

# It's Hands-On For RTA's Tie Grading Seminar Students

The Railway Tie Association held its 2017 Crosstie Grading Seminar July 31-Aug. 3 in the Guthrie, Ky., area.

The intensive, hands-on learning experience covered a range of related topics such as basic nomenclature and structure of wood, how to identify the difference between softwood and hardwood and how to distinguish between the different species, and more.

Seminar instructors also taught attendees to spot defects that may limit

tie life and addressed manufacturing plant hygiene. Students also participated in the annual Species Identification and Crosstie Grading Derby. This year's winners were Joe Ortiz of Veolia Transportation Maintenance Infrastructure, Dalton Wicker of Action Tie and Lawrence Jones of Stella-Jones.

This year's instructors included several veterans of the annual Tie Grading Seminar, plus a few new faces: Marshall Allen, a private consultant on track

maintenance, engineering, rehabilitation and inspection; Terry Conners, associate extension professor at the University of Kentucky; Brad Crawford, a forestry specialist/crosstie inspector for Norfolk Southern; Nate Irby, category manager – Engineering, Ties & Timber for Union Pacific Railroad; Robert Pearce, production manager for Stella-Jones; Jim Ringe, professor of forestry at the University of Kentucky. ■

## DAY 1

On day one, seminar attendees get an overview of the history of railroads and the engineering principles that undergird today's network of railroads. Maximizing the efficiency of the wood crosstie is as essential to today's railroads as it has always been. Species identification is an integral part of the process of creating a good crosstie system, and the University of Kentucky professors are on hand to give an in-depth look at species.



Attendees get together for a pre-seminar reception generously sponsored by Koppers.



Norfolk Southern's Brad Crawford provides students with an overview of the engineering principles behind the specification and use of crossties in RR applications.



UK's Dr. Terry Conners starts off with species ID, then delves into the first of several presentations on wood species ID.



Gerald Horning of Koppers digs in to his block box and shaves off a piece to identify one of the numerous species used in tie production.



Frank Beal of Beal Lumber takes a closer look.



Jesse Kyle of Stella Jones discovers red oak is porous by blowing bubbles through it.



After Day 1 classroom work it's time for a reception generously sponsored by Mike Goldston of Brewco, shown here with UP's Nate Irby and Koppers' Ted Woerle.



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**DAY 2**

Day two brings a continuation of the species identification with cut tie ends and a trip to the plant for a look at full-size ties. Instructors are on hand to help the students with species and defect ID in preparation for the Tie Grading Derby scheduled for day three.



UK Professor Jim Ringe and Allan Hopper of McCreary County Hardwoods show Hunter Waite and Brandon Buterbaugh of Mellott Wood Preserving what different species look like using cut tie ends.



Robert Pearce of Stella-Jones delves into the details of tie defects in Tie Grading 101.



Lawrence Jones and Steve Bryant of Stella-Jones measure the rail-bearing area while Ethan Lightcap of Stella-Jones takes a closer look at the tie.



Tie Grading Station Video Quiz Winner Joe Ortiz of Veolia Transportation Maintenance Infrastructure



A bit of history hangs at the Koppers Guthrie plant. A hand-hewn tie with Broad Axes and other tools of the trade.



Prior to the Guthrie plant tour all seminar attendees receive a detailed safety briefing from plant manager Josh Knoch.



Koppers was a gracious host for the Tie Grading Seminar.



Nick Anderson and Trent Gilbert of Koppers compare notes.



Shea Ziser of MiTek uses RTA's Tie Grading app and notes from class to identify species and defects.

# DAY 3

Day three begins with tie-sized blocks in which students must ID 25+ species with only a 30-second look at each block testing students' knowledge in 30 seconds flat. Then it's on to treating and off to the plant for a tour and the Grading Derby.



The morning starts with a test in wood species ID. Jacob Oran of Stella-Jones has 30 seconds to determine the species of this block of wood.



Lawrence Jones of Stella-Jones is the winner of the large block species ID test.



Norfolk Southern's Brad Crawford gives a history of wood preserving.



Dr. Conners dons his Hawaiian shirt to demonstrate the treating process in miniature. Home to some of the harshest conditions wood can face, Hawaii needs wood preservation too. It's a thinker...



The class gathers around to see how far the dye penetrated each species.



Jim Ringe gives the ins and outs of insects, fungi, and the importance of the proper seasoning of ties prior to treating.



Then it's back to Brad for details on best practices for top-notch quality control at the treating plant.



RTA's newest tie grading seminar instructor, Nate Irby of Union Pacific, talks about procurement from an industry perspective.



Plant automation has greatly improved quality control.



But the human factor is still necessary to oversee the process, as Michael Wright, Wright Rail, Jesse Kyle, Stella-Jones, Jaewoo Kim, Nisus, and Shea Zeiser, MiTek learn.



Koppers' Jerry Millard explains how the tie grader has a front row seat to quality control. Koppers has a multi-level quality control process in place at the Guthrie plant.



There are no gray areas when it comes to tie treating, explains Josh Knoch (center) - it's carefully monitored to assure compliance to specification.



James Miller of North American Tie & Timber studies one of the test ties.



Jesse Kyle of Stella-Jones works to identify species.



Stella-Jones' Robert Pearce gives the answers to the Tie Grading Derby.



Dalton Wicker of Action Tie wins the Full-Size Tie Grading Derby test.

## Thank You For Being Part Of The Tie Grading Crew!

Special thanks are in order for the **Tie Grading Instructors and other representatives:**

Marshall Allen, Terry Conners, Brad Crawford, Nate Irby, Robert Pearce and Jim Ringe; RTA President Tim Ries; and Education Committee Chairman Ted Woerle. RTA's Barbara Stacey of RTA was the on-site representative.

**RTA Tie Grading students include** Dalton Wicker of Action Tie; Frank Beal of Beal

Lumber Co.; James Edwards of CR Quality Services Inc.; Robert Dudley of Dudley Hardwoods; Michael Liesenfelt of Georgetown Rail Equipment Co.; Nick Anderson, John Baron, Marcus Gilbert, Gerald Horning, Patrick Green, Jon Ashcraft and Spencer Railey of Koppers Inc.; Allan Hopper of McCreary County Hardwoods; Brandon Buterbaugh and Hunter Waite of Mellott Wood Preserving; Shea Ziser of MiTek

Industries Inc.; Jaewoo Kim of Nisus Corporation; James Miller and Anthony Sparks of North American Tie & Timber; Nathan Barnhart, Steve Bryant, Lawrence Jones, Ethan Lightcap, Jacob Oran, Hunter Hutchins, Sammy Crittendon, Jesse Kyle and Jerrad Calton of Stella-Jones Corp.; Victor Key of Transdev; Chad Stark of Voestalpine Nortrak; Jim Clouse and Jose Ortiz of VTMI; and Michael Wright of Wright Rail America Inc. ■

