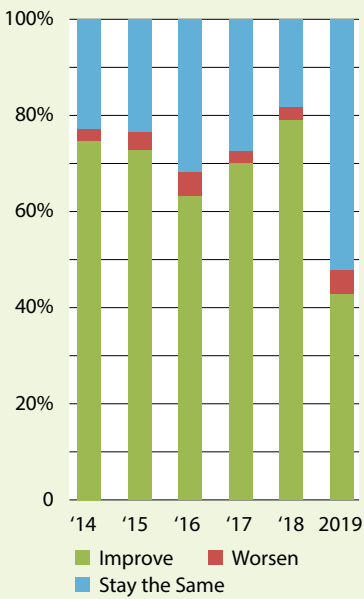
EWTA membership category



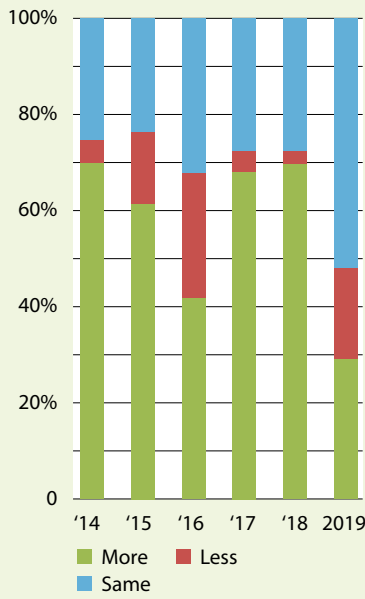
Headquarter location



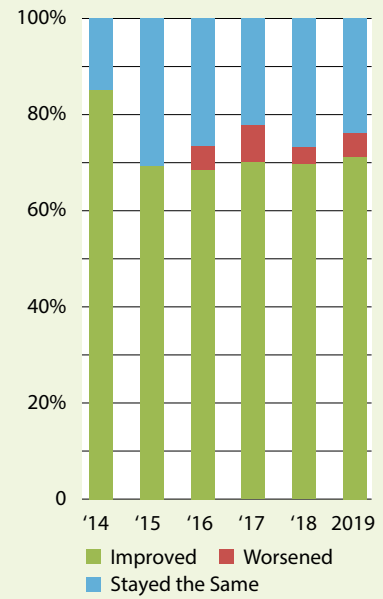
What is your business projection for the new year?



How optimistic are you about your wood-related business this year versus last year?



Did business improve, worsen or stay the same this past year?



will stay the same in 2019 as they did in 2018, while 33 percent expect levels to increase. Last year, 39 percent of those surveyed felt employment would increase in the coming year. That number went as high as 64.7 percent in 2013.

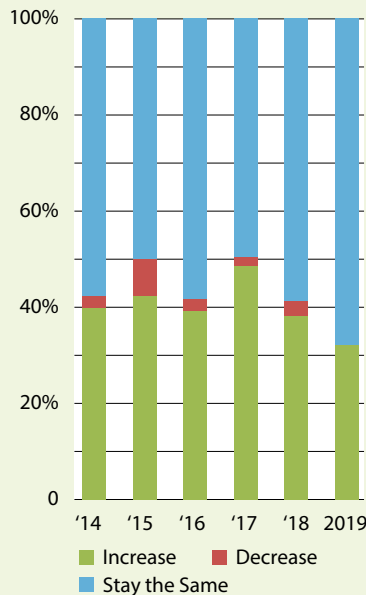
Preparing for the future

While the economy may be uncertain and the housing market slowing, EWTA members aren't sitting idle. In response to the question, "What have you done to adapt or seize opportunity?" one member commented that their company would be looking at efficiency improvements and waste reduction, while another is looking into high-tech equipment solutions.

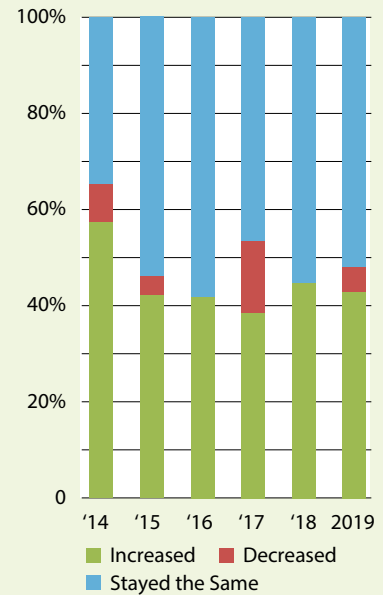
"Redesign(ing) equipment to be faster and more reliable, as well as safer," read one comment. "Less operator intervention...and robotic offerings." Another indicated a move towards digitization, workflow automation and standardization.

Many seem to be diversifying their offerings so they are able to perform better no matter what the future holds. Some are seeking partnerships with other manufacturers to increase product offerings, while others are focusing on improving customer service "before and after the sale." One comment mentioned investing in strategic partnerships "to

What is your employment projection for the new year?




Did your employment levels change last year?



make our business more scalable."

No matter what the future holds, EWTA members will continue to push forward. As one member commented:

"We continue to focus on efficiency, quality work and good customer support. (We'll) make the best of the situation and plan for improving as things change...as they always do!" 

Sheila Cain (scain@engineeredwood.org) is communications director of the Engineered Wood Technology Association and editor of its Engineered Wood Journal.

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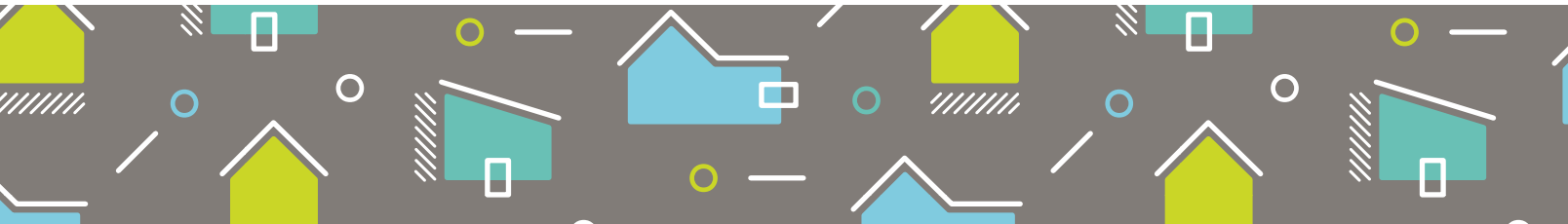
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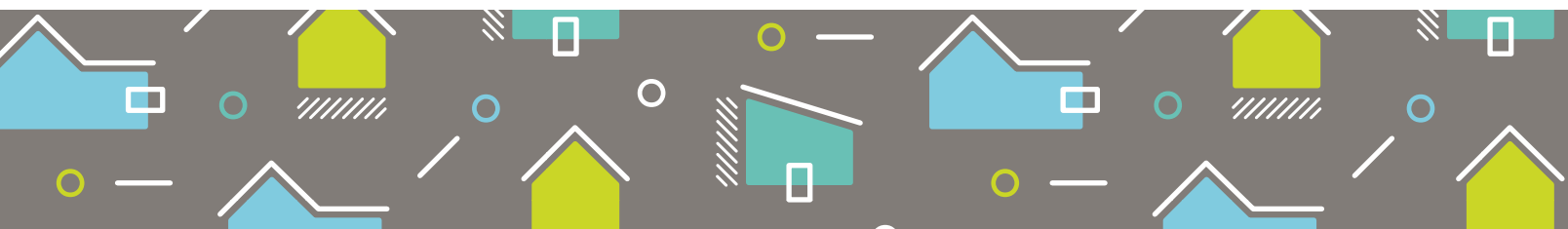
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APA'S OUTLOOK ON THE INDUSTRY

Economy Unstable, But Room for Education and Future Planning

by Sheila Cain

A decade ago, single-family housing starts in the U.S. hit bottom at less than 500,000 starts, down 75 percent from the 2005 peak of 1.75 million. The collapse in single-family starts led to several difficult years of business for those in the engineered wood products industry. Now, 10 years later, the market is once again looking uncertain.

The *Engineered Wood Journal* sat down with Ed Elias, president of APA – The Engineered Wood Association, and Joe Elling, APA's director of market research, to find out what's happening in the industry, how APA is positioning itself during this time, and why the recent slowing of the housing industry might have a silver lining.

Q: What challenges and changes is the housing industry facing?

Ed Elias, APA President: As everyone recognizes, there's a lot of volatility in the market, both domestically and internationally. We're approaching the upcoming year with a mode of caution. We're looking at potentially recessionary actions within the housing sector, our single largest market component.

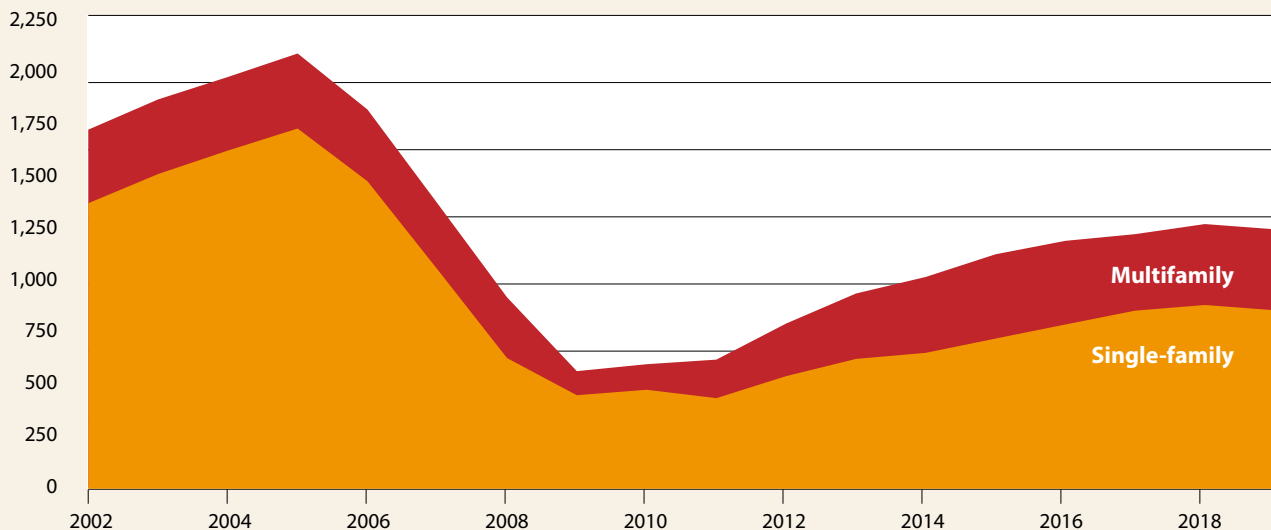
Joe Elling, Director, Market Research: Over the course of the second half of 2018, new and existing home sales have been on a downward trend. This challenge has been heightened by an increase

in mortgage rates and lack of supply, sustaining upward pressure on home prices. We're entering 2019 (statistic reports were delayed at press time due to the partial government shutdown in December and January) with the sense that builders are more cautious regarding the sales outlook for 2019. Builder sentiment in January 2019 was at the lowest level since July 2016. In order to generate sales, builders are reported to have been offering increased sales incentives.

