ABSTRACT

EXPLORATION OF KENAF FIBER USING NON-MACHINE LOOM (ATBM) FOR FASHION PRODUCTS

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This study explores the potential of grade-A kenaf fiber (Hibiscus cannabinus L.) as an alternative weft yarn in the production of woven fabrics using a Non-Machine Loom (ATBM). Kenaf fiber possesses physical characteristics such as high tensile strength, lightweight nature, and high biodegradability, making it a sustainable material option. However, its stiffness and coarse surface present challenges, particularly in textile applications that come into direct contact with the skin. The use of ATBM offers the advantage of stable warp density control, which plays a key role in creating stronger and more durable fabric structures. In addition to the technical aspects of weaving, this research also considers a visual design approach through the application of design elements and principles to create textile products that are not only functional but also visually appealing. Various weave structures and yarn characteristics were tested during the exploration process to produce diverse and applicable outcomes. The results of this exploration are expected to open new opportunities for utilizing kenaf fiber in the fashion industry.

Keywords: *ATBM, Fashion Products, Kenaf Fiber.*