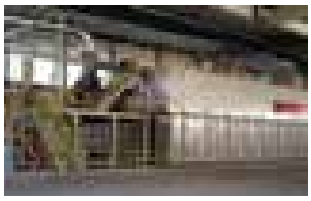
ENGINEERED WOOD Journal
AUTUMN 2019

IN WITH THE NEW

Wood Science Programs Renamed, Rebranded

PAGE 14



HARNESSING HOT AIR

A Brief History of Jet Veneer Dryers

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APA ANNUAL MEETING AND INFO FAIR PREVIEW

Beyond: Exploring the Industry's Expanding Frontiers

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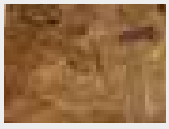

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Volume 22, No. 2, Autumn 2019

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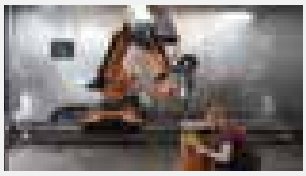

Image courtesy of Evan Schmidt - TallWood Design Institute

About the Cover Photo:
About the cover photo: Jörn Dettmer, technical manager for Oregon State University's TallWood Design Institute, programs a robot for wood milling. Many universities' wood science programs are changing and adding programs to appeal to a student body interested in technology and sustainability.

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In this issue…

The idea to bring together professors from wood science programs at universities throughout the U.S. was one that Robert Smith, professor and department head at Virginia Tech's Department of Sustainable Biomaterials, had been considering for years. When he shared his vision with his colleagues, they obviously thought the idea was a sound one as well: all the schools Smith reached out to sent at least one representative to the meet-up, which happened on the Virginia Tech campus in early 2018.

The gathering gave the department leaders a chance to not only share with their peers the changes they've made in their courses and programs over the past few years, but also brainstorm ways to recruit students.

It's no secret that wood science programs are not often students' first choices when they start their college careers.

"Most high school students want to go into engineering, science or business and never think of natural resources," says Smith.

Smith is hoping for a shift in that line of thinking. Nearly all of the representatives at last year's gathering reported changes to the names of their degree programs and courses, with many others sharing news of significant modifications to their curriculum. These changes were made with one main goal in mind: appeal to a new generation of students with interests and career aspirations that differ from those of their parents' generation.

We've highlighted many of the changes at wood science programs across the country in our story, "In with the New," on page 14.

Beyond: APA's Annual Meeting and EWTA's Info Fair

If it's fall, it's time for APA's Annual Meeting and EWTA's associated supplier exhibition, Info Fair. The JW Marriott Tucson Starr Pass Resort & Spa in Tucson, Arizona, is the venue for the annual gathering, and the dates are Nov. 2-5. Speakers and workshops will reflect the meeting's theme: Beyond. You'll get the latest news on APA's lab expansion and hear from experts about new market opportunities facing the industry, and also have a chance to gather industry information and build valuable network connections.

I always look forward to escaping the rain and grey skies of the Pacific Northwest's fall for the promise of sunnier weather, and this year is no exception. Knowing that I'll again have the opportunity to connect with APA and EWTA members – who have, over the years, become friends – makes it all the more special.

scain@engineeredwood.org

Forest Products Society Announces Award Winners

The Forest Products Society, a global network of forest products professionals, presented its 2019 Annual Excellence Awards in June at the 73rd FPS International Convention in Atlanta. The winners are:

- Richard Vlosky, PhD, for the Fred W. Gottschalk Memorial Award. This award recognizes exceptional service to FPS by an individual member. Vlosky has been a member of the Society for 27 years and has been involved in a number of strategic leadership roles at the national and section levels. He served as FPS president in 2016 and is currently chairman of both the 2019 International Nominating Committee and the Mid-South Section Communications Committee.
- Taysuya Shibusawa, PhD, for the Wood Engineering Achievement Award. This award recognizes accomplishments and innovations in the discipline of wood engineering, including structures, structural elements, building codes, consensus standards, design procedures and education. Shibusawa was hired by FPS in 1994.
- Birgit Anna-Lisa Östman, Joachim Schmid, Michael Klippel, Alar Just, Norman Werther and Daniel Brandon, for the L.J. Markwardt Award. This award recognizes the author(s) of a *Forest Products Journal* or *Wood and Fiber Science* technical paper published during the previous two years that has the most outstanding merit in the field of wood as an engineering material. The 2019 winning paper is "Fire Design of CLT in Europe," published in *Wood and Fiber Science* in 2018.
- Ju Dong (first place) and Oluwatosin Oginni, PhD (second place), for the Wood Award. The Wood Award recognizes the most outstanding graduate student research conducted in the field of wood and wood products. Dong, a student at Louisiana State University-Baton Rouge, wrote a paper titled, "3D printed conductive polycaprolactone composites integrated with carbonized cellulose nanofibers: toward the applications for electromagnetic interference (EMI) shielding and deformation sensing." Oginni, who received his doctoral degree at the School of Natural Resources, West Virginia University, wrote a paper titled, "Pyrolysis of dedicated bioenergy crops grown on reclaimed mine land in West Virginia."


Richard Vlosky


Taysuya Shibusawa


Ju Dong


Oluwatosin Oginni

CPA Will Now Require EPA Compliance

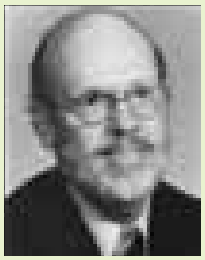
The Composite Panel Association has updated and strengthened its Eco-Certified Composite (ECC) Sustainability Certification program, now requiring 100 percent compliance with EPA TSCA Title VI.

The new rules took effect March 22, and all composite panel mills certified to the standard must meet the updated requirements in ECC 4-19. This includes a plant's commitment to meeting the CARB and EPA TSCA Title VI formaldehyde emissions requirements for 100 percent of its panels 100 percent of the time, even if panels are sold in countries where those regulations do not apply.

The standard also specifies carbon footprint, life-cycle inventory and other verifiable environmental practices and emphasizes the responsible use of wood fiber. Certified mills must now use the new ECC 4-19 logo on all new production, but may sell existing stock of product already labeled with the ECC 4-11 mark.

In Memoriam

John O. Batson


John O. Batson

John Batson, former chairman of the Southern Forest Products Association, passed away Feb. 5, 2019. He was 94. Mr. Batson had a long, and distinguished career in the lumber industry, including managing sawmills and related businesses in Arkansas, Alabama, and Mississippi. He opened his own sawmill, Batson Lumber Company, in Hammond, Louisiana, in 1970. He spent a decade as president and CEO of his company. In 1976, he helped found Albany Woodworks, which reclaims antique heart pine and cypress, and continues to operate today in Tickfaw, Louisiana. Later in life, Mr. Batson served as an independent consultant both domestically and internationally in the lumber industry. He was an active member in SFPA, serving as chairman from 1979-1980. In recognition of his commitment to the industry, John received SFPA's "Southern Pine All Stars" award in 2000. Mr. Batson is survived by his six children and four grandchildren.

Richard Michael "Ricky" Dunn

Ricky Dunn, a former quality auditor for APA – The Engineered Wood Association, died July 6, 2019, after a lengthy illness. He was 66. Mr. Dunn was born in Camden, Arkansas, and attended Southern Arkansas University Tech. He lived with his family for many years in Natchitoches, Arkansas, while working for APA, retiring in 2006. Mr. Dunn and his wife, Connie, lived in Cocoa, Florida, for the last several years of his life. Mr. Dunn is survived by his wife, a daughter, two sons, a sister, a brother and four grandchildren.

Ronald T. Fallert

Ronald Fallert, president and chief executive officer of South Coast Lumber Co. & Affiliates, passed away April 8, 2019 in Portland, Oregon, as the result of a sudden-onset brain tumor. He was 77. Mr. Fallert graduated from Southern Oregon University in 1965 with a bachelor's degree in business, then took a management position with International Paper before returning to his family's small sawmill company, South Coast Lumber, in 1973. He began as general manager and soon became president and CEO, where he served for the past 46 years. Mr. Fallert is survived by his wife, Susan, a son, a stepson, a daughter, and granddaughter; as well as a brother, sister, niece and four nephews.

Robert Kennedy

Robert (Bob) Kennedy, former University of British Columbia professor and dean, died June 17, 2019, at the age of 87. During his long career, Kennedy taught in UBC's forestry program, served as Dean of Faculty and directed the Western Forest Products Laboratory (now FPInnovations). He was named a fellow of the International Academy of Wood Science and served in many other forest industry organizations, including the Forest Products Research Society, International Union of Forest Research Organizations, Canadian Forestry Association and Canadian Institute of Forestry. He is survived by his wife, Averil, three children and three grandchildren.

Jonathan E. Martin


Jonathan E. Martin

Jonathan E. Martin, chairman of Martin Sustainable Resources LLC, the parent company of RoyO-Martin, died Sept. 20 in Alexandria, Louisiana, at age 70. The grandson of the company's founder, Martin worked for the family business for 49 years. He began working in the family mill in Castor, Louisiana, during summers and high school vacations. After earning an engineering degree from Louisiana State University in 1971, he joined the family business full time, working in all levels of the company. He sat on the APA Board of Trustees from April 2003 to December 2018, serving as the Association's chair from 2005 to 2007 and vice chair from 2004 to 2005. He received APA's Bronson J. Lewis Award in 2015 for his contributions to the engineered wood industry. Active in his community and with many charitable organizations, he was awarded the Alexandria Rotary Club's Service Above Self award in June.

Decorative Hardwood Names New Board Members

The Decorative Hardwood Association recently elected new members to its board. Wave Oglesby of Columbia Forest Products and Jeremy Manthei of Manthei Veneer were elected chairman and vice-chairman of the board of directors. New board members include David Williams, Great Lakes Veneer; Don Tomaszewski, Besse Forest Products; and Doug Johnson, States Industries.

Garret Keil of Murphy Plywood assumed the vice presidency of the hardwood plywood division and Herb Upton of Shaw is now the vice president of the engineered flooring division. Retiring after decades of board service are George Freeman and John Varner.

CPA Safety Winners; New Board Members

The Composite Panel Association honored several companies for their safety records at the association's 2019 spring meeting, and also elected new leadership. The awards for the best long-term safety record over the past three years were given to Arauco North America, Moncure, North Carolina (Class I) and Louisiana-Pacific Corporation, Roaring River, North Carolina. (Class II).

The annual safety awards for having zero incidents in 2018 were given to Arauco North America, Moncure, North Carolina; and Timber Products, Martell, California; for Class I plants, and Panolam, Huntsville, Ontario; and Louisiana-Pacific, Roaring River, North Carolina; for Class II plants.

Two plants recognized for safety improvement were West Fraser Mills, Whitecourt, Alberta (Class I); and Panolam, Huntsville, Ontario (Class II). Steve Carroll of Arauco was elected to the executive committee, while Mike Avery of Timber Products Company and James Hogg of Uniboard Canada were elected chairman and vice chairman, respectively, to the Environmental Public Affairs Committee. Tammy Polovic of Omnova Solutions was named chairman of the Decorative Surfaces Council.

