Gateway Document for Candidate Railroad Tie Products

Objective:
To provide a roadmap for the evaluation of new tie products for use in track. Specifically, what basic criteria to evaluate and where it can be done, so a proper presentation to purchasing agents and engineering departments can be assembled. This preliminary work shall serve as the basis from which a decision can be made to determine if further evaluation is warranted.

Scope:
The railroad industry uses many familiar materials but, occasionally, a manufacturer develops an alternative tie product that they feel may be of value to the industry. The manufacturer may lack the means by which to investigate whether this new product does, indeed, fulfill a need of the industry. And, they need to understand the basic requirements or characteristics for existing railroad products.

Background:
This document does not attempt to write new evaluation criteria, rather to list what currently is available and where testing may be performed. It must be considered a living document that needs periodic review and updating. It is intended to be a guide only, was developed by consensus and is open to further comment and revision as necessary.

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Section 1. Tie Product Category:

New (no existing like product) ρ Substitution / Replacement ρ

If substitution or replacement; describe existing product:

Section 2. Manufacturer / Vendor Contact Information.

Manufacturer Name	
Product Trade-name / trademark	
Copyright or patent status	
Contact Name / Title	
Office & mobile phone / Fax	
Email	
Mailing Address	

Section 3. Tie Product Characteristics (not all may apply).

Physical	Mechanical	Other
Weight	Stiffness (MOE)	Moisture absorption
Density	Strength (MOR)	Preservative treatment
Dimensions (as used)	Split Resistance	Preservative assay
Moisture Content	Impact Resistance	Lab decay testing
Color	Fastener Holding – Static	Lab insect testing (termites)
Texture	Fastener Holding – Cyclic	Field decay testing
Hardness	Moment of Inertia (vertical)	Field insect testing (termites)
Moisture Stability	Section Modulus	Accelerated aging
Thermal Stability	Compressibility (MOC)	Fire resistance
Flame Spread	Coefficient of thermal expansion	Salt spray exposure
Freeze / Thaw cycling		In-track lateral resistance
UV Degradation		Electrical resistivity
Abrasion Resistance		Reaction to soda ash
		Chemical exposure reaction

Section 4. Test Facilities Recognized by the RTA and Member Railroads.*

Subject	Name	Direct Contact (or call RTA)
Lab & Field decay / insect testing & preservative Issues	Mississippi State University Louisiana State University Oregon State University Michigan Technological Univ.	Mr. Michael Sanders 662-325-8097 Dr. Allen Rutherford 225-578-4131 Dr. Jeff Morrell 541-737-4222 Dr. Peter Laks 906-487-2364
Mechanical property evaluation of ties & fasteners	University of Illinois University of Tennessee Knoxville TTCI – Pueblo, CO Construction Technologies Labs Southwest Labs	Mr. Riley Edwards 217-244-7417 Dr. Uday Vaidya 865-974-7620 Mr. Kenneth Laine 719-584-0537 Mr. Frank Laux 847-965-7500 Mr. Charles Kerr 918-251-2858
Engineering & In-track Evaluation	TTCI – Pueblo, Colorado University of Delaware	Ms. Carmen Trevizo 719-584-0560 Dr. Allan Zarembski 302-831-7002

* this list subject to periodic review, use of a facility not on this list possible with prior RTA consent.

Section 5. Test Standards Recognized by the RTA and Member Railroads.

Subject	Name	Contact
Lab & Field decay / insect testing for preservatives	American Wood Protection Association	Mr. Colin McCown 205-733-4077
Mechanical property evaluation of treated ties & fastener system	AREMA Chapter 30	301-459-3200
Lumber / Timber Grading	AREMA Chapter 30 Railway Tie Association National Hardwood Lumber Association Southern Pine Inspection Bureau West Coast Lumber Inspection Bureau	301-459-3200 770-460-5553 901-377-1818 850-434-2611 503-639-0651
Misc. Testing Standards	American National Standards Institute American Society for Testing & Mtrls	212-642-4900 610-832-9500