

**PENGARUH PERSENTASE SERAT SABUT PINANG DAN RESIN  
EPOKSI TERHADAP SIFAT FISIK DAN MEKANIK PAPAN BETON**

**SKRIPSI**



**JURUSAN FISIKA  
FAKULTAS MATEMATIKA DAN ILMU PENGETAHUAN ALAM  
UNIVERSITAS ANDALAS  
PADANG**

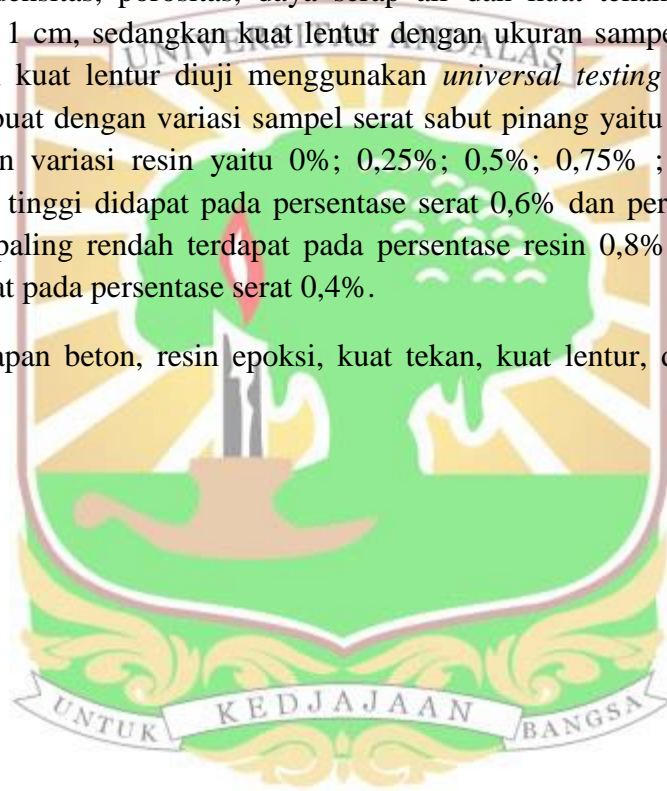
**2018**

## **PENGARUH PERSENTASE SERAT SABUT PINANG DAN RESIN EPOKSI TERHADAP SIFAT FISIK DAN MEKANIK PAPAN BETON**

### **ABSTRAK**

Telah dilakukan penelitian tentang pengaruh persentase serat sabut pinang dan resin epoksi terhadap sifat fisik dan mekanik papan beton. Sifat fisik dan mekanik yang diuji meliputi densitas, porositas, daya serap air dan kuat tekan dengan ukuran sampel 5 x 5 x 1 cm, sedangkan kuat lentur dengan ukuran sampel 20 x 5 x 1 cm. Kuat tekan dan kuat lentur diuji menggunakan *universal testing mechine* (UTM). Papan beton dibuat dengan variasi sampel serat sabut pinang yaitu 0%; 0,2%; 0,4%; 0,6%; 0,8% dan variasi resin yaitu 0%; 0,25%; 0,5%; 0,75% ; 1%. Nilai sifat mekanik paling tinggi didapat pada persentase serat 0,6% dan persentase resin 1%. Densitas yang paling rendah terdapat pada persentase resin 0,8%, sedangkan daya serap air terdapat pada persentase serat 0,4%.

Kata kunci : papan beton, resin epoksi, kuat tekan, kuat lentur, densitas dan daya serap air.



## **EFFECT OF PERCENTAGE OF COIR FIBER AND EPOXI RESIN ON PHYSICAL AND MECHANICAL PROPERTIES OF CONCRETE BOARD**

### **ABSTRACT**

Effect of percentage of coir fiber and epoxy resin on physical and mechanical properties of concrete board. Had been investigated physical and mechanical properties which are examited are the density, porosity, water absorption and compressive strength with for sample size of 5 x 5 x 1 cm, while 20 x 5 x 1 cm for flexural strength. Compressive strength and flexured strength are tested using universal testing mechine (UTM). Concrete board is made with the variation of sample fiber coir fiber being 0%; 0.2%; 0.4%; 0.6%; 0.8% and resin variation being 0%; 0.25%; 0.5%; 0.75%; 1%. The highest value of mechanical properties was obtained at 0.6% fiber percentage and 1% resin percentage. The lowest density is in observed the resin percentage of 0.8%, while the water absorption is observed in 0.4% fiber percentage.

Keywords: concrete board, epoxy resin, compressive strength, flexural strength, density and water absorption.