SFPA Announces 2018 Sawmill Safety Awards

Seven Southern Pine sawmills – all members of the Southern Forest Products Association – are recent recipients of the 2018 Sawmill Safety Award. SFPA lumber manufacturer members are considered for the award based on information submitted regarding occupational injuries and illnesses.

Safety performance is judged by how each mill's safety record stacks up against facilities with comparable lumber output throughout the year. The results for 2018 included reports from 54 mills that recorded nearly 20 million employee hours. Division I includes sawmills that produce 50 million board feet or less; Division II covers facilities that produce 51 to 150 million board feet; and Division III includes mills that produce more than 150 million board feet annually.

The seven sawmills being honored for outstanding safety records during 2018 are:

- Division I: Weyerhaeuser Company – Zwolle, Louisiana, and McShan Lumber Company – McShan, Alabama.
- Division II: Weyerhaeuser Company – Millport, Alabama, and Weyerhaeuser Company – Holden, Louisiana.
- Division III: West Fraser, Inc. – New Boston, Texas, Weyerhaeuser Company – Idabel, Oklahoma, and Weyerhaeuser Company – Dodson, Louisiana.

SFPA's 2018 Sawmill Safety Award winners.

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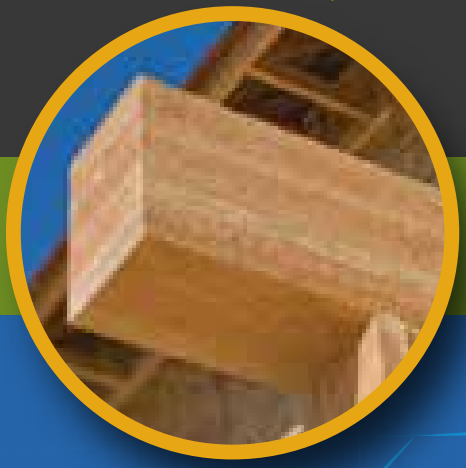

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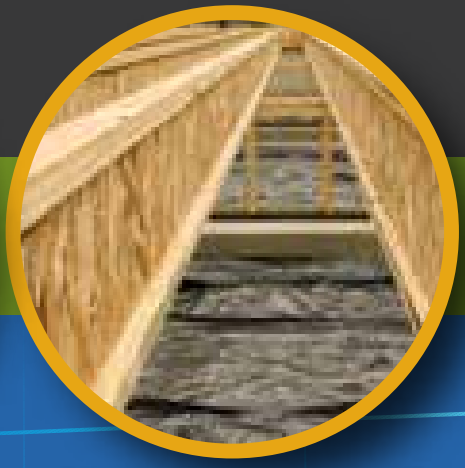

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IN WITH THE NEW

Wood Science Department Heads Rename, Revamp Programs to Widen Appeal

by Sheila Cain

Image courtesy of University of Idaho

Undergraduate student Kieron Teets and Armando McDonald, University of Idaho professor of Renewable Materials Chemistry at University of Idaho, make a particleboard panel.

EDITOR'S NOTE: The bulk of the findings outlined in this article come from the white paper, "The Current and Future State of Wood Science Education in the United States," authored by Robert Smith, professor and department head at Virginia Tech's Department of Sustainable Biomaterials, and graduate student Paula Fallas Valverde. It was published in the April 2019 issue of the *Wood and Fiber Science* journal, the publication of the Society of Wood Science and Technology. The report can be viewed on the Wood and Fiber Science website at https://wfs.swst.org/index.php/wfs/article/view/2835

Undergraduate wood science programs have a long and deep history in the U.S. They became particularly popular after World War II when the housing market expanded and the demand for forest products increased. Traditional programs focused on training young adults to enter into the manufacturing environment, which included lumber manufacturing, the pulp and paper industry, and eventually wood composites such as plywood, OSB and other engineered wood. A focus on the business and marketing aspect of the industry came about in the 1980s, and programs evolved to train students for the entire distribution chain of the industry.

While the industry's demand for wood science graduates has been high, the discipline has long failed to appeal to high school students. The reasons are varied. Many students have a negative view of forestry, believing that they offer few jobs and low wages. Others are more interested in ecosystem conservation and species protection. Most students have decided on their major by their junior year of high school – and it isn't wood science. As a result, universities' wood science programs rely heavily on recruiting students once they arrive on campus.

Last spring, representatives from nearly a dozen wood science colleges throughout the U.S. got together on the

Virginia Tech campus to discuss the past, present, and – especially – the future of undergraduate wood science degree programs. Spearheaded by Robert Smith, professor and department head at Virginia Tech's Department of Sustainable Biomaterials, and graduate student Paula Fallas Valverde, the gathering resulted in a white paper that was published in *Wood and Fiber Science*, the official publication of the Society of Wood Science and Technology.

The published paper highlighted a number of schools that have introduced new undergraduate wood science programs, resurrected old ones, and greatly diversified subject matter. The buzz surrounding this flurry of activity is indicating that the future of the programs may be looking up.

Packaging is currently the third largest industry in the world. With an annual growth of 4 percent, it is expected to become a trillion-dollar industry by 2020, inspiring many traditional forest product companies to expand their operations to include biodegradable wood-based packaging. There are also emerging opportunities in plant-based packaging, and the new Auburn degree will position these students to be at the forefront of this economic boom.

Image courtesy of Evan Schmidt - TallWood Design Institute

OSU's TallWood Design Institute houses an articulated robot for wood milling; a fairly new application for such industrial robots, which are typically used for purposes such as assembly and welding.

The University of Minnesota's Department of Bioproducts and Biosystems Engineering renamed its degree program in 2014. Now called Sustainable Systems Management, the major offers four areas of emphasis: Building Science and Technology, Corporate Sustainability Systems, Energy Systems and Sustainable Products Business Management.

The New Line-Up

Below are details of the renamed, revised and, in some cases, brand-new wood science undergraduate degree programs now being offered at wood programs throughout the U.S.

Auburn University, Forest Products Development Center, School of Forestry and Wildlife Sciences

Auburn's School of Forestry and Wildlife Sciences recently launched a new degree program: Sustainable Biomaterials and Packaging. Started in the fall of 2018, the program is collaboratively taught by faculty from the School of Forestry and Wildlife Sciences and the colleges of Agriculture, Business, and Architecture, Design and Construction. The interdisciplinary approach to the curriculum was designed to prepare students for careers within diverse fields related to biomass production, operational logistics, and conversion processes of products and packaging.

University of Idaho, College of Natural Resources, Department of Forest, Rangeland and Fire Science

When the University of Idaho's Forest Products bachelor's degree program changed to Renewable Materials about six years ago, it also shifted its focus from just wood to include other renewable materials such as agricultural fiber as well. The degree program still has a major wood and wood-based materials focus, says Armando McDonald, Renewable Materials Chemistry professor, but it has been broadened to cover hemp, bamboo, straw, and bio-based polymers such as polylactic acid, as well as sustainability (waste utilization) in the curriculum.

A decade ago, a "capstone" component was added to the department's degree, McDonald says. This includes two courses: Product Development and Brand Management as well as Biomaterial Product and Process Development. The two courses combined are the senior research project, which includes a business plan and developing a prototype product. The degree is designed to be flexible for the student to take classes that will give them additional expertise in various aspects of Renewable Materials, such as business, bioenergy, construction/design, and biomaterials, McDonald says.

Expanding Options

All 11 universities that were asked to participate in the gathering sent representatives to share information about their schools' specific programs. Auburn University, for example, launched a brand-new degree program – Sustainable Biomaterials and Packaging – in the fall of 2018. Michigan Technological Institute has some new offerings in the works as well: this fall, it will introduce a new minor in Sustainable Biomaterials, and it is just a year or two away from offering a new bachelor's degree, possibly also named Sustainable Biomaterials.

And at Oregon State University's College of Forestry, students can now consider a major in Renewable Materials with an option in Advanced Wood Manufacturing. The option offers coursework that covers digital manufacturing issues and digital coursework that other options do not, says Eric Hansen, who heads up the College of Forestry's Department of Wood Science and

Engineering. In addition, the college's TallWood Design Institute recently started offering a certificate program in mass timber manufacturing and construction, targeting manufacturers and building contractors. Both programs benefit from a new advanced wood products laboratory and education center.

Smith, the meet-up's coordinator and co-author of the resulting white paper, says the gathering was something he and his colleagues had discussed planning for years and proved to be a successful venue at which to share information and brainstorm ways to recruit students to their programs.

"It has been difficult to attract students to wood science programs because they do not know of the great opportunities available in the industry for those with the degree," Smith says. "Most high school students want to go into engineering, science or business and never think of natural resources."

Michigan Technological University, School of Forest Resources and Environmental Science

Michigan Tech is in the process of resurrecting and restructuring its wood science degree program after several years of absence. The program was shelved in 2003; however, wood protection has remained a research strength in the school.

Starting this fall, the university will be offering a new minor in Sustainable Biomaterials, says Mark Rudnicki, professor of practice in forest biomaterials in the School of Forest Resources and Environmental Science, and it will be housed in the university's School of Forest Resources and Environmental Science. A new major is also in the works, with faculty working across several departments and colleges at MTU to put the program together.

"Since we have a new president and several new deans across campus, now seems to be a good time for some changes," Rudnicki says.

University of Minnesota, College of Food, Agricultural and Natural Resource Sciences, Department of Bioproducts and Biosystems Engineering

In 2004, the University of Minnesota changed the name and broadened the scope of their programs and department from Wood and Paper Science Department to Bio-Based Products. Ten years later, in 2014, its Bachelor of Science degree in BioProducts Marketing and Management was re-envisioned to embrace sustainable products and systems management and renamed Sustainable Systems Management. The major offers four areas of emphasis: Building Science and Technology, Corporate Sustainability Systems, Energy Systems and Sustainable Products Business Management.

"We offer a major that educates the students with the background and tools needed to make sustainability happen in the real world," says Omar Espinoza, associate professor in the school's Department of Bioproducts and Biosystems Engineering. "The program embraces a broader view of sustainability and sustainable products (including wood products and bio-based products), energy and business practices."

Mississippi State University, College of Forest Resources, Department of Sustainable Bioproducts

Back in 2014, MSU's Department of Forest Products changed its name – and curriculum – to Department of Sustainable Bioproducts. The program still focuses heavily on wood and timber-based products manufacturing and use, but it has broadened to include more environmental issues and bio-based products, as well as marketing and trade, says Rubin Shmulsky, professor and head of the Department of Sustainable Bioproducts.

Courses include those in manufacturing/production, solid wood and composites, bioproducts, environmental issues, durability and protection, wood identification, and energy products, as well as basic courses in mechanics, physics, chemistry, electives, and university general education requirements.

"Companies interested in these students continue to be those in the many and varied aspects of the forest products sector as well as consultants, environmental firms, research organizations, various state and government organizations, import/export, et cetera," says Shmulsky.

North Carolina State University, College of Natural Resources, Department of Forest Biomaterials

The Wood Products program at North Carolina State University was the first undergraduate program in the U.S. to be accredited in 1984 by the Society of Wood Science and Technology (SWST). Over the years, several curriculum names had been used by the program, including Wood Technology, Wood Science and Technology and Forest Products. In 2013, the Department of Forest Biomaterials requested a program title change from Wood Products to Sustainable Materials and Technology (SMT), with the attendant request for a revision of the curriculum. The requests were approved, effective in the fall of 2013. A Wood Products concentration within the SMT curriculum was added in the fall of 2018.

