BEBERAPA SIFAT BAMBU LAMINA
YANG TERBUAT DARI TIGA JENIS BAMBU
(Some Properties of Laminated Bamboo Board made from Three Bamboo Species)

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ABSTRACT

This study investigated the potential of laminated bamboo board as a wood substitute, with particular focus on the effects of bamboo species on some properties of laminated bamboo board glued with urea formaldehyde. The bamboo species applied in these tests were andong (Gigantochloa pseudoarundinacea), mayan (Gigantochloa robusta) and tali (Gigantochloa apus) collected from private gardens in West Java. Results showed that some properties of laminated bamboo board were affected by bamboo species except moisture content, compression strength parallel to grainand bonding strength. The density of laminated bamboo board varied from 0.60 -0.77 g/cm3. The laminated bamboo board made from tali had the highest bending strength while laminated bamboo board made from mayan had the lowest bending strength. The bonding strength of laminated bamboo board of dry and wet samples varied from 67.03 – 86.19 kg/cm2and 54.43 - 62.92 kg/cm2respectively. Three-layer thick laminated bamboo board made from those three bamboo species had comparable strength to wood strength class II. Production of laminated bamboo board is technically feasible and it will provide an alternative wood source.

Keywords: Bamboo, laminated bamboo board, urea formaldehyde, physical and mechanical properties, bonding strength2

ABSTRAK

Penelitian ini bertujuan untuk mempelajari kemungkinan penggunaan bambu lamina sebagai bahan substitusi kayu, khususnya mengetahui pengaruh jenis bamboo terhadap sifat bambu lamina yang direkat dengan urea formaldehida. Bambu yang digunakan dalam penelitian ini adalah bambu andong (Gigantochloa pseudoarundinacea), bambu mayan (Gigantochloa robusta) dan bambu tali (Gigantochloa apus) yang berasal dari tanaman rakyat di Jawa Barat. Hasil penelitian menunjukkan bahwa beberapa sifat bambu lamina dipengaruhi oleh jenis bambu yang digunakan kecuali kadar air, keteguhan tekan sejajar serat dan keteguhan rekat. Kerapatan bambu lamina bervariasi antara 0,62 – 0,79 g/cm3. Bambu lamina dari bambu tali memiliki nilai keteguhan lentur tertinggi sedangkan bambu lamina dari bambu mayan memiliki keteguhan lentur terendah. Keteguhan rekat bambu lamina yang diuji dengan cara geser tekan bervariasi antara 67,03 – 86,19 kg/cm2dan 54,43 – 62,94 kg/cm2berturut-turut untuk uji kering dan uji basah. Sifat perekatan bambu lamina dari bambu andong, mayan dan tali cukup baik. Bambu lamina (3 lapis) masing-masing dari bambu andong, mayan dan tali setara dengan kayu kelas kuat II. Pembuatan bambu lamina secara teknis dapat dilakukan dan produk tersebut dapat digunakan sebagai bahan substitusi kayu.

Kata kunci: Bambu, bambu lamina, urea formaldehida, sifat fisis dan mekanis,keteguhan rekat