

## Moisture-induced distortion of laminated veneer products

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### Abstract

Laminated veneer products are used in several contexts but especially in furniture manufacture. A major shortage of laminated veneer products are their shape-sensitive to changes in moisture content. A deviation from the intended shape is a problem for both the manufacturers and users of the final products and annually such deviations cause great economic losses in the manufacturing industry.

The purpose of this paper is to explore the influence of moisture on the shape stability of laminated veneer products and to identify those wood material properties which are important for good shape stability of the final product. This should lead in practise to some usable recommendations for the industry.

The results show that it is possible to improve the shape stability of laminated veneer products if knowledge of various materials and process parameters is implemented in the manufacturing process. To achieve shape stability of laminated veneer products in practice, the following should be followed by the manufacture industry:

- Develop cooperation with suppliers of veneer and set requirements of veneer with regard to deviation of the fibre angle, and require that the veneer be dried and conditioned to a level consistent with production
- Control incoming veneers with respect to fibre angle and moisture content
- Plan warehousing of veneers and ensure adequate conditioning
- Consider the orientation of the veneers and the species

Key words: thermo-hydro-mechanical processing, shape stability