Refocusing the curriculum to sustainable materials and technology efficiently draws upon the core science and technology offered in the old Wood Products degree, says the director of the Sustainable Materials Technology program, Perry Peralta, and adds newer sustainability courses that give students expanded skills for the future. New courses added include Environmental Life Cycle Analysis, Sustainable Materials for Green Housing, Recycling to Create a Sustainable Environment, Industrial Ecology, Industrial Chemical Pollutants, and Sustainable Business and Innovation. Advised elective courses in Sustainable Design, Bioenergy, and Environmental Economics were also added.

With the changes in the program name and content, the number of undergraduate students increased from 30 to 95 students within three years, Peralta says, with enrollment remaining steady at that level.

Name Changes and Recruiting Efforts

The new and revamped programs at Auburn, Michigan Tech, OSU and many others follow widespread name changes of universities' wood science programs in an effort to remain relevant on campus and appeal to a changing demographic. For example, at Virginia Tech, the university's Wood Science and Forest Products Department was renamed the Department of Sustainable Biomaterials. Mississippi State University followed a similar course, scrapping the department's name, "Forest Products" and adopting instead, "Sustainable Bioproducts." And at Pennsylvania State University, the Wood Products major and Agricultural Systems Management merged to form BioRenewable Systems.

Participating Wood Science Universities

The following professors and department heads convened at Virginia Tech last spring to discuss the future of wood science and technology education.

Brian Via
AUBURN UNIVERSITY

Armando McDonald and Charles Goebel
UNIVERSITY OF IDAHO

Stephen Shaler
UNIVERSITY OF MAINE

Mark Rudnicki
MICHIGAN TECHNOLOGICAL UNIVERSITY

Omar Espinoza
UNIVERSITY OF MINNESOTA

Rubin Shmulsky
MISSISSIPPI STATE UNIVERSITY

Marko Hakovirta
NORTH CAROLINA STATE UNIVERSITY

Eric Hansen
OREGON STATE UNIVERSITY

Paul Heinemann
PENNSYLVANIA STATE UNIVERSITY

Audrey Zink Sharp
VIRGINIA POLYTECHNIC INSTITUTE

Jingxin Wang and Robert Burns
WEST VIRGINIA UNIVERSITY

Vicki Herian
SOCIETY OF WOOD SCIENCE AND TECHNOLOGY

Beyond the name changes and reinvigorated programs, many academic units have placed a renewed focus on recruiting efforts. Virginia Tech, for example, has started an aggressive

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Oregon State University, College of Forestry, Department of Wood Science and Engineering

In 2010, the Department of Wood Science and Engineering at OSU's College of Forestry conducted a major overhaul of its undergraduate program and changed the name of the major to Renewable Materials.

While the program at its heart is focused on the study of wood products and creating employees for the forest products industry, it diversified by creating a degree option in Art and Design that prepares students to engage with renewable materials on an aesthetic level, whether as interior designers, fine artists or entrepreneurs. This option produces a graduate that will likely be more suitable for value-added industries as well as the design side of the industry, says Eric Hansen, department head of OSU's Department of Wood Science and Engineering.

More recently, the college has added a new option in Advanced Wood Manufacturing, which prepares students to succeed in an advanced, digital manufacturing environment. In addition, the college's TallWood Design Institute is developing a certificate program in mass timber manufacturing and construction, targeting manufacturers and building contractors. Both programs benefit from a new advanced wood products laboratory and education center.

Pennsylvania State University, Department of Agricultural and Biological Engineering, College of Agricultural Sciences

The Wood Products major at Pennsylvania State University was discontinued around 2012 and a new major, BioRenewable Systems, was created from the former Wood Products and Agricultural Systems Management majors, says Paul Heinemann, professor and head of the Department of Agricultural and Biological Engineering. The Wood Products program was subsequently phased out, with the last student enrolled graduating within the last year.

The new undergraduate program has two options: Bioproducts and Agricultural Systems Management. The major is an integration of engineering technology, science, and business, says Heinemann. Students take courses in math, physics, biology, statistics, engineering technology, business principles, and systems analysis. These concepts are then applied to management, analysis, and/or technical sales related to biologically based products or agricultural production in higher level courses.

"We still serve the more traditional wood product and agricultural industries," Heinemann says, "but students are also interested in renewable energy and other sustainability related areas."

campaign through a campus recruiting program focusing on undeclared majors. Student clubs have also gotten involved. A full-time recruiter was appointed in 2015 by the College of Natural Resources, focusing on a state-wide recruitment approach. The university's efforts have resulted in a doubling of the student population since 2013.

Addition of new wood science faculty members at many colleges is expected to further position wood programs as alluring areas of study. Many schools reported in the white paper that the influx of new wood science faculty is leading their departments away from traditional wood science research and toward more technology-focused study. North Carolina State University's Sustainable Materials and Technology program, for example, is in the midst of an active search for a new faculty member who will focus on product and industrial design, says Marko Hakovirta, head of the university's Forest Biomaterials department, which oversees the Sustainable Materials and Technology program. The successful candidate will be expected to assume a leadership role in

Students and staff from WVU's Wood Science and Technology program

Virginia Polytechnic Institute, College of Natural Resources and Environment, Department of Sustainable Biomaterials

Virginia Tech changed the name of its Wood Science and Forest Products department to the Department of Sustainable Biomaterials in 2012. That same year, it created a Packaging degree.

The school has started an aggressive campaign through a campus recruiting program focusing on undeclared majors. Student clubs have also gotten involved. A full-time recruiter was appointed in 2015 by the College of Natural Resources, focusing on a state-wide recruitment approach. The university's efforts have resulted in a doubling of the student population since 2013.

West Virginia University, Division of Forestry and Natural Resources

Changes are expected to come soon to the Wood Science and Technology program at West Virginia University's Division of Forestry and Natural Resources, says Gloria Oporto, the division's associate professor of Wood Science and Technology. For now, the university offers a Bachelor of Science in Wood Science and Technology with four possible areas of emphasis: Forest Utilization, Wood Processing, Renewable Materials Marketing and Sustainable Low-Rise Residential Construction. In July of this year, the Wood Science and Technology Program received re-accreditation by the Society of Wood Science and Technology.

developing new directions in sustainable product and industrial design, Hakovirta says.

OSU has hired a new PhD-level industrial engineer in support of its new degree program. Juan Du is currently a visiting scholar at Georgia Tech and will begin her career at OSU later this fall.

Planning for the Future

As wood science programs position themselves for a successful future, department leaders must perform a balancing act of sorts: maintaining programs' fundamental roots in traditional study while adapting to the new sciences of sustainability proving more attractive to young adults.

Participants in the gathering of last spring's department leaders also agreed that working with the forest products industry to understand their future workforce needs was vital, as was joining forces to develop a message and brand that conveys the positive attributes of using renewable resources to replace our hydrocarbon-based economy.

At Pennsylvania State University, the Department of Agriculture and Biological Engineering's College of Agricultural Sciences recently created a new major, BioRenewable Systems, from two former majors.

"One of our big challenges is getting potential employers to understand what our major is about and what the students bring to the table," says Paul Heinemann, professor and head of the Department of Agricultural and Biological Engineering.

Perhaps OSU's Hansen sums it up best: "If I could send one message to our industry partners, it's 'Help us recruit!'"

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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HARNESSING HOT AIR

A Brief History of Jet Veneer Dryer Advancements

by Alan Knokey

Image courtesy of USNR

Automatic Dryer Exhaust Control (ADEC) optimizes dryer performance and reduces the cost of drying veneer.

Today's high-capacity veneer dryers are robust and finely-tuned machines that consistently and efficiently produce high-quality veneer with a uniform dry moisture content and aesthetic appearance. The first jet dryers came on the scene in 1961, and technology has since advanced to meet the changing needs of the plywood industry.

The 1960s and 1970s introduced jet drying to the softwood plywood industry, followed by an increase in machine productivity as jet drying techniques became more refined. Before the advent of jet drying, most plants used longitudinal drying, which applies radiant energy to the veneer, whereas jet drying is the application of thermal energy. Some of this thermal energy comes from air temperature, but most of it comes from contact with the rolls touching the veneer, an action somewhat analogous to ironing clothes.

The process of drying veneer requires more labor per thousand board feet than any other function required to manufacture plywood. The conversion from longitudinal drying to jet drying technology consumed a disproportionate amount of available capital from the early 1980s through the 1990s. While jet drying enjoys the benefit of radiant energy, it also uses convection, or jets of thermal energy blasting the veneer between the dryer rolls, similar to an oven at home. This advancement significantly reduced comparative drying time.

This same period saw the advent of new rules that require the cleaning of exhaust, thereby driving changes to all drying equipment. Because volatile organic compounds (VOCs) and fugitive dust were found to adversely affect air quality and human health, the direction of change at the turn of the century was

Image courtesy of USNR

Veneer dryers can now be erected offline and rolled into place, reducing the standard production outage of 18 weeks down to three weeks.

shifted toward eliminating all fugitives emanating from dryers into the factory environment. Today's jet veneer dryers offer the industry a high-performance drying package that delivers exhaust from a single point, and in normal operation, mitigates fugitive emissions into the factory.

From the 1990s through 2005, all the capital for improving dryer efficiency was spent on moisture segregation and drying technique. Just prior to the great recession of 2008, plant consolidation consumed the capital. Reduction in labor hours was achieved through adding new dryers and eliminating shifts.

Throughout the early 2000s, a massive amount of capital that would have been spent on new dryers and upgrades was consumed by exhaust abatement systems to bring producers into regulatory compliance. Consolidated plants with ample exhaust abatement pushed for more dryer capacity to further lower labor costs.

This article discusses some advancements made at USNR, but are characteristic of plywood mills' needs of all dryer suppliers to meet current air emission requirements at increased production capacity with increased demands for labor productivity.

Bigger dryers, more output

The six-deck dryer was developed around 2008 and its popularity began to grow due to its expanded productivity. A six-deck dryer of the same length as a four-deck has 33 percent more drying capacity per unit of time. Since both dryers require identical staffing, the six-deck lowers labor cost by 33 percent. Dryers typically operate on a four-shift basis, which means one less shift per week of operation or one-third labor cost per unit of board feet. Often, the six-deck dryer has sufficient length to double the production and eliminate not one but two four-deck dryers.

The high-capacity six-deck dryer uses airfoil centrifugal fans along with repairable embedded fin-extended surface steam or circulated hot oil coils. It's also available with direct-fired natural gas or propane heaters. In all configurations, the dryer is designed to match the air delivery and heating capacity of its four-deck predecessor. This ensures the same productivity per square foot of holding capacity whether it has four or six decks.

Modern-day six-deck jet dryers are available with an insulated stainless-steel floors and 5-inch-thick welded-steel duct fitted with stainless-steel outer cladding. The doors are also stainless-steel construction, one per section on both sides, and hung with articulating hardware to protect the tadpole.

In addition to these construction features, the six-deck dryer can include modern control concepts which improve dryer thermal efficiency, increase productivity, reduce maintenance, and eliminate fugitives from the drying area.

