

Sawing to new heights

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- Adam Wilson & Sons Ltd switched to a CCA alternative treatment ahead of the deadline.
- Investment has included an X-ray strength grading line.
- Two additional kilns have increased drying capacity by 50%
- Production of KD C16 carcassing has increased by 50%.

Scottish sawmill Adam Wilson & Sons Ltd is at the forefront of added-value timber production, following its early conversion to Tanalith E, plus installation of the UK's first X-ray strength grading line

Timber is a tough business in which to succeed – prices don't rise year on year (and often fall), while at the same time customers expect ever-higher levels of service. Profitability must therefore be achieved by adding value and cutting costs.

Over the last decade the timber industry has moved rapidly in these areas, and Scottish sawmiller Adam Wilson & Sons has been at the forefront of this trend. In the past 10 years the company has invested more than £14m in the latest sawmilling, drying, machining and treatment facilities to further improve the quality of products and services it provides customers in the construction, fencing, pallet and packaging sectors.

Most recently this has included installation of an X-ray strength grading line at the main sawmill in Troon – which, with an annual output in excess of 125,000m³ of sawn softwood is probably the largest single mill production in Scotland. It has also converted to [Arch](#) Timber Protection's CCA-alternative preservative, Tanalith E, at its machining and treatment site in Ayr.

"We switched to Tanalith E well ahead of the June 2004 deadline for the [EU](#) legislation that restricts the use of traditional CCA preservatives, and all our carcassing, fencing and decking products are treated with it," said sales manager Scott Wilson. "Although we had used Tanalith CCA preservative successfully for many years with no problems, the market perception had started to change and customers – particularly those who supply local authorities – were asking about the proposed legislation.

"The change to Tanalith E was both quick and easy. [Arch Timber Protection's](#) technical engineers installed a new, simple control system and prepared the plant, and the company provided training for our operatives. There's also a comprehensive after-care service, which includes assistance with marketing – such as supplying point-of-sale materials for our sales team to give to customers, as well as technical leaflets and product brochures that explain the benefits of Tanalith E."

Adam Wilson & Sons' decision to move early paid dividends. The company built up knowledge and experience with the new product and ensured that all CCA chemicals and treated stock moved through the supply chain before the EU legislation came into effect.

In addition, the ability to offer Tanalith E treated timber enabled the company to win business that it would otherwise have lost, since some customers who supply local authorities or for government-funded projects had been told to use CCA alternative treatments even before it became a legal requirement.

"Tanalith E is proven in use throughout the world," said Mr Wilson. "It produces a clean, green colouring that looks attractive and brings out the natural quality of the timber. The colour is also consistent from piece to piece and pack to pack, which is particularly important for products such as fencing and decking.'

Adam Wilson & Sons' investment has also included two additional kilns that have increased drying capacity by 20,000m³ to 60,000m³ a year – another important step in the company's decision to move away from the lower-end unseasoned market into higher quality, added-value products. For example, production of kiln-dried C16 carcassing for the construction industry has increased by 50%.

Another high-tech solution that has improved production quality and efficiency and reduced costs is the new automated grading line, which handles wood from 38-75mm in thickness and 75-250mm in width and includes the first UK installation of an X-ray scanner.

At the start of the line, single layers of timber are removed from the packs by a vacuum lift and fed firstly through a visual grading station and then to an in-line non-contact moisture meter which checks to ensure it is within the required tolerance for kiln-dried strength-graded wood.

Each piece then passes through the non-contact X-ray scanner. This measures the density and identifies the size and quantity of knots. The system assesses whether these features affect the strength of the timber to the extent that it would fall outside the standard for C16, and any failures are discharged onto a separate line and processed for other end-uses.

Timber that is successfully graded to C16 has the grading mark applied by an automatic ink-jet printer. The line runs at 200m/min.

"The main reason for investment in this line was because mechanical strength grading had become a bottleneck," said Mr Wilson. "We needed a system that could keep up with our growing volume of KD C16 carcassing. When we used mechanical grading machines we were having to run three shifts – now we run just one shift on the new line and produce 50% more."

At the end of the line is an automatic stacking station, where finished packs are polythene-wrapped and strapped – with bearers attached. The latter is a nice touch as it means fast and easy lifting for Adam Wilson & Sons' customers since they don't need stocks of bearers and there's no interruption while forklift drivers wait for bearers to be placed.

"We are focused on providing the best possible service," said Scott Wilson, "and our investment has ensured that customers receive top quality timber products that are attractive, well-presented, easy to handle, and treated with Tanalith E which meets the latest legislative requirements."

Adapting to demand

Adam Wilson & Sons was founded by Adam Wilson in 1856 – his original sawmill supplied smelting plants for the industrial revolution. Five generations on, under the guidance of Hamish Wilson, the company is "equally committed to meeting the demands of its current markets". It has its own harvesting division and sources logs from its own forests as well as from Forest Enterprise and other woodlands. The company has achieved FSC scheme approval.