

Economy, Global Demand & More Take Center Stage At 99th Annual Conference

RTA members convened in San Diego, Calif., Oct. 31-Nov. 3, at the Manchester Grand Hyatt to network, conduct business and learn about industry trends affecting their businesses.

Prior to business sessions kicking off, the 300+ attendees enjoyed time together during events like the Annual Golf Tournament, a tour of the *USS Midway*, stationed in San Diego Bay, and a visit to the award-winning San Diego Zoo.

The Annual President's Reception allowed all in attendance to reconnect prior to the business sessions beginning the next day.

RTA convened an expert group of presenters to address attendees on a host of topics ranging from economic and legislative issues affecting the wood tie industry to procurement and engineering plans for the railroads.

A fun night was had by all during the

Annual RTA Banquet, where attendees donned Top Gun-themed costumes and awards were presented to a group of professionals who have made significant contributions to the industry.

The pictorial essay that follows provides highlights of the conference. Photos were taken by Gary Coleman. To view a gallery of all photos taken, log onto <http://colemanphotography.pass.us/rta17/>.

Golf Tournament

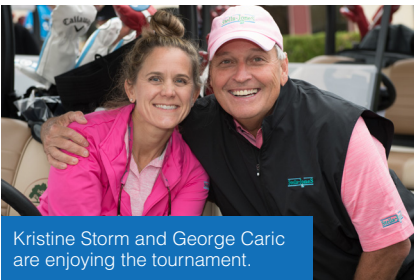
RTA golfers enjoyed a day of fun and friendly competition at the Maderas Golf Club in San Diego.



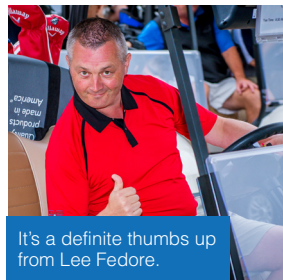
John Reaves gives his best smile for the camera.



So close, but, yet, so far...that's what Mike Goldston and Grant Vale are thinking!



Kristine Storm and George Caric are enjoying the tournament.



It's a definite thumbs up from Lee Fedore.



Ted Woerle, Tim and Mary Ries, and John Heller enjoyed their foursome.



Bill and Rhema Behan, left, are with Sandy and Jeff Miller.



Geno Huenick, left, with Steve Bolte, Rob Crawford and Jim Hansen.



Canon McDonald, left, with "Clown" Ingle, Joe Chinyavong and Kenny Dailey.



Nathan Henderson, left, is with Cory Thomas, John Giallonardo and Travis Gross.



Somebody (Jory Greenfield) is "in the money!"



Stacy Borkofsky joins George Caric, Rob Churma and Zach Dombrow in the clubhouse.



Chuck Kraynick showing John McGinley which way they need to head off.



Dave Koch, right, takes careful aim as Shea Zeiser looks on.



TAKE DR. ZAREMBSKI HOME!

He'll be your personal tutor with new RTA and University of Delaware online railroad courses at udel.edu

Yes, you can have the professional engineer legend in your own home! The railroad profession's leading expert, Dr. Allen M. Zarembski of the University of Delaware, together with the industry's leading member organization, the Railway Tie Association, have collaborated on a series of online railroad and transit training courses. Take them when you want, right at home. They are packed with the critical information you need and were created to help you earn the professional development hours you want. This is your fast track to wood tie and railway track maintenance and construction expertise:

For professional engineers:

- *Engineering and Design Issues for Timber Railroad Crossties*
- *Introduction to Crosstie Degradation and Failure Modes*
- *Introduction to Railroad Load Environment for Crossties*

For non-railroad professionals:

- *Introduction to Railroads and Transit Systems for the Non-Railroad Professional (Parts 1 and 2)*
- *Introduction to Railroad Crossties for the Non-Railroad Professional*

These professional development courses are perfect for new hires or veterans in engineering, technical, or maintenance disciplines. These modules are RTA-authorized and UD-developed. **Start today at udel.edu/002718.**

**Gain online PDHs
at udel.edu!**

*Special Pricing
for RTA Members!*

UNIVERSITY OF
DELAWARE

RTA
Railway Tie
Association

www.rta.org

© 2015 The Railway Tie Association.
All rights reserved.

USS Midway Tour

RTA members were treated to a special behind-the-scenes tour of the historic *USS Midway* during the Annual Conference. On hand as tour guide was noted author Scott McGaugh, author of “Midway Magic” and “USS Midway – America’s Shield.”



