EFFECT OF WATER REDUCTION ON K-500 CONCRETE WITH THE ADDITION OF POLYNEX HE

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Abstract

This study aims to determine the behavior of using Polynex HE in concrete mixtures. That from the other side the results of high-quality concrete work fas (cement water factor) must be low or the amount of water is small so that workability is low or difficult. The resulting concrete will also experience the emergence of air cavities even though the concrete has been compacted concrete. For this reason, added materials are needed, one of which is polynex HE.

The method used in this test is by making a concrete mixture using SNI 7656: 2012 with Polynex HE as an added material to the concrete mixture by 1% of the weight of cement and a reduction in the amount of water 10%, 15%, 20%, 30% of the amount of normal concrete water. Treated concrete for 1 day, 3 days, 7 days, and 28 days.

The parameters to be obtained in this study are the slump value, fill weight and concrete quality. From the test results, the slump value is obtained, the greater the reduction in the amount of water, the smaller the slump value obtained. As for the weight of the contents, the greater the reduction in the amount of water, the smaller the weight of the contents obtained. For concrete quality at the age of 28 days, compressive strength values range from 26.80 – 37.99 Mpa with a maximum value of 37.99 Mpa at BP1-30%.

Keywords : *Concrete Quality, Slump Value, Fill Weight, Polynex HE, Job Mix*