

The effect of power intensity properties of microwave modified oil palm trunk lumber

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ABSTRACT

In the decade, oil palm (*Elaeis guineensis*) in Malaysia is one of the conventional sources that will be rising, and the rate of biomass will considerably increase in yet to come. Presently, oil palm biomass is going through research and development and appears to be the most sustainable alternative. Investigations on oil palm biomass have been conducted to support in draw out waste of oil palm and in the meantime can help economic yield to the country. This study was expected to estimate the effect of power intensity properties of microwave modified oil palm trunk lumber. Microwave treatment of oil palm trunk samples was set of connections by using a microwave operating at 2.45 GHz with the liberated process input power intensity (600-1000W) were studied under the given condition. Impact and compression of the samples were tested. The analysis of properties of the fresh material and dry samples was employed by scanning electron microscopy. Oven drying technique also was involved as a comparison of the conventional drying process in this research. Based on the outcomes of this study, both drying methods improved the characteristics of the specimens.

KEYWORDS:

Biomass; Drying; Lumber; Microwaves; Scanning electron microscopy