

ABSTRAK

Judul: Studi Eksperimental Penambahan *Fiber Polypropylene* Terhadap Kuat Tekan Dan Kuat Lentur Beton, Pembimbing: Agung Sumarno, ST., MT. Penulis: Leonardus Kevin Deodatus, NIM: 41118310005. 2020.

Beton merupakan salah satu bahan yang paling sering digunakan dalam dunia konstruksi, beton pada umumnya tersusun dari komposisi campuran agregat halus. Agregat kasar, air dan semen. Namun beton memiliki kelemahan terhadap kemampuan menahan gaya lentur, dewasa ini beton sudah mengalami banyak sekali inovasi, salah satunya adalah beton serat. *Fiber Polypropylene* merupakan salah satu jenis serat yang dapat digunakan sebagai material tambah penyusun beton. Penelitian ini dilakukan untuk mengetahui pengaruh penambahan *Fiber Polypropylene* terhadap kuat tekan dan kuat lentur beton. Pengujian pada penelitian ini dilaksanakan merunut pada SNI (standar nasional indonesia) dan ASTM (*american standard testing and material*), dari hasil percobaan penambahan *Fiber Polypropylene* dengan variasi 0%, 1%, 1,2%, dan 1,4% diketahui memberikan pengaruh kepada kuat tekan dan juga kuat lentur beton. Kuat tekan dan Lentur yang paling tinggi diperoleh pada beton variasi 1%. Dengan menggunakan benda uji silinder dan balok.

Kata Kunci: Beton, *Fiber Polypropylene*, Kuat Tekan, Kuat Lentur.

ABSTRACT

Title: Experimental Study of Polypropylene Fiber Addition to Compressive Strength and Flexural Strength of Concrete, Counselor: Agung Sumarno, ST., MT. Author: Leonardus Kevin Deodatus, NIM: 41118310005. 2020.

Concrete is one of the most frequently used materials in the construction world, concrete is generally composed of a mixture of fine aggregate composition. Coarse aggregate, water and cement. However, concrete has a weakness to the ability to withstand the flexural force, today concrete has experienced a lot of innovations, one of which is fiber concrete. Polypropylene fiber is a type of fiber that can be used as an added material in concrete. This research was conducted to determine the effect of adding polypropylene fiber on compressive strength and flexural strength of concrete. Tests in this study were carried out according to SNI (Indonesian national standard) and ASTM (American standard testing and material), from the results of the experiment of adding polypropylene fiber with variations of 0%, 1%, 1.2%, and 1.4% known to have an effect to the compressive strength and flexural strength of concrete. The highest compressive strength and flexure obtained in concrete variations of 1%. By using cylindrical and beam test specimens.

Keywords: Concrete, Polypropylene Fiber, Compressive Strength, Flexural Strength.