



SCION 
forests • products • innovation

EXPERTISE IN SOFTWOOD TIMBER DRYING

Scion, a New Zealand Crown Research Institute, provides research, science and technology to convert wood and fibre into a range of products and energy.

WOOD DRYING RESEARCH AND CONSULTING

For over 50 years Scion has been the leading research organisation in the field of wood drying and a world leader in adapting drying techniques for plantation grown softwoods. Between 1988 and 2008 this research to industry was coordinated by the Scion/ Industry Multiclient Drying Group, a multinational research cooperative that collaborated with local and global companies and other leading research institutions to improve drying process technologies.

Scion works with manufacturers, providing expert knowledge developing new processes and products and improving and optimising existing processes. Our commercial services include consultancy in developing new wood drying technology, and quality control in drying, kiln performance audits, and developing kiln schedules for new species and timber treatments for improved quality of dry product. Companies that we work with include softwood sawmillers and processors, kiln suppliers and energy suppliers.

Scion has a wealth of experience contained in the complete archive of the 20-year Scion/Industry Multiclient Drying Group, comprising expert knowledge, reports, data files, spreadsheets, and software tools. This resource is available to companies to apply to new problems for softwood pine species and hardwoods.

TYPICAL RESEARCH PROJECTS

- Improving final steam conditioning.
- Software-based moisture content analysis tools (MContent).
- Reduction of warp in structural grades.
- Reduction of longitudinal stress.
- Factors influencing final moisture content variation.
- Temperature effects on hand-held moisture meters.
- Water spray stress relief.
- Investigation of the causes of kiln brown stain.
- Air and condensate emissions from timber drying.
- Cooling timber stacks for steaming.
- The role of heat-up and presteaming on reducing surface checking.
- Drying process simulation and optimisation.
- Evaluation of post-drying humidity cycling to reduce longitudinal stress and improve stability.
- Best strategy to reduce final moisture content variation of softwood drying.
- Optimisation of steam steaming for improving final moisture content distribution and stress relief.
- Assessment of kiln emissions.
- Investigation of kiln brown stain.
- Best strategy for cooling before steaming.

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