The machining characteristics of oil palm empty fruit bunches particleboard and its suitability for furniture.

ABSTRACT

A series of machining experiments were carried out using a CNC router, with single fluted router-bits, to evaluate the machining and tool wearing properties of the particleboard made from oil palm empty-fruit bunches. The result found that the resultant machined surface of the oil palm particleboard was poor with an increased incidence of defects such as tear out and chip out on the edges of the panels compared to wood particleboard. Further, the material showed increased abrasiveness on the cutting tools due to its high silica content. Despite the shortcomings, the lower cost and environmental friendly reputation of the panels will further encourage its use in the furniture industry, especially in concealed applications.

Keyword: Oil palm; Particleboard; Machining; Furniture; Process economics.