Kajian eksperimen dan numerik hubungan tegangan dan regangan geser pada beton ringan beragregat ringan polypropilene = Experimental and numerical study on relationship of shear stress and strain in lightweight aggregat polypropilene concrete

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Abstrak

ABSTRAK
Limbah plastik salah satunya jenis polypropilene merupakan limbah yang sulit diurai sehingga berdampak buruk bagi lingkungan. Mendaur ulang limbah plastik menjadi agregat ringan merupakan salah satu solusi dan juga inovasi beton ringan. Tujuan penelitian ini adalah mengetahui tegangan dan regangan geser beton ringan agregat polypropylene. Dilihat dari hasil eksperimen dan numerik nilai tegangan geser maksimum dan regangan geser maksimum semakin tinggi apabila mutu beton semakin tinggi karena gaya geser nominal yang dapat ditahan beton juga meningkat.
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ABSTRACT
Polypropilene is one type of a plastic waste that is difficult to decompose and has bad impact for the environment. Recycling plastic waste into light aggregate is one of a solution and also lightweight concrete innovation. The purpose of this research is to know the stress and shear stretch of lightweight concrete aggregate polypropylene. Judging from the experimental and numerical results the maximum shear stress and maximum shear stress are higher when the quality of the concrete is higher because the nominal shear force that can be retained by the concrete also increases.