Some of the RTA ladies take time out for a quick photo-op.



The RTA group poses in front of a fighter jet while attending a tour of the *USS Midway*.



Buddy Downey gives a thumbs up in the cockpit as Howard Tomlinson looks on.



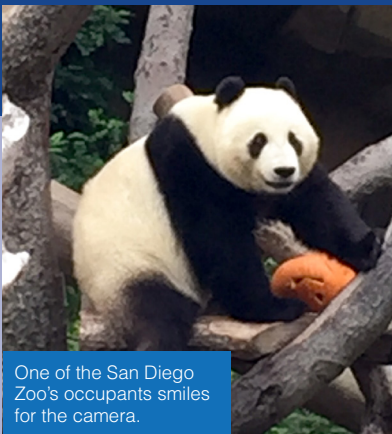
Susan Tomlinson also gives the “all clear” from the cockpit.



The *USS Midway* sits proudly in the San Diego Bay.

San Diego Zoo Tour

A trip to San Diego is incomplete without a visit to the San Diego Zoo. RTA members enjoyed special behind-the-scenes tours of the zoo, where they enjoyed interactive visits with animals not typically available to regular visitors.



One of the San Diego Zoo’s occupants smiles for the camera.



Kathleen Broadfoot and the local giraffe have a few things to discuss.



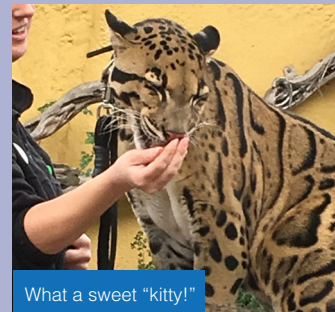
Mike Diraimondo enjoys petting the zebra on the zoo tour.



Looks like Pattie Parrett is enjoying her conversation with a local flamingo.



Word is out that the RTA group is visiting so some of the resident hippos decide to take a look.



What a sweet “kitty!”

President's Reception

The Annual President's Reception is a time when attendees gather in an informal setting to see old friends and make new ones. This year, the venue overlooked the beautiful San Diego Bay.



Linda Darr officially checks in at the President's Reception.



Bud Bartley with Mike Goldston.



Jeff Parrett, Rob Churma and Wes Piatt.



Dave Koch smiles for the camera.



David and Tina Caldwell with Traci Marschalk and Ray Moistener.



Jana and Jeff Lippincott.



Rosalie and Stan Thomas.



Jim and Lynn Carter.



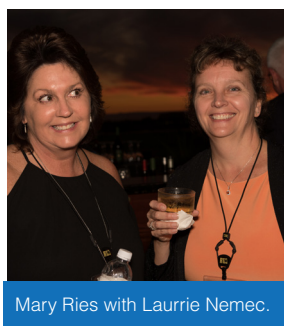
Bill Blaise with Ken Laughlin.



Andy and Chris Pane with Sue Peirson and Kathy Laughlin.



Ryan Reyes with Jaime Escobar.



Mary Ries with Laurrie Nemecc.



Ryan Conrad talking with Steve Smith.



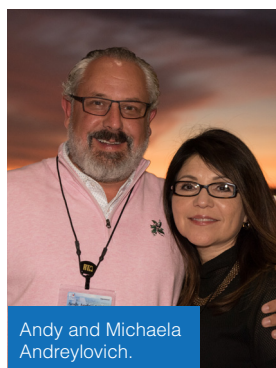
Connie and Tony Frey.



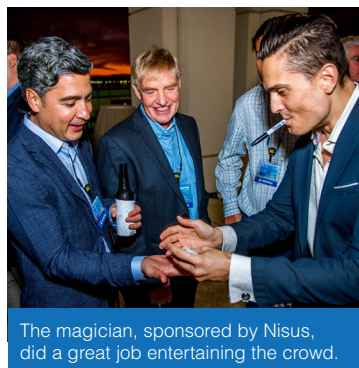
Darryl Odger checks out the new issue of CrossTies as Carolyn McGillivray looks on.



First Lady Mary Ries with RTA President Tim Ries.



Andy and Michaela Andreylovich.



The magician, sponsored by Nisus, did a great job entertaining the crowd.



Jean Meyer with Terry Good.



Sue and Ken Peirson.

