Abstract

This study Physical and mechanical properties of sandwich made of common reed in the middle layer is covered with wooden cladding was evaluated. Variables include the type of treatment the intermediate layer, laminated wood species and temperature were pressed. The middle layer consists of treatment: Treatment with acetic acid, treated with sodium hydroxide without treatment. Three laminated wood species fir, beech and mulch was used And the temperature at three levels: 120, 135 and 150 ° C. The number of treatments (timber type) with three replications was 81 boards. Physical and mechanical properties, modulus of elasticity, internal bonding, bonding strength, density profile and FT-IR, water absorption and thickness swelling after 2 and 24 hours was performed on samples The treatments were based on factorial design analysis and Duncan test was used for comparison of mean. Independent and interactive effects of each factor on the variable physical and mechanical properties were studied. The results showed that the mechanical properties of flexural modulus (9/42 MPa), elastic modulus (9539/11 MPa), IB (23/0 MPa) and tensile adhesion and FT-IR as a result of increased chemical treatment And physical properties such as water absorption and thickness swelling decreased. Maximum level of mechanical properties of the panel so that the core layer of particles treated with acetic acid, laminated wood species Fir and temperatures were 150 ° C were better mechanical properties.

Keywords: chemical treatment, coating, sandwich panels, the middle layer, Phragmites australis

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