Laser treatment transforms MDF producing startling image of rare wood grains

March 10 2008

Researchers at WMG at the University of Warwick have devised a way of using a laser that transforms MDF giving it a surface finish that looks like some of the most expensive wood grains.

The “LaserCoat” research project in a collaborative research effort consisting of eight academic, research and commercial organisations and part-financed by the Technology Strategy Board.

University of Warwick WMG researcher Dr Ken Young said:

“MDF is a superb and highly versatile material. It’s easy to work with and cheap. It is usually made from waste material so it is much kinder to the environment than using more real wood. But normally it looks rather dull in its raw state. Until now there has been no way to liven it up other than painting it.”

“Using lasers to produce a wood grain in MDF could help bring a more natural quality into homes and businesses without the financial and environmental cost of having to use new wood.”

The technology also has great potential for commercial use as it is very hardwearing and can be used for flooring or other applications where cost is an issue but where looks are important too. It can mimic a vast range of real wood grains, it can produce logos, decoration, or even coloured and shaped decorative surfaces using a powder coating version of this new laser technology.

Mick Toner, Factory Manager of Howarth Windows & Doors sees significant benefits from the new technology for his business,

“We would love to use MDF for the glazing beads in doubling glazing but customers do not like the look of raw MDF. This LaserCoat technology will provide a grained look that will delight our customers, give us much more manufacturing flexibility and cut the cost of the raw materials four fold”

“MDF is also an ideal material for providing the thermal insulation required for modern doors. Our customers are increasing using translucent coatings on their doors which are not aesthetically pleasing on MDF panels – the LaserCoat technology cuts through this problem providing an attractive surface for MDF no matter the coating used”

Source: University of Warwick