

**INFLUENCE OF SAWDUST AND ADHESIVE TYPE ON THE
MECHANICAL PROPERTIES OF RICE HUSKS PARTICLE BOARD**

**A dissertation-interim evaluation submitted in partial fulfillment of the
requirement for the degree**

Of

**MASTER OF TECHNOLOGY
(Machine Design)**

Submitted By

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October 2023

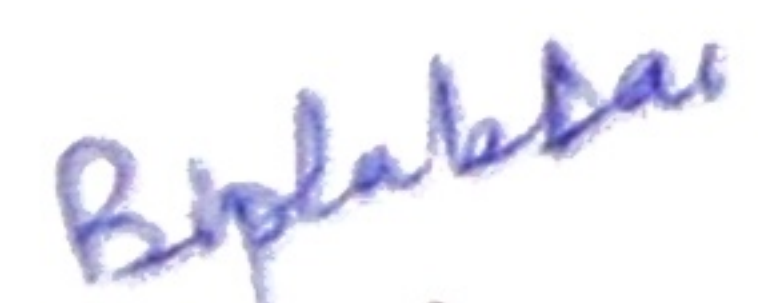
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ABSTRACT

Utilizing agricultural waste materials like rice husks has shown promise as a replacement for conventional wood-based components. However, rice husks particle board's mechanical qualities might not be sufficient for some applications. In this context Influence of sawdust and adhesive type on the mechanical properties of rice husks particle board is examined in this study. This study investigates the effects of various adhesive types NEROFIX, SUPERCOL plus and RADCOL royal and Sawdust ratios on the properties of composite particle boards. Specimens of 20 x 20 x 2.4 cm were made with different proportions of rice husks, Sawdust and with each adhesive type. Three commercial synthetic adhesives were used. The particle adhesive mixtures were molded and were subsequently cold pressed and left to dry on air. Modulus of elasticity, density, water absorption and thickness swelling tests were performed. As the sawdust ratio rises, the internal bond strength falls, indicating the importance of the adhesive in preserving the board's structural integrity. The study also emphasizes how the type of adhesive might affect the mechanical properties of the board. This study offers important information about the effects of sawdust and adhesive type on the mechanical properties of rice husks particle board, which can help with the production of the board and aid in the creation of high-quality, sustainable wood-based substitute.

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