ABSTRAK

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Judul : **Pengaruh Subtitusi Limbah plastik PET (Poyethylene Terephthalate) Tehadap Kuat Tekan Dan Kuat Lentur Beton**

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Dalam penelitian tugas akhir ini Limbah Plastik yang berjenis Poyethylene Terephthalate (PET) mempunyai berat jenis antara 0,92 - 0,96 dan digunakan sebagai material subtitusi terhadaap kerikil pada campuran beton. Metodologi penelitian yang digunakan adalah membandingkan variasi limbah plastik Poyethylene Terephthalate (PET) yaitu 3%, 6%, 9%, dan 12% dengan campuran pengeras semen. Pengolahan data penelitian dengan benda uji berbentuk silinder dan balok untuk tiap variasi. Pengujian kuat tekan dan kuat lentur beton dilakukan saat umur beton 28 hari. Hasil uji kuat tekan mengalami keturunan pada variasi 12% campuran beton limbah plastik PET (Poyethylene Terephthalate) sebesar 26,83 MPa atau 465 KN . Sedangkan hasil uji kuat lentur, didapatkan mutu beton mengalami kenaikan, yang mana pada variasi 3% campuran limbah plastik PET (Poyethylene Terephthalate) sebesar 28 KN atau 5,08 MPa.

Kata Kunci : *Beton, Limbah Plastik (PET), Kuat Tekan, dan Kuat Lentur*

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ABSTRACT

Meanwhile, the amount of plastic waste from human activities is increasing every year. In this final project research, plastic waste of the type Poyethylene Terephthalate (PET) has a specific gravity between 0.92 - 0.96 and is used as a substitution material for gravel in a concrete mixture. The research methodology used is to compare variations of Poyethylene Terephthalate (PET) plastic waste, namely 3%, 6%, 9%, and 12% with a mixture of cement hardener. Research data processing with cylindrical and beam-shaped test objects for each variation. The compressive strength and flexural strength of concrete were tested when the concrete was 28 days old. The results of the compressive strength test resulted in a variation of 12% of the plastic waste concrete mixture of PET (Poyethylene Terephthalate) of 26.83 MPa or 465 KN. While the results of the flexural strength test, the quality of the concrete has increased, which in the variation of 3% of the mixture of PET plastic waste (Poyethylene Terephthalate) is 28 KN or 5.08 MPa.

Keywords: Concrete, Plastic Waste (PET), Compressive Strength, and Flexural Strength

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