



FIELD TESTING AND MICROSCOPY - IMPORTANT TOOLS FOR A REALISTIC LONG-TERM EVALUATION OF WOOD IMPROVEMENT TREATMENTS

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Abstract

The paper briefly presents the principle, methodology basics and the research opportunities offered by a modified L-joint test for a complex in-field evaluation of wood behaviour in outdoor above ground exposure, corresponding to the biological use class 3. A comprehensive and detailed examination of the tested samples, looking not only to the biological degradation of wood but also to wood cracking and coating performance (cracking, flaking, exfoliation, adherence), was performed and the evaluation methodology was completed and adapted. Macroscopic evaluation was completed by microscopic examination. Samples of beech and fir wood, as untreated controls or surface treated according to simpler or more complex treating schedules including three reactive resins, a biocide base coat and an alkyd paint were tested and periodically examined. The results refer to the main types of biotic and non-biotic degradation phenomena of wood and/or coatings observed after 48 months of outdoor exposure, highlighting the influence of the treatments applied.

Key words: cracks, decay, discolouration, microscopy, resins, weathering, wood degradation

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