

# TIE GRADING SEMINAR

## Graders Reach New Heights In West Virginia

“When we planned this year’s Tie Grading Seminar, it was bound to be one of the best ever,” said Railway Tie Association (RTA) Education Committee Chairman Marshall Allen. And, Allen was right. With the best facilities RTA attendees have ever enjoyed, a superbly orchestrated plant experience by the wonderful folks at Appalachian Timber Services (ATS), and our largest instruction staff ever assembled, the 2014 seminar met and exceeded all expectations. The week’s work included three full days of instruction in the classroom and in the field at ATS. Punctuated with more tests reinforcing the subject matter than ever before, students excelled in the coursework. The below chronicles some of the week’s highlights. ■



Twenty-eight tie graders and eight instructors converged on ATS in Sutton, W.Va., for this year’s Tie Grading Seminar.

### Day 1

Day 1 includes a journey of learning that begins at the foundation of the railroad operations—the track structure and the role that wood ties play in the way railroads provide safe service throughout more than 200,000 miles of track every day. This look at engineering principles is followed by an in-depth look at wood structure and why wood performs at such a high level in the track environment.



Education Committee Chairman Marshall Allen introduces the “staff” instructors, who will lead this year’s Tie Grading event: Allen, Gauntt, Randy Baileys, Terry Conners, Jeff Morrell, Jim Ringe, Robert Pearce and John Zuspan.



Instructor John Zuspan of The Track Guy Consultants gives students a look at the engineering principles behind tie specifications.



Dr. Terry Conners begins the wood identification instruction with a look at different wood properties.



Students dig into the wood identification sample boxes to take their first look at how to discern the macro features that help in identification.



Instructors do more than just lecture at the Tie Grading Seminar; they are hands-on with help in answering questions. ➤

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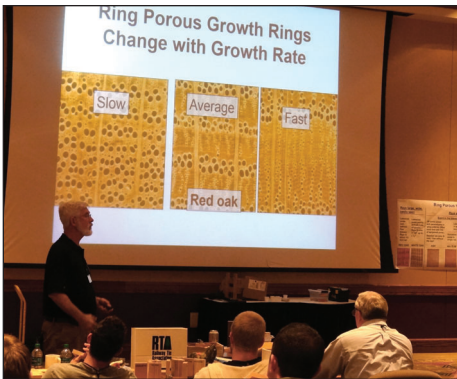
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Conners continues to explain the primary differences in hardwoods.



Then, he illustrates how some woods like red oak can have air pass through their pores, while some woods with obstructed pores like white oak won't pass liquids or air.



A hands-on demo: Dip a small piece of red oak in soapy water and then blow on the other end. Bubbles will form on the wet end. Cool, huh?

**Day 2**

Students expand their knowledge of wood species and then dive into the specifications for wood ties, looking at defects that are allowable and those that require ties to be either industrial grade or culled.



Next up is some serious diving into the other species.



The first test...



...requires students to identify up to 30 blocks of different wood species used for crossies.



Later in the day it's field work...



...where classmates work together on full-sized ties...



...to grade them and identify species. And, after some thinking it through, they are all successful.



Here, Jack Hughes of Norfolk Southern digs in to the test.



Appalachian Timber Services Vice President Rick Gibson and Marshall Allen enjoy a moment during the field test.



Here, Jeff Morrell (right) helps out a couple of students with a question.

**Day 3**

More species and defect work are augmented with an in-depth look at wood preservation, a plant tour at ATS and finals. This year's class proved more than a match for the work, and scores were spectacular.



Day 2 and Day 3 contain numerous HD video modules that both instruct and test students on tie defects.



The attendees learn more about wood preservation from Jim Ringe...



...Jeff Morrell...



...and Randy Baileys who tag team the instruction on Seasoning, Treating & Quality Control.



Following the instruction, another hands-on demo using a vacuum chamber illustrates how pressure forces wood preservatives into the cells of the wood.



Then, it's off to see a real treating plant at ATS where they operate three cylinders...