Wednesday RTA Business Session & Luncheon

RTA attendees got down to business on Wednesday with discussions on economic, global, sawmill and trade issues. It was especially enlightening to hear from sawmillers who reported on their concerns on resources, labor, trade and more.



Kevin Hicks opens the conference with the annual safety session.



President Ries begins the business session.



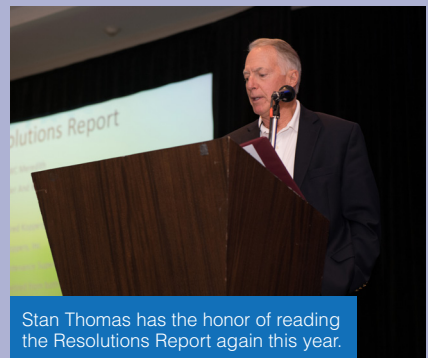
The U.S. economy panel is the first topic on the very full agenda. Tony Hatch discusses economics affecting the railroads.



Jason Dallas with a question from the audience.



David Caldwell addresses the well-attended morning session.



Stan Thomas has the honor of reading the Resolutions Report again this year.



Dallin Brooks of WWPI addresses the luncheon group.



Linda Bauer Darr applauds the crowd for their support and attendance during her luncheon address.



Keeping with the patriotic theme of the conference, guests sing the national anthem prior to Kristine Storm's presentation.



John Urman shows Scott Waring some of the benefits of the RTA conference app.



Some of the RTA Executive Committee enjoyed visiting after the luncheon. From left, Jon Zilloux, Kevin Hicks, Kenny Dailey, Jim Gauntt, and Tim Ries.



Cambria and David Woodard of Nevada Railroad Materials speak with AREMA President Dwight Clark.

Annual RTA Banquet

Annual Banquet
 With a Top Gun theme (San Diego, after all!), RTA's Annual Banquet was a fun evening for all. Entertainment was provided by Latin guitarist Gabriel Romo and comedian and humorist Mark Cordes.



Comedian Mark Cordes entertains the crowd.



Michael McNail of Missouri Tie receives the \$300 gift card from David Hatfield of McCreary County Hardwoods, who sponsored the cards.



Top Gun-themed attendees.



Jane and Bill Moss are in the spirit of the night!



Laurie Nemecek and Mary Ries enjoy the evening.



Susan Gauntt shares a pose with Kristine Storm.



George Caric, left, and Stan Thomas, right, escort Rob Churma to the stage to accept his award.



Marshall Allen does door duty with the RTA team.



"Clown" and Patty Ingle, left, enjoy the evening with Kenny Dailey and Susan Gauntt.



Arne Arneson, center, enjoys a pre-banquet chat as son, Peder (right), listens in.



Ken Peirson looks like he is about to be shipped out!



Jim Gauntt joins Pattie and Jeff Parrett for a photo-op.



John Brown talking with Terry Good.



Gene Dodson with Mary Bartley and Glenn Floresca.



The well-attended banquet was enjoyed by all.



Barbara Stacey channels her inner Amelia Earhart with the planes!

RTA Conference Exhibitors

RTA's Annual Conference would not be possible without the support of exhibiting companies. We thank them for their participation in and support of the conference.



Chuck Kraynick with Tim Carey at the Lonza Wood Protection booth.



George Apostolou with Dave Berry at the Lewis Bolt & Nut exhibit.



Andreas Schwartz of Lindner America with his tabletop.



Jim Renfroe with Wood Care Systems.



David Piper with Mike and Susan Goldston at the Brewco exhibit.



Barry Black welcomes Skipper Beal at the Taylor Machine Works exhibit table.



Wheeler Lumber's tabletop exhibit.



Exhibit table for Progressive Railroading.



Lisa Roberts with Jeff Peterson of Omaha Track stand by their table.



Alan Cox explains Cahaba Pressure Treated Forest Products as Brandon Stephens looks on.



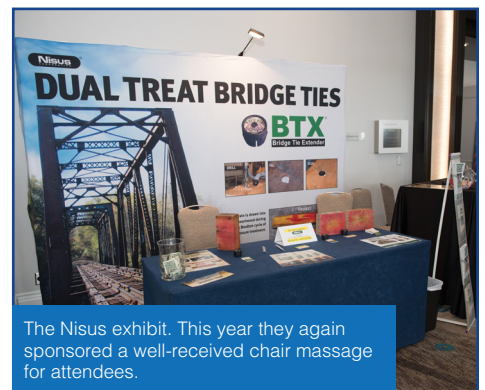
Nick Delmonico explains some of his products at Encore's booth.



