"ANALISIS *TRIAL MIX* PRODUKSI BETON *AIR-ENTRAINED* DI PT PIONIRBETON INDUSTRI PLANT PULOGADUNG"

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INTISARI

Menurut udara yang dimasukkan, beton dibedakan menjadi dua yaitu *Air Entrained Concrete* dan *Non Air Entrained Concrete*. *Air Entrained Concrete* merupakan beton yang memiliki gelembung-gelembung udara kecil yang sengaja dibuat terperangkap oleh bahan tambah khusus. *Air Entrained Concrete* memiliki kandungan udara berkisar 4% hingga 8%, sedangkan *Non Air Entrained Concrete* berkisar 0,5% hingga 3%. Rongga udara dapat memengaruhi kekuatan beton. Beton yang memiliki banyak rongga udara akan mengurangi kekuatan beton tersebut, tetapi beton lebih mudah dalam pengerjaannya. Untuk itu perlu diketahui bagaimana perbedaan kekuatan beton *non air entrained* dan beton *air entrained*.

Beton yang diamati pada penelitian ini ada dua jenis yaitu *air entrained concrete* dan *non air entrained concrete*. Mutu yang digunakan pada kedua beton ini yaitu mutu f_c' 32 MPa.yang kedua nya diperiksa kadar udara dan kuat tekan.

Berdasarkan hasil pengujian, diperoleh kadar udara *air entrained concrete* sebesar 4,5% dan *non air entrained concrete* sebesar 1,5%. Waktu *initial setting* kedua beton tidak berbeda jauh, hanya selisih 15 menit lebih cepat *air entrained concrete*. Hasil pengujian kuat tekan beton *air entrained concrete* lebih kecil dibandingkan beton *non air entrained* sebesar 5,5%.

Kata Kunci : Beton, *air entrained concrete, non air entrained concrete,* kadar udara, kuat tekan

"THE ANALYSIS AIR-ENTRAINED CONCRETE TRIAL MIX PRODUCTION *OF PT PIONIRBETON INDUSTRI PLANT PULOGADUNG"*

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ABSTRACT

According the air content of materials, concrete is divided into two, namely Air Entrained Concrete and Non Air Entrained Concrete. Air Entrained Concrete is concrete that has small air bubbles which trapped by special admixtures. Air Entrained Concrete has air content ranging from 4% to 8%, while Non Air Entrained Concrete from 0.5% to 3%. Air content could affect the strength of concrete, while workability would increase. It is necessary to know the difference between non entrained concrete and air entrained concrete.

The concrete observed in this research consisting two types, namely air entrained concrete and non air entrained concrete. The concrete compressive strength used in both concrete were f_c' 32 MPa.

Both were checked for air content, setting time, and compressive strength. Based on the test results, air entrained concrete had air content of 4.6% and non air entrained concrete of 1.5%. Whereas, there was no much difference setting time with only 15 minutes for air entrained concrete faster than non air entrained concrete. The results of testing the compressive strength of air entrained concrete are smaller than non air entrained concrete.

Key Words : concrete, air entrained concrete, non air entrained concrete, air content, compresive strength