...and treat a variety of wood tie specialty bridge products. ➤



As the tour winds down near the grading station...



...we meet up with a couple of welcome interlopers from West Virginia University Forest Products. Pictured are Conners, Morrell, Joe McNeel and Jeff Slahor.



Finally, we're back to the last test where students receive their final grade from the instructors.



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# Thank You

Our attendees all wish to thank ATS Vice President of Sales Rick Gibson and Plant Manager Roy Henderson for their efforts to make this event such a wonderful experience. Also, thanks goes out to all the sponsors for the dinners and lunches during the event (list to come). Finally, the students and RTA must thank our all-volunteer instruction staff that year-in and year-out give up a week or more of time in prep and in the classroom to make the annual Tie Grading Seminar a great success. We really can't thank you enough!

**INSTRUCTORS:** Marshall Allen, Allen Railroad Services; Randy Baileys Lonza Wood Protection; Terry Conners and Jim Ringe, University of Kentucky; Jim Gauntt, Railway Tie Association; Jeff Morrell, Oregon State University; Robert Pearce, Lee Inspection & Consulting; and John Zuspan, Track Guy Consultants.

**EDUCATION COMMITTEE MEMBERS:** Kris Hedding of Stella-Jones and Steve Lish of Koppers Inc.

**STUDENTS:** Justin Coeburn, Robert Fox, Johnny Hodges and Kody Whitt of Acme Wood Preserving; Aaron Cottrell and Ben Meckley of Appalachian Timber Services; Charles Gilley, Jeff Caldwell, Zac Adamo, Marcus Douglas, Raymond Koch, Bill Sachs and Adam Mitchell of Koppers Inc.; Charles Orozco of NAVFAC EXCW; Guadalupe Acosta and Juan Quintana of New Mexico Ties & Poles; Jack Hughes of Norfolk Southern Corp.; Toby Coyner, Jason Dallas, Christina Fargiano, Max Harris, Paul Huff, Duston Johnston, Dustin Juneau, Philip Qualls, Dan Reed, Justin Runyon, Loney Shepler and Rafael Silva of Stella-Jones Corp.

**SPONSORS:** Special thanks are due to the sponsors of the 2014 Tie Grading Seminar. Thank you to Arch Wood Protection, Appalachian Timber Services, Stella-Jones Corp. & Wheeler Lumber. ■



Robert Pearce reads off the final test answers.

## RESEARCH UPDATE:

# RTA-AWPRP In Mississippi

Railway Tie Association (RTA) Executive Director Jim Gauntt visited The RTA-AWPRP (Alternative Wood Preservative Research Project) at the Dorman site ongoing at Mississippi State University.

This research project is designed to test a variety of new wood preservative systems in concurrent, replicated work at two sites (Dorman and MacNeil) under the direction of Mississippi State Senior Research Associate Mike Sanders. Sanders and Gauntt were joined by Ken Peirson, Stella-Jones director - quality assurance/procurement audits, to review their installed systems and prepare for next year's field trip to the site.

RTA-AWPRP is a joint project conducted in cooperation with five Class 1 railroads, several wood preservative manufacturers and RTA treating company members. The principal modality being investigated

includes comparative testing of full-sized ties treated with differing wood preservative systems, including dual treatment processes, directly against both untreated and standard creosote-only treated ties. The idea is to determine the relative performance of these different systems when matched up with industry standard products.

The "twist" in the replicated work is that the second site in MacNeil, Miss., is not only in AWPA decay Hazard Zone 5 (Dorman is in Zone 4.), but also is infested with the much more aggressive Formosan Subterranean Termite. The test protocols were designed to maximize decay and termite activity over the planned 20-year test and to discern if there were any differences in the performance of wood



preservatives in FST infested environments compared to the native termite site.

There are two phases to the project. Phase one is in its sixth year of evaluation, and phase two is in its second year. All reports to date on the progress of the work can be found at [www.rta.org/research-reports](http://www.rta.org/research-reports). The most recent annual evaluation will be presented at the RTA conference in Orlando. ■