



Assessing the market opportunity for treated glued wood products

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Abstract:

In this study market opportunities for treated glue-laminated (glulam) products were investigated in the industrial wood sector. The main benefits of treated glulam are through-product treatment and the ability to manufacture treated products in shapes and sizes that do not fit into common treating chambers. These attributes provide for very durable and large glulam structures that are appropriate for outdoor use. For these reasons bridges, power poles, and sound abatement barriers were investigated. These are markets where wood has lost market share to or is being challenged by concrete and steel substitutes.

The vehicular bridge market was once heavy to the use of wood. Today wood accounts for only 7% of the number bridges in the US and less than 0.9% of the actual surface area of bridges in place. In interviewing municipalities in Canada it is clear that wood is not the preferred material with many wood bridges being replaced by concrete. Further, none of the municipalities contacted were planning wood bridges. However, wood bridges are still being installed. In the US 0.9% of the bridges installed by area in 2007 were wood. This is good news as wood is holding its market share. Steering clear of high volume or large bridges, local bridges are well suited for wood as they are plentiful, small in scale, and many are in disrepair. If 20% of local bridges were built with wood in Canada this would have equalled approximately \$51 million in wood bridge construction in 2007.

Municipalities are much more open to the use of wood for pedestrian bridges and overpasses. Their quick construction and aesthetics are positive attributes in this application. One municipality contacted is planning multiple wood pedestrian bridges in the next five years. However, for the purpose of this market review there is little published information on pedestrian bridges.

Noise abatement barriers are a good high-volume technical fit for treated glulam. Increases in traffic and current road infrastructure improvements will lead to more demand for sound abatement in the future. This market is dominated by concrete, but at a very high price. If treated glulam can give adequate durability and sound performance properties it would be approximately 20% cheaper than concrete. The market for sound barriers in Canada could utilize up to 10 mmbf of wood per year to construct 80 km of barrier. This product can also be marketed as a high-performance acoustic fence for residential markets.

Treated glulam was also considered for utility poles. It is transmission grade poles where glulam would best fit the market as the demand is for longer poles which are more difficult to get in solid wood. This type of pole is where wood is currently being displaced by tubular steel. If glulam poles were used in 25% of the replacement transmission poles per year this could equal 8 mmbf. Light poles or standards are another market to consider. While this is a relatively low volume market glulam light standards are a premium product in European markets.

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