

ABSTRACT

Researches involving porous concrete started in 1995, one of them were by Ghafari et al. and supported by a journal published by Portland Cement Association (PCA) and National Ready Mixed Concrete Association (NRMCA) in 2004 by Paul D. Tennis et al. said that the strength of light concrete without fine aggregate ranges from 500 psi to 4000 psi (3.5 MPa to 28MPa). The purpose of this research is to find the influence between the mixtures of water cement ratio and the Aggregates/ Cement ratio on the resulting porosity and permeability which came from the resulting concrete mix, and the influence of porosity to permeability of light concrete without fine aggregates linearly with experiment methods. Aggregates used came from Tangerang and the tests used varied water cement ratio of 0.3; 0.35; and 0.4 with Aggregates/ Cement ratio of 3; 3.5; 4; 4.5; and 5. The results of this research showed the increase of porosity is directly proportional with the increase of permeability; and higher water cement ratio gave concrete with lower porosity and permeability.

Keywords : Light Weight Concrete Without Fine Aggregates, Porosity, Permeability, Pervious Concrete