

Adding technology

Holz Schiller has seen the future of timber windows in the UK – it's bright and a significant proportion of them will be made in laminated timber. Mike Jeffree reports

Holz Schiller isn't a window producer itself. It's a sawmill working away in the background making specially developed laminated wood and other products for the manufacturers.

While it may be one step away from the finished item, however, Schiller's research and development effort is clearly focused on helping customers to push back the technical barriers and make their windows even more serious competition for rivals in plastic and aluminium.

And it's an approach which is proving an international success. Holz Schiller belongs to a trading "alliance" of German timber suppliers co-ordinated by the Kullik & Rullmann sales and marketing operation (K&R) and, via the latter, it exports its window components throughout Europe and to Japan and the US.

Holz Schiller's main raw material is pine logs sourced from the Black Forest region near its mill in Regen, or the woodlands near its other plants in the Czech Republic. These are graded, then cut into short lengths or scantlings for laminating into multiple-ply sections for the window manufacturer.

According to Carlsten Kullik of K&R the first obvious benefit of lamination for the window maker is that it renders natural timber, with all its inherent idiosyncracies, into a more predictable, uniform engineered component.

"The initial cost is higher than solid timber," he acknowledged, "but because the wood is carefully graded and laminated in controlled conditions, the end result is a very clean

component. This means that there is far less waste in the production line because the manufacturer doesn't need to remove sections with knots and other defects."

Because the window makers have to make less allowance for rejected raw material and, effectively, have their components optimised to the finished window profile, using laminated timber also means they can carry less stock.

"This is an attractive benefit for all manufacturers, but particularly the small- to medium-sized manufacturer who really needs to keep investment in stock under control," said Mr Kullik. "We believe the overall savings that result outweigh the initial higher cost."

The advantages of laminated components also extend to the durability and maintenance of the finished window.

"Because they produce a clean surface and eliminate knots and pockets of resin, the performance of the window is more predictable; there is no leaching of resin to spoil the paint finish so it sticks better and you have fewer maintenance problems," said Mr Kullik.

"Laminated timber is very stable too, with less risk of developing splits and shakes as temperature and humidity change. The adhesive resin we use is very high performance and we have



Holz Schiller managing director Heinrich Schiller with a semi-finished window

considerable experience using it – we consume around 500 tonnes a year."

The lamination process also allows the option, not just of engineering the component so the tougher "standing growth ring" section of the pine forms the exposed surface, but also of mixing timber species to come up with the best blend of cost and performance. "For example, we can use harder-wearing larch for the external surface, with pine on the inside," said Mr Kullik.

Holz Schiller and K&R also make a point of selling laminated components on their environmental benefits. Besides waste reduction, these also include the fact that they can be made from smaller

JELD-WEN makes clear decision

JELD-WEN UK Ltd is one of this country's converts to laminated timber in the production of its windows and Holz Schiller has recently joined its list of suppliers.

"We were looking for a clear finger-jointed and laminated redwood product to use as a substrate for our fully-finished timber windows," said JELD-WEN's purchasing manager Pete Robinson. "This was on the basis that a clear finger-jointed product gives a much better finish, with no knots or any leaching through the paint – no defects whatsoever."

Holz Schiller was one of the first companies to approach JELD-WEN with the product and sent the first batch around three months ago, with monthly consignments scheduled to hit between 200-400m³ a month.

"Holz Schiller have been very responsive," said Mr Robinson. "They will supply virtually any cross-section we request and in very small quantities."

"There is minimal waste and the repairs rate is virtually down to zero," he added. "We don't have to do any denibbing or prep work prior to painting, so it works very well."