Claus Staalnar with his American Wood Technology booth.



Curtis Schoop and Jeff Brimm take time out from the National Salvage and Service booth.



The Nisus exhibit. This year they again sponsored a well-received chair massage for attendees.

Awards & Recognition

An RTA Conference highlight is the presentation of awards for those who have made significant contributions to the wood tie industry.



Rob Churma accepts the Branding Hammer Award from Tim Ries.



President Ries with Broad Axe Award winner Jeff Broadfoot.



Silver Saw Award winner, Henry Christ, with Tim Ries.



Bill Behan, of Gross & Janes, accepts the Executive Committee's Plaque of Service to RTA on Mike Pourney's behalf.

Thank you to all of the businesses involved in making the 2017 RTA Conference a success!

CONFERENCE TOP SPONSORS: NISUS • KOPPERS • STELLA-JONES

SPONSORS

All Conference Sponsors

Acme Wood Preserving
 American Wood Technology
 Appalachian Timber Services
 Asphalt and Fuel Supply
 Cahaba Pressure Treated Forest Products
 Canadian Pacific
 Georgetown Rail Equipment Co.
 Gross & Janes Co.
 Herzog Railroad Services Inc.
 Koppers Inc.
 Lone Star Specialty Products
 Lonza Group
 McCreary County Hardwoods

Mellott Wood Preserving Inc.
 MiTek
 National Railroad Construction & Maintenance Association
 National Salvage & Service Corp.
 Nisus Corp.
 North American Tie & Timber
 Progressive Railroading
 RailWorks Corporation
 Ruetgers
 Stella-Jones Inc.
 Tank Fab Inc.
 Taylor Machine Works
 Wheeler Lumber

Golf Tournament Sponsors

Acme Wood Preserving
 Gemini Forest Products
 Herzog Railroad Services Inc.
 Koppers Inc.
 Norfolk Southern
 North American Tie & Timber
 Progressive Railroading
 Somerville Companies
 Stella-Jones Inc.
 Wheeler Lumber

TABLETOP EXHIBITS

American Wood Technology
 Brewco Inc.
 Cahaba Pressure Treated Wood Products
 Encore Rail Systems Inc.

Lewis Bolt & Nut Company
 Lindner America
 Lonza Group
 National Salvage & Service Corp.
 Nisus Corp.

Taylor Machine Works
 Omaha Track Inc.
 Progressive Railroading
 Wheeler Lumber
 Wood Care Systems

RTA Conference Presenters Share Insight On Issues Affecting Wood Tie Industry

Experts from all facets of the railroad, hardwood and wood tie industries were on hand at the 2017 RTA Conference and Technical Symposium in San Diego, California, Oct. 31-Nov. 3. The presenters shared their insights about challenges and opportunities the industry is facing today and what we might see in the next several years. Below are excerpts from their presentations.

ECONOMIC SESSION

Anthony Hatch, ABH Consulting



Railroads that increase rates above rail inflation every year, about 2 percent, will need to provide better service and more capacity in the future. I call it the “Grand Bargain.” We are seeing rapid intermodal growth due to better service; huge railroad investments; truck problems like fuel, driver shortages and congestion; the switch from other freight cars; and growing economy and trade.

David Caldwell, Hardwood Market Report



China is well over 50 percent of our U.S. lumber exports. But our exports are less than 10 percent of their total consumptions. We need them more than they need us. We have an abundant supply of hardwood timber owned by private landowners who are willing to sell it for the right price.

PROCUREMENT SESSION

Ray Moistner, IHLA



Our challenges include log exports—putting all eggs in one basket; labor—general and next generation; and wood byproducts. The key now is to believe something can be done about it. We have identified opportunities like increased automation, more outreach to global markets, co-generation, robotics and less milling and more exporting of logs. We can all agree by now that there’s enough wood out there, but access is still limited.

Skipper Beale, Beale Lumber Company



It all starts with timber. You can’t have a sawmill if you don’t have access to timber. We have a lot of eggs in one basket—China. If we have one trade dispute, we have a lot of problems. I’m concerned

about the flooring business. We lost Stewart Flooring, which is Shaw Industries, and Armstrong in Jackson, Tenn.

