

## Surface Coatings of Boards Made from Alternative Materials

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**Abstract :** In recent years, alternative materials, such as annual plants or recycled and waste materials are becoming more and more popular input material for the production of composite materials. They can be used for the production of insulation boards, construction boards or furniture boards. Surface finishing of those boards is essential for utilization in furniture. However, some difficulties could occur during coating of boards from alternative materials; physical and chemical differences from conventional particleboards need to be considered. From the physical aspects, surface soundness and surface roughness mainly determine the quality of the surface. Since surface layers of boards from alternative materials have often lower density, these characteristics could be deteriorated and thus the production process needs to be optimized. Also, chemical reactions of board's material with coating could be undesirable. The objective of this study is to evaluate the parameters affecting the surface quality of boards made from alternative materials and to find possibilities of the coating of these boards. In this study, boards of particles from rapeseed stems were produced using a laboratory press. Surface soundness, as representatives of mechanical properties and surface roughness, as representative of physical properties, were measured on boards from rapeseed stems. Results clearly indicated that produced boards had lower surface quality than commercially produced particle boards from wood. Therefore, higher thickness of surface coating on rapeseed based boards is needed.

**Keywords :** coating, surface, annual plant, composites, particleboard

**Conference Title :** ICFPCMA 2018 : International Conference on Functional Polymers, Composites, Materials and Applications

**Conference Location :** Lisbon, Portugal

**Conference Dates :** September 24-25, 2018