

ABSTRAK

Beton adalah campuran semen *portland* atau semen hidrolis lainnya, agregat halus, agregat kasar, dan air dengan atau tanpa bahan campuran tambahan (*admixture*). Beton diharuskan memiliki ketahanan terhadap air, absorpsi air pada beton normal sangat tinggi sehingga tanpa tekanan air bisa masuk kedalam beton melalui pori kapiler. Untuk meningkatkan beton terhadap kekedapan air salah satu metode yang digunakan yaitu pelapisan *waterproofing coating* pada permukaan beton. Bahan *waterproofing* yang digunakan yaitu jenis semen, dengan variasi pelapisan 0.00, 0.50, 1.00 dan 1.50 kg/m² pada beton mutu 20 MPa. Cara uji absorpsi merujuk pada *British Standart 1881: Part 122: 1983* dengan bentuk benda uji berbentuk kubus dimensi (15x15x15) cm dan masing masing variasi berjumlah 3 benda uji. Hasil penelitian nilai absorpsi beton dengan variasi pelapisan *Waterproofing Coating* 0.00, 0.50, 1.00 dan 1.50 kg/m² pada beton mutu 20 MPa masing masing memiliki memiliki nilai absorpsi rata-rata sebesar 4.16%, 3.33%, 1.26% dan 1.24%. Berdasarkan hasil penelitian, beton dengan pelapisan *waterproofing* akan memberikan pengaruh penurunan nilai absorpsi pada beton. Penurunan nilai absorpsi tertinggi terdapat pada variasi 1.50 kg/m² yaitu sebesar 70.26% dari beton tanpa pelapisan *waterproofing coating*.

Kata Kunci: Beton, *Penetron Waterproofing Coating*, Absorpsi.

ABSTRACT

Concrete is a mixture of portland cement or other hydraulic cement, fine aggregate, coarse aggregate, and water with or without admixture. Concrete is required to have water resistance, water absorption in normal concrete is very high so that without pressure water can enter the concrete through capillary pores. One of the methods used to increase the water resistance of the concrete is the waterproofing coating on the concrete surface. The waterproofing material used is cement, with coating variations of 0.00, 0.50, 1.00 dan 1.50 kg/m² on 20 MPa quality concrete. The absorption test method refers to British Standard 1881: Part 122: 1983 with the shape of the test object in the form of a cube with dimensions (15x15x15) cm and each variation consists of 3 specimens. The results of the research on the absorption value of concrete with variations of waterproofing coating 0.00, 0.50, 1.00 dan 1.50 kg/m² on 20 MPa quality concrete each have an average absorption value of 4.16%, 3.33% , 1.26% and 1.24%. Based on the results of the study, concrete with a waterproofing coating will have an effect