EE: There are other things in the marketplace that are favorable, such as employment and wages, but those are far overshadowed by constraints on housing affordability and builders' ability to construct and make a profit.

U.S. Housing Starts

(Thousands)



Source: Census Bureau. APA forecast.

Over the course of the second half of 2018, new and existing home sales have been on a downward trend. This challenge has been heightened by an increase in mortgage rates and lack of supply, putting pressure on home prices. The partial federal government shutdown delayed the release of statistics for the last few months of 2018, but this graph reflects APA's best estimates for 2018 and 2019.

Q: How are other markets faring?

JE: Furniture manufacturers, many of which use engineered wood in their construction, are facing continued stiff competition from imports, which have taken over a larger share of the market over the last decade. Nonresidential construction is well below where it was at its peak 12 years ago. The retail sector is also seeing high vacancy rates. Department stores, for example, are seeing a hit as distribution through e-commerce rises.

Q: With many of the markets slowing, where might the engineered wood industry experience gains?

EE: Building codes in many areas have expanded the heights for wood-framed construction to between 12 and 18 stories, where they were previously restricted to heights between four and six stories. There's potential for our industry to expand market share in volumes not previously experienced. There's potential for light-frame wood assemblies and product lines like mass timber to be used in these buildings. This is in its infancy, however, recognizing that the codes passed won't take effect until 2020 and 2021.

Q: Considering the headwinds and uncertainties, what's APA delivering to boost the success of its members?

EE: As the marketplace slows, APA is taking this opportunity to develop tools and education to position our members to be ready for the next peak. On the education front, APA has been developing tools and programs to make it easier to engineer, design and build using our members' products. For example, new webinars in APA's Resource Library – with a focus on framing basics, advanced



Ed Elias, APA President


framing, fire protective assemblies, force transfer around openings, and other topics – have been extremely popular with the designer and builder communities. The live webinars are selling out just days after they're introduced, and the recordings are getting a lot of views as well.

JE: The education component is extremely important to the engineered wood industry. Unless we have skilled people building homes and apartments, it's going to be challenging to adequately meet the demand for more affordable housing.

Q: APA is just about done with its \$4.5 million lab expansion, which is adding a 70-ft by 75-ft "strong floor" and increasing the lab's ability to test taller assemblies. What will this mean for APA members and the engineered wood industry as a whole?



Joe Elling, APA Director of Market Research

EE: We previously tested single-story wall sections and small or scale roof or floor configurations. The expansion will allow for testing of shearwalls up to three stories and allow us to look at higher-load diaphragms. We'll be able to simulate earthquake performance on full-scale buildings – not just a single plane. And since we own the lab, testing can happen immediately – we're not on anyone else's timeframe. Private labs can be expensive, and universities often have different agendas. We can set the stage for what we want to be doing going forward. 

Sheila Cain (scain@engineeredwood.org) is communications director of the Engineered Wood Technology Association and editor of its Engineered Wood Journal.

APA RESEARCH LAB EXPANSION

Upgrades Expand Testing Capabilities

The APA Tacoma Research Center hasn't received an upgrade – aside from a 5,000-sq-ft addition in 2006 to accommodate installation of full-scale house and diaphragm performance test equipment – since it was built in 1969. This spring, the \$4.5 million expansion will open, offering enhanced testing capabilities, a 70-ft by 75-ft “strong floor” and additional space to test shearwalls up to three stories tall.

APA'S NEW LAB: **By the Numbers**

STRONG FLOOR:

28 tons of steel (rebar)

830 tons of concrete

860 anchors

STRONG WALL:

30 feet high

Made up of **10** blocks,
each weighing more than **19,000** lbs



The “strong floor” in the APA lab’s new addition will allow for the testing of taller and heavier assemblies.

Photos by Angie Dollar/APA



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2019 Membership Directory

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.

This membership directory, updated for 2019, includes company descriptions and contact information for all EWTA members. It's just one of many tools designed to help members connect with each other and the industry.

Membership Benefits

The benefits of EWTA membership are many. Among them:

Valuable Networking:

- Exhibit and sponsor at Info Fair (members-only) held in conjunction with the APA annual meeting
 - Hailed by many exhibitors as their favorite show every year
 - 2018 stats:
 - Over 500 attendees with plenty of networking opportunities (exhibits, receptions, golf, tennis, clay shooting competition, meals and meetings)
 - 85 exhibits with 90 companies exhibiting and/or sponsoring
 - High level executives from APA member companies at this event
 - Veteran Connections program - new exhibitors and members may be paired with long-time exhibitors to help introduce you to APA members and others
 - Special reception with APA Board of Trustees and one representative from each exhibiting company to help you build networks and open new doors
 - 2019 – Save the date for 2019! November 2-4, 2019 / JW Marriott Starr Pass, Tucson, AZ
- Supplier of the Year (all members) and Innovation of the Year Awards (if you submit an entry) including a listing on the EWTA *Supplier of the Year Ballot* sent to all APA member companies for voting (This benefit only applies during years when held)
- Listing on the web in our member directory – featured as a new member

Free Vital Market Research and Publications

- FREE Market Research – Stay Informed! (\$1,150 if purchased by non-members – free to our members)
(note – if you would like samples of these reports, just ask! Our members tell us they are incredibly helpful to keep track of markets that affect our industry)
- Monthly Housing Starts Report (annual subscription rate for non-members is \$600)
- Quarterly Production Report (annual subscription rate for non-members is \$275)
- Structural Panel & Engineered Wood Yearbook (\$275 for non-members)
- APA Management Report (free to members)
- APA Annual Report (free to members)
(Other APA publications are available for free or at a discount to our members when ordered through our office. For more on APA Publications, visit <https://www.apawood.org/resource-library>)
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 - Connections Newsletter – Industry and member news available free to all APA and EWTA members
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 - All new members have a story about their company when they join
 - EWTA members may sponsor the newsletter as part of an Info Fair sponsorship package or for \$50 per issue
 - E-mailed to all APA and EWTA members
- Engineered Wood Journal magazine sent to approximately 3,000 industry subscribers
 - Free directory listing for members in the spring issue
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- EWTA Annual Report distributed to all APA and EWTA members with your company listed as a member

The annual cost of EWTA membership is just \$1,200. For more information about the benefits of membership or for a membership application, contact Terry Kerwood, Managing Director, terryk@engineeredwood.org or 253-620-7237, or visit the EWTA website at www.engineeredwood.org.

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A-Lert Construction Services

A-Lert Construction Services was established in 1979 and specializes in design and 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
120 West Madison
Fredonia, KS 66736
jstewart@centurionind.com
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 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: Chris Bartlett - Vice President
Phone: 604-529-1991
120 - 185 Golden Drive
Coquitlam, BC V3K 6T1 Canada
cbartlett@alteconline.com
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 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: Jarno Kamarainen - Director, Wood Processing North America
Phone: 770-640-2467
5405 Windward Parkway, Suite 100W
Alpharetta, GA 30004
jarno.kamarainen@andritz.com
www.andritz.com



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, 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 www.arclin.com.

Contact: Reed Singleton - Technical Sales Director
Phone: 678-781-5370
1000 Holcomb Woods Parkway, Suite 342
344 Tannehill Road
Roswell, GA 30076
reed.singleton@arclin.com
www.arclin.com



Argos Solutions LLC

Argos offers a full range of optical inspection and process control systems that replaces manual grading and patching of wood products. With more than 25 years of experience and installations in more than 30 countries, Argos provide the latest technology of vision-based scanning systems for the plywood, composite and furniture industries. 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: Richard Lepine - General Manager
Phone: 919-428-1262
2013 Castleburg Drive
Apex, North Carolina 27523
Richard.Lepine@argossolutions.no
www.argossolutions.no



Ashland Specialty Ingredients

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.

Contact: Mark Vlavisavich - Account Manager, Structural Assembly Adhesives
Phone: 708-205-1586
5200 Blazer Parkway
Dublin, OH 43017
mvlavisavich@ashland.com
www.ashland.com



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.

Contact: Mark Semeniuk - Chief Operating Officer
Phone: 250-367-9441
2073 Hepburn Drive
PO Box 460
Fruitvale, BC V0G 1L0 Canada
mark.semeniuk@atcowoodproducts.com
www.atcowoodproducts.com

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.

Contact: Craig Lyerly - Market Segment Manager, Building Products
Phone: 336-802-4746
1717 English Road
High Point, NC 27262
craig.lyerly@axaltacs.com
www.axaltacoatingsystems.com

BASF - We create chemistry

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

Contact: Gregory Lonc - Business Manager, Rigid Urethane Chemicals North America
Phone: 732-324-6837
1609 Biddle Avenue
Wyandotte, MI 48192-3736
gregory.lonc@basf.com
www.basf.us



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 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.

Contact: Ludwig Fleischhackl - Area Manager Sales & Engineering
Phone: +49 7531 99 43 31
Cell: +49 172 1408381
Lohnerhofstrasse 6
78467 Konstanz, Germany
lfleischhackl@baumer.com
www.baumerinspection.com



BRUKS-SIWERTELL

Bruks is a specialty Materials Handling company with a 120 year history in engineering and manufacturing innovative equipment for Wood Chipping and Hogging, receipt at the Mill through Truck Dumps and Pits, Storage & Recovery, Material Drying, Log Handling, Butt Flare Reducing, Conveyor systems, Screening Hogs and Hammermills. Bruks Drum Chippers, especially, have been marketed and installed in North America since the 1970's with over 10,000 units operating worldwide.

Contact: René van der Merwe - Sales Manager North America
Phone: 770-849-0100
5975 Shiloh Road, Suite 109
Alpharetta, GA 30005
rve@bruks.com
www.bruks.com



BRUNETTE MACHINERY CO.

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: Kirk Forbes - President
Phone: 604-522-3977
8717 - 132nd Street
Surrey, BC V3W 4P1 Canada
sales@brunettemc.com
www.brunettemc.com

Casey Industrial, Inc.

Casey Industrial has provided process installation services for over 70 years to the Forest Products sector. We self-perform all major trades, work nationwide and have experience with all major technology providers supporting APA members.

Contact: Tom Lepak - VP, Business Development
Phone: 720-974-2659
1400 West 122nd Avenue
Suite 200
Westminster, CO 80234
tlepak@caseyind.com
www.caseyind.com



Release Innovation™

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 cost savings.

Contact: Gerard Przekop - Director, North American Sales
Phone: 517-545-7844
1445 West McPherson Park Drive
PO Box 860
Howell, MI 48844-0860
gprzekop@chemtrend.com
www.chemtrend.com

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.