David Brazeale, Brazeale Lumber Company



Even though equipment is more modern today to harvest timber, it is still very labor driven, which is a problem for us going forward. We have two months of supply in our log deck now. We prefer to have more like three months. I’m having trouble with byproducts such as fuel, sawdust and bark. It’s hitting our bottom line.

Henry Christ, Dunaway Timber Company



I have 30 days worth of supply for the current production we have. I’ve left home to come here and my people are facing seven days of rain starting this morning. This time last year, we had somewhere around 65 days worth of supply. Last year’s weather was good enough that we never missed a day for snow. We could be facing weather this year. Every one of those logs going to that log yard for export would make a crosstie.

Brett Franklin, Tri-State Timber



Ash is unbelievable. Buyers come in and raise the price against each other. It is typically rare to have them come in and raise prices in middle of season. The buyers are not getting the volume they want. There is more and more competition from log buyers competing against sawmills.

Geoff Henderson, Anderson Tully



A huge volume of our stock goes into China and/or Asia. Asia is a necessity. As far as Anderson Tully goes, we have found in Asia that we’re trying to find customer bases that keep it in Asia. Thirty-five

percent of our production does go green to within a five-state radius of Vicksburg.

THIRD PARTY & RR QUALITY CONTROL SESSION

Nate Irby, Union Pacific



We want material that’s as good as we can get to begin with. Junk in is junk out. We have to get the best tie we can all the way thru system. In terms of from the time we get the tie to the time we send it on track, we are fine tuning things at the plant. Pre- and post-cresote formal inspections help us fine tune operations at the plant. We are also doing internal training at the railroad to make sure that everyone is on board so that we are sourcing the best ties.

Brad Crawford, Norfolk Southern



We are doing visual field inspections. We are inspecting after the ties are laid out and prior to installation and/or after ties are installed; borings in the field; third party lab inspection on the borings. We’ve paid a lot of money for ties, and I want to make sure they last a long time.

Don Guillen, Association of American Railroads



How does AAR ensure facilities meet and maintain their QMS M-1003? Auditing agencies are assigned to specific facilities. There are over 50 auditors trained by the Quality Assurance Committee (QAC). All 134 components must be M-1003 QA certified. Manufacturers of railway ties are a required specification. Must be certified in order to supply to the railway industry.

Kim Merritt, Southern Pine Inspection Bureau

The benefit of having third-party auditing for standardized quality control programs is the creation of a level playing field among producers. This reduces subjectivity in results,



which, in turn, provides for more consistent quality throughout the industry and results in enhanced service life for our products. When we have that, it inspires confidence and stability.

Tad Cleve, Timber Products Inspection Bureau



We utilize our skilled and diverse staff to assist in the identification of abnormalities throughout the manufacturing process. We stay involved with the client to help in the elimination of these issues and provide routine over-processing evaluations to reduce the loss of product value.

WORKING LUNCHEON

Dallin Brooks, WWPI

We are a diverse sector with a lot of seemingly unique challenges. We must work together to improve the perception that renewable is better than recyclable, and preserved wood is both. We must talk about how preserved wood reduces the need for new wood to replace degraded wood and that it is reusable and recyclable. Perceptions create policies. I am already working on the next generation so they start to get a positive impression of preserved wood.

Linda Bauer Darr, ASLRRRA

45G is the shortline rehabilitation tax credit, and it is a top priority for our association. 45G helps feed your families. The credit is



what allows us to invest in the rail ties to upgrade our track. Our chief congressional sponsors are working hard to include our legislation in whatever tax bill is introduced. If the tax reform bill not dealt with by year end, we will go to Plan B, and that is attempting to include it in the Extenders Package. If none of that works, we'll go to Plan C, which is to push for inclusion in the infrastructure bill that will come to pass next year.

REGIONAL & SHORTLINE RAILROAD SESSION

Kristine Storm, Genesee & Wyoming



Our scrap tie disposal strategy is that any tie replaced is to be disposed of accordingly, meaning it goes to co-gen or landfill. We are facing a continued obstacle of finding alternative disposal avenues to reduce costs. Our annual new tie change-out program creates about 765,000 scrap wood ties.

Judy Petry, Farmrail Corp.



