Biodeterioration Impacts on Mechanical Properties of *Eucalyptus camaldulensis* Dhnh.

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Abstract

The biodeterioration of four different wood aging classes (3, 5, 7 and 10 years) of *Eucalyptus camaldulensis* selected from northeastern and eastern parts of Thailand were verified to establish the impacts of wood durability and mechanical properties. The experiment was carried out by agar block and sandwich methods. The tested blocks were exposed to wood decay fungi and maintained in the four month-incubation period. The results showed that the young age of wood sample (3, 5 and 7 years) from two regions were susceptible to fungi attack as "perishable level" and manifested less than 2 years of service life. However, the old aged wood samples (10 years) were more resistant to fungi and upheld about 10-15 years of service life. The impact on wood mechanical properties was eventually evaluated in term of bending strength (MOR). To summarize, the results of decay fungi effect indicated that the northeastern timber demonstrated in the same level strength as eastern timber.

Keywords : *Eucalyptus camaldulensis,* Biodeterioration, Wood decay fungi, Wood mechanical property