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PHYSICAL AND MECHANICAL PROPERTIES OF WOOD FROM THIN LOGS OF *Quercus petraea* spp.

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Abstract

This paper examined some physical and mechanical properties of wood from thin trees of sessile oak collected from thinning operations, in order to recommend this secondary wood resource for potential superior applications (as solid wood panels and furniture components). Swelling, shrinkage, modulus of rupture (MOR) and modulus of elasticity (MOE) and compression strength parallel to the grain were examined and compared with data from literature reported for mature trees. The variation of the above characteristics from the base to the top of the bole was also examined. The results have indicated similar strengths for wood from the thin trees compared to mature trees, but a slightly greater dimensional instability, especially in the radial direction, which compensates with a lower anisotropy coefficient. Similar strengths of wood from thin sessile oak trees compared favourably to mature wood recommend it for value added capitalization providing its dimensional variation is controlled.

Key words: compression parallel to the grain, MOR, MOE, sessile oak, shrinkage, swelling, thin logs

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