The Status and Direction of the Treated Lumber Producing Sector in British Columbia – FRDA Report 052

The treated wood products sector in British Columbia is healthy and expanding. Statistics Canada shows British Columbia’s treated wood sector in 1986 employed 455 total activity employees and shipped goods valued at over $19 million. While B.C.’s primary sawmill sector had dominated all other provinces in scale and productivity, for the past three years, British Columbia has also exceeded Ontario (its closest interprovincial competitor) in number of treaters or employees. This report surveys the treating industry in British Columbia, the rest of Canada, and the United States in terms of its scale and the processes and chemicals used.

The researchers were unable to find one source of information that was comprehensive or timely. This resulted in estimations and compromises between the various partial sources. Some statistical information, however, was noteworthy. For example, the value of treated wood products shipped from Canadian treaters increased steadily from $81.4 million in 1976 to over $250 million in 1985. The trend is clearly upward but the researchers also point out that the costs of input materials – especially raw wood – have also risen dramatically, and, consequently, the true growth, while substantial, would be less. Closer analysis suggests that the estimated annual growth rate in demand for treated wood is 10 - 12% and is predicted to continue well into the 1990s.

Directions for the British Columbia market also indicate an expanding need for the kinds of treated products available. The areas marked for the most rapid growth are the residential renovation and repair markets at both the professional and do-it-yourself level. Treated products targeted for them now include: timbers, exterior woodwork, exterior stairways, plywood, shakes and shingles, fencing, poles, posts, rails, decking, garden furniture, and playground equipment.

The commercial market is also becoming aware of the economic benefits of pressure-treated wood. Further, treatment creates a potential to retain or recapture segments of this market that have been previously lost to alternative materials such as concrete, metal, and plastic. For example, due to increasing scarcity, straight solid cedar or Douglas-fir for utility poles/piles are increasingly expensive. By appropriate treating, cheaper, but less durable species such as hemlock, lodgepole pine, and spruce can be successfully substituted.

The growing acceptance of preserved wood foundations (PWF) offers more opportunities for a relatively new market, considering that the cost of a typical house with a cement foundation is similar to PWF, without the measurable advantages:

- PWF’s thermal efficiency is superior to concrete;
- it is easier to insulate between studs and framing does not require an interior pony wall;
- the drywall can be nailed directly onto studs, eliminating furring using cartridge fired nails;
- generally faster construction especially with prefabricated PWF panels;
- uses the same carpentry skills required to frame the rest of the house;
- no cracking due to settlement;
- the costs are competitive in rural areas where cement batch plants are not accessible; and,
- construction can be done in below-freezing conditions.

Fire retardant treatment may provide another direction for the market. Although it is not seen by the industry as a major growth sector, the research here suggests that, by combining the preservation treating with fire retardant and insect repelling treatment, new products could help overcome sales resistance in markets such as the United Kingdom.

Beyond a market analysis, the research also surveys the technical aspects of the industry. Brief summaries are reported of the kinds of treatments available. They range from kiln drying to pressure treatment or incised woods, where chemical solutions penetrate into the surface of the wood. The research also includes lists of the organizations involved in wood treatment in Canada and the United States. Data on British Columbia treaters including their location, types of products, treating systems, quantity, species of wood, and market is also provided.

In the overview, the research also raises some of the potential problems in the codes and standards of the industry.
the major U.S. market. While treatment chemicals and processes may be identical in both countries, no reciprocity exists for their acceptance by the other country. This is largely due to the lack of common or national grading systems for treated wood. The Canadian Wood Preserves Bureau (CWPB) is currently working to rectify this situation. It will be necessary for Canada to develop a national grading system which can be approved by its U.S. counterparts before that market will open to Canadian manufacturers.

Another potential area for problems is in the quality of controls for treatments. In British Columbia, pine and spruce are often treated together even though spruce does not absorb the chemicals as readily and at present does not meet the CSA requirement. This is primarily a cost factor. Obtaining a pure pine sort creates additional processing costs. The ramifications with lifetime warranties could be severe and complicated if the spruce shows premature service failure. The research emphasizes that the industry should consider such legal implications.

In examining the chemical treatments currently in use the research indicates that the use of waterborne salt treating systems is on the increase in Canada, while creosote usage is declining. Listed in the data is a summary of all the chemicals using in treating and their trade names as well as the CSA recommended end use guide for various treatments.

The use of the chemical Pentra, also raises the issue of environmental concern as it is toxic to plants and animals. The data shows that some countries are responding loudly to this threat. Sweden has banned the use of the chlorophenate family as a wood treatment/preservative, and Japan and West Germany have made several attempts to ban the importation of wood treated with chlorophenates.

As a positive example of the environmental concern, a safe intransit surface protection was recently developed in British Columbia by a Canfor research team. It employs a formulation of low hazard chemicals such as borax and alkali. This protection has been employed on all Canfor's exported lumber to the European and Japanese markets for the past fourteen months with satisfactory results. It is now ready for wider commercialization.

Copies of this 35-page report, The Status and Direction of the Treated Lumber Producing Sector in British Columbia, by Woodbridge, Reed and Associates, are available while supplies last, from:

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