Technical Session 4:
Treated Wood Disposal and Reuse

Treated Timber in the Circular Economy: Opportunities for Reuse

Mark Brown
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ABSTRACT

Proper preservative treatment has a well-deserved reputation for extending the useful life of timber, thereby reducing the need to harvest additional trees while sequestering carbon. However, treatment becomes a liability at the end of life due to the presence of residual preservatives. This has become increasingly problematic in the emerging circular economy that encourages reuse/recycling wherever possible. Treated timber, especially that treated with chromated copper arsenate (CCA), poses special challenges and regulators often equate all treated wood with CCA. There are a number of possible reuse/recycling options for treated timber, but regulatory and logistics issues have sharply limited implementation of these strategies. This presentation will briefly review the magnitude of the issue, outline the logistical hurdles, and set the stage for the subsequent presentations on more specific preservative systems.

Disposal of Copper Nap Treated Materials

Ken Laughlin
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Rockford, Tennessee

ABSTRACT

The presentation is about the use of QNAP treated wood, the life expectancy of the wood, and then the disposal option at end of life. QNAP lasts longer than most other preservatives which in itself is an advantage in disposal. It is also a NON-RESTRICTED use pesticide which again opens many different doors to disposal. Lastly, because of its NR use category it is open to numerous additional means of disposal under the Non-Hazardous Secondary Material Rule.

Biochar's Role in Farming and Soil Health

Stephen Smith
Stephen Smith Consulting
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ABSTRACT

Farm soil is in trouble. Decades of "modern" farming, including monoculture planting, intensive tilling, fertilizing, and herbicide use have left much of U.S. farmland lacking in carbon, nutrients, and biological diversity. Used railroad ties can help.

Regenerative farming methods reverse the soil decline by incorporating plant carbon, natural nutrients, cover crops, while minimizing tilling and chemical use. However, this process takes years to decades to transform dirt into soil. The addition of biochar from ties offers a short-cut. Biochar improves soil quality by increasing aeration, water holding capacity, improving nutrient availability, and providing an environment for soil bacteria to thrive.

By using pyrolysis, used ties can be converted into biochar and renewable gas for energy. There are significant economic incentives. Biochar added to soil lasts a very long time, making it qualify for carbon sequestration credits. There are grants available for improving farm soil. Tipping fees may be collected for tie recycling. Gas product has value as renewable natural gas, can be used to make hydrogen, or even to produce ammonia fertilizer. Grants may even be available to cover part of the cost of the pyrolysis plant. Thus, a profitable business seems feasible.

Treated Wood Recycling & Disposal

Curtis Schopp
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Clear Creek, Indiana

ABSTRACT

The presentation illustrates the current real-world options for recycling and disposal of treated wood. The reasons why over 80% of railroad ties are recycled and less than 10% of poles are recycled will be explained. The current types of companies that utilize the fuel will be discussed.

We will look at the process of properly handling and marketing landscaping wood for reuse, both in railroad ties and poles. Biochar will be a part of treated wood recycling in the future. The equipment required to produce a "biochar" varies greatly. How the char is sold and utilized will be the determining factor in its sustainability.

Keeping Wood Greenest - Considerations for End-of-Life Planning

Jeff Lloyd
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Rockford, Tennessee

ABSTRACT

This talk discusses some of the issues associated with end-of-life planning for preserved wood and potentially impacts LCAs and the carbon footprint of wood in service. Competitive fuels and different energy sources are a main driver of current difficulties with using end-of-life wood products for fuel. Adding value, overcoming cost differences, and understanding where wood fits in a low carbon future is discussed. Whilst users have a number of immediate and future potential options for wood recycling,

energy capture and disposal, and whilst a number of these are proposed, only a few can keep us competitively green in a dramatically changing world.