ABSTRAK

EFFECT OF ADDITION OF SAWDUTS TEAK (Tectona grandis L.f) OF COMPRRESSIVE STRENGTH, TENSILE STRENGTH AND WATER ABSORTION IN CEMENT MORTAR

By

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Using of wood as the building material in construction or other building elements produced the waste wood that has not been fully exploited, in the form of sawdust. One way of utilization of industrial waste is by using wood as a building material. In this research, industrial waste wood (wood powder) will be used as a partial replacement of cement and sand on building materials such as cement mortar.

This research aimed to study and determine the effect of the addition of teak wood sawdust in cement mortar for compressive strength, split tensile strength, and water absorption. The comparison of the mixture composition of cement and sand used is 1: 5, with cement water factor (FAS) is 0.5. Whereas variations in the usage of sawdust is used in the mixture is at 0%, 10%, 15%, and 20% of the weight of the weight of cement and sand.

The results showed that the testing of compressive strength and tensile strength sides with cement mortar composition of sawdust in substitution of cement and sand substitution results are decreases. For the test results of water absorption, showed that the water absorption value increases. The use of sawdust
as stuffing material in cement mortar, will greatly influence the reduction in compressive strength, tensile strength sides and increase the absorption of water produced.

**Key words**: sawdust, compressive strength, tensile strength, water absorption