Research Article:

EXPERIMENTAL RESEARCH ON THE SWELLING PRESSURE DEVELOPED BY ASH WOOD

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Abstract:
The paper presents the results of an experimental research concerning the swelling pressure developed by ash wood (Fraxinus excelsior L.). The objective of the presented work was to determine the level and time evolution of the pressure developed by ash wood samples, when swelling from oven-dry state until the fiber saturation point was exceeded and maximum swelling was reached. The results show maximum values of the swelling pressure between 3.10 MPa and 4.52 MPa, as well as clear differences between the values of the swelling pressures in radial and tangential direction, respectively. The results can be useful for various applications related to wood products, especially for outdoor furniture and wood in constructions.

Key words: ash wood; swelling pressure.

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