In the past five years, we have seen significant growth by adding 15 new customers. We are now hauling a lot of drilling commodities and a little bit of grain. In 2013, received a TIGER grant, which allowed us to open farthest west location for Badger Mining. We serve a company that hauls frac sand, which has brought people into the area. Shortlines serve these little communities and we help breathe life back into them.

Below are a few notes from those who attended the RTA Conference. RTA appreciates the feedback!

Thank You For A Successful Conference

Jim, thanks for the speaking invite and congratulations on another successful RTA-great venue for supplier meetings, old and new and very well managed event. We look forward to our continued support of the RTA and will be attending in 2018.

—Robert W. Snyder, OmniTrax

RTA Did A Great Job!

Another great conference. Your team did a great job as always. Thanks for everything.

—Kevin D. Hicks, P.E., Union Pacific Railroad

Thank You RTA

RTA has been outstanding to work with!

—Nathan Loftice, BNSF

Bob Snyder, OmniTRAX



We're a wood believer. This year, we expect to purchase about 120,000 ties and will continue to significantly grow. If all projects were approved, we would blow this number out of the water. We are in the process of upgrading all of our railroads, and this number will move up to a much larger amount. >



Wheeler Lumber

Committed to performance since 1892

QNAP™

COPPER NAPHTHENATE

Treated Ties & Timbers

Proven oil-borne preservative preferred for environmentally sensitive areas

Engineering and Shop Drawings services available

800.843.8304 www.wheeler-con.com dkoch@wheeler1892.com

AWPA Standards

AREMA Approved

Cleaner Handling

No Corrosion Concerns

TPI Certified Facility

Alan Matheson, Tacoma Rail



We purchase and install around 4,000 ties per year in addition to switch ties and assorted bridge timbers. Last year, we partnered with Port of Tacoma on a major rail yard reconfiguration, enabling us to achieve higher operational flexibility within the same footprint we've had for some time.

Scott Adams, WATCO Companies



We are one of the largest short-line operations in the United States. We are the third largest industrial contract switching provider. 700,000+ annual carloads, 450 locomotives and 3,900 railcars. We serve 37 states, 32 switching operations, 37 short line railroads, 23 railroad repair shops and 67 terminal locations.

ENGINEERING FORUM

Dwight Clark, Union Pacific, AREMA President



Next year, AREMA will hold its annual conference Sept. 16-19 at the Hilton Chicago for its Conference & Exposition.

Students are an integral part of keeping AREMA relevant going forward. We have 22 AREMA student chapters now. We encourage their attendance at conferences, where there are specific events tailored to the next generation. There is strong member and industry support for the AREMA Educational Foundation, and close to 100 students applied for the scholarships offered in 2017.

Carmen Trevizo, TTCI



One of our objectives is to gather more data to provide to the railroads so that they can benefit from better planning and forecasting on their tie replacement programs. New wood, different treatments. Using automated inspection data with Georgetown Rail's Aurora system.

John Cech, BNSF



BNSF's infrastructure is in the best shape ever. Capital investment continues to be strong. Smarter, data-driven maintenance programs are driving efficiencies.

Our partnerships with suppliers, consultants, researchers drive innovation.

Michael Singelyn, Canadian National



Our annual new tie change out is 2.1 million ties. We continue to reduce the usage of eight-foot crossties in Canada and continue to move away from softwood crossties system-wide. We are exploring innovative inventory, logistics and supply chain processes.

Joshua Marsky, CSX Transportation



Our strategy for the future is to support the implementation of precision-scheduled railroading; automate processes and equipment to drive safety and efficiency; and develop tools and equipment to improve work processes and optimize work planning.

Kevin Hicks, Union Pacific



We have a strong bridge replacement program, with an emphasis on replacement of timber structures, especially in the South. We are doing significant wood tie deck replacements as well. We are continuing to invest in our hump yards. We have plans to upgrade control systems at 17 major hump yards, and we are currently about half-way there. We are continuing our long-term strategy to upgrade facilities to support international and domestic intermodal.

RAILROAD SUSTAINABILITY, TIE DISPOSAL & CONTRACTOR FORUM
Nathan Loftice, BNSF



Sustainability means different thing to different people. But when something reaches an obstacle on disposal, and it starts grinding its way up the supply chain, it gets looked at very closely.

David Smat, BNSF



NHSM is interfering with tie energy recovery by increasing landfill use and fossil fuel use. We will continue negotiations with EPA and ask them to consider alternative treatment types to include those that extend tie useful life. RTA's Tie Recovery Task force would like to be part of solution.