Fine-tuning dryer design

As jet dryers got larger, designers continued to fine-tune the internal mechanics to ensure efficient and effective operation. It was found that exhausting dryers at the lowest temperature point during the process dramatically improves the thermal efficiency of the dryer. Because the lowest temperature point (wet end of the process) also equates to a high level of moisture evaporation, a wet end seal section located at the infeed to the main dryer section is one of the key design elements. This single point exhaust feature allows the system to pull all the process air from the dryer into one region to be exhausted. This patented concept is called Automatic Dryer Exhaust Control (ADEC). Dryers equipped with the ADEC system have been shown to increase productivity, reduce thermal energy requirements, and reduce exhaust flow. With these proven benefits, ADEC is gaining industry acceptance. Consequently, more manufacturers now offer systems attempting to emulate the powerful benefits of ADEC.

Another key design element that has improved jet dryer efficiency in recent years is a secondary heating system in the wet end seal (WES) section. This feature maintains a high temperature as the gasses are mixed, thus ensuring that VOCs remain in gaseous form as they are exhausted from the dryer. This also alleviates pitch build-up. Temperature data gathered at the top of the WES section, the point of air intake from the dryer section, and the point of ambient air intake from the plant, allows the ADEC system to precisely control the heating level of the air mixture inside the WES section prior to exhaust. This is the key to maximizing thermal efficiency.

Another key element for optimizing dryer operation is control of the cooler exhaust volume to minimize the flow of heated air from the dryer into the cooler section, and cooler air into the hot dryer. This patented Cooler Pressure Balance

Image courtesy of USNR

A large winch was mounted to the mill floor to roll the 1 million pound dryer into place. A second installation using this method is now underway in the Southern U.S.

system further improves thermal efficiency by minimizing VOCs and pitch buildup, which reduces maintenance and allows for automatic veneer temperature control in the dry veneer stacking process.

Minimizing downtime during installation

Often the largest cost a producer bears when investing in a new veneer dryer is the production down time required to demolish the old dryer, and erect and commission a new dryer in its place. The typical downtime required to install a new dryer is about 18 weeks, resulting in significant loss of production.

The first USNR six-deck jet veneer dryer in the southern pine industry was commissioned in 2012. It included 18 drying sections, together totaling 144 ft. The potential for lost production was huge, but the use of a unique installation procedure cut this plant's outage time to just three weeks and greatly minimized losses.

One of the biggest challenges was designing a dryer that would not pull apart when moved into position. Dryers are typically erected in place, so this project involved designing a special rail system to support the dryer during initial assembly, for rolling it into place, and for the final positioning.

A major differentiator of this project was simply the magnitude of the dryer to be moved. Other pieces moved have rarely topped 100,000 pounds. This new six-deck dryer tipped the scales at nearly 1 million pounds. A large winch was mounted to the mill floor to provide the moving force. It was expected to take several hours to move the 300 feet into position, but it was done in under 45 minutes. This novel approach for a dryer installation won the EWTA Innovation of the Year award in 2012.

Besides the savings in outage time for the mill, this new construction process allows more time for quality checks and inspections with less pressure. Less pressure means less chance of injury. The resulting safety improvements is another big advantage.

The ability to replace existing dryers by towing a new fully preassembled dryer into place significantly reduces the cost of a new dryer installation. This new process will undoubtedly change the face of many future veneer dryer projects, as other processors recognize the opportunity for savings in time and money.

A second USNR six-deck dryer project is now underway in the southern U.S. that will use all these advancements, including a plan to build it offline and tow it into place.

Alan Knokey is vice president of the plywood and panel division at USNR and a member of EWTA. He can be reached at alan.knokey@usnr.com, usnr.com, and 360.225.8267.

APA ANNUAL MEETING AND INFO FAIR PREVIEW

Beyond: Exploring the Industry's Expanding Frontiers

by Sheila Cain

This year's Annual Meeting will explore the industry's expanding frontiers, from the launch of the APA lab's new testing capabilities to the abundance of market opportunities.

APA's Annual Meeting, held Nov. 2 – 5 at the JW Marriott Tucson Starr Pass Resort & Spa in Tucson, Arizona, coincides with EWTA's annual Info Fair supplier exhibition. The theme of the meeting – Beyond – will weave its way into the presentations and sessions offered throughout the extended weekend. The four days will be punctuated by cocktail hours, receptions and plenty of time for networking.

Several advisory, marketing and subcommittee meetings – including meetings of the EWTA Adhesives and Technical Subcommittee and the EWTA Advisory Committee – signal the start of the event on Saturday. The day wraps up with an EWTA-hosted welcome reception for APA and EWTA members and meeting attendees.


Mike Mullane


Joe Elling


Ed Elias


Wayne Yamano


Jim Enright

Sunday is a day for recreation and networking, featuring the annual golf tournament, cripple coot shoot and tennis tournament. Info Fair opens that evening, accompanied by an EWTA-hosted reception.

Monday kicks off with the General Session at 8:30 a.m., featuring a keynote presentation by former astronaut and author Mike Mullane, who completed three space missions aboard the shuttles Discovery and Atlantis. Prior to his space travels, Mullane completed 134 combat missions in Vietnam as a weapon systems operator in the U.S. Air Force. He retired from NASA and the Air Force in 1990 and has since written three books. He is also an acclaimed professional speaker on the topics of teamwork, leadership and safety.

The General Session will also include "State of the Industry" and the "State of the Association" addresses by APA Chairman Jim Enright and APA President Ed Elias.

Mullane will respond to questions and comments from meeting attendees in a Joint Roundtable in conjunction with the Safety and Health Workshop. following the General Session.

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The Safety and Health Workshop offers breakout sessions throughout the day at which participants can discuss practical techniques and concepts for improving mill safety programs.

The mid-day Marketing Advisory Committee meeting will feature guest speaker Wayne Yamano, a principal with John Burns Real Estate Consulting, where he helps executives make informed housing industry decisions by leveraging his experience as an executive at a top homebuilder recognized for innovation.

The speaker will follow APA Market Research Director Joe Elling's delivery of his latest market forecast.

In addition to the Sunday evening reception, the Info Fair supplier exhibition will be open through Monday, including a buffet lunch. A reception will kick off that evening's dinner and Safety Awards recognition. Here, APA members who have made significant advances in mill safety will be honored, along with winners of EWTA's Supplier of the Year and Innovation Award programs.

As always, the Annual Meeting allows plenty of time for networking and relaxing. The spouses' program on Monday brings participants together to mold, paint and assemble ceramic ornaments, jewelry and gifts. The program is hosted by Ben's Bells, whose mission is to teach individuals and communities about the positive impacts of intentional kindness. Participants are encouraged to hang their wind chimes throughout their communities, in public places, for others to find and take home. Transportation, lunch and a gift will be provided.

The APA and EWTA registration desks at the resort open on Saturday at 8 a.m., and registration continues through Monday afternoon. See the schedule of events at right for the complete meeting agenda.

Agenda

(As of publication. Check the APA meeting agend for latest schedule.)

SATURDAY, NOV. 2	
8 am – 5 pm	Registration Desk Open
10:30 am – noon	EWTA Adhesives and Technical Subcommittee *(open to all attendees)*
10:30 am – noon	International Market Subcommittee *(closed)*
12:30 – 2:30 pm	Glulam Management Committee *(closed)*
2 – 2:30 pm	Info Fair Exhibitor Meeting *(open to all exhibitors)*
3 - 4 pm	EWTA Advisory Committee *(open to all attendees)*
3 – 5 pm	I-Joist/SCL Management Committee *(closed)*
4 – 5:30 pm	Industrial Market Subcommittee *(closed)*
5:30 – 7 pm	EWTA Welcome Reception *(all attendees welcome)*

SUNDAY, NOV. 3	
8 am – 1 pm	Mike St. John Memorial Golf Tournament
8 am – 2 pm	Cripple Coot Shoot
9:30 am – 1 pm	Ole Sorenson Memorial Tennis Tournament
11 am – 5 pm	Registration Desk open
3 – 4:30 pm	Nonresidential Market Subcommittee *(closed)*
5 – 7:30 pm.	Info Fair and Reception

MONDAY, NOV. 4	
7 – 8:30 am	Buffet Breakfast
8 am – 4 pm	Registration Desk Open
8:30 – 10:15 am	General Session: Beyond
10:20 am – 4:30 pm	Safety and Health Workshop
10:30 – 11:30 am	Joint Roundtable with Special Guest -- Astronaut Mike Mullane
10:30 – Noon	Residential Market Subcommittee *(closed)*
10:30 am – 2:30 pm	Spouses' Program
Noon – 1:30 pm	Info Fair Networking Lunch
1:30 – 4 pm	Marketing Advisory Committee Meeting
5:30 – 7 pm	Info Fair and Reception
7 pm	Chairman's Dinner and Safety Awards Recognition

TUESDAY, NOV. 5	
6:30 am	Board of Trustees Breakfast
7:30 – 11 am	APA Board of Trustees meeting

INFO FAIR, held annually in conjunction with the APA annual meeting, is sponsored by the Engineered Wood Technology Association (EWTA), APA's related nonprofit supplier organization. Meeting and event sponsors are highlighted.

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Dieffenbacher is an international group of companies specializing in the manufacturer of press systems and complete production systems for the wood, automobile and supplier industries. As an independent fifth generation family company, we have stood for continuity, tradition and reliability for over 140 years. Our Wood business unit plans and implements complete solutions for the manufacture of wood-based panels, such as particleboard, MDF, OSB and LVL plants.
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Alpharetta, GA 30004
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www.dieffenbacher.com

DO2 Industriel

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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
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Durr MEGTEC, LLC

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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.
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info@megtec.com
www.babcock.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.
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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."
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www.evergreenengineering.com

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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.
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Contact: Alexander Root
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Charlotte, NC 28217
sales@grecon.us
www.grecon-us.com

Flamex, Inc.

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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
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www.sparkdetection.com

Franklin Adhesives & Polymers

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

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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.
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frommstrappingsystems.com

Georgia-Pacific Chemicals LLC

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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-joist assembly systems and has achieved a leadership role in the cement fiberboard industry and moulded door skin lines. For 100 years Globe Machine has served the forest products industry.
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Grenzebach Corporation

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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.
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Guardian Chemicals, Inc.

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

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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.

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Hexion, Inc.

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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.

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www.hexion.com

Hunt, Guillot & Associates LLC

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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.

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IBC, International Bar Coding Systems & Consulting, Inc.

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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.

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IMAL-PAL Group

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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.

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www.imalpal.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.

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Itipack Systems

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

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www.itipacksystems.com

KADANT Carmanah Design

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

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www.kadantcarmanah.com

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LDX Solutions Lundberg

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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.
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www.lundbergllc.com

LIMAB North America

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LIMAB supplies non-contact laser measuring systems for composite panels and engineered wood products, including thickness and squareness measurements, and blow detections on panels.
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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 as well as Antiblu® antisapstains. Lonza also 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.
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Alpharetta, GA 30004
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www.wolmanizedwood.com

Matthews Marking Systems

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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 - Product Manager, DOD Ink-Jet Products
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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.
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amccann@merrittmachinery.com
www.merrittmachinery.com

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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.
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Nicholson Manufacturing Ltd.

