ABSTRAK

Agriyanti Tinuru. 2021. *"Pengaruh Penambahan Serat Bambu Wulung Terhadap Kuat Tekan Beton"*. Program Studi Teknik Sipil S-1, Fakultas Teknik Sipil, Universitas Sintuwu Maroso, Dosen Pembimbing I: Ebelhart O. Pandoyu, ST.,M.Eng. Dosen Pembimbing II: Irnovia B. Pakpahan, ST.,M.Eng.

Penelitian ini memanfaatkan serat bambu sebagai bahan tambahan dalam campuran beton. Pembuatan dari bahan baku menjadi serat cukup mudah dan tidak perlu peralatan khusus, serta populasi bambu yang cukup banyak dan tersebar sehingga mudah diperoleh. Penelitian ini bertujuan untuk mengetahui pengaruh penambahan serat bambu terhadap kuat tekan beton dan persentase optimum penambahan serat bambu yang efektif terhadap kuat tekan beton.

Hasil dari pengujian kuat tekan beton adalah pada penambahan serat bambu 0% sebesar 19.83 MPa, 1% sebesar 20.13 MPa, 2% sebesar 21.60 MPa, dan 3% sebesar 18.80 MPa. Dan kenaikan kuat tekan optimum yang didapat yaitu dari hasil penambahan serat bambu sebanyak 2% dari berat semen dengan nilai fc' 21,60 Mpa. Peningkatannya mencapai 8.93%.

Kata Kunci: Serat Bambu, Kuat Tekan Beton

ABSTRACT

Agriyanti Tinuru. 2021. "**The Effect of Adding Wulung Bamboo Fiber to the Compressive Strength of Concrete**". S-1 Civil Engineering Study Program, Faculty of Civil Engineering, Sintuwu Maroso University, Supervised by Ebelhart O. Pandoyu, ST., M.Eng and Irnovia B. Pakpahan, ST., M.Eng.

This research utilizes bamboo fiber as an additive in the concrete mix. The manufacture of raw materials into fiber is quite easy and does not require special equipment, and the bamboo population is quite large and scattered so that it is easy to obtain. This study aims to find out the effect of adding bamboo fiber to the compressive strength of concrete and the optimum percentage of effective addition of bamboo fiber to the compressive strength of concrete.

The results of the research obtained that the concrete compressive strength test were the addition of 0% bamboo fiber of 19,83 MPa, 1% of 20.13 MPa, 2% of 21,60 MPa, and 3% of 18.80 MPa. The increase in optimum compressive strength obtained is from the addition of bamboo fiber as much as 2% of the weight of cement with a value of fc' 21,60 Mpa. The increase reached 8,93%.

Keywords: Bamboo Fiber, Concrete Compressive Strength