WELL PRESERVED TIMBER

Australian scientists have come up with a cleaner, more durable and efficient way to preserve timber for outdoor uses, from weatherboards and timber decking to vineyard posts and garden structures.

Using a microwave conditioning process prior to treating timber, researchers at the CRC for Wood Innovations have achieved a far better distribution of the preserving chemicals through the entire piece of wood.

The challenge in preserving timber is to get the treatment into the centre of the wood to prevent it from rotting ‘from the inside out’, explains Mike Brown, general manager of TimTech Australia, a commercial timber preservation company which has taken up the new technology with enthusiasm.

The CRC microwave conditioning process “opens up” timber so that pine heartwood and some hardwoods that are normally resistant to taking up preservative chemicals become permeable. The CRC process enables complete penetration of preservative into the timber.

In addition, CRC scientists have improved the usual preservation procedure by treating wood while it is hot, which enables rapid fixation of the preservatives.

“We wanted to ‘fix’ the preservatives inside the timber, so they cannot leach out onto the surface or surrounding soil, where people or crops could come in contact with them,” explains CRC research director Professor Peter Vinden, whose team at the University of Melbourne developed the procedure.

“Fixation is more efficient at the higher processing temperature we use, so that chemical residues are virtually eliminated,” says CRC preservation scientist Dr Jeff Hann.

The rapid fixation technique is used with copper-chrome-arsenic (CCA) formulations. The microwave conditioning works for a range of preservatives, including CCA and other copper-based formulations, as well as boron.
preservatives. It removes the need to recover excess preservatives after
treatment, and reduces the time required to store treated timber on a "drip pad".

CRC researchers have achieved rapid and complete treatment of timber with
approximately 5 minute turn-around times.

“For industry, the CRC process streamlines and speeds-up production, and
yields a more durable product,” says Ron Eddy, managing director of TimTech
International.

“We anticipate incorporating the technology into existing commercial timber
processing facilities as an online treatment plant capable of treating sawn product
as it is produced.”

“For the community, it produces a safe timber that lasts longer no matter where it
is used, be it a farm, a park or a family garden.”

Input from TimTech staff has been vital to bringing the technology to the market,
says Professor Tom Spurling, CEO of CRC Wood Innovations.

“Working with TimTech has allowed us to access their market understanding and
refine our technology to better meet the needs of wood processors,” he says.

CRC Wood Innovations is a collaborative partnership between Australian
research organisations and industry; the CRC provides the timber and wood
products industries with applied technologies and training programs. TimTech
Chemicals is a CRC partner representing the timber protection industry.

For more information, please contact:

Mike Brown, General Manager, TimTech Australia
Phone: (07) 3491 7983;
Mobile: 0424 269 124

Professor Tom Spurling, CEO, CRC Wood Innovations
Phone: (03) 9214 6088
Mobile: 0409 461 390

Nola Wilkinson
Communication Manager, CRC Wood Innovations
Phone: (03) 9214 6094
Email: NWilkinson@swin.edu.au