Contact: Stuart Clarke - President
Phone: 601-366-0331
3000 Old Canton Road, Suite 235
PO Box 4876
Jackson, MS 39216
info@clarkeveneers.com
www.clarkeveneers.com

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: Andy Clarke - President
Phone: 541-343-3395
660 Conger Street
PO Box 2428
Eugene, OR 97402
andyc@clarkes-ind.com
www.clarkes-ind.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.

Contact: Claude Malette - P. Eng.

Phone: 705-360-5525

60 Wilson Avenue, Suite 101

Timmins, ON P4N 2S7 Canada

cma@cmaeng.com

www.cmaeng.com

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 has grown as our customer needs have grown with efficiency, and safety as key drivers. Our facilities compliment 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.

Contact: Doug Pauzé - Senior Vice President, Operations

Phone: 250-754-7775 ext. 115

#2-84 Robarts Street

Nanaimo, BC V9R 2S5 Canada

dpauze@coastlandwood.com

www.coastlandwood.com



Cogent Industrial Technologies

From greenfield to modernization projects, clients across the globe leverage our technology expertise in wood based panel board and pellet plants to successfully define, design, build and operate their industrial operations. Our services include: project management, process engineering, plant-wide integration, industrial safety, electrical power, automation and controls, industrial IT and operations performance management.

Our integrated approach connects equipment, processes and people to increase productivity, reduce operational cost and improve efficiencies.

Contact: Bijan Shams - President

Phone: 604-207-8880

Suite 300 13775 Commerce Parkway

Richmond, BC V6V 2V4 Canada

bijan.shams@coigentind.com

www.cogentind.com

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.

Contact: Mike Coil - General Manager

Phone: 604-596-7578

8269 - 130th Street

Surrey, B.C., V3W 7X4 Canada

mdc57@telus.net

mike@coilmanufacturing.com

www.coilmanufacturing.com

Combilift USA

Combilift is a specialist forklift & straddle carrier manufacturer producing a wide range of customized handling solutions, all of which are designed for the safe, space saving and very productive handling of the long and bulky loads. 4-way Combilifts work as counterbalance, sideloader, and narrow-aisle forklifts. The Combi-SC (Straddle Carrier) is the cost effective solution for the handling of containers and oversized loads.

Contact: Gearoid Hogan - VP Sales & Marketing Northeast

Phone: 336-378-8884

303 Concord Street

Greensboro, NC 27406

gearoid.hogan@combilift.com

www.combilift.com



Connexus Industries Inc.

Connexus industries Inc. manufactures 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, I'ANCO Products and Lacey Harmer Inc.

Contact: Cliff Lane - President & General Manager

Phone: 604-882-1602

27474 Gloucester Way

Langley, BC V4W 4A1 Canada

clane@cnxsind.com

www.connexusindustries.com



Con-Vey Keystone, Inc.

Con-Vey has over 70 years experience in custom material handling solutions. We engineer and manufacture equipment for, Plywood, OSB, PB, MDF, LVL, I-Joists and Specialty Panels. Con-Vey supplies world class saw lines, finishing lines, sanding lines, feeders, stackers, conveyors, specialty automated equipment and robotic solutions. Con-Vey means Quality and Value you can count on.

Contact: Dave Larecy - President

Phone: 541-672-5506

526 NE Chestnut

PO Box 1399

Roseburg, OR 97470

dave.larecy@con-vey.com

www.con-vey.com



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 to the highest quality standards, in modular frames, with the right combination of working units, motors, and feed speeds that best fit 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 Particle Board, 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.

Contact: Eric Johnston - Sales Director - Panel Division

Phone: 336-434-6644

107 Seminole Drive

Archdale, NC 27263

eric.johnston@costasanders.com

www.costasanders.com

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.

Contact: Ian Hughes

Sr Market Manager - Building and Construction

Phone: 412-413-6871

1 Covestro Circle

Pittsburgh, PA 15205

ian.hughes@covestro.com

www.covestro.com



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.

Contact: Cole Martin - Sales Manager, Capital Sales and Modernizations

Phone: 678-325-5782

1345 Ridgeland Parkway, Suite 100

Alpharetta, GA 30004

cole.martin@dieffenbacher.com

www.dieffenbacher.com

DO2 Industriel

The DO2 Rapid Wrapper Automatic Panel packaging system offers outstanding performance. 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. Contact: Patrick Sasseville - Sales Representative
Phone: 888-276-0554
303 8th Avenue
Dolbeau-Mistassini, Quebec G8L 1Z6 Canada
info@do2.ca
www.do2.ca



Dominion Chemical Company, Inc.

Wax nuances 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 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. Contact: Maclin Ferrell - Vice President
Phone: 804-733-7628
2050 Puddledock Road
PO Box 1069
Petersburg, VA 23803
maclinferrell@dominionchemical.com
www.dominionchemical.com



Durr MEGTEC, LLC

Durr MEGTEC, LLC 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; dry electrostatic precipitators for particulate removal from energy sources, and ultra-high-efficiency RTO/RCO systems for VOC abatement. We also offer pulse jet fabric filters (baghouses), SNCR systems for NOx control, and cyclonic dust collectors. The Dürr MEGTEC aftermarket group also provides upgrades, parts, and service for every make of air pollution control equipment for the engineered wood products industry. Contact: John Giesfeldt - Content Marketing Manager
Phone: 920-339-2787
830 Prosper Street
PO Box 5030
DePere, WI 54115 United States
info@megtec.com
www.babcock.com

EcoSynthetix

EcoSynthetix is a renewable chemicals company specializing in bio-based materials that are used as inputs in a wide range of end products. Our commercial products are cost-competitive and exhibit similar performance characteristics compared to the non-renewable products they replace. Our sustainable products allow customers to reduce their use of harmful materials, such as formaldehyde and styrene-based chemicals. Our two flagship products are EcoSphere® biolatex® and DuraBind™ biopolymers. EcoSphere is in commercial use around the world in the paper and paperboard packaging industries. DuraBind™ biopolymers are a no-added formaldehyde binder system used in the production of wood composite panels. Contact: Scott Good - RVP Sales, Americas
Phone: 587-899-2621
3365 Mainway Drive
Burlington, ON L7M 1A6 Canada
sgood@ecosynthetix.com
www.ecosynthetix.com

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. Contact: Steven Mays - Partner
Phone: 503-643-6305
3720 SW 141st Avenue, Suite #206
Beaverton, OR 97005-2349
steve@ews-usa.com
www.ews-usa.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
Phone: 541-484-4771
Eugene Office
1740 Willow Creek Circle
Atlanta Office: 404-267-1471
8607 Roberts Drive, Suite 100
Eugene, OR 97402-9152
aedwards@eeeug.com
www.evergreenengineering.com

Evertree

Plant Based Chemical Solutions offering a revolution in industrial solutions and materials with cost competitive, plant-based chemicals that offer the same or better performance than petroleum-based chemicals. Our first product family SynerXID™ offers a 20 to 40% reduction of formaldehyde and petroleum based resins used in wood based panels with a significant raw material cost reduction while achieving the same panel properties. Contact: Peter Tagge - CEO - North America
Phone: 917-224-5794
727 Norristown Road
Ambler, PA 19002
peter.tagge@evertree-technologies.com
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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. Contact: Alexander Root
Phone: 704-912-0000
648-A Griffith Road
Charlotte, NC 28217
sales@grecon.us
www.grecon-us.com



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. Contact: Ed Pridgen - Minifog Product Manager
Phone: 336-299-2933
4365 Federal Drive
Greensboro, NC 27410
epridgen@sparkdetection.com
www.sparkdetection.com



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.

Contact: Joshua Bartlett - Business Development Manager
Phone: 800-877-4583
2020 Bruck Street
Columbus, OH 43207
joshbartlett@franklininternational.com
www.franklinadhesivesandpolymers.com



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 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.

Contact: Francesco Belloni - Equipment Manager
Phone: 9176982052
85 Fulton St
Boonton, New Jersey 7005 USA
francesco.belloni@airpadusa.com
frommstrappingsystems.com



Fusoni U.S.

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.

Contact: Adrian Yovanovich - Manager, North America
Phone: 210-712-7803
Fusoni Componentes, S.L.
Poligono Industrial de Argame - C/Mostayal
Fusoni U.S.
422 Mesa Loop
Argame, Asturias, Spain
ayovanovich@fusoni.us
www.fusoni.net



Georgia-Pacific Wood Adhesives

bonds that last. advancements that work.™

Georgia-Pacific Chemicals LLC

Georgia-Pacific Chemicals offers a portfolio of thermosetting resins for plywood, oriented strand board and laminated veneer lumber applications as well as custom-formulated solutions to meet our customers' specific needs. Our innovative RESI-BOOST® adhesive technology, when used in combination with RESI-BOND® and RESI-MIX® adhesives, has demonstrated decreased press times as much as 10-20% without sacrificing bond quality nor increasing temperatures. It can lower glue usage as much as 3-10%. RESI-BOOST adhesive technology joins our other quality products - WOODWELD® spray dried powders; RESI-STRAN® and RESI-BOND liquid adhesives; and RESI-MIX® and RESI-MIX® Ultra ready-to-use mixed adhesives.

Contact: Georgia-Pacific Wood Adhesives
Phone: 866-4GP-CHEM/866-447-2436
133 Peachtree Street NE Suite 10
Atlanta, GA 30303
gpchemical@gapac.com
www.gp-chemicals.com



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-joint 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.

Contact: Mike Tart - Sales Manager
Phone: 253-383-2584
701 East "D" Street
PO Box 2274
Tacoma, WA 98421
sales@globemachine.com
www.globemachine.com



Grenzebach Corporation

We are a leading global manufacturer and supplier of drying systems to the veneer and building materials industries with over 400 dryer installations worldwide. Grenzebach's new Wood Fiber Insulation Board line produces materials in densities of 3 to 10 lbs. per cubic foot. Our veneer product line includes dryer infeed and outfeed systems, jet and longitudinal dryers, and color veneer grading and stacking systems. Grenzebach has completed extensive rebuilds on all makes and models of veneer and gypsum dryers. Complete parts and service support is also available.

Contact: Charles Shurtliff
Phone: 678-488-8369
Sales Manager - Building Materials Division
10 Herring Road
Newnan, GA 30265
charles.shurtliff@grenzebach.com
www.grenzebach.com

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.

Contact: Greg Pecharsky - Vice President
Phone: 780-998-3771
155-55202 SH 825
Sturgeon Industrial Park
Sturgeon County, AB T8L 5C1 Canada
gpecharsky@guardianchem.ca
www.guardianchem.com



H.B. Fuller

H.B. Fuller Plywood Adhesive Coated Solutions has specialists for all your composing needs. Gain improved wood recovery and reduced unit costs at the composer through a package of specialized tapes and strings, patented adhesive application equipment, process improvement tools and expert service for both green and dry veneer process.

Contact: Adam Brennan - Senior Account Manager
 Phone: 318-349-4081
 417 NW 136th Street
 Vancouver, WA 98685
 adam.brennan@hbfuller.com
 www.hbfuller.com

Hansen-Rice, Inc.