As the leader in ring debarker technology since 1948, Nicholson has built its reputation on constant innovation, performance, quality, service support and on long term relationships.
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Panel World Magazine / Hatton-Brown Publishers, Inc.

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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.
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Raute

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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.

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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.

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www.reajetus.com

Samuel Coding & Labeling

Samuel Coding and Labeling Division has been providing fully integrated industrial ink jet and labeling systems for the panel products industry since 1990. These systems include: automatic staple package tag systems, ink jet grade mark systems, nail line systems, automatic bar code systems, and ink jet stencil and stripe machines.

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Samuel Packaging Systems Group

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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.

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SASCO Chemical, A PSG Company

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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.

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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.

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www.thesemco.com

Signode Packaging Systems

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

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www.signode.com

SonicAire

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Phone: 503-283-4749
2221 North Argyle
Portland, OR 97217
mike.cook@spartek.com
www.spartek.com

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Phone: 630-517-1283
100 W. Lake Dr.
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brian.valley@spray.com
www.spray.com

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Phone: 704-522-9435
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Phone: 866-489-WESP (9377)
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mlarke@stratachemsolutions.com
www.stratachemsolutions.com

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Phone: Phone: +81-568-73-6421
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Contact: Andrew Johnson - Vice President
Phone: 425-771-1190 Ext. 128
20818 44th Avenue West Suite 201
Lynnwood, WA 98036-7709
ajohnson@tsi-inc.net
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Phone: 360-225-8267
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Phone: 317-346-0711
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Phone: 613-796-1606
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Headquarters:
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Phone: 541-484-9621
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Blacksburg, VA 24061
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2019 SUPPLIER AWARD CANDIDATES

Innovation and Excellence Celebrated

EWTA members will be recognized for innovative practices and excellence in service at the APA Annual Meeting and EWTA Info Fair.

The Supplier Awards, including the Supplier of the Year awards and Innovation of the Year award, will be presented during the Nov. 4 awards dinner during the Annual Meeting in Tucson, Ariz. The winners will also be published in the Spring 2020 issue of the *Engineered Wood Journal*.

Supplier of the Year award winners are determined by a vote of APA members via email ballot before the annual meeting. Votes are cast based on quality, service and delivery.

Innovation Award winners are also determined by APA member email votes, combined with in-person votes at EWTA's Info Fair supplier exhibition.

Below is a preview of the Innovation Award entries (in alphabetical order, by company) followed by a list of the Supplier of the Year award candidates (sorted by member type). Additional information about the awards program may be found on EWTA's Supplier Awards webpage at www.engineeredwood.org/awards.

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

INNOVATION OF THE YEAR ENTRY A

Automatic Panel Repair System for Plywood

ENTERED BY:
Argos Solutions/Con-Vey Keystone

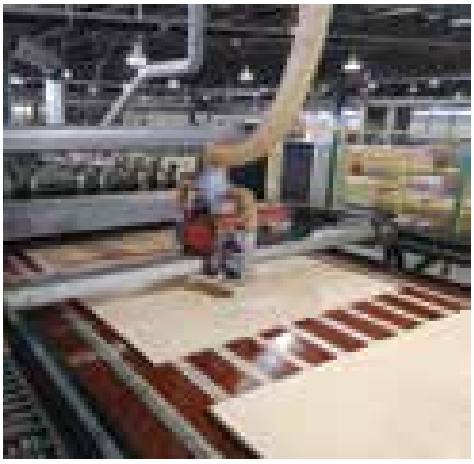
DATE OF FIRST USE: 2017 (North America)

BENEFIT 1: Replaces hand labor with automatic defect recognition followed by automatic repair process

BENEFIT 2: Increase production capacity, enhance repair quality, improves yield and reduces waste.

RESULTS: >50% reduction in waste putty, >5% in yield, >10% in quality and >80 % reduction of rework.

DESCRIPTION: Argos' Automatic Panel Repair system's innovative technology can recognize and differentiate defects that affect the surface quality of plywood intended for industrial plywood, engineered flooring and other applications where a smooth surface is required. The system replaces hand labor with automatic defect recognition followed by an automatic repair process. It increases production capacity and enhances repair quality. Putty waste is reduced by 50 percent and rework is reduced by 80 percent.



INNOVATION OF THE YEAR ENTRY B

The Belt Conveyor

ENTERED BY:
Bruks Siwertell

DATE OF FIRST USE: 8/31/2018

BENEFIT 1: Fully enclosed/dust tight construction

BENEFIT 2: No intermediate moving parts between the drive and tail pulleys, resulting in lower friction factors.

RESULTS: Belt tension due to the air-cushion is lower than 40% of the tension caused by idler friction and belt sag.

DESCRIPTION: The Belt Conveyor has a totally enclosed design that protects the environment from dust emissions and keeps any material losses to a minimum. It uses a formed pan to support the belt, with a fully flanged cover over it to make it dust tight. There are no intermediate moving parts between the drive and tail pulleys, resulting in lower friction factors. Tension in the belt, caused by rolling idlers and belt sag, is significantly reduced, resulting in lower power requirements.

INNOVATION OF THE YEAR ENTRY C

Robotic Plywood Layup Line

ENTERED BY:
Con-Vey

DATE OF FIRST USE: 2/1/2019

BENEFIT 1: Labor Savings

BENEFIT 2: Customizable

RESULTS: Case studies have not been completed.

DESCRIPTION: Con-Vey's Robotic Plywood Layup Line utilizes five robotic arms with vacuum tooling to unstack veneer sheets and send them through a curtain glue coater for layup. The robotic arms require very limited maintenance when compared to traditional layup lines, and offer more versatility. The line is highly customizable so it can be engineered for each customer's specific needs. The robotic plywood layup line was a joint project with Freres Lumber Co., Inc. and was installed at their Mill City, Oregon, facility.

INNOVATION OF THE YEAR ENTRY D

HAJ13 Dispenser

ENTERED BY:
FROMM Packaging Systems

DATE OF FIRST USE: 10/1/2018

BENEFIT 1: Safe

BENEFIT 2: Increase Manufacturing Production Capacity

RESULTS: 3 SJC replace up to 45 standard coil = x42 fewer machine stops and roll changes (200 minutes saving)

DESCRIPTION: FROMM Packaging Systems has engineered new automated strap dispensers and moved to super jumbo strapping coils, reducing downtime and injury risks between each coil change. The strap remains on the transport pallet and is placed onto a turntable that then feeds the strap to the strapping machines as needed. PLC controls are provided so the massive coils don't unwind and the strapping heads draw the correct amount of material as required. The system requires virtually no human interaction and alarms are in place to indicate when the strap coils need to be changed.

INNOVATION OF THE YEAR ENTRY E

Pressguard X200

ENTERED BY:
Guardian Chemicals Inc.

DATE OF FIRST USE: 6/18/2019

BENEFIT 1: Non-corrosive

BENEFIT 2: No build up formation

RESULTS: Excellent release properties (visual) with no odor (physical). Third-party testing for corrosion results.

DESCRIPTION: Pressguard X200 is a non-corrosive, non-odorous, MDI release agent for multiopening/daylight presses. The agent provides release at low application rates without residual buildup on press platens or darkening of the board surface. The product is concentrated for increased cost efficiency. Its high degree of water solubility allows for easy dilution to target appropriate addition levels, regardless of application system. Pressguard X200 has shown the ability to remove previous press buildup caused by other release agents. A single product, it eliminates the need for multiple release chemicals.

INNOVATION OF THE YEAR ENTRY F

Loctite HB X Purbond

ENTERED BY:
Henkel

DATE OF FIRST USE: 1/1/2019

BENEFIT 1: The first and only one-part Polyurethane Adhesive to meet all North American performance requirements.

BENEFIT 2: Cold set, moisture curing allows for exceptional opportunity for production flexibility and output.

RESULTS: Passed full-scale fire testing for CLT, glulam and I-joist. Supports 90% (by volume) of todays NA CLT production.

DESCRIPTION: Loctite HB X Purbond is the only one-component polyurethane adhesive to meet all North American requirements for glulam, CLT (PRG 320 - 2018), and I-joist, including full-scale fire testing. Loctite HB X Purbond meets the requirements of both Canada and USA for fire, wet use, CSA 0112.9.10, ANSI 405 and PRG 320-2018. Cold set, moisture curing allows for exceptional opportunity for production flexibility and output.

Loctite HB X Purbond

INNOVATION OF THE YEAR ENTRY G

OSB Press Platen Repair Robot

ENTERED BY:
KTC Industrial Engineering with Nova Robotics

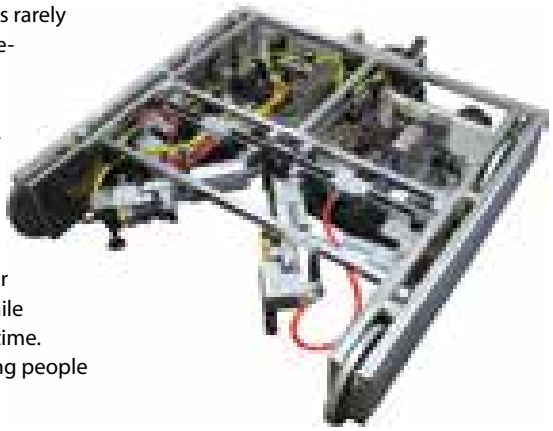
Date of First Use: 9/1/2018

BENEFIT 1: Repair of Platen Dents while press is still hot, reducing downtime

BENEFIT 2: Safety - keeping people out of the line of fire by allowing a machine to perform dangerous work

RESULTS: Repairs platen surface dents

DESCRIPTION: Presses accumulate wear and require regular maintenance, but it is rarely economical to schedule a full maintenance shutdown for minor repairs. Human labor cannot be performed on or around a hot press. As a result, maintenance is typically deferred to infrequent, often annual intervals during large scheduled maintenance shutdowns. The OSB Press Platen Repair Robot allows the repair of platen dents immediately and while the press is still hot, reducing downtime. The robot improves safety by keeping people out of a dangerous environment.



INNOVATION OF THE YEAR ENTRY H

Real-Time Predictive Plant Modeling

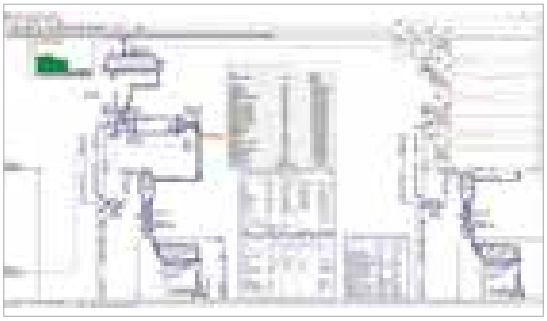
ENTERED BY:
KTC Industrial Engineering

DATE OF FIRST USE: 9/1/2016

BENEFIT 1: Root cause analysis to determine the cause of production problems or upset conditions

BENEFIT 2: Predictive model to anticipate and prevent upsets and optimize plant production

RESULTS: Yes



DESCRIPTION: Real-Time Predictive Plant Modeling offers a visual and dynamic model of panelboard production that simulates plant operation in real time. It allows operators to baseline their plant and then make process changes and predict the outcome prior to spending capital or making improvements that don't pan out. This is an advancement over the "tribal knowledge" method of plant operation where operators determine outcomes through experience and observation passed down from worker to worker. This technology paired with artificial intelligence (AI), currently being explored, will lead to "lights out" production facilities as seen in other industries.

