

Medium Density Fiberboard from Bamboo

PIYAWADE BAUCHONGKOL, VALLAYUTH FUEANGVIVAT, WERAYA THAMMAKHAN
BORVORNWIT PANGWONG AND PITAK HANGAM

Abstract

Research study for medium density fiberboard (MDF) made from 4 bamboo species; Pai Bong (*Dendrocalamus brandisii*), Pai Mah Ju (*Dendrocalamus latiflorus*), Pai Sang Mon (*Dendrocalamus sericeus*) and Pai Leang Wan (*Bambusa sp.*). The density of experiment boards at 650 and 750 kg./cu.m. processed with various urea formaldehyde (UF) content at 10% and 12% (by dry weight of fiber). Properties of boards were tested by TISI 966-2547 and JIS A 5906-1994. The data gathered were analyzed by statistical method. The results demonstrated that Pai Leang Wan and Pai Mah Ju at 750 kg./cu.m. with 12% UF (by dry weight of fiber) suitable for manufacturing MDF because physical and mechanical properties passed industrial standard but water absorption were decrease.

Key words

medium density fiberboard (MDF), Pai Bong (*Dendrocalamus brandisii*), Pai Mah Ju (*Dendrocalamus latiflorus*), Pai Sang Mon (*Dendrocalamus sericeus*), Pai Leang Wan (*Bambusa sp.*), moisture content, density, modulus of rupture, modulus of elasticity, internal bond, water absorption, thickness swelling, Urea formaldehyde (UF)