

## **‘Scale Infinite’ is a huge draw at FuoriSalone 2014**

***A new interpretation of the extraordinary American tulipwood CLT ‘Endless Stair’ steals the spotlight in Milan***

**April 15, 2014** - ‘Scale Infinite’, the latest iteration in the life of dRMM and the American Hardwood Export Council’s award-winning tulipwood structure, has attracted significant attention at FuoriSalone 2014. The project is based on the Endless Stair, an intriguing structure of Escher-like interlocking staircases made from American tulipwood cross-laminated timber (CLT), which has been reconfigured and is a feature at Interni Magazine’s ‘Feeding New Ideas for the City’ exhibition at the Università degli Studi in Milan. The Ca’ Granda building, one of main venues in the FuoriSalone event, is the new setting for Scale Infinite, which will remain on display until April 18, 2014.

Maintaining the initial influence of Escher, Scale Infinite is a further play on perspective. Six interlocking flights of steps have been joined together to create a visually arresting form offering a compositional contrast to the classical uniformity of the surrounding Renaissance building. De Rijke Marsh Morgan Architects have once again given importance to the element of ‘play’ within the structure, harnessing the possibilities of user interactivity through the integration of different levels, joints, and possible pathways. This game of perspective also gives users the chance to experience the elegant courtyard of the Ca’ Granda from a unique viewpoint. As such, the project is a deliberate contrast in material, scale and composition to its harmonious new backdrop in Milan. It is an aesthetic provocation and, as ever, adds a new dimension to the context in which it stands.

“Scale Infinite is not just an exciting wood sculpture, it is also part of a unique research project that is advancing the knowledge of timber construction and sustainability. This project is the first ever use of hardwood for CLT, which is usually made from softwood. American tulipwood is an abundant and relatively inexpensive American hardwood, and crucially for this project, it is incredibly strong and stiff for its weight. Testing carried out in Italy last year during the production of the original Endless Stair structure, has shown that tulipwood is up to 3 times stronger in rolling shear than typical

construction softwood, such as spruce. Therefore the three ply CLT panels that make up the treads and balustrades only need to be 60mm thick,” said Roderick Wiles, AHEC Director for Africa, Middle East, South Asia and Oceania.

Designed by de Rijke Marsh Morgan Architects (dRMM), engineered by Arup, and built by Imola Legno and Nüssli, Endless Stair was conceived as a three-dimensional exercise in modular timber construction, offering the potential for reconfiguration and adaptation to different contexts. The structure was originally designed for the London Design Festival, and was installed in front of the Tate Modern. Working from first principles, through testing, research and analysis to design this prototype, AHEC believes that Endless Stair will bring many lasting benefits. The project clearly demonstrates that hardwoods, with their high performance and attractive appearance can add a new dimension to future timber construction and the ultimate aspiration is that this cross-laminated hardwood will eventually brought into mainstream building construction.

“The latest reincarnation - Scale Infinite - pushes the design of the CLT elements even further by using performance data gathered from the London installation. Experimenting with the re-arrangement of landings and extending the cantilevering top flight to its limit has lifted the engineering design to a new level. To protect the paving of the courtyard, Scale Infinite sits on a platform with thermally modified American ash decking, which contrasts beautifully with the pale tulipwood. The thermal modification process uses a high temperature in a controlled environment, permanently altering the wood’s chemical and physical properties. The process increases dimensional stability and decay resistance and thus significantly extends the service life of the material,” concluded Wiles.

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#### **About AHEC**

The American Hardwood Export Council (AHEC) is the leading international trade association for the U.S. hardwood industry, representing the committed exporters among U.S. hardwood companies and all the major U.S. hardwood production trade associations. AHEC runs a worldwide programme to promote American hardwoods in over 50 export markets, concentrating on providing architects, specifiers, designers and end-users with technical information on the range of species, products and sources of supply. In addition, AHEC also produces a full range of technical publications. For more information, please visit: [www.americanhardwood.org](http://www.americanhardwood.org).