

HUBUNGAN SIFAT DASAR DAN SIFAT PENGERINGAN LIMA JENIS KAYU ANDALAN JAWA BARAT

The Relation Between Basic Properties and Drying Properties of Five Priority Wood Species from West Java

Oleh/By:

Efrida Basri dan Nurwati Hadjib

ABSTRACT

This study was intended to investigate the relation between basic properties and drying properties of five priority wood species, i.e. pulai kongo (*Alstonia congensis* Engl.), kibawang (*Azadirachta excelsa* Jack.), salamander (*Grevillea robusta* A.Cunn), mahoni (*Swietenia macrophylla* King), and suren (*Toona sureni* Merr.) from West Java. The air drying methods used were 29 - 35°C temperatures and high temperature drying (100°C). The basic properties included basic density, shrinkage, modulus of rupture (MOR), compression parallel to grain (C//), wood strength and anatomical structures. The drying properties included drying duration and wood quality. The maximum-minimum temperature and humidity for each species were based on defects resulted in high temperature drying.

The results showed that the drying properties were significantly affected by basic density and wood anatomical structure. Following the drying qualities and basic properties, the optimal drying schedules for pulai kongo and mahoni wood at 70 - 95°C temperature and 29 - 75% humidity; kibawang wood at 65 - 88°C temperature and 29 - 78% humidity; suren wood at 65 - 90°C temperature and 29 - 78% humidity; and salamander wood at 58 - 83°C temperature and 27 - 82% humidity. These drying schedules, however, still need further trial prior to their implementation in the factory-scale operation. Based on basic density, strength class, and decorative value, kibawang, salamander, mahoni and suren wood were suitable for fancy furniture.

Keywords: Priority wood species, wood basic properties, drying properties.

ABSTRAK

Tujuan penelitian ini adalah mempelajari sifat dasar kayu dalam hubungannya dengan sifat pengeringan lima jenis kayu andalan Jawa Barat, yaitu pulai kongo (*Alstonia congensis* Engl.), kibawang (*Azadirachta excelsa* Jack.), salamander (*Grevillea robusta* A.Cunn), mahoni (*Swietenia macrophylla* King) dan suren (*Toona sureni* Merr.). Pengujian sifat dasar kayu meliputi berat jenis, penyusutan, keteguhan patah, tekan sejajar serat, kekuatan kayu, dan struktur anatomi kayu. Sedangkan pengujian sifat pengeringan meliputi lamanya pengeringan dan mutu kayu. Metode pengeringan yang digunakan adalah metode alami (suhu 29 - 35°C) dan pengeringan suhu tinggi (suhu 100°C).

Hasil penelitian menunjukkan bahwa berat jenis dan struktur anatomi kayu mempengaruhi sifat pengeringan kayu. Berdasarkan mutu pengeringan dan sifat-sifat kayu, bagan pengeringan (suhu dan kelembaban) yang optimal bagi kayu pulai kongo dan mahoni adalah 70 - 95°C dan 29 - 75%; kayu kibawang 65 - 88°C dan 29 - 78%; kayu suren 65 - 90°C dan 29 - 78%; dan kayu salamander 58 - 83°C dan 27 - 82%. Skedul pengeringan ini perlu diujicobakan terlebih dahulu sebelum diterapkan di industri. Berdasarkan berat jenis, kekuatan, dan nilai dekoratifnya, kayu kibawang, salamander, mahoni, dan suren cocok untuk dijadikan bahan baku mebel indah.

Kata kunci: Jenis kayu andalan, sifat dasar kayu, sifat pengeringan.