



INTISARI

Bambu merupakan bahan yang serba guna, penangkarannya mudah dan cepat masak tebang. Bambu dianggap sebagai salah satu bahan organik yang paling kuat, sehingga para ahli bangunan telah berpikir untuk mengganti baja dengan bahan bambu dalam bangunan-bangunan beton. Bambu mudah diserang oleh jamur dan kumbang bubuk. Penelitian ini bertujuan untuk mengetahui lama proses pengawetan, pengaruh pengawetan terhadap bambu serta efektifitas bahan pengawet terhadap proses pengawetan.

Pengawetan dengan metode Boucherie-Morisco, yaitu dengan menggunakan dua tabung gas elpiji. Tabung 1 berisi udara dengan tekanan tetap 4 kg/cm² dihubungkan ke tabung 2 yang berisi larutan pengawet. Dari tabung 2 melalui selang yang salah satu ujungnya diberi nosel yang berguna untuk memasukkan zar pengawet ke bambu. Bambu yang digunakan wulung (*Gigantochloa verticillata* Wild.Munro) dengan panjang 1,5m;3,0m;4,5m; dan 6,0m pengulangan tiga kali. Bahan pengawet Boraks dengan konsentrasi 5%. Mortalitas serangga selama 3 bulan terhadap rayap kayu kering. Hasil pengujian dianalisis varian dan selanjutnya diuji LSD (Least Square Difference) untuk mengetahui perbedaan setiap level pada faktor yang berbeda nyata dan Uji T (T test) untuk membandingkan hasil.

Hasil penelitian menunjukkan semakin lama waktu tunggu (hari ke) proses pengawetan semakin cepat. Untuk proses pengawetan hari ke 12, ke 8 dan ke 4 lama proses pengawetan berturut-turut 120; 126,92; 163,83 menit. Semakin lama waktu tunggu absorpsi dan retensi cenderung naik. Absorpsi untuk hari ke 8 sebesar 82,50 kg/m³ dan hari ke 12 sebesar 194,130 kg/m³. Retensi hari ke 8 sebesar 1,116E-06 kg/m³ dan hari ke 12 sebesar 4,027E-06 kg/m³. Faktor panjang bambu berpengaruh terhadap lama proses yaitu semakin panjang bambu maka waktu pengawetan semakin lama. Untuk bambu panjang 1,5 m; 3,0 m; 4,5 m; 6,0 m; lama proses pengawetan berturut-turut 16,22; 81,67; 172,11; 277,67 menit. Faktor blok/ posisi berpengaruh sangat nyata terhadap kadar air. Kadar air sebelum proses pengawetan pada bagian pangkal sebesar 49,5000%, bagian tengah 42,68442% dan bagian ujung 30,1676%.Sedang kadar air sesudah proses pengawetan pada bagian pangkal 61,0632%, bagian tengah 48,8548% dan bagian ujung 37,1083%.

Kata kunci : bambu wulung, panjang bambu, pengawetan



ABSTRACT

Bamboes are usefull material and considered as strongest organic material so engineers think to replace reinforcement in concrete with bamboes. Bamboes are vulnerable to be attacked by fungi and powder post beetle. The experiment was conducted to know the effect of preservation to bamboes and the effectivity of preservative to preservation's process.

Boucherie-Morisco method use two LPG tubes. First tube filled with air pressure of 4 kg/cm^2 and connected to the second tube that filled with preservative. The nozzle was given at the end of pipe from the second tube to enter the preservative into the bamboo. Bamboes used for the experiment were bambusa *Gigantochloa verticillata* Munro, with length's 1,5 m; 3,0 m; 4,5 m; and 6,0 m respectively with three time repetition each. The preservative was of 5% concentration. Bug's mortality until 3 month to *Cryptotermes cynocephalus* light. The results were processed with variant analysis and then tested with Least Square Difference to know the different of each level that significant and T test used to compare the result before and after experiment's of mortality and weight loose.

Results showed that the longer the time delay, the quicker the preservation process. Preservation day of 12th, 8th, and 4th were 120; 126,92 and 163, 83 minutes respectively. The longer the time delay, absorption and retention tend to increase. Absorption for 8th day, 12th were $82,50 \text{ kg/m}^3$ and $194,130 \text{ kg/m}^3$ respectively. Retention for 8th day, 12th were $1,116\text{E}-06 \text{ kg/m}^3$ and $4,027\text{E}-06 \text{ kg/m}^3$ respectively. Lengthen of bamboes, the longer the preservation time. The preservation time for bamboes with length's 1,5m; 3,0m; 4,5m and 6,0m were 16,22; 81,67; 172,11 and 277,67 minutes respectively. The bamboo's position affect water content. At base, middle, point of bamboo's the water content before preservation were 49,5%; 42,68442%; 30,1676% respectively and after preservation were 61, 0632%; 48,8548%; 37,1083% respectively.

Key words: *Bambusa Gigantochloa verticillata* Munro, bamboo's length, preservation