PENGARUH SKEDUL SUHU DAN KELEMBABAN DAN KETEBALAN SORTIMEN TERHADAP KUALITAS PENGERINGAN KAYU SENGON (*Paraserianthes falcataria* (L.) Nielsen) DI DALAM TANUR PENGERING TRI THERM (STUDI KASUS DI PT. SSSWI WONOSOBO)

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INTISARI

Pengeringan kayu dalam tanur merupakan proses yang kompleks, menyangkut adanya kesesuaian antara karakteristik kayu dan skedul suhu dan kelembaban. Oleh karena itu skedul suhu dan kelembaban harus disesuaikan dengan karateristik kayu. Penelitian ini bertujuan untuk mengetahui pengaruh ketebalan sortimen dan skedul suhu dan kelembaban terhadap karakteristik pengeringan kayu sengon dalam tanur pengering konvensional jenis Tri Therm. Manfaat yang diharapkan adalah mendapatkan kualitas kayu hasil pengeringan yang lebih baik, proses pengeringan yang lebih cepat dan biaya pengeringan yang lebih hemat.

Bahan penelitian berupa kayu sengon dengan tiga aras ukuran; 20x103x1300 mm, 42x103x1300 mm, dan 55x103x1300 mm. Skedul suhu dan kelembaban yang digunakan berdurasi 6 hari dan berdurasi 10 hari. Penelitian ini menggunakan rancangan percobaan analisis varian rancangan acak lengkap faktorial. Penerapan skedul suhu dan kelembaban berdurasi 6 hari dan 10 hari dilakukan secara bergantian terhadap jenis sortimen. Parameter yang diamati adalah laju pengeringan, penyusutan tebal, cacat membusur, memangkuk, melengkung, memuntir, cacat retak dalam, dan jumlah pecah ujung.

Hasil penelitian ini menunjukkan bahwa laju pengeringan skedul suhu suhu dan kelembaban berdurasi 6 hari untuk ketebalan 20x103x1300mm adalah 8,97 %/hari, ketebalan 42x103x1300 mm sebesar 10,34 %/hari, dan ketebalan 55x103x1300 mm adalah 9,84 %/hari lebih cepat dari pada skedul suhu dan kelembaban berdurasi 10 hari yaitu 6,11 %/hari pada ketebalan 20x103x1300 mm, 6,47 %/hari pada ketebalan 42x103x1300 mm, 6,02 %/hari pada ketebalan 55x103x1300 mm. Faktor skedul suhu dan kelembaban berbeda nyata terhadap parameter laju pengeringan, penyusutan tebal, cacat melengkung, dan pecah ujung. Faktor ketebalan sortimen berbeda terhadap parameter cacat pengeringan khususnya cacat memangkuk, melengkung, cacat retak dalam, dan pecah ujung. Interaksi antara faktor skedul suhu dan kelembaban dan ketebalan sortimen berbeda terhadap penyusutan tebal, cacat pengeringan khususnya cacat membusur, memangkuk, melengkung, dan cacat retak dalam.

Kata Kunci : Pengeringan kayu, skedul suhu dan kelembaban berdurasi 6 hari dan 10 hari, ketebalan sortimen, tanur pengering, kayu sengon, karakteristik pengeringan.

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THE EFFECT OF TEMPERATURE AND HUMIDITY SCHEDULE AND WOOD THICKNESS FOR QUALITY DRYING OF SAWN TIMBER SENGON (*Paraserianthes falcataria* (L.) Nielsen*)* AT TRI THERM CONVENTIONAL KILN DRYING

(CASE STUDY AT PT. SSSWI WONOSOBO)

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ABSTRACT

Wood drying at kiln is a complex process which has a fitting between wood characteristic and temperature and humidity schedule. So, its needed that wood drying schedule to be fitted with wood characteristic. This research was aimmed to knowing is the effect of temperature and humidity schedule and wood thickness for drying characteristic at Tri Therm conventional kiln drying. The benefit that we hoped from this research was to gain a better quality of wood drying, faster rate of drying process and lesser cost.

Substances used in this research was three size of sengon wood; 20x103x1300 mm, 42x103x1300 mm, dan 55x103x1300 mm. The temperature and humidity schedule used in this research that have been duration 6 and 10 days. This research was using random complete block difference as an analysis methode. The application of temperature and humidity schedule that have been duration 6 days and 10 days was changes one by one in a row toward every specimenns. Parameter concerned in this research were rate of wood drying, thickness shrinkages, and defects (bowing, cupping, curving, twisting, honeycombing, and end check).

This result of research proven that the rate of wood drying of temperature and humidity schedule that have been duration 6 days for 20x103x1300 mm specimen was 8,97 %/day, for 42x103x1300 mm specimen was 10,34 %/day, and for 55x103x1300 mm specimen was 9,84 %/day and its faster than temperature and humidity schedule that have been duration 10 days which is 6,11 %/day for 20x103x1300 mm specimen, 6,47 %/day for 42x103x1300 mm specimen, 6,02 %/day for 55x103x1300 mm specimen. Temperature and humidity schedule factor was different in a term of wood rate drying, thickness shrinkage, amount of curving, and end check. Wood thickness factor was different in a term defect especially amount of cupping, curving, honeycombing and end check. . The interaction of temperature and humidity schedule and wood thickness was different in a term of thickness shrinkage, defectespecially amount of bowing, cupping, curving nad honey combing.

Key word : Wood drying, temperature and humidity schedule that have been duration 6 day and 10 day, wood thickness, kiln drying, sengon wood, drying characteristic.

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