ALTERNATIVE SPECIES FOR WOOD POLES

by

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In 1981/82 Forintek undertook contract work with Bell Northern Research to address the problems associated with wood poles treated with waterborne wood preservatives.

The work involved the treatment of pine poles with a copper chrome arsenate wood preservative; and the use of various additives to control pole hardness. The systems investigated involved the use of surfactants, alternative chromium compounds and alternative CCA formulations.

Bulking agents that appear to act as lubricants, wood stabilizers, and affect the moisture content and distribution in wood poles were also investigated. The latter proved to be successful in reducing or at least controlling the hardness of various species of wood poles treated with CCA-C. As an added feature the bulking agents used resulted in greater stability of the wood pole and reduced or changed the checking pattern normally associated with pine species.

Although checking is not considered a serious problem in most pine species the effects of the additive were quite noticeable on specimens treated at Forintek.

Considering that a major problem of spruce is its dimensional stability a preliminary study was conducted to investigate the effect of similar additives on this species.

Seasoning checks that occur in spruce present a potential major problem both in terms of maintaining the integrity of the treated outer shell and climbing difficulties resulting from checks encountered by linesmen during maintenance and installation of transmission lines.

A number of experiments were conducted using chemonite wood preservative and bulking agents to determine their effect on dimensional stability of white spruce roundwood. Results indicate that considerable improvement in the dimensional stability of white spruce can be achieved using a 6.5% solution of bulking agent and 2.0% chemonite. I believe that a solution to the present problems of checking in spruce specimens may improve the prospects of using this species as an alternative wood pole material.

Results on pole sections tested indicate that checking can be controlled with material remaining check free at moisture contents as low as 18%.