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- **PanelSpray-NM** for marking continuous nail lines on OSB
- **PanelSpray-RA** for mixed release agent application on mats, cauls or press belts when using PMDI resins

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INNOVATION OF THE YEAR ENTRY I

Edge Scan Press Frame Inspection of Multi-Opening Daylight Press Frames

ENTERED BY:
N.I.S. Nondestructive Inspection Service

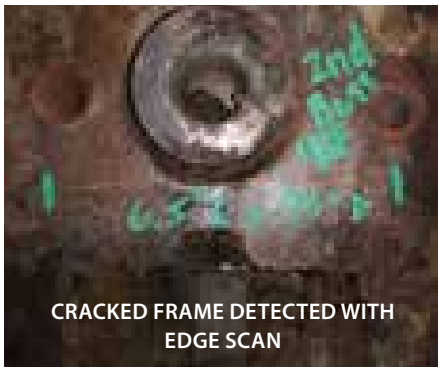
DATE OF FIRST USE: 6/1/2015

BENEFIT 1: Allows inspection of high stress areas of press frames to be performed during scheduled down days

BENEFIT 2: No disassembly of related press components required, allowing for more frequent inspections

RESULTS: One OSB producer has had no unscheduled down time in more than four years due to press frame failure

DESCRIPTION: Multi-opening press frames have a history of catastrophically failing. With the Edge Scan Press Frame process of inspecting multi-opening daylight press frames, frame cracks can be identified at their non-critical stage, allowing monitoring until they are deemed necessary for repair. This process virtually eliminates any unscheduled downtime. It requires no removal of unrelated components in order to inspect behind or under them. The most that would have to be removed is piping or conduit, and this can usually be done by loosening some clamp bolts. With the ability to perform an entire press frame inspection on a regularly scheduled down day, small cracks can be monitored on a more frequent schedule.



CRACKED FRAME DETECTED WITH EDGE SCAN

INNOVATION OF THE YEAR ENTRY J

High-Speed Packaging

ENTERED BY:
Samuel Packaging Systems Group

DATE OF FIRST USE: 4/1/2019

BENEFIT 1: 30% increase in package throughput reduces number of strappers required in a mill.

BENEFIT 2: Higher speed packaging reduces staffing necessary to run the strappers.

RESULTS: Strap cycle reduced from 12 seconds to eight seconds. Allowed customer to eliminate one pack line.

DESCRIPTION: Strapping equipment is the bottleneck in many production facilities. Samuel Packaging reduced the time a package is stopped for strapping by 30 percent. This speed increase allows customers to reduce the number of strapping machines and associated handling equipment needed. Previously, a strap cycle (applying strap, bottom batten and top corner protectors) would take 12 seconds. The current machine is capable of applying the same strap in less than eight seconds. This higher speed packaging reduces staffing necessary to run the strappers and can allow the customer to eliminate a pack line.

INNOVATION OF THE YEAR ENTRY K

Board Quality Cockpit (BQC)

ENTERED BY:
Steinemann Technology USA, Inc.

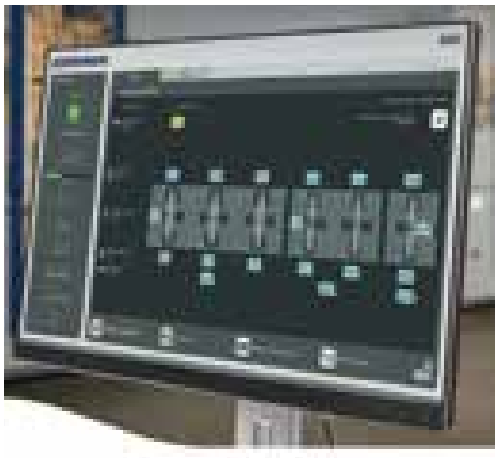
DATE OF FIRST USE: 11/1/2018

BENEFIT 1: Calculates removal distribution per head with exact setpoints for machine height (Cont Additional Details)

BENEFIT 2: Can also be automatic function (Closed-loop)

RESULTS: Repeatable panel quality, minimal set up time, connected to ERP, handling & press. Sander can be run 100% from the press room. Operator only required for belt change overs.

DESCRIPTION: The Board Quality Cockpit assistance system monitors the sanding line while collecting and analyzing a wide range of data. Based both on this analysis and the specialist knowledge incorporated in the system, it recommends the optimum settings for your machine. In other words, it functions as a monitoring, control, analysis, early-warning and process control system. The aim is to wholly integrate the sanding line into the process of wood-based manufacturing. Data becomes easier to exchange and the sanding process significantly more efficient.



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SUPPLIER OF THE YEAR AWARD CANDIDATES

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

Consulting/Services

Casey Industrial, Inc.
CMA engineering Inc.
Cogent Industrial Technologies
Evergreen Engineering, Inc.
Hansen Rice
Hunt, Guillot & Associates LLC
KTC Panelboard Engineering, Inc
Mid-South Engineering Company
Nondestructive Inspection Service
Panel World Magazine / Hatton-Brown Publishers, Inc.
ProChem Inc
SEMCO
Union Pacific Railroad
University of Tennessee, Center for Renewable Carbon
Wechsler Engineering & Consulting, LLC

Equipment/Tooling

Adwest Technologies, Inc., A CECO Environmental Company
Airstar Inc.
A-Lert Construction Services
ALTEC Integrated Solutions, Ltd.
ANDRITZ Inc.
Argos Solutions AS
Baumer Inspection GmbH
BRUKS-SIWERTELL
Brunette Machinery Company Inc.
Clarke's Industries, Inc.
Coil Manufacturing, Ltd.
Combilift USA
Connexus Industries Inc.
Con-Vey Keystone, Inc.
COSTA Sanders LLC
Dieffenbacher Customer Support, LLC
DO2 Industriel
Durr MEGTEC, LLC
Electronic Wood Systems, N.A.
Fagus GreCon, INC
Flamex, Inc.
FROMM Packaging Systems
Globe Machine Manufacturing Company
Grenzebach Corporation
HAWE Hydraulik
IBC, International Bar Coding Systems & Consulting Inc.
IMAL-PAL Group
IMEAS Inc.
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LIMAB North America
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Taihei Machinery Works Ltd.
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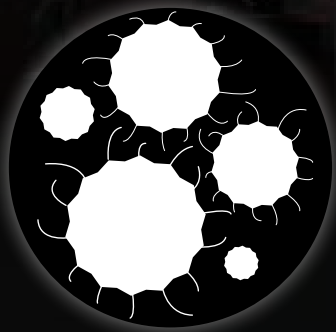

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BANKING ON IT

First United Bank Invests in Mass Timber

by Chanel Studebaker

Image courtesy of Gensler

The First United Bank buildings currently under construction in Texas and Oklahoma will be the first mass timber buildings in each state.

Mass timber is paying dividends in Fredericksburg, Texas, and in Shawnee, Oklahoma, thanks to a forward-thinking client and an architecture firm up for a new challenge.

In envisioning two new branch buildings, First United Bank wanted structures that aligned with their sustainability initiative. Gensler architects responded with an innovative design and building materials.

"First United wanted buildings that really showed how they were built and related to their customer base," according to Gensler project architect Taylor Coleman. "Using mass timber was the best way to accomplish those goals."

The buildings are the first mass timber structures designed by Gensler. Coleman says the material required more upfront work with the contractor for the drawings. The exacting manufacturing process leaves no room for error.

"Whatever you put down is exactly what you're going to get, so you need to get it right," Coleman said. "But the extra time we spent at the front end we more than got back during erection."

He estimates that the build phase was 50 percent to 60 percent faster than with concrete or steel. Overall, the projects are expected to be completed 25 percent faster than they would have been using a different material.

"The roof was set on the Fredericksburg branch in a day and a half. The slowest part was repositioning the crane," he said.

Despite the lack of experienced mass timber tradespeople in the building's fairly rural locations, assembly was made easier with help from the manufacturers. Gensler and contractor Kendnel Kasper Construction, Inc. recruited local home builders in Texas who had experience adding mass timber elements to area residential construction. International Beams, the manufacturer of cross-laminated timber (CLT) and glulam for the Texas branch, sent an expert to help train those workers on panel installation, and by the third panel, they had it down pat.

In addition to the use of CLT panels for the roof, the 8,500-sq-ft design for the Fredericksburg structure includes glulam columns and beams. International Beams suggested southern yellow pine, available locally.

Rendering courtesy Gensler

Southern yellow pine used in the Texas branch for glulam beams adds rich color and striking contrast in the grain of the wood.

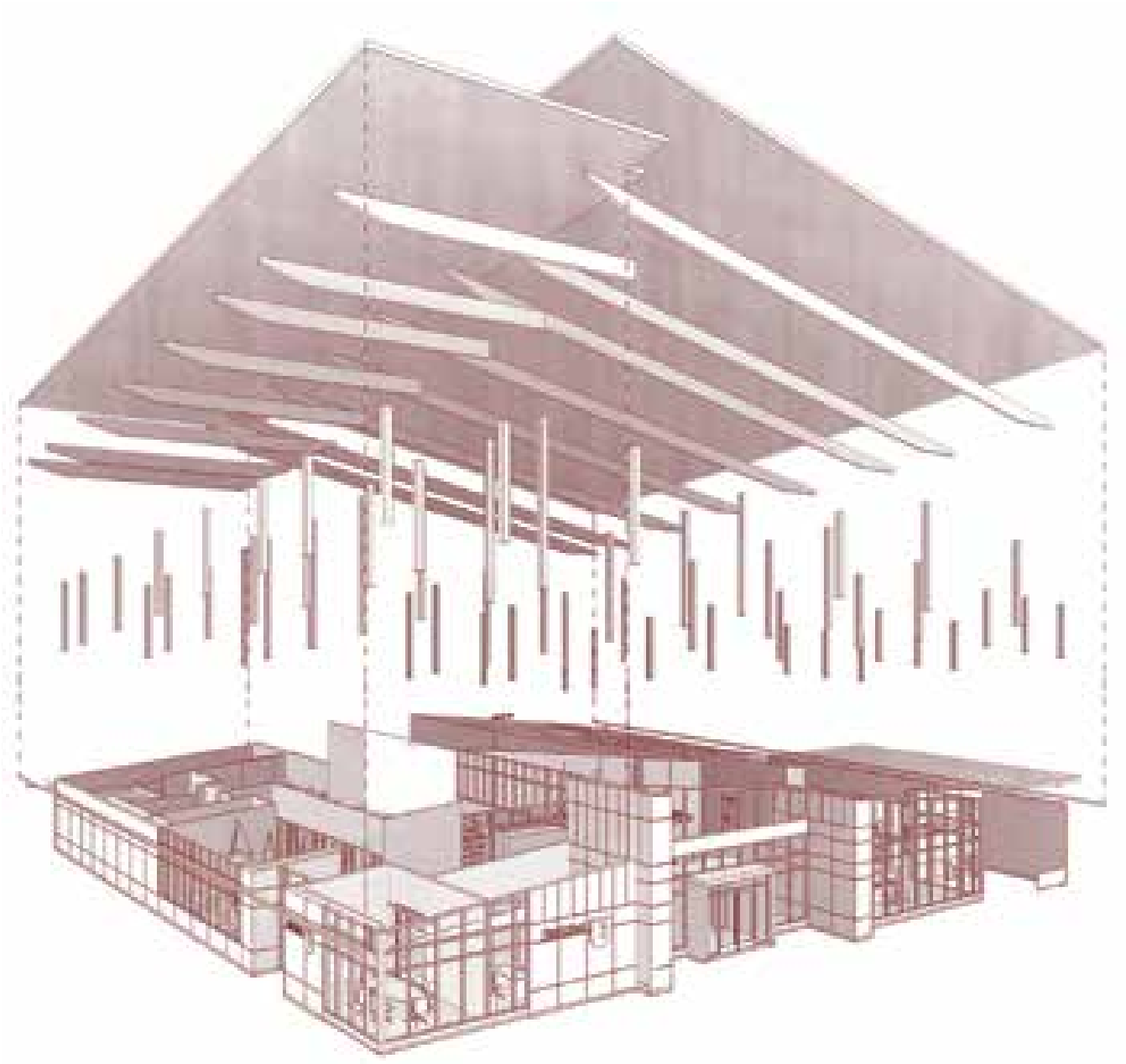
Image courtesy Gensler

Rendering courtesy Gensler

"The result is fantastic," according to Coleman. "The species is native to the area and will be familiar to employees and customers. It's got this rich color and a real striking contrast in the grain of the wood."

