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SIMPLE METHODOLOGY OF MEASUREMENT UNCERTAINTY FOR MECHANICAL TEST PARAMETERS OF PLYWOOD ON STATIC BENDING STRENGTH

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ABSTRACT

The main objective of this study was to develop a simplified methodology for assuring the quality of wood based panel products through measurement of mechanical properties of static bending strength viz. modulus of rupture of plywood along or across the grain direction. The methodology includes the measurement of uncertainty related to these parameters that plays a vital role in quality assurance plan. Measurement of uncertainty may be quantified using calculation estimation of single components of uncertainty. For estimation of uncertainty of mechanical test parameters in some cases, it is hardly possible to include all possible components of uncertainty. This paper presents a methodology of calculation of measurement uncertainty based on test data of samples received for testing, data obtained from internal quality control and data on inter-laboratory comparison, thus reaching maximum probability of comprising all components of uncertainty. The knowledge of uncertainty in measurement is of great importance for all users of laboratory services, laboratory itself and all interested parties that benefit from the results of research where reliability of rest results are of outmost importance.

KEYWORDS: *Estimation of Uncertainty, MoR, Plywood, Standard Deviation*