

## WOOD PRESERVATION IN THE 80's

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In order to maximize progress in wood preservation, there are four areas that should receive priority in future research projects. These are: (1) new wood preservative systems, (2) fundamental mechanisms of wood decay, (3) improved test methods for evaluating wood preservatives, and (4) improved methods of treating refractory wood species.

In the past few years interest in new biocides for wood preservative systems has been stimulated by the action of governmental agencies such as our Environmental Protection Agency. However, it is quite obvious that progress in this area is severely hampered by our lack of understanding of the fundamental mechanism of wood decay. This is further complicated by the inadequacy of our current laboratory test methods for predicting the performance of wood preservatives used in ground contact. Hence, more information in these areas would greatly accelerate the development of new wood preservatives.

Adequate penetration of preservatives in treated wood is an extremely important factor in the performance of the end product. For some species such as southern yellow pine, preservative penetration is not a problem. On the other hand, for species such as Douglas-fir, etc., the preservative penetration is often marginal and undoubtedly affects the ultimate performance. Consequently, the development of methods for improving penetration of preservatives would be extremely useful to the industry.

Predictions on significant developments and trends in wood preservation in the 1980's were discussed. Over the past ten years, waterborne salt treatment has shown spectacular growth and it is felt that this will continue — although at a slower pace — in the 80's. In addition, there currently is considerable activity in the development of waterborne penta preservatives and these should gradually replace the penta-petroleum systems.

The increased activity in the development of new biocides should lead to commercialization of new wood preservative systems in the next decade. The initial systems will undoubtedly be for above ground applications.

As far as new products are concerned, the most promising prospects for the 80's are poles, crossarms and crossties manufactured from composite wood material. This offers the opportunity to utilize low grade wood species and waste material which will become increasingly important in the future. These products also offer many more options for preservative treatment, since in many cases the biocide can be applied to the flakes prior to manufacture. This will insure uniform treatment which is not always possible with solid wood products.