Utilization of Coir and Recycled Polypropylene for Bamboo Matting Layer Composite

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Abstract

Utilization of non wood material as raw material in wood industry would be increase in the future because environmentally issues. The objective of this research were to evaluate characteristic of coir, recycled polypropylene (RPP), and tali bamboo (*Gigantochloa apus*) as raw material in composite board and find out the optimum quality of composite board made from its material. The board samples target density was 0.7 g/cm^3. The board construction type was core type composite board (three layers). The bamboo sheet wide was 1 cm and 2 cm with and without bark. The bamboo matting was used in angle and perpendicular orientation to length of the board. The results showed that coir, RPP, and tali bamboo suitable for composite board material. Utilization of bamboo matting layers increases the mechanical properties of board, except internal bond. All of composite board made from coir and RPP with bamboo matting layers fulfill the JIS A 5908 standard in density and thickness swelling after 2 and 24 hours of water immersions. However, only composites with bamboo matting layers with bark and sheet wide 1 cm fulfill JIS A 5908 standard for veneered particleboard in MOE.

Keywords: bamboo matting layers; coir; composites board; recycled polypropylene