An investigation into the tool wearing characteristics of rubberwood (Hevea brasiliensis) laminated veneer lumber

ABSTRACT

Peripheral machining of Rubberwood LVL and solid Rubberwood were carried out on a computer numerical control router, using cemented tungsten carbide cutters. The cutter wear rate and power consumption showed similar patterns of increment. Rubberwood LVL was found to be four times as abrasive as solid Rubberwood, and a combination of wear mechanisms were involved in contrast, to abrasion which was the predominant mechanism when machining solid Rubberwood. The use of a simple wear model based on the Taylorôs tool life equation has enabled the total tool wear to be quantified. This information can be expanded into useful production data for the Rubberwood based high-volume Furniture manufacturing industry.

Keyword: Rubberwood; Tool; Peripheral machining; Furniture manufacturing industry