Solutions driven organization providing value to construction projects through Pre-Construction, In-House 3D Design, General Contracting and Self Perform Steel & Thermal.

Contact: Dale Dolecheck - Director, Industrial Programs
 Phone: 208-465-0200
 1717 E. Chisholm Dr.
 Nampa, ID 83687
 ddolecheck@hansen-rice.com
 www.hansen-rice.com

HAWE Hydraulik

HAWE Hydraulik is a well-respected, worldwide, Germany-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.

Contact: Steve Kathan - Industrial Group Manager
 Phone: 503-222-3295
 12990 SE Highway 212
 Clackamas, OR 97015
 s.kathan@hawe.com
 www.hawe.com

Henkel

Henkel is the world's largest Adhesive company. LOC-TITE 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.

Contact: Chris Whelan - Business Development Director
 Phone: 604-880-2361
 10 Finderne Ave, Suite B
 Bridgewater, NJ 08807
 chris.whelan@henkel.com
 www.furniture-building-components.com

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 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.

Contact: Patrick Beadling - Director of Account Services
 Phone: 616-459-4144
 2000 Oak Industrial Drive
 Grand Rapids, MI 49505
 patrick@hexarmor.com
 www.hexarmor.com



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 more than 50 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, furniture, mouldings and millwork.

Contact: Steve Banick
 Phone: 541-741-6650
 180 East Borden Street
 Columbus, OH 43215
 Steve.Banick@hexion.com
 www.hexion.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: Jason McIntosh - Director of Business Development HGA
 Phone: 318-255-6825
 603 Reynolds Drive
 PO Box 580
 Ruston, LA 71270
 jmcintosh@hga-llc.com
 www.hga-llc.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: Michael F. Adams, Business Manager
 Phone: 905-609-0034
 8600 Gosling Road
 The Woodlands, TX 77381
 michael_f_adams@huntsman.com
 www.huntsman.com

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: Chris Pedersen - President
 Phone: 250-493-3201
 1940 Barnes Street
 Penticton, BC V2A 4C3 Canada
 cpedersen@ibcworld.net
 www.ibcworld.net

Idemitsu Lubricants America Corporation

IDEMITSU/Idemitsu Lubricants America Corporation offers wood industry members a full line of lubricants including synthetic high-temperature chain oils, environmentally friendly gear and hydraulic oils as well as compressor lubricants. By using highly refined, hydro-cracked base oils Idemitsu Lubricants America Corporation can provide high quality blended lubricant products to meet your critical requirements. The customer-oriented philosophy of IDEMITSU is to develop products based on the customer's requirements. Professional Lubrication Engineers can assist in all facets of your lubrication project from problem analysis to product selection and from lubrication maintenance to development of customized lubricant-check systems.

Contact: Ryan Stanton - National Accounts Engineer
 Phone: 248-455-1458
 3000 Town Center, Suite 2820
 Southfield, MI 48075
 rstanton@ilacorp.com
 www.ilacorp.com



IMAL-PAL Group

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

Contact: Andrew Jowett - President
Phone: 509-855-3411
IMAL-PAL Group, Inc.
P.O. Box 870949
Stone Mountain, GA 30087
andrew.jowett@imalpal.com
www.imalpal.com



IMEAS Inc.

IMEAS is a world leader in surface finishing solutions, with over 3,000 machines operating worldwide. 2016 marked IMEAS's 50th 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.

Contact: Nathan Rutherford - President
Phone: 678-364-1900
1125 Commerce Drive
Suite 200
Peachtree City, GA 30269
imeas@imeas.net
www.imeasinc.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 - Sales Woven Packaging - IPG
Phone: 780-224-6569
50 Abbey Avenue
Truro, Nova Scotia B2N6W4 Canada
smaw@itape.com
www.itape.com

Itipack Systems

Itipack Systems has been in business since 1970. We are a manufacturer of automated strapping systems.
Contact: Bert Kuik - NA BD/Sales Director
Phone: 905-333-3695
Cell: 360-594-2338
919 Zelco Drive
Burlington, ON L7L 4Y2 Canada
bkuik@itipacksystems.com
www.itipacksystems.com

JAX, Inc.

JAX is a full-line lubricant manufacturer with expertise in compounding high-end synthetic and petroleum lubricants. With over 60 years of industry experience, JAX has earned it's 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 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 and performance.

Contact: Ted Schultz - Director OEM & Engineered Wood
Phone: 800-782-0570 ext. 307
W134 N5373 Campbell Drive
Menomonee Falls, WI 53051
tjschultz@jax.com
www.jax.com

KADANT

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 Strand-ers, SmartRING Strand-ers, 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.

Contact: Carlos Vieira - Director, Capital Sales
Phone: 604-299-3431
Unit #8 15050 54A Avenue
Surrey, BC V3S 5X7 Canada
info.carmanah@kadant.com
www.kadantcarmanah.com



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: Mike Simmons - Vice President Sales & Service
Phone: 800-942-4401
77684 Highway 99 South
Cottage Grove, OR 97424
msimmons@kimwood.com
www.kimwood.com

KOCH KNIGHT

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: Matt Thayer - VP Sales and Marketing
Phone: 330-488-1651 x210
5385 Orchard View Drive SE
PO Box 30070
East Canton, OH 44730
matthew.thayer@kochknight.com
www.kochknight.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 proven methodology to design machinery and processes while supporting the project management team with accurate budgets and schedules. We are now taking the risks out of projects with Dynamic Process Modeling and Advanced Project Tracking technology.

Contact: Jan Karnik - President
Phone: 604-592-3123
#218-12877 76th Avenue
Surrey, BC V3W 1E6 Canada
jan.karnik@ktceng.ca
www.panelboard.net

LIMAB North America

LIMAB supplies non-contact laser measuring systems for composite panels and engineered wood products, including thickness and squareness measurements, and blow detections on panels.

Contact: Jens Svensson - President
Phone: 704-321-0760
9301-B Monroe Road
Charlotte, NC 28270
jens.svensson@limab.com
www.limab.com

Lonza Wood Protection

Lonza Wood Protection is a global leader in the development and supply of innovative technologies for the treatment of wood. Lonza's technologies improve the performance of wood products, making them resistant to termites, fungi, fire, mold and moisture. Lonza manufactures and supplies many of the highest quality and well-known wood protection products, including its Wolman® line of preservatives, Sillbor® borate treatments, Chemonite® ACZA industrial preservatives, Dricon® fire retardants, FrameGuard® and Wolman® non-pressure mold inhibition and preservative products and the Diacon Mycostat® and Antiblu® antisapstain lines. Together with its New Zealand-based affiliate, Zelam Ltd, Lonza offers formulations specifically designed for the treatment of engineered wood. With global operations and an expansive offering of services and expertise, Lonza is dedicated to the success of its customers.

Contact: Steve Nielsen - Regional Sales Manager
Phone: 604-271-8855
360 Interstate North Parkway, Suite 450
Atlanta, GA 30339
steve.nielsen@lonza.com
www.wolmanizedwood.com

Lundberg

Lundberg 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, 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: Jaymie Deemer - Director of Sales
Phone: 425-283-5070
8271 154th Ave NE Suite 250
Redmond, WA 98052
jaymie.deemer@lundbergllc.com
www.lundbergllc.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 ink jet printing 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.

Contact: Donna Meade - Strategic Initiatives Manager
Phone: 800-775-7775
6515 Penn Avenue
Pittsburgh, PA 15206
info@matw.com
www.matthewsmarking.com

McLube

Mold Release, Anti-Tack and Lubrication

McLube

McLube is a globally recognized leader in the release and lubrication industries headquartered outside Philadelphia, USA. Founded in 1954, McLube 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 for more information, on-site technical assistance, and samples of our proven formulas. McLube is a brand of McGee Industries, Inc.

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

meinán[®]

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 yield, and extremely close thickness tolerance. The lathe is part of an automatic veneer peeling line featuring automatic stacking and green composing of random strips into full veneer sheets 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.

Contact: Jimmy Nakaya - Sales Director
Phone: 716-434-5558
U.S. Representative:
Merritt Machinery, LLC
10 Simonds Street
Anna McCann, President
amccann@merrittmachinery.com
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.

Contact: Dave Olson - Corporate Sales Manager
Phone: 612-529-7791
5201 East River Road Suite 301
Minneapolis, MN 55421
info@mereen-johnson.com
www.mereen-johnson.com



Metriguard Technologies Inc.

High-speed Metriguard veneer graders operate in LVL and structural plywood mills worldwide. Laboratories depend on Metriguard Panel Bending & Performance Testers to evaluate structural panels. The new Model 840 tests OSB used as I-joist web stock. For MSR/MEL lumber producers, Metriguard offers the Model 7200 for longitudinal installations and the Sonic Lumber Grader for transverse installation, both are compatible with scanners. The Model 312 Bending Proof Tester is a standard in MSR QC labs. With over 40 years in the engineered wood products business, Metriguard has the knowledge and equipment for grading and testing structural veneer, panels and lumber.

Contact: Dan Uskoski - VP Sales
Phone: 509-332-7526
2465 NE Hopkins Court
Pullman, WA 99163
duskoski@metriguard.com
www.metriguard.com



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 as well as government and commercial clients with a particular expertise within the forest products industry. Mid-South has offices in Hot Springs, Arkansas; Cary, North Carolina; and Orono, Maine. Established in 1969, MSECO has since grown steadily in knowledge and experience. 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

200 Mackenan Drive

Cary, NC 27511

sstamey@mseco.com

www.mseco.com



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.

Contact: Tim Peterson - President

Phone: 503-720-0540

31678 South Highway 213

Molalla, OR 97038

tim@millmachinery.net

www.millmachinery.net

NESTEC, Inc.

NESTEC, Inc. is a turnkey provider of thermal oxidation systems for the wood products industry including regenerative thermal oxidizers (RTO) including on line bake out, regenerative catalytic oxidizers (RCO), process scrubbers, Wet Electrostatic Precipitators (WESP), duct design, secondary heat recovery, system upgrades, energy audits, inspections and parts. Our key staff of engineers has over 300 years of experience in the field of thermal oxidation and has participated in solving air emissions problems for the wood products industry since the early 1990s. Whether you need a new air pollution control system or require upgrades and improvements to an existing RTO-WESP system, NESTEC, Inc. is your best resource to ensure a successful project.

Contact: James L. Nester - President

Phone: 610-323-7670

222 East Main Street

Pen Argyl, PA 18072

jnester@nestecinc.com

www.nestecinc.com

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 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: Charlie Brown - Vice President of Sales
Phone: (870) 628-6378
701 E. Arkansas Ave
P.O. Box 159
Star City, AR 71667
cbrown@next-wire.com
www.next-wire.com

Nicholson Manufacturing Ltd.

Industry Leader in ring debarking technology since 1948.

Contact: Russell Huband - NCVS Manager

Phone: 250-654-2235

9896 Galaran Road

PO Box 2128

Sidney, BC V8L 3S6 Canada

forestsales@nmbc.com

www.debarking.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.

