

PENINGKATAN PEMANFAATAN JATI PLUS PERHUTANI (JPP)
UNTUK KAYU LAMINA
Utilization Improvements on Jati Plus Perhutani (JPP)
as Glued Laminated Timber

Oleh/By

Mohammad Muslich & Nurwati Hadjib

ABSTRACT

Jati plus Perhutani (JPP) reveals one of the fast-growing teak (*Tectona grandis*) varieties which have been developed through the tissue culture to enhance supply capability of teak wood from teak plantation. Information about fast growing teak wood (including JPP) is still limited. As the relevance, this attempt tried to experimentally improve the inferiority of JPP wood at 9 year age. Results showed that the JPP in size was categorized as small diameter wood (KBK, A.1), and in durability susceptible to dry-wood termites (*Cryptotermes cynocephalus*) and subterranean termite (*Coptotermes curvignathus*). The JPP after being treated with particular preservatives, improved its durability class remarkably. To impart added value of JPP wood and to utilize it as efficiently as possible the JPP after being treated with borax preservative or untreated was shaped into lamina with and without finger-joint connection, and then assembled to glue laminated beam (glulam) using the mixture of phenol-resorcinol-formaldehyde and urea-formaldehyde adhesive. It turned out that the strength and mechanical properties of the glulam was not affected by the finger-jointed and by borax-treating, except compressive strength parallel to the grain (in the lengthwise direction of glulam) and stiffness (MOE).

Keywords: Jati plus perhutani (JPP), inferior properties, durability, preservation glulam, finger-joint connection 2

ABSTRAK

Jati plus perhutani (JPP) adalah jati (*Tectona grandis*) yang dikembangkan dengan menggunakan kultur jaringan. Informasi mengenai kualitas kayu jati cepat tumbuh tersebut belum banyak diketahui. Penelitian ini bertujuan untuk memperbaiki sifat inferior agar pemanfaatannya optimal. Hasil penelitian menunjukkan bahwa JPP umur sembilan tahun termasuk kriteria kayu bulat kecil (KBK, A.1.), rentan terhadap rayap kayu kering (*Cryptotermes cynocephalus*) dan rayap tanah (*Coptotermes curvignathus*). Kayu tersebut setelah diawetkan, kelas awetnya meningkat. Untuk meningkatkan nilai tambah dan manfaatnya, kayu tersebut dibentuk menjadi balok lamina dengan dan tanpa sambungan bentuk jari kemudian dirakit menjadi balok laminamenggunakan perekat campuran fenol-resorsinol-formaldehida dan urea formaldehida. Hasil penelitian menunjukkan adanya sambungan dan pengawetan dengan boraks tidak berpengaruh terhadap modulus elastisitas balok tersebut kecuali pada uji tekan sejajar lamina.

Kata kunci: Jati plus perhutani, sifat inferior, keawetan, pengawetan balok lamina, sambungan bentuk jari