**Pengaruh Kadar Perekat Papan Komposit Tandan Kosong Kelapa Sawit pada Taraf Intensitas Bunyi**


## Abstrak

Telah dilakukan pembuatan papan komposit dari campuran partikel Tandan Kosong Kelapa Sawit (TKKS) dan perekat PVAc berupa lem putih (fox). Penelitian ini bertujuan untuk menganalisis taraf intensitas bunyi serta sifat fisis dari papan komposit. Papan komposit dibuat menggunakan kadar perekat dengan variasi 8%, 10%, 12%, 14%, dan 16%. Pada pengujian taraf intensitas bunyi, frekuensi bunyi yang digunakan adalah 125 Hz, 250 Hz, 500 Hz, 1000 Hz, 2000 Hz, dan 4000 Hz. Berdasarkan hasil pengukuran taraf intensitas bunyi setelah melewati papan komposit, diperoleh taraf intensitas bunyi tertinggi pada kadar perekat 8% yang termasuk papan komposit berkerapatan rendah dengan nilai yang terukur oleh *sound level meter* sebesar 74,2 dB pada frekuensi 500 Hz. Sebaliknya, taraf intensitas bunyi terendah diperoleh pada kadar perekat 16% yang termasuk papan komposit berkerapatan tinggi dengan nilai yang terukur oleh *sound level meter* sebesar 58,6 dB pada frekuensi 125 Hz. Selain itu, hasil pengujian sifat fisis papan komposit untuk semua variasi kadar perekat yang memenuhi syarat SNI 03-2105-2006 yaitu kerapatan papan komposit dengan rentang nilai 0,705 g/cm$^3$ - 0,723 g/cm$^3$ dan kadar air papan komposit dengan rentang nilai 8,36% - 9,66%.



Kata Kunci: Papan Komposit, Taraf Intensitas Bunyi, Sifat Fisis Komposit

***Effect of Adhesive Levels of Composite Boards of Empty Palm Oil Bunches on Sound Intensity Levels***


***Abstract***

*Composite boards have been made from a mixture of Empty Palm Oil Bunches particles and PVAc adhesive in the form of white glue (fox). This research aims to analyze the sound intensity level and the physical properties of the composite board. Composite boards were made using adhesive levels with variations of 8%, 10%, 12%, 14% and 16%. In testing the sound intensity level, the sound frequencies used were 125 Hz, 250 Hz, 500 Hz, 1000 Hz, 2000 Hz and 4000 Hz. Based on the measurement results of the sound intensity beam after passing through the composite board, the highest sound intensity level was obtained at an adhesive content of 8% which is a low-density composite board with a value measured by a sound level meter of 74,2 dB at a frequency of 500 Hz. In contrast, the lowest sound intensity level was obtained at 16% adhesive content which is a high-density composite board with a value measured by a sound level meter of 58,6 dB at a frequency of 125 Hz. In addition, the results of testing the physical properties of the composite board for all variations in adhesive content met the requirements of SNI 03-2105-2006, namely the density of the composite board with a value range of 0,705 g/cm$^3$ – 0,723 g/cm$^3$ and the moisture content of the composite board with a value range of 8,36% - 9,66%.*



*Keywords: Composite Board, Sound Intensity Level, Composite Physical Properties*