Contact: Ed Hauldren - VP of Operations

Phone: 304-562-6835

2825 US Route 60 East

PO Box 220

Hurricane, WV 25526

ed@nisforndt.com

www.nisforndt.com

OCI Melamine Americas

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

Contact: Lee Miller - Application Support

Phone: 800-615-8244

Rhonda Pizzolato - Customer Service

rhonda.pizzolato@ocimelamine-all.com

c/o Advanced Louisiana Logistics - ALL

501 Louisiana Avenue, Suite 201

Baton Rouge, LA 70802

info.melamine@ocinitrogen.com

www.ocimelamine.com



Owens Corning - InterWrap

InterWrap® 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. InterWrap 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. InterWrap's global supply chain efficiency is achieved by our strategic manufacturing and distribution centers located throughout North America, Asia & Europe.

Contact: Clive Mills - Sales Director

Phone: 262-389-0695

2650 Fassitt Road, Bldg. #200

North Charleston, SC 29406 USA

Clive.Mills@owenscorning.com

www.interwrap.com

Pallmann Industries, Inc.

For more than 100 years, Pallmann has designed and built size reduction machinery. Specializing in high-capacity, high-performance stranders, flakers, refiners and mill utilized by the engineered panel board industries.

Contact: Rolf Gren - General Manager

Phone: 973-471-1450

820 Bloomfield Avenue

Clifton, NJ 7012

info@pallmannindustries.com

www.pallmannindustries.com

Panel Machinery & Controls, LLC

At Panel Machinery & Controls, our focus is to provide the most up to date and trouble free Equipment design, Servo Motion Control and Automation systems for the Engineered Wood Products Industry. Our engineering staff has years of experience in quality-designed and field proven equipment and controls for the Plywood Industry. We have service technicians experienced with hydraulic & electrical motion control, capable of on-site trouble shooting and programming of all brands of PLC's and motion controllers. We are a United Laboratories 508A certified panel shop experienced in custom panel design and fabrication. Call or E-mail for more information. Contact: Roger Daniels - President
Phone: 503-744-0830
5422 SE International Way
Milwaukie, OR 97222
roger@panelmachinerycontrols.com
www.panelmachinerycontrols.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), to be held March 12-13, 2020. Contact: Rich Donnell - Editor
Phone: 334-834-1170
225 Hanrick Street
PO Box 2268
Montgomery, AL 36104
rich@hattonbrown.com
www.panelworldmag.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: Ron Iff - General Manager
Phone: 360-538-1480
2999 John Stevens Way
Hoquiam, WA 98550
riff@paneltechintl.com
www.paneltechintl.com



PRESSURE TREATING AND FABRICATED WOOD PRODUCTS

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
4066 SE Tualatin Valley Highway
PO Box 100
Hillsboro, OR 97123
david@permapost.com
www.permapost.com



Raute

As a global leader in machinery manufacturing, Raute is a partner that has extensive expertise in wood products technology. Raute enables its customers to create value added forest assets by supplying technologies and services for profitable and sustainable production of veneer, plywood, and LVL. Raute continually leads the market in developing cutting-edge advancements for large mill-wide projects as well as individual process lines, line modernizations, and equipment upgrades. Contact: Martin Murphy - President, North America
Phone: 604-524-6611 Ext. 379
1633 Cliveden Avenue
Delta, BC V3M 6V5 Canada
martin.murphy@raute.com
www.raute.com



INDUSTRIAL CODING AND MARKING

REA JET

Because REA JET knows that real demands need real solutions, we continue to be a global leader of coding and marking equipment for the building materials industry. German engineered, our technology has been consistently designed and developed to withstand the demands of harsh production environments. Our extensive line of technology includes Large Character Ink Jet Printers (DOD), zero maintenance High Resolution Ink Jet (HP) printers as well as Laser and Spray Mark systems. Contact REA JET today to learn more about our products, capabilities and service offerings. Contact: Nicole Richie - Marketing Manager
Phone: 440-332-0555
7307 Young Drive
Walton Hills, OH 44146
nrchie@reajetus.com
www.reajetus.com

Rockwell Automation

Innovative Industrial Automation. Rockwell Automation, the world's largest company dedicated to industrial automation and information, makes its customers more productive and the world more sustainable. Throughout the world, our flagship Allen-Bradley® and Rockwell Software® product brands are recognized for innovation and excellence. Contact: Stephen Howell - Industry Manager Forest Products, NA
Phone: 770-754-8540
11575 Great Oaks Way, Suite 110
Alpharetta, GA 30022
slhowell@ra.rockwell.com
www.rockwellautomation.com

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 and packaging requirements. Samuel's product line includes steel and plastic strapping, pneumatic and manual hand tools, seals, edge protection, stretch-wrap, product identification equipment and 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. Contact: Bob Hadden - Forest Industry Manager
Phone: 800-667-1264
2278 - 192nd Street, Unit 109
Surrey, BC V3S 3X2 Canada
bob.hadden@samuel.com
www.samuelstrapping.com

Sansin Corporation (The)

Backed by over 30 years of proven performance with large commercial, residential and mass timber wood buildings and structures, Sansin is the global leader in developing high-performance factory finishes that deliver the color, durability and performance that architects, engineers and builders can count on. From undercoats, treatments and preservatives to finishes and fire retardants, Sansin's Precision Coat products provide wood protection for a variety of substrates and engineered wood products, including cross-laminated timber, siding, OSB, glulam, millwork and timbers. Sansin continues to deliver environmentally friendly wood coatings that enhance performance without compromise. Contact: Caroline March-Long - Director of Sales and Marketing
Phone: 519-245-2001
111 MacNab Ave.
Strathroy, ON N7G 4J6 Canada
cml@sansin.com
www.sansin.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: Bill Holbrook - Director of Sales

Phone: 706-766-6888

827 Pine Avenue

bholbrook@polymersolutionsgroup.com

www.polymersolutionsgroup.com

SEMCO

SEMCO helps businesses cut lighting energy cost by 60-75% through turnkey LED lighting retrofits. We obtain utility, state, and federal incentives to pay for a large percentage of the new lighting. We represent our customers and buy directly from leading US LED manufacturers, securing the best prices, the longest warranties, and the most effective lighting solutions. From design and layout to project management, we handle the entire lighting upgrade, creating a brighter, safer work environment and improved bottom line for our customers.

Contact: James Fletcher - President

Phone: 251-747-0501

731 Wedgewood Drive

PO Box 4724

Gulf Shores, AL 36542

jimf@thesemco.com

www.thesemco.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 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.

Contact: Dirk Koltze - President

Phone: 704-424-4141

200 N. Cobb Pkwy., Suite 302

Marietta, GA 30062

d.koltze@siempelkamp-usa.com

www.siempelkamp-usa.com

SIGNODE INDUSTRIAL GROUP

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.

Contact: Claude Gregory - Forest Products Industry Manager

Phone: 828-850-9777

3624 West Lake Avenue

Glenview, IL 60024

cgregory@signode.com

www.signode.com

SMARTTECH

BRIDGE TO SMART TECHNOLOGIES



SMARTTECH

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Contact: Hanoch Magid - President

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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

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W V C O

Willamette Valley Company

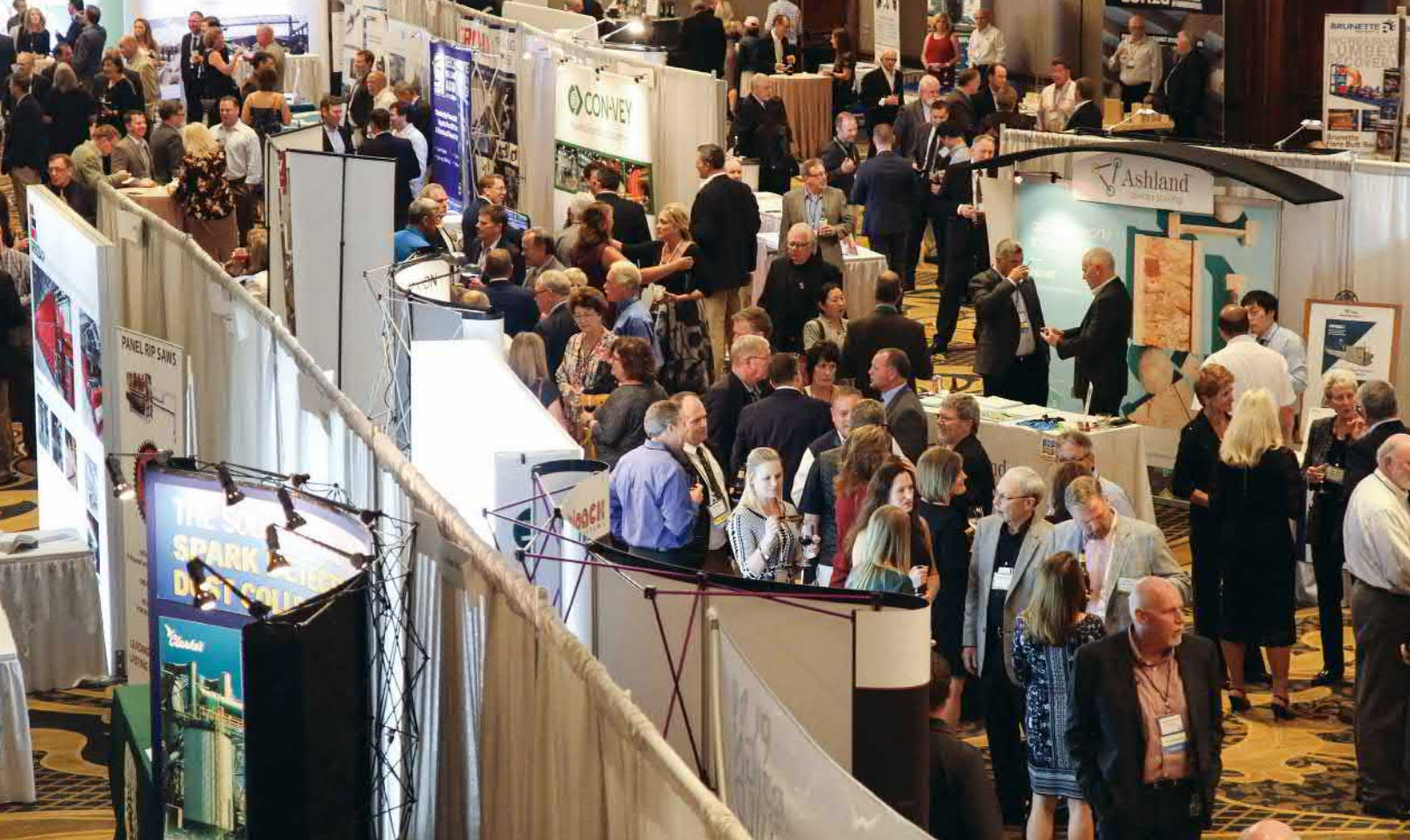
Willamette Valley Company manufactures epoxies, putties and urethanes for upgrading all wood substrates, and also makes a wide range of water based coatings, primers and sealers. Willamette also makes many fillers and extenders for wood adhesives and plywood glues. Pretec, the company's equipment solutions 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
990 Owen Loop
PO Box 2280
Eugene, OR 97402
tony.vuksich@wilvaco.com
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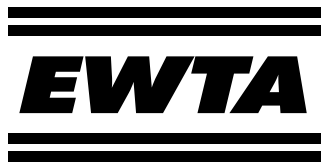
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INFO FAIR 2018

EWTA Members Gather for Annual Supplier Exhibition

EWTA members and guests from around the world gathered in San Antonio Oct. 27-29 for the Engineered Wood Technology Association's annual Info Fair supplier exhibition. Info Fair is an opportunity for

members to share ideas and network with others in the engineered wood industry, and the event is held annually in conjunction with APA's Annual Meeting. This year, 87 EWTA member companies exhibited at the event, and 61 sponsored.

Info Fair was held at the La Cantera Resort and Spa.

In addition to Info Fair, the annual extended weekend also provides an opportunity for both EWTA and APA members to attend APA-sponsored

Continued page 51



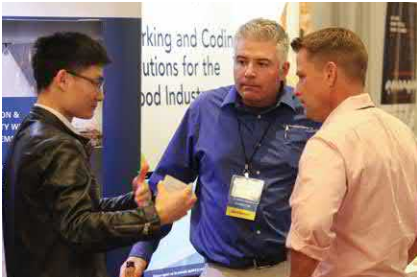


Photo courtesy of APA



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EWTA members posed for the association's annual group photo.

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Mark Your Calendars: Info Fair 2019 Dates Set

Info Fair 2019 will be in Tucson, Ariz., this year; the land of saguaro cacti and sunny skies. The event will be held Nov. 2-4 at the JW Marriott Starr Pass Resort & Spa. Registration opens April 15. For information, visit www.engineeredwood.org and click on Events and Programs, or email coordinator Emily Houg at emilyh@engineeredwood.org




Continued from page 48

workshops, participate in roundtable discussions and listen to presentations about association activities. Members also took part in numerous receptions, luncheons and sporting competitions, including the annual golf tournament, cripple coot shoot and Ole Sorenson Memorial Tennis Tournament. 



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SUPPLIER EXCELLENCE

EWTA Members Recognized in Annual Supplier Awards Program

by Sheila Cain



Photo courtesy of APA

EWTA honored the winners of the 2018 EWTA Supplier of the Year Awards at the Chairman's Dinner during APA's Annual Meeting last October. From left: James Slay, Arclin; Dale Brown, USNR; James Wright, Arclin; Rich Donnell; Hatton Brown/Panel World magazine; John Murray, Willamette Valley Company; Jim Enright, vice-chairman, APA Board of Trustees; and Terry Kerwood, EWTA managing director.

Four EWTA member companies were honored during the Chairman's Dinner at the APA Annual Meeting in San Antonio, Texas, Oct. 29 for excellence in the industry. The companies were winners in EWTA's annual Supplier Awards program. The two-pronged program includes the Supplier of the Year Award (three categories) and the Innovation of the Year Award.

The Supplier of the Year Awards are based on the quality, service and delivery of EWTA member products and services to APA member companies. The

awards are presented for each of EWTA's membership categories: Equipment and Tooling, Materials and Supplies, and Consulting and Services. The Innovation of the Year Award recognizes a company providing a new technology, product or service that has been shown to reduce production costs, increase productivity, improve product quality, or in some other way provide a bottom line benefit to APA members.

The award winners are selected by votes of APA member representatives.



Photo courtesy of APA

Supplier of the Year and Innovation of the Year award winners take home trophies for their hard work.

WINNERS OF THE 2018 SUPPLIER OF THE YEAR AWARDS ARE:

EQUIPMENT/TOOLING CATEGORY

USNR

USNR USNR recently acquired the business of Ventek, Inc., the industry leader in veneer scanning, grading, and handling systems for the plywood industry. This rounds out USNR's line of plywood machinery that includes Coe brand lathes, computerized chargers, core drives, tray systems, dryers, stacking systems, lay-up lines, and presses. USNR also supplies machinery for beam lamination, finger-jointing and presses for the composite board industry.



Terry Kerwood (left), EWTA managing director, congratulates USNR employees (from left, Alan Knokey and Dale Brown) for their Supplier of the Year Award in the Equipment/Tooling category. At far right is Jim Enright, APA vice-chairman.

MATERIALS/SUPPLIES CATEGORY

Willamette Valley Company

W V C O 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.



Willamette Valley Company employees (and a few spouses) joined EWTA Managing Director Terry Kerwood (far left) on stage to accept their Supplier Award. From left are Kerwood, Mark Dewar, Donny Arrington, Cathy Rudinsky- Board of Directors, John Harrison, APA Board of Trustees Vice-Chairman Jim Enright, Tony Vuksich, John Murray, Kurt Russell, Randy Green, Pam Green, Robert Pitts, Leslie Pitts, Mindy Sakraida, Tom Sakraida and Mark Osuna.

CONSULTING/SERVICES CATEGORY

Panel World Magazine/Hatton Brown Publishers

PanelWorld Panel World publishes six issues per year for a 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).



EWTA Managing Director Terry Kerwood congratulates Rich Donnell with *Panel World Magazine/Hatton Brown Publishers* for his company's win in the Consulting/Services category.

INNOVATION OF THE YEAR AWARD

Arclin: Enhanced Bond Technology

Arclin's Enhanced Bond Technology is specifically designed to improve adhesive flow, penetration, and ultimately the bond quality on wood surfaces that are notoriously difficult to bond. Resins incorporating Enhanced Bond Technology better cut through the chemically modified veneer surface to improve adhesive flow and penetration and to increase the depth and consistency of wood failure when gluing overdried veneer.



From left, Terry Kerwood, EWTA managing director; James Dantzler, Arclin; James Wright, Arclin; James Slay, Arclin; and Jim Enright, vice-chairman, APA Board of Trustees.

A CLOSER LOOK

CORRIM Continues to Assess Wood's Performance

by Maureen Puettmann

Today's designers and specifiers of building materials consider environmental impacts when making the choice of which material to use. Wood products have many positive environmental attributes that may help position wood as a material of choice. However, other building materials producers also make environmental claims to position their materials as positive environmental choices. Without a systematic, scientific basis to assess environmental attributes, sorting out environmental claims can turn into a subjective battle where slick marketing ads can win out over true environmental attributes.

Fortunately, the wood industry had the foresight many years ago to invest in and embrace scientific methods to assess the environmental impacts of wood production and use. These methods, now embodied in various ISO standards, provide the basis to measure the cradle-to-grave impacts of material use. This gives the wood industry a solid technical and transparent basis to foster confidence in using wood products.

Updating EPDs on Engineered Wood

Beginning in 1996, with support from various wood associations and producers, the nonprofit Consortium for Research on Renewable Industrial Materials (CORRIM) has developed comprehensive life cycle analysis (LCA) documents on the environmental performance of wood building materials. The CORRIM website is host to more than 60 LCA reports and more than 30 refereed publications documenting the environmental impacts of forestry operations and the production of solid wood products and engineered wood products.

CORRIM researchers have produced LCAs on U.S.-produced plywood, oriented strand board, laminated strand lumber, laminated veneer lumber, glulam beams and engineered wood I-joists, to

name a few. The final result of the LCA study for a material is the publication of an Environmental Product Declaration, or EPD, which reports the environmental impacts linked to a product or service. The EPD serves to communicate the environmental performance of a product to consumers. (See side story, What is an EPD?)

In accordance with ISO standards, the underlying data used to develop EPDs must be refreshed on a periodic basis. In 2012, CORRIM set out to update the original reports commonly known as the Phase I Research Reports by collecting production data from engineered wood producers located in the Pacific Northwest and southeast U.S.

The need for updated data was to remain in conformance with the North American Structural and Architectural Wood Products PCR and to update the current EPDs set to expire in April 2019.

The wood product production data were collected from individual facilities on a voluntarily basis. Industry participation is vital for the quality of the LCAs and EPDs. The number of wood product manufacturers participating was higher in these last surveys compared to the original surveys for Phase I. The wood industry has an increased interest in quantifying the environmental footprint of their production, which resulted in a greater willingness to participate. The resulting benefit of increased participation means the overall data quality is higher.

Changes in Latest Reports

Some of the changes between the original Phase I reports and the latest reports is the requirement for performing the LCA based on an economic allocation versus a mass allocation. Using an economic allocation means the environmental impacts produced are allocated to the product

Table 1

Pacific Northwest Glulam Allocation used for a Mass or Economic Allocation Approach¹

Glulam Production	Mass Allocation	Economic Allocation
Glulam (product)	88%	100%
Co-Products	12%	0%
Total	100%	100%

Lamstock Production	Mass Allocation	Economic Allocation
Lumber, Rough Green	50%	86%
Chips, Green	24%	11%
Bark, Green	6%	1%
Hog Fuel, Green	14%	1%
Sawdust, Green	6%	1%
Total	100%	100%

¹ Bowers et al. 2017. CORRIM: Report – Module G1 Cradle-to-Gate Life-cycle assessment of glued laminated timbers US Pacific Northwest region.

based on value, not a mass balance (see Table 1 below). The latest CORRIM LCA reports show that when an economic allocation is performed, environmental impact associated with the main product increased. The magnitude of the shift in environmental burdens versus a mass allocation can vary by product, raw material input and type of co-products produced.

An economic allocation approach can be appropriate in production where low-value, high-volume co-products are common. However, there remains a large uncertainty in the pricing of wood products and co-products and their use as an allocation method in LCA.

In the CORRIM LCA reports, several impact categories (energy consumed, fresh water consumption, raw material used and waste) are reported (see Table 2). Renewable biomass used for heat

energy in wood products facilities represents a major portion of the total energy demand. In all but I-joist production, biomass energy represents between 53 and 63 percent of the total energy use for the EWP. This results in a large reduction in the non-renewable energy used to produce many wood products. Solid waste and non-renewable materials are low in EWP production.

Forest management scenarios consider the CO₂ uptake by trees and its storage as carbon. When the trees are harvested, the carbon leaving the forest is considered an emission. This accounting principle is important because it prevents double accounting. For example, biomass when burned (biogenic carbon) for energy is not accounted as a greenhouse gas and is therefore not part of the global warming potential value. Furthermore, this allows for the harvested wood prod-

uct carbon to be reported as a carbon store over a long period of time. This treatment of carbon is consistent with the Intergovernmental Panel for Climate Change (IPCC 2006). The difference of the carbon stored in the product and carbon emissions released during production is the net carbon emission. Using the IPCC carbon accounting method, all EWP store more carbon in the wood product than is released during production. Here, the CO₂ uptake for wood and bark is determined by multiplying the product process input dry weight of wood and associated bark by 1.83 using a 50 percent carbon content of wood and bark and the molecular weight of CO₂ at 3.664.

Continuing need for data

CORRIM has reported over the last decade the role carbon will play as a metric

TABLE 2

ENVIRONMENTAL IMPACT ASSESSMENT RESULTS FOR FOUR EWPS² PRODUCED IN THE PACIFIC NORTHWEST U.S.

PER CUBIC METER (M3)		PLYWOOD	GLULAM	LVL	I-JOISTS
Impact Categories					
Global warming potential	kg CO ₂ eq.	143	116	218	263
Acidification Potential	H+ moles eq.	1.60	1.22	2.29	2.61
Eutrophication Potential	kg N eq.	0.06	0.05	0.08	0.10
Ozone depletion Potential	kg CFC-11 eq.	0.00	0.00	0.00	0.00
Smog Potential	kg O ₃ eq.	25	25	31	35
Energy					
Non-renewable fossil	MJ	2,440	1,647	3,740	4,599
Non-renewable nuclear	MJ	235	137	318	2.22
Renewable, biomass	MJ	4,610	3,268	4,710	3,321
Renewable (other)	MJ	148	95	196	152
Total Energy	MJ	7,433	5,148	8,964	8,074
Other Reporting Requirements					
Non-renewable materials	kg	5.81	9.37	5.11	3.38
Renewable materials	kg	640	510	862	615
Fresh water	L	1060	458	1220	1127
Solid waste	kg	11.80	8.84	9.15	6.79

² Puettmann et al. 2017. www.corrim.org; Bowers et al. 2017. For Prod. J. 67(5/6)2017(368-380); Bergmann and Alanya-Rosenbaum. 2017. For Prod. J. 67(5/6)2017(343-354); Bergmann and Alanya-Rosenbaum. 2017. For Prod. J. 67(5/6)2017(355-367)

What is an LCA?

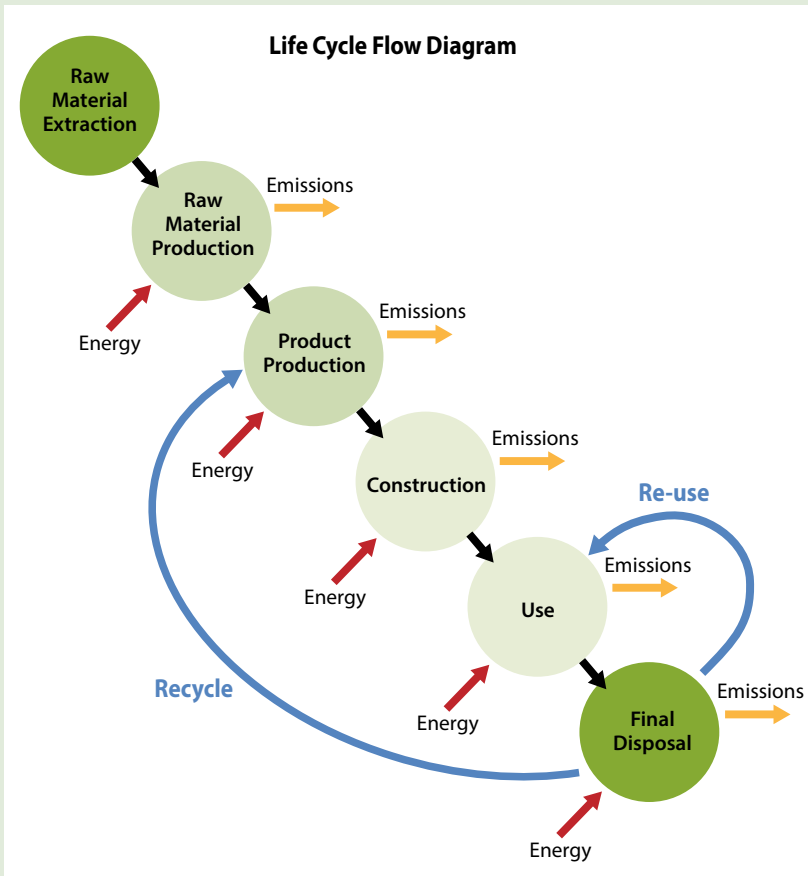
Life-cycle assessment, commonly referred to as "LCA," has evolved into the internationally accepted method to analyze the environmental impact of a product. An LCA begins with a collection of inputs and outputs that occur during the production process. Common inputs are fuels, energy and raw materials, while outputs are emissions to air, water and land, as well as the main product and any associated co-products.

These inputs and outputs are referred to as the life cycle inventory (LCI). The LCA methodology can also determine potential impacts of production, use and disposal. A life cycle impact assessment (LCIA) takes the life cycle inventory output and categorizes each output into a set of potential impacts.

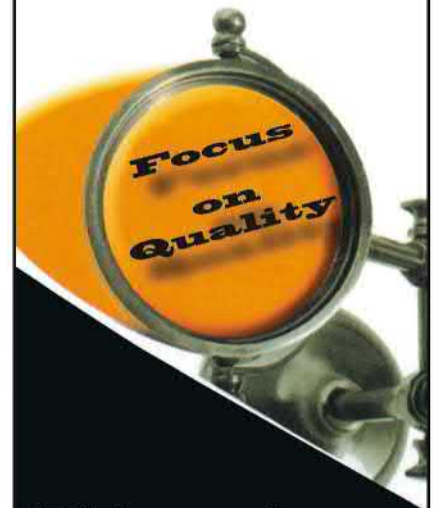
In North America, some of the potential impacts reported in LCAs are global warming potential, acidification, eutrophication, ozone depletion and smog. Energy use is also reported and listed as coming from fossil, nuclear, biomass, hydro, solar or wind sources.

LCAs also are performed under a defined system boundary. For example, the LCA might only include activities on-site at a production facility, which would classify the LCA as a gate-to-gate. A cradle-to-gate could refer to all activities from resource extraction through production or construction. A cradle-to-grave would include extraction, production, use/maintenance and final disposal.

Designers and specifiers today are assessing building materials for their environmental impacts as well as the other functional aspects of products, such as structural performance, ease of installation and product durability. The LCA studies conducted by CORRIM ensure that the wood industry can provide the needed data to designers so that wood remains a viable and often preferred building material.



This image shows the inputs and outputs for a Life Cycle Inventory.



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What is an EPD?

An Environmental Product Declaration, or EPD, is a standardized report of environmental impacts linked to a product or service. Data collected in an LCA can be summarized in an EPD. An EPD is similar to nutritional labels on food. It serves to communicate the environmental performance of a product to consumers.

EPDs are developed using a harmonized set of standards documented in a PCR (Product Category Rule). Under these standards, EPDs are considered a Type II environmental declaration. The PCR serves as a guide in the development of declarations for products that are comparable to others within a product category.

Reasons for publishing an EPD can vary by manufacturer. Usually a manufacturer or industry desires to better understand the environmental footprint of their product. While an LCA can pinpoint environmental hot spots in a product's lifecycle, they are lengthy and can be highly technical—neither of which appeals to a non-LCA audience. EPDs can fill the gap for producers who choose to disclose LCA results in a format that's readable to the public. EPDs can also be a good resource for consumers who can compare different products side-by-side when produced under the same PCR.

There are two types of EPDs: product specific and industrywide. For a product-specific EPD, an individual company conducts an LCA specific to its own production operations and develops the EPD for a particular product. In an industrywide EPD, data is based on an industry average. These usually involve multiple producers who develop the same product used for the same purpose. This is appropriate for commodity products, such as lumber and plywood, where production technology is not greatly different among them.

It is important to note that EPDs are not judgmental. There is no implied performance benchmark to achieve or show how "green" a product is. EPDs are there to be a guide to consumers, allowing them to make the decision.

EPDs for wood products are downloadable at www.awc.org/sustainability/epd

EPD "Nutritional" Label – Wood Products


Amount per Unit

LCA Impact Assessment		Total	Forestry Operations	Wood Products Production
Global Warming Potential	kg CO ₂ eq.	143	11	132
Acidification Potential	SO ₂ eq.	1.60	0.15	1.45
Eutrophication	kg N eq.	0.06	0.01	0.05
Smog	kg O ₃ eq.	25	5	20
Total Energy	MJ	7,425	165	7,260
Non-Renewable Resources	kg	6	0.01	6
Renewable Resources	kg	640	0.00	640
Water Use	L	1,061	11	1,050

INGREDIENTS: CARBON

The data collected in a Life Cycle Analysis can be summarized in an Environmental Product Declaration, or EPD. An EPD communicates the environmental performance of a product to consumers and resembles the nutritional labels found on foods.

for determining a product's sustainability. Over the last decade we have seen an increase in demand for wood product LCAs and EPDs. Architects and engineers are searching for accurate wood LCA information to help improve the environmental footprint of buildings. Although thorough in its reporting, we expect these latest LCA reports to face scrutiny and continuous updates to remain relevant. It is our goal that these wood product LCA reports will serve as building blocks in larger studies that assess the economic, social and environmental impacts of wood product use in current and emerging markets such as mass timber construction.

CORRIM is currently involved in updating softwood lumber and hardwood lumber production in the Inland Northwest and Northeast-Northcentral regions of the U.S. 

Maureen Puettmann is the director of operations for CORRIM—The Consortium for Research on Renewable Industry Materials. For more detailed information on individual product LCAs, visit www.corrin.org. All reports are downloadable and free. For a copy of the Forest Products Journal CORRIM Special Issue-Forest Products Life-Cycle Analysis Update Overview, contact Puettmann at maureen@corrin.org.

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Three Retire, Three Join EWTA Advisory Committee

Three long-time EWTA Advisory Committee members have retired from the committee, and three new members have stepped in to take their places.

Rick Nelson has been a committee member for three years. He stepped down from his position last fall and is retiring this spring as Weyerhaeuser's Kalispell (Mont.) plant manager where he's worked for the past three years. He worked in various management positions for Plum Creek/Weyerhaeuser for 36 years before that.

Christie Cordova, quality value yield manager for Georgia-Pacific Wood Products in Atlanta, has taken Nelson's spot on the committee. Cordova also serves on the APA Technical and Quality Advisory Committees and the Industrial Subcommittee for APA's Marketing Advisory Committee.

Dale Leeper, a member of the Advisory Committee since 2010 and PF Technology Manager for member company Hexion, retired from both positions Aug. 31, 2018. Leeper had also served on the APA standing committee that oversees revisions to PS

1 and PS 2. Hexion's Mark Clark has filled Clark's vacated seat.

Tim Fisher served on EWTA's Advisory Committee for many years, nine as vice-chairman. He also worked at USNR for 37 years, most recently in a business development role for the company's veneer/plywood division. He retired from both USNR and his vice-chairman role with EWTA last December. USNR's Chris Van Ackeren will assume Fisher's role on the Advisory Committee.

EWTA Committee Recommends 2019 Budget

The EWTA Advisory Committee finalized the association's 2019 budget during its meeting last October in San Antonio, Texas. The budget is for income of \$485,800 and expenses of \$484,800, resulting in a year-end net surplus of \$1,000 and cash reserves of \$238,839. The proposed budget was forwarded to the APA Board of Trustees for approval.

EWTA Allocates \$80,000 For APA Research

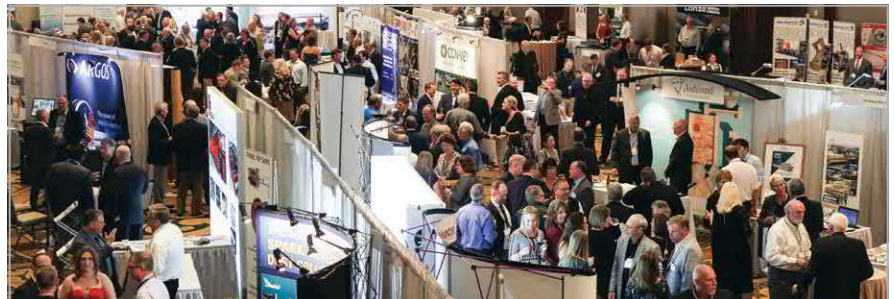
EWTA's Advisory Committee, at its meeting in San Antonio, Texas, last October, voted to recommend an allocation of \$80,000 to fund four projects benefiting the engineered wood industry. The project proposals, presented by APA staff, included:

- \$30,000 for an acoustic evaluation of a one-hour fire-rated I-joist assembly
- \$10,000 for residential market study on Wall Panelizers
- \$10,000 to complete the Build a Better Building series of educational videos
- \$30,000 to study VOCs from mass timber products used in commercial buildings

The recommendation was forwarded to the APA Board of Trustees as part of the overall EWTA budget for 2019. Research contributions, made possible by EWTA member support, continue to trend in a positive direction with more than \$350,000 invested since 2000.

New EWTA Contacts For Member Services, Info Fair

EWTA members now have two new contacts at the association, following last fall's retirement of former Member Services Director and Info Fair Coordinator Melinda Lilley.



Join us at Info Fair 2019!



The Engineered Wood Technology Association's Info Fair supplier exhibition – held in conjunction with APA's annual meeting – provides face-to-face connection with leading engineered wood products industry decision-makers.

REGISTRATION OPENS April 15

Early Bird Registration Ends August 30

Info Fair: November 2-4, 2019

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For more information:

Emily Houg: emilyh@engineeredwood.org



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Emily Houg serves as the new Info Fair manager. Houg has coordinated special events and conferences across the U.S. for government agencies, associations and nonprofits and has held board positions with the Pacific Northwest Chapter of Professional Meeting Convention Association. She can be reached at emilyh@engineeredwood.org.

Also new to EWTA's team is Sydney Martin, the association's new member services coordinator. In this role, Martin manages membership directory updates, works with *Engineered Wood Journal* advertisers, and provides general support

to EWTA members, the managing director and Info Fair manager. She can be reached at sydney@engineeredwood.org.

Date Set for 2019 EWTA Info Fair

It's not too early to start planning for the 2019 EWTA Info Fair and APA Annual Meeting. This year's events will be held Nov. 2-4 at the JW Marriott Starr Pass in Tucson, Ariz. Early Bird registration for Info Fair will open April 15. For more information, contact Emily Houg at emilyh@engineeredwood.org.



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EWTA Welcomes 2 New Member Companies

Two companies have joined EWTA in recent months as new members. They are:

- **Airstar Inc.** of Irvine, Calif.; a manufacturer of quality control systems for the forest products industry. Its non-contact system can test all engineered wood products including plywood, LVL, OSB and glulam. President Jan Strycek can be reached at jan@airstar1.com
- **Nextwire**, of Star City, Ark.; with more than 50 years of manufacturing and engineering experience in woven fabrics. Nextwire CleanSheet II caul and press screens offer extended life resulting in lower cost per board foot. Vice-president of Sales Charlie Brown can be reached at cbrown@next-wire.com

Dürr Acquires Division Of Babcock & Wilcox

Dürr Systems recently announced that it has acquired the industrial environmental technology business of Babcock & Wilcox.

The acquisition of Babcock & Wilcox's environmental technology specialists, MEGTEC and Universal, has meant significant growth for Dürr's environmental technology division, Clean Technology Systems.

With this acquisition, the company is broadening its business in Europe and North America to meet the growing demand for industrial environmental solutions in the regions, according to a press release announcing the deal.

Dieffenbacher Wins Award For Knife Ring Flaker

Dieffenbacher was recently honored for its design of a knife ring flaker, a joint project between Dieffenbacher's Wood Business Unit and the Tübingen design firm defortec.

The product received the Focus Open Silver Award 2018 from a jury of the Design Center Baden-Württemberg. The jury said the design "graphically visual-

izes the enormous forces at work inside the machine during the flaking process and conveys solidity and reliability."

Walker Environmental Opens Calgary Office

Walker Environmental, a division of Walker Industries, opened a new office in Calgary, Alberta, Canada, last fall. The new office marks the company's fourth location in Alberta.

Wanhua Names Site of New Manufacturing Base

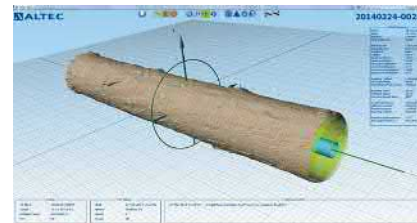
Wanhua Chemical recently announced that it will develop a new \$1.25 billion chemical manufacturing complex in Convent, St. James Parish, La. The new MDI plant has a capacity of 400 kilotons per year and will generate 1,000 construction jobs at peak activity. It will also create 170 new direct jobs with another 1,060 new indirect jobs.

Construction is set to start this year, with operations anticipated to begin in 2021. Wanhua currently operates fully integrated MDI manufacturing complexes in Yantai, Ningbo and Zhuhai, China; and Kazincbarcika, Hungary.

Altec Installs Scanner For New Client

Altec Integrated Solutions recently completed its first installation of charger controls and its Altec XY Scanner in the hardwood industry. The job included the installation and commissioning of the controls and scanner for Columbia Forest Products.

The Altec team reused the existing charger PLC and IO components, in addition to providing the client with a new XY laser scanning system and solutions PC.



Lonza

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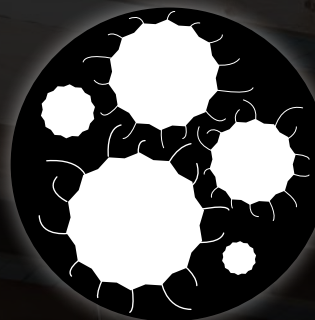
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Raute Appoints Järvinen as New CFO

Raute recently announced that it has appointed Tarja Järvinen as group vice president, CFO of Raute Group. She will also be member of Raute Group's executive board, reporting to president and CEO Tapani Kiiski. Järvinen assumed the position on February 1.

Willamette Valley Co. Names New Business Manager

Robert Pitts has been named the business manager for Willamette Valley Co.'s North American Wood Products business. According to a press release from the company, Pitts has been instrumental in guiding Willamette Valley Co.'s North

American sales efforts in sealers and primers for engineered wood for nearly 20 years.

Pitts will focus his efforts on the company's plywood business and the growth of its specialty wax business, as well as paint and coating products. Pitts started his new position January 1.

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2019

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- 3-5** IWPA 63rd World of Wood Annual Convention, Tucson, Ariz., www.iwpawood.org
- 23-25** American Forest Resource Council annual meeting, Stevenson, Wash., amforest.org

MAY

- 5-7** American Wood Protection Association annual meeting, Orlando, Fla., www.awpa.com
- 5-7** Composite Panel Association Spring Meeting, Naples, Fla., www.compositepanel.org
- 8-9** Global Softwood Log and Lumber Conference, Vancouver, B.C., www.woodmarkets.com
- 12-14** Decorative Hardwoods Association spring conference, Santa Rosa, Calif., www.decorativehardwoods.org
- 20-21** Bio Fiber Polymer Composites Symposium, Madison, Wis., forestprod.org/woodcomposites
- 27-31** LIGNA: World Fair for the Forestry and Wood Industries, Hannover, Germany, www.ligna.de

JUNE

- 6-8** American Institute of Architects Conference on Architecture 2019, Las Vegas, Nev., conferenceonarchitecture.com
- 25-28** Forest Products Society 73rd International Convention, Atlanta, Ga., www.forestprod.org
- 26-28** Southern Forest Products Association's 2019 Forest Products Machinery and Equipment Expo, Atlanta, Ga., sfpaexpo.com

JULY

- 17-20** Association of Woodworking and Furnishings Suppliers Fair, Las Vegas, Nev., awfsfair.org

SEPTEMBER

- 4-6** Bioenergy 2019, Jyväskylä, Finland, www.bioenergiamessut.fi
- 9-12** Furniture China 2019, Shanghai, China, www.furniture-china.cn
- 17-19** World Forestry Center's "Who Will Own the Forest?" conference, Portland, Ore., www.wwotf.org
- 24-27** Nondestructive Testing and Evaluation of Wood Symposium, Freiburg, Baden-Württemberg, Germany, ndtesymposium.org

OCTOBER

- 6-8** Composite Panel Association Fall Meeting, Denver, Colo., www.compositepanel.org

NOVEMBER

- 2-5** APA Annual Meeting and EWTA Info Fair, Tucson, Ariz., www.apawood.org, www.engineeredwood.org

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Mail: 7011 So. 19th Street, Tacoma, WA 98466
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To suggest or submit stories:

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As a matter of policy, mailing lists for this publication are not available. For a listing of members of the Engineered Wood Technology Association (EWTA), log on to www.engineeredwood.org. For a listing of APA members, visit www.apawood.org.

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With global expertise in wood products technology and services, Raute is innovation driven and continually leads the market in developing cutting-edge advancements in the profitable and sustainable production of veneer, plywood and LVL. Raute provides complete solutions for large mill-wide projects as well as individual process lines, line modernizations, and equipment upgrades.

Signode Packaging Systems

Phone: 828-850-9777
3624 West Lake Avenue
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www.signode.com



Signode's direct-to-product and print-and-apply label printing solutions utilize the latest technology to deliver high-speed, high-resolution printing with precise placement. From multiple color options to variable data capabilities, they integrate seamlessly into operations and can accommodate changing production needs, including both face and end printing applications. Signode's printing solutions are manufactured with advanced control systems and integrated features to simplify operation and maintenance, providing better performance to keep production lines running effectively and efficiently.


Enabling Engineered Wood Products



For over 80 years, Hexion has been at the forefront of the engineered wood industry, inspiring our partners to produce the most sustainable building materials on earth.

Hexion's resins and adhesives enable...

- Increased heat resistance
- Increased water resistance
- Improved manufacturing productivity
- Utilization of the entire tree
- CO₂ sequestering

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A RENAISSANCE IN VENEER SOURCING CONFIDENCE

