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NEWS

Wood Modification Alternative to Traditional Preservative Treated Wood

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Products that are challenging the traditional preservative treated wood markets have made some headway in high end niche markets. Heat treatments of wood and chemical modification using acetic anhydride to acetylate wood have been studied for many years and are now both commercially available. Both methods result in increased decay resistance and improved dimensional stability to different degrees. Strength properties of the wood are also affected mainly by heat treatments.

Both processes achieve a reduction in susceptibility to insect and decay attack while increasing dimensional stability by reducing changes in wood moisture content. Heat treatment is done by heating the wood to high temperature (up to 2400 C) typically in the presence of steam to prevent combustion. Acetylated wood results from the reaction of acetic anhydride with wood and the subsequent esterification of the accessible hydroxyl groups in the cell wall. Both processes result in a reduction of available (to attract water therby increasing moisture content) hydroxyl groups within the wood.

For more on thermally modified wood products see:
http://saydina.com/thermally-modified-hardwoods/
http://www.swm-wood.com/en/Thermally%20modified%20wood/ominaisuudet2
http://cambiawood.com/

For more on acetylated wood products see:
http://www.accoya.com/
http://www.eastman.com/Company/AcetylatedWood/Pages/Overview.aspx

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