The task force will look at what can we do to be creative and innovative to recover ties.

Jeff Lloyd, Nisus Corp.



A big problem we have now is the cost of natural gas. Fracking technology is a mixed blessing for railroads. Wood fuel must compete with natural gas on price. It is more difficult to burn wood than natural gas. What can be done? A tax credit for biomass or a tip fee added to treated wood fuel or higher natural gas prices would likely drive things back to biomass.

Jason Feagans, Blackwood Solutions



We must open our mind to possibility that in some situations the landfill is not so bad. We have this knee-jerk reaction that landfilling is bad and we are wasting our resources. Some situations where we are consuming way too many resources to recycle. There are awesome landfills that do an amazing job of breaking down everything into organic material, creating methane and producing fuel.

Curtis Schopp, National Salvage & Service



We recycle about 7 million ties per year at six facilities. We sell about 2 million landscape ties per year. Anytime you can use something in its current form, it's good. We are able to sell them as fuel because we find certain places around the country that need the fuel. On a daily basis, International Paper weighs the cost of our fuel vs. other fuels they have on hand.

Richard Carney, Railworks Corporation



Railworks customers are Class 1, shortline and regional railroads, passenger rail transit authorities, general contractors, manufacturers and industrial companies. We dispose of 1 million plus ties per year across North America, primarily generated from maintenance, construction and rehabilitation projects. We undergo a selective pursuit of cleanup and disposal projects. We have volatility and rising costs associated with the current options. ➤

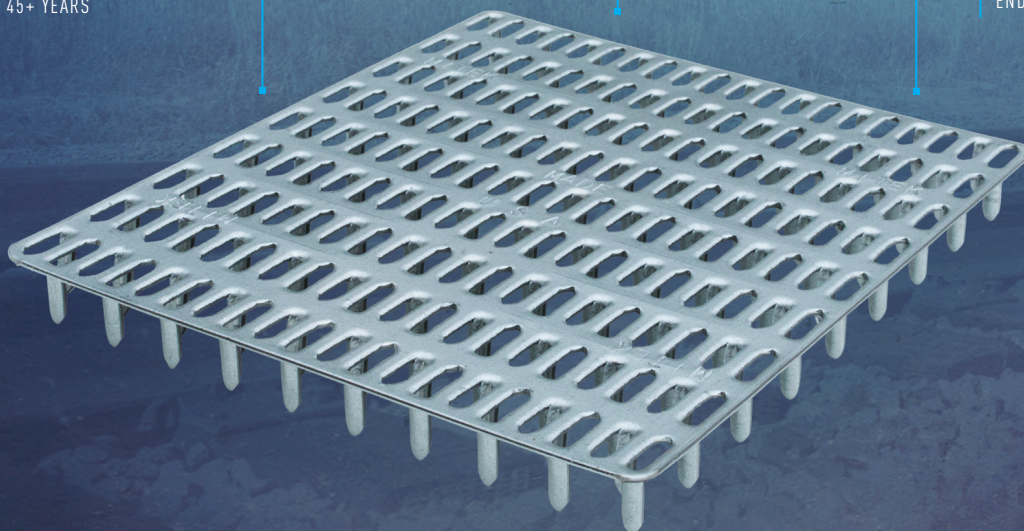
CHOOSE A TRACK RECORD *THOUSANDS OF MILES LONG*

MITEK® ANTI-SPLIT PLATES

INCLUDED
IN AAR CROSSTIE TESTING
FOR 45+ YEARS

MEETS OR EXCEEDS
RAILROAD SPECIFICATIONS

WORKS
WITH ALL CURRENT
END PLATE MACHINES



TRUST THE ONLY ANTI-SPLIT PLATES PROVEN TO PERFORM SINCE 1970.

MiTek Anti-Split Plates are specifically designed for end grain applications, with patented features that ensure penetration at the end of the tie for maximum holding power.

Extend the Life Of Your Crossties.
Contact Bill Moss, 1-800-325-8075
or visit MiTek-US.com

MiTek®

THE NEW STANDARD

Jeff Peterson, Omaha Track



We have a very good grasp on how to go out and pick up scrap ties. We have a tie grinding facility in Superior. In total, this facility could grind 5 million ties per year in one shift per day. Tie chips burn hot and clean, and they're dry and dense. That said, challenges include public misperceptions about burning ties.

