

Market Development of Thermo-Treated Hardwood

Impact: Thermo-treated wood (TTW) is a new generation of wood material that uses a patented high-temperature, oxygen-free kiln process to produce durable, chemical-free, cost-effective building material alternatives for weather-exposed applications. TTW products can potentially reduce the environmental impact of exterior and high-moisture application building materials that are usually treated with some sort of chemical preservative. Thermo treatment significantly improves various wood characteristics without added chemicals by molecularly altering the wood to improve its dimensional stability, thus reducing warping, checking and twisting, as well as protecting against rot and decay to improve durability. The result is chemical-free wood that is ideally suited to outdoor structural applications such as decking and railing.

Project Overview: This project will pursue green product positioning strategies for applications in outdoor decking where TTW products may be used, such as deck boards, stair treads and railing systems. The TTW durability treatment alters a product's mechanical and physical properties, thus creating building code listing challenges for quick market entry of TTW structural decking into the building market. To address that issue, this project will focus on testing and verifying properties for two thicknesses of hardwood deck board products and a guardrail system, which will ease their entry into the marketplace.



GBA Product Innovation Grant Amount: \$100,000

Leadership Team: Babcock Lumber Company is a wholesale distributor of building materials headquartered in Pittsburgh, Pennsylvania. Its team is led by Mr. Patrick R. Cannin, *Managing Director of the Hardwoods Division*, located in Champion, Pennsylvania. Other Babcock team members include Ms. Darlene Cyphert and Mr. Wes Dunn. Babcock's partners in the Pennsylvania State University School of Forest Resources include Dr. Paul M. Smith, *Professor, Sustainable Building Materials Marketing*; Dr. Nicole R. Brown; and Mr. Lee Stover.

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