

ABSTRACT

The Amenability of Selected Trinidadian Timbers to Vacuum/Pressure Impregnation with Aqueous Liquids

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The objective of this research was to empirically examine, as regards their potential for treatment with water-borne preservatives, a number of Trinidadian timbers. No reports are known to exist of any previous investigations into the treatability with aqueous liquids of any Trinidad-grown species (mostly hardwoods). In addition, overseas publications regarding hardwoods provide virtually no information on the treatability of the selected species. Based on the wide variability in structure among and within hardwood species and the fact that penetration was due to lateral liquid entry, it was clear that previously developed flow models, which describe and predict the mass flow of liquids in wood in the **longitudinal** direction, were not directly applicable to the infusion of aqueous liquids in the **transverse** direction. The findings have identified the possibilities for:

1. advancing understanding of the factors affecting the amenability of hardwoods to preservation with aqueous liquids;
2. extending the present restricted range of merchantable Trinidadian timbers through post-conversion preservative treatments complemented by improved efficiency and product quality within the local wood treatment sector;
3. review of a number of not-necessarily-optimal treatment specifications in currently-published wood-preserving standards for which no empirical-testing basis could be found; and

4. a program of investigations into the properties and treatability of other lesser-known Trinidad-grown timbers, considering the historical absence of available funding for local research (Section 1.1.5).

The findings also verify the usefulness of simple non-pressure screening tests for reliably identifying promising (i.e. likely to be treatable) species which may be desirable for forestation and exploitation because of silvicultural and strength considerations.

Keywords: Legall Clyde J.; timber, treatability; vacuum/pressure impregnation; water-borne preservatives.