RESEARCH SESSION

Jim Carter, Norfolk Southern (Retired)



Our bridge ties are dual-treated with CuNap and borate using BTX. The borate diffuses all the way through there in the bouldering process, and we are very pleased with it. What railroads can expect based on current data is bridge life of 16 years in high hazard zones and 26 years in low hazard zones. A switch to CuNap increases tie life by 30 percent. Increased copper retention increases tie life by 10 years. Borate heartwood treatment increases tie life 20 years.

Tim Carey, Lonza Wood Protection



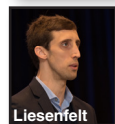
We have the Firesheath paint application as a way of preventing fire-related disasters. Field application of Firesheath WFS Net comes in 3' x 50' rolls so you can wrap material around it. Because it's very flexible, you can make any kind of shape you want. We want to stop the fire and protect the wood.

Todd Euston &

Michael Liesenfelt, GREX



Aurora Tie Inspection 3D takes a three-dimensional look at a tie and delivers the data to the railroads. We're running a detection car over track and the X-ray is focused on the gauge part of the track.



The rails serve as a radiation barrier. When the X-ray comes back, it shows the variability in the density of the wood. We are also investigating use of the same technology for ties before they leave the treating plant.

Andreas Schwarz, Linder America

Railroad ties come to end of life and because its wood, traditionally, people use



high-speed grinders to process ties down to size. This has its disadvantages because metal contamination, especially big plates and spikes, damage grinders and stop production. We do a primary shred and remove all metal in the process and put ties into high-speed machine afterwards.

Jeff Morrell, Oregon State University



Part of the researchers' goal is to make sure treated wood can be used safely in aquatic environments. We have treated wood exposed over waterways. We expose pieces of treated wood with different BMPs applied to them. We've looked at ACZA, CCA, CA and ACQ. Chemicals always come off the wood. BMPs do help. We are trying to see whether the processes are worth doing to show regulators that with these processes they should allow these products to stay in the systems.

CLASS I RAILROAD PURCHASING FORUM

Cory Thomas, BNSF



The majority of our capital spend will go into replacement, much of it rail and ties. We have a total \$3.4 billion in capital expenditures planned for next year. We think we have the tie program normalized, which helps us have a consistent program in terms of purchasing, tie gangs, etc. This year, we have been light on buying switch ties. Next year will see us return to a normal program.

Nate Irby, Union Pacific



UP has a \$3.1 billion capital plan for next year. So far we have bought 3.5 million wood ties for 2017. Future estimated tie demand is 3.6 million for wood and 400,000 for concrete.

David Knopsnider, CSX Transportation



Our 2.8 million ties installed this year will be closely matched for 2018. We don't see that changing. With the changes in the company and capital plans not finalized and precision scheduled railroading in the mix, we'll get

through this together. Stella-Jones and Koppers, I'd like to say a special thank you for working through these changes with us.

Scott Feldman, Norfolk Southern



We are primarily wood railroad, with some steel ties and still testing a small number of composite. Wood—at 99 percent—is our tie of choice. 100 percent of our ties are required to be dual treated. We are doing very well as of last year, with healthy inventories. We are working with sawmills and treaters to be transparent, which has really helped us get control, get cars where they need to go, and avoid ebbs and flows and peaks and valleys.

Bill Blasé, Kansas City Southern



With regard to our five-year tie program, you can see for next year, we're expecting a 6 percent increase in tie installation, subject to final approval of the budget. We will install 760,000 total ties in 2018, with 620,000 total wood. Our risks and opportunities are wood supply, pricing, inventory balance and continued business growth.

Darryl Odger & Mitchell Johnston, Canadian National



Our annual demand is 2 to 2.25 million ties per year (creosote treated hardwood ties) 50,000 to 75,000 switch ties; 50,000 to 100,000 concrete ties per year. In 2018, we expect to remain flat, with 2.15 million ties installed. We will throw a little additional volume in for additional capital. Switch ties between 30,000-50,000. Bridge ties would be flat.

Rob Churma, Canadian Pacific



In 2017, we installed close to 1.2 million crossties, which was a pretty good year for us. Preplated ties are holding at 25,000. We are trying different fasteners this time. We are 100 percent hardwood and 0 percent softwood. Some updates to wood tie purchasing: We will use zero 6x8s in the United States and Canada. No softwoods. ■