Client-driven Design

The Shawnee branch is being built with the Douglas-fir glulam supplied by Bell Structural Solutions, a division of ALAMCO Wood Products, with CLT supplied by Nordic Structures. That branch, which will come in at 12,500 sq ft, is due to be completed in October



Credit: Rendering courtesy Gensler

Courtesy Gensler

2019. For that project, Bell Structural Solutions came on site to assist with installation of some CLT and glulam elements.

"The design was really driven by the client," Coleman said. "First United wanted buildings that were designed to last."

Coleman's plans delivered a net-zero structure with solar panels and a rainwater collection system. He estimates the system on the Fredericksburg branch will collect 250 million gallons in runoff annually—enough rainwater to fully satisfy the water needs for the branch's native plant landscaping. The enhanced building envelope and high-efficiency HVAC systems provide a 42 percent improvement over code requirements. Also, Gensler estimates 190 tons of CO2 is being offset through the use of sustainably harvested timber. Similar efficiencies are expected with the Shawnee branch, also a net-zero project.

"The mass timber really looks fantastic in the branch, especially the fine-milled exposures," Coleman said.

Plans are in the works for an even larger 37,000 sq ft hub for First United in Sherman, Texas. That structure, also slated to be a mass timber building, broke ground in April 2019.

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

2018 APA SAFETY AND HEALTH AWARDS

Solid Strides Forward in Worker Safety

APA – The Engineered Wood Association has announced the winners of its 2018 Safety and Health Awards. The program celebrates safety and operational excellence in the structural panel and engineered wood industry.

Resolute-LP Engineered Wood and LP won Safest Company Awards in their respective categories, and Resolute-LP Engineered Wood and Roseburg Forest Products Company topped the competition for the innovation awards.

The average Weighted Incident Rate (WIR) for the structural panel and engineered wood industry was 6.99 in 2018, a significant decrease from 2017's 8.43. The 2018 Total Incident Rate (TIR) was 1.41, also an improvement over 2017's 1.77. WIR is calculated using both the number and the severity of recordable incidents.

The Equipment-based Innovation in Safety Award went to Resolute-LP Engineered Wood in LaRouche, Quebec, for its sheet metal storage system. The goal was to create a system that allowed a worker to manipulate sheet metal with minimal manual lifting and handling. The new system stores metal vertically rather than by stacking horizontally, eliminating fall and hand crushing hazards. A highly maneuverable motorized trolley and hoist retrieves and transports the material to its destination without blocking pedestrian areas. The project has reduced the number of hazards for entrapment, increased productivity and minimized the safety risks for the activity.

The Jeff Wagner Process-based Innovation winner was Roseburg Forest Products Company in Coquille, Oregon, for its safe driver process. Based on a number of near misses between truck drivers and mobile equipment operators, the team at Roseburg developed a Safe Driver Process. It erected small buildings at each of three load/unload sites on the property. These structures, equipped with heat and air conditioning to keep drivers comfortable while they wait, each feature weight sensitive mats connected to flashing lights to let the forklift drivers involved in the load process know that the

INCIDENT FREE HONOR SOCIETY	Product	WIR*	TIR**
Boise Cascade Company *Roxboro, NC*	IJ/LVL	0.00	0.00
Louisiana-Pacific Canada Ltd. *Maniwaki, Quebec*	OSB	0.00	0.00
Louisiana-Pacific Canada Ltd. *Swan Valley OSB / Minitonas, Manitoba*	OSB	0.00	0.00
LP Brasil *Ponta Grossa, Brazil*	OSB	0.00	0.00
LP *Panguipulli, Chile*	OSB	0.00	0.00
LP *Carthage, TX*	OSB	0.00	0.00
LP *Sagola, MI*	OSB	0.00	0.00
LP *Tomahawk, WI*	OSB	0.00	0.00
LP *Wilmington, NC*	LVL	0.00	0.00
Norbord *Grand Praire, Alberta*	OSB	0.00	0.00
Norbord *Nacogdoches, TX*	OSB	0.00	0.00
Resolute-LP Engineered Wood *LaRouche, Quebec*	IJ	0.00	0.00
Resolute-LP Engineered Wood *Saint-Prime, Quebec*	IJ	0.00	0.00
RoyOMartin *Corrigan, TX*	OSB	0.00	0.00

* Weighted Incident Rate (WIR)
** Total Incident Rate (TIR)

APA Safety and Health Advisory Committee Members

Terry Evans, *Committee Chairman*
Boise Cascade Company

Sam Newbill, *Vice Chairman*
Hood Industries, Inc.

Josh Jenkinson
Structurlam Mass Timber Corporation

Bryan Kimball
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Jocelyn Lagace
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truck driver is out of their work area. The safe driver shacks have led to a reduction in near misses between truck drivers and forklift operators as well as increased communication and safety awareness.

Begun in 1982, the APA awards program honors the management and employees of companies and mills with the lowest Weighted Incident Rate (WIR) that is calculated using the number and severity of recordable incidents reported on the mill's annual OSHA (Occupational Safety and Health Administration) report. Since 2008 was the first year that WIR was used, awards and reports for 2009 through 2016 also continue to show Total Incident Rate (TIR), the measure used in previous years.

Seventy-eight APA-member structural wood panel and engineered wood product facilities in the U.S., Canada and abroad participated in the 2018 program. A total of 20 facilities representing six APA member companies earned awards in various competition categories. Some of the mills were multiple award winners.

INNOVATION IN SAFETY AWARD

Equipment-Based Innovation Winner:	*Jeff Wagner Process-Based Innovation Winner:*
Resolute-LP Engineered Wood – *LaRouche, Quebec* *"Sheet Metal Storage System"*	**Roseburg Forest Products Company** – *Coquille, Oregon* *"Safe Driver Process"*

SAFEST COMPANY AWARDS

	AVERAGE WIR	AVERAGE TIR
Resolute-LP Engineered Wood *(Companies with three or fewer member mills)*	0.00	0.00
LP *(Companies with four or more member mills)*	3.29	0.50

ANNUAL SAFETY & HEALTH HONOR ROLL

Division I (Plywood)		WIR	TIR
1st Place	**RoyOMartin** – *Chopin, Louisiana*	2.44	0.47
2nd Place	**Boise Cascade Company** – *Chester, South Carolina*	3.88	0.52
Division II (OSB)		**WIR**	**TIR**
1st Place	**LP Brasil** – *Ponta Grossa, Brazil*	0.00	0.00
2nd Place	**LP** – *Panguipulli, Chile*	0.00	0.00
Division III (Glulam, I-Joist and SCL)		**WIR**	**TIR**
1st Place	**LP** – *Wilmington, North Carolina*	0.00	0.00
2nd Place	**Boise Cascade Company** – *Roxboro, North Carolina*	0.00	0.00

3-YEAR SAFETY AWARD (2016-2018)

Division I (Plywood)	Avg. WIR	Avg. TIR
Boise Cascade Company – *Chester, South Carolina*	3.47	0.93
Division II (OSB)	**Avg. WIR**	**Avg. TIR**
LP – *Panguipulli, Chile*	0.00	0.00
Division III (Glulam, I-Joist and SCL)	**Avg. WIR**	**Avg. TIR**
LP – *Golden, British Columbia*	1.50	0.53

SAFETY IMPROVEMENT AWARD (2016-2018)

Division I (Plywood)

Hood Industries, Inc. – *Wiggins, Mississippi* **72% Improvement**

2016 WIR	2017 WIR	2018 WIR	2016 TIR	2017 TIR	2018 TIR
38.95	17.83	10.75	5.87	2.05	1.79

Division II (OSB)

LP Brasil – *Ponta Grossa, Brazil* **100% Improvement**

2016 WIR	2017 WIR	2018 WIR	2016 TIR	2017 TIR	2018 TIR
0.75	0.00	0.00	0.75	0.00	0.00

Division III (Glulam, I-Joist and SCL)

Boise Cascade Company – *White City, Oregon* **93% Improvement**

2016 WIR	2017 WIR	2018 WIR	2016 TIR	2017 TIR	2018 TIR
8.21	1.26	0.59	2.05	1.26	0.59

In addition to the Safest Company and Innovation awards, other competition categories include Safety Improvement, Annual Safety and Health Honor Roll, 3-Year Safety Award and Incident Free Honor Society. The annual honor roll, three-year average and safety improvement categories are divided into three divisions based on the type of product manufactured at the mill.

While the program awards are limited to APA members, data are collected from both member and nonmembers mills in order to provide a broad-based industry performance benchmark. A total of 78 mills reported data for 2018.

The winning facilities and companies will be recognized and their safety accomplishments celebrated during the Chairman's Dinner at APA's annual meeting in November in Tucson, Arizona. Award plaques also will be presented to the winning mills by senior APA management staff.

The 2018 Safety and Health Awards program was the 11th year of the program under a revitalized safety effort spearheaded by an APA Safety and Health Advisory Committee, comprised of several APA member company safety professionals. Under the committee's guidance, three main goals were established: make the APA program the premier safety awards program in the industry, encourage the sharing of best practices as a means to improve the industry's safety culture and programs and, most importantly, improve the industry's overall safety performance.

APA is proud of industry progress to develop and implement systems and processes that continue to decrease incidents and improve worker safety.

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APA 2019 Yearbook Available to Members

The 2019 Structural Panel & Engineered Wood Yearbook has been released by *APA – The Engineered Wood Association*. Free for EWTA members, the yearbook includes an analysis of the U.S., Canadian and global economies, focusing on factors that impact demand for engineered wood products across several market segments as a basis for forecasting expected production of engineered wood products. Besides the analysis and forecast, the yearbook also includes historical data on engineered wood production. Topics examined in the yearbook include:

- **Residential construction in the U.S. and Canada, new and repair/remodel**
- **Nonresidential and industrial markets**
- **North American imports and exports**
- **Outlook and production statistics for structural panels (OSB and plywood), including historical data**
- **Engineered wood product demand and production (glulam, I-joists and LVL)**

The entire 2019 market forecast, including all market segments and production outlook, as well as statistical data, is included in the yearbook. EWTA members may request the report by emailing ewta@engineeredwood.org. Nonmembers may purchase the report for $300 at www.apawood.org.

Product Showcase

Altec
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Altec Completes Full Lathe Deck Fabrication
Altec nears completion of its first Green End full lathe and electric charger fabrication. Shop and factory testing of the complete lathe will take place at Diboll, TX at the end of September and will have the lathe on display for 4 weeks, and the charger in Eugene during the same period. Installation at Coastal Forest Products Havana, FL takes place in December. For further information please contact Chris Bartlett at cbartlett@alteconline.com

EWTA Welcomes New, Returning Members

- **Siemer Milling Company**, a former EWTA member, recently rejoined the association. Siemer Milling, based in Teutopolis, Illinois, produces and markets Glu-X, a chemical-free glue extender milled from wheat and used expressly as the protein-starch adhesive for the plywood industry. Jay Wallace, vice president of customer service, can be reached at jwallace@siemermilling.com.
- New member **ProChem Inc.** of Elliston, Virginia, provides water treatment chemicals, equipment, service, and optional O&M services to the engineered woods market. CleanWESP™ is the treatment program offered to lower overall operational costs, reduce downtime, reduce maintenance and extend media life. Director David Martin can be reached at dmartin@prochemwater.com.

New WVCO R&D Facility Opens

Willamette Valley Company recently held a grand opening for its new research and development facility in Eugene, Oregon. The facility is 28,000 sq ft and houses 24 laboratory benches. The physical testing lab is utilized by Willamette Valley Company's chemists and technicians to test the physical properties of cured materials. The analytical lab is used to peer into the inner workings of the materials: how they cure and how the chemistry interacts. The application area is used to simulate how the company's products are applied in the field. Chemists and technicians share an open office space as well as many collaboration spaces.

Willamette Valley Company's new research and development facility.

Dürr Offers Air Purification Portfolio

Dürr's recent acquisition of MEGTEC has allowed the company to expand its portfolio of exhaust purification technology to meet tightening environmental regulations in the wood products industry. Dürr's new CleanSwitch regenerative thermal oxidizer is a highly efficient solution for the destruction of volatile organic compound emissions that arise from the treatment and processing of wood. The technology has an annihilation rate of 99 percent or more and a thermal efficiency of 95 to 97 percent.

The CleanSwitch regenerative thermal oxidizer delivers a VOC destruction efficiency up to 99 percent in this Southern yellow pine OSB dryer application.

Evergreen Engineering Opens New Office

Evergreen Engineering, based in Eugene, Oregon, has opened a new location in the Seattle area to better serve the company's major wood products and pulp and paper clients in Washington state, and to also take advantage of the pool of local talent available in the area. The new Everett, Washington, office will be led by Project and Office Manager Kevin Tangen, formerly based in Evergreen's Eugene office. He is joined by Mechanical Engineer Erik Lasher and newly hired Senior Project Manager Jeffrey Tuma. Locally hired designers and drafters will round out the team.

SMARTECH Expands SmartWax Technology

SMARTECH (formerly TIP), recently expanded the reach of its SmartWax technology to additional territories and additional technologies. The product, which reduces the cost of wax used in the manufacturing process through a patented suspension technology, is now being sold in Asia and Europe.
The company is also marketing the technology for use in MDF and particleboard. SMARTECH has more than tripled its investment in SMARTECH-X, its research arm, fueling the development of additional technologies.

Dieffenbacher Debuts New Oscillating Screen

Dieffenbacher recently introduced its new HCOS High-Capacity Oscillating Screen for particleboard production, promising more throughput with less investment. The HCOS is developed for producing high volumes. It is available in three sizes, with the largest version enabling throughput of 260 cubic meters per hour.

The screen can be equipped with Mechanical Inclination Feature, which allows the adjustment of the screen's inclination to increase or decrease material flow. The screen can be installed in new plants or integrated into existing plant structures as a retrofit.

Dieffenbacher's High-Capacity Oscillating Screen

Raute Showcases New Veneer Dryer

Raute recently debuted its new Next Generation Dryer. The dryer optimizes raw material usage and speed control, eliminates pitch and corrosion opportunities, and is environmentally friendly, producing zero emissions in the mill by utilizing modern measuring technologies and automated processes. The dryer uses 15 percent less electricity per veneer cubic meter produced, with minimized re-drying, and offers up to three percent more dry veneer recovery with optimized hot air circulation. Raute also offers a Complete Drying System that combines Mecano and Metriguard technologies that analyze visual, moisture, and stiffness for the highest accuracy in veneer grading, along with automated dryer feeding and dry stacking.

JAX, Inc. Announces Leadership Transition

JAX, Inc. has promoted Kyle C. Peter to the position of president and CEO. Former president and principal owner Eric J. Peter has transitioned to product research and senior advisory roles. Kyle Peter has been JAX's director of international sales for the past seven years, two of those based in Zurich, Switzerland.

Altec Hires Two New Team Members

Altec Integrated Solutions has hired two new employees. Allan McClure is the general manager of Altec's manufacturing facility (Demco Manufacturing, Inc.) in Diboll, Texas. He brings with him 43 years of experience in the veneer and plywood industry in plant operations, machinery manufacturing and technical field service, particularly on the green end. Randy Watts is a field service technician also based out of Altec's Diboll manufacturing facility. Watts has 27 years of experience on veneer green ends in both operations and management.

Allan McClure

Randy Watts

UPCOMING *connections*

2019

OCTOBER

12-16 Woodtech Wood Processing Machinery and Intermob Fair, Istanbul, Turkey, intermobistanbul.com/en/

16-18 North American Wholesale Lumber Association (NAWLA) Traders Market 2019, San Antonio, Texas, nawla.org

NOVEMBER

2-4 APA Annual Meeting and EWTA Info Fair, Tucson, Ariz., www.apawood.org, www.engineeredwood.org

12-14 2019 North American Association of Floor Covering Distributors + North American Building Materials Distribution Association Annual Convention, New Orleans, La., distributorconvention.org

19-22 Greenbuild International Conference and Expo, Atlanta, Ga., greenbuildexpo.com

DECEMBER

3-6 Western Pulp, Paper and Forest Products Safety and Health Conference, Portland, Ore., osha.oregon.gov/conferences/western/Pages/index.aspx

2020

JANUARY

21-23 National Association of Homebuilders International Builders' Show 2020, Las Vegas, Nev., www.buildersshow.com

MARCH

12-13 Panel and Engineered Lumber International Conference and Expo (PELICE), Atlanta, Ga., www.pelice-expo.com

16-18 Dubai WoodShow, Dubai, United Arab Emirates, dubaiwoodshow.com

APRIL

26-29 Composite Panel Association Spring Meeting, Dana Point, Calif., www.compositepanel.org

MAY

14-16 AIA Conference on Architecture 2020, Los Angeles, Calif., conferenceonarchitecture.com

SEPTEMBER

9/30-10/2 Timber Processing and Energy Expo, Portland, Ore., www.timberprocessingandenergyexpo.com

OCTOBER

17-20 APA Annual Meeting and EWTA Info Fair, Aventura, Fla., www.apawood.org, www.engineeredwood.org

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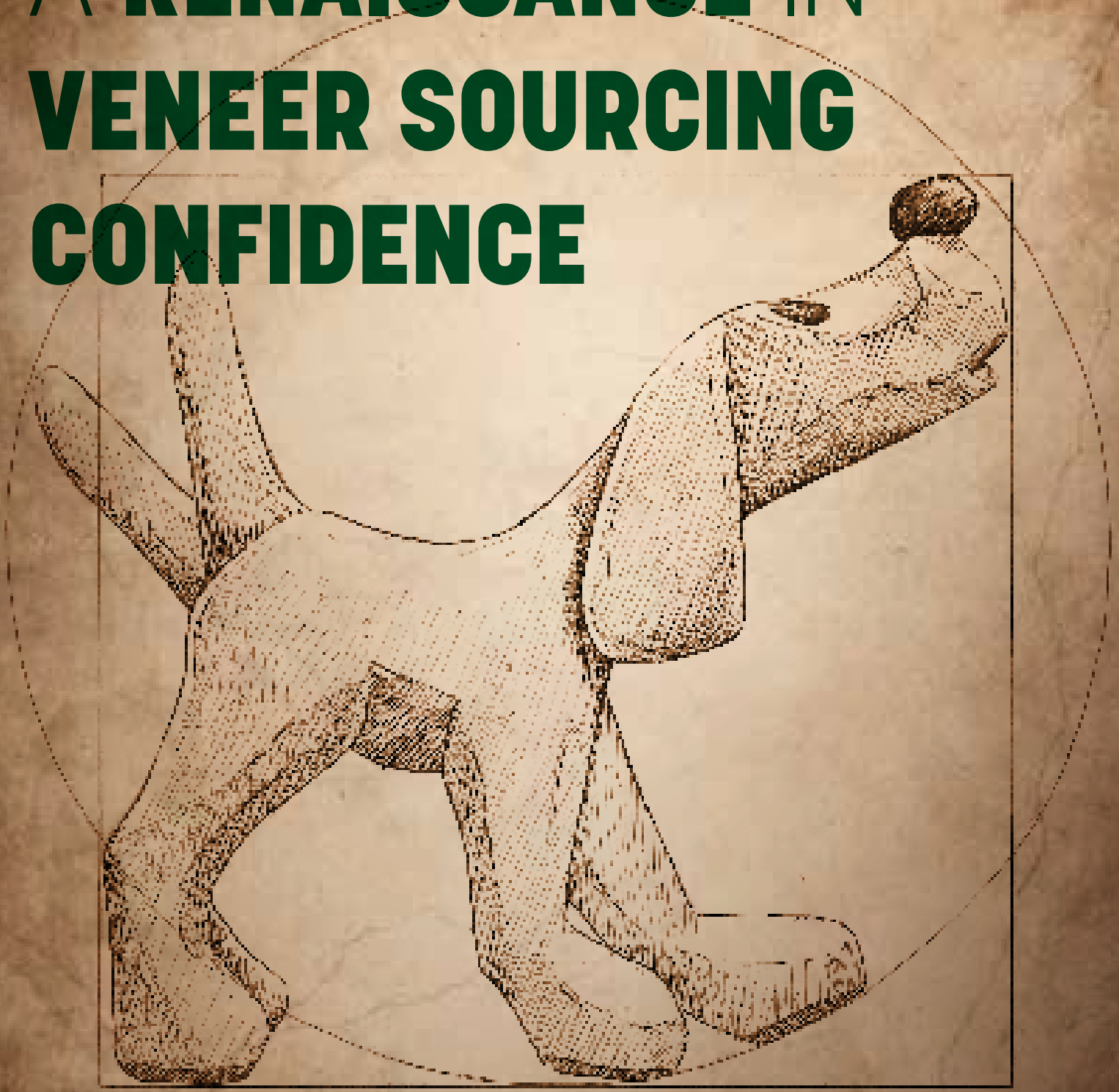

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