

PENGUJIAN EKSPERIMENTAL KUAT TEKAN PAVING BLOCK SUBSTITUSI LIMBAH BUBUT ALUMINIUM DENGAN PERSENTASE 4%, 6%, DAN 8%

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ABSTRAK

Perkembangan sektor industri di Indonesia semakin pesat saat ini, turut memberikan dampak pada sektor lain berdampak negatif yang begitu dirasakan berasal dari limbah industri yang di buang. Limbah B3 mengandung bahan yang bisa membahayakan manusia serta makhluk hidup. Limbah jenis ini tidak bisa begitu saja ditimbun, dibakar, atau dibuang ke lingkungan. Limbah bubut alumunium termasuk dalam limbah bahan berbahaya dan beracun (B3) sehingga berbahaya jika tidak diolah kembali. Penggunaan limbah bubut alumunium sebagai bahan penyusun *paving block press* (mutu tinggi) merupakan solusi bagi limbah industri. *Paving block* merupakan komposisi dari bahan bangunan yang mempunyai fungsi untuk menutup permukaan tanah, seperti trotoar, pengerasan areal parkir, dan pengerasan jalan kelas ringan. Acuan perencanaan *paving block* yaitu pada SNI 03-0691 tahun 1996, dengan ketentuan f'c yang beragam sesuai dengan klasifikasi *paving block* tersebut. Penelitian pengujian eksperimental kuat tekan *paving block* normal dan substitusi limbah bubut alumunium dengan persentase 4%, 6%, dan 8% mendapatkan hasil optimum kuat tekan pada substitusi limbah bubut alumunium sebesar 6 % dengan nilai kuat tekan 36.06 MPa sedangkan pengujian penyerapan air pada *paving block* normal dan substitusi limbah bubut alumunium mendapatkan hasil penyerapan air optimum pada benda uji *paving block* dengan substitusi limbah bubut alumunium sebesar 4% dengan nilai persentase penyerapan air sebesar 3.93%.

Kata Kunci: Kuat Tekan, Limbah Bubut Alumunium, *Paving Block*

EXPERIMENTAL TESTING OF PAVING BLOCK COMPRESSIVE STRENGTH OF ALUMINUM LATH SUBSTITUTION WITH 4%, 6%, AND 8% PERCENTAGES

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ABSTRACT

The development of the industrial sector in Indonesia is currently growing rapidly, contributing to the negative impact on other sectors which are felt to come from the industrial waste that is disposed of. B3 waste contains materials that can harm humans and living things. This type of waste cannot simply be dumped, burned, or dumped into the environment. Aluminum lathe waste is included in hazardous and toxic waste (B3) so it is dangerous if not reprocessed. The use of aluminum lathe waste as a building block for paving block press (high quality) is a solution for industrial waste. Paving block is a composition of building materials that have a function to cover the ground surface, such as sidewalks, hardening of parking areas, and light grade road paving. The reference for planning paving blocks is in SNI 03-0691 in 1996, with various f_c provisions according to the classification of the paving blocks. Experimental testing of the compressive strength of normal paving blocks and substitution of aluminum lathe waste with a percentage of 4%, 6%, and 8% obtained the optimum results of compressive strength in the substitution of aluminum lathe waste of 6% with a compressive strength value of 36.06 MPa while the water absorption test on paving blocks Normal and substitution of aluminum lathe waste obtained optimum water absorption results on paving block specimens with aluminum lathe waste substitution of 4% with a water absorption percentage value of 3.93%.

Keywords: Compressive Strength, Aluminum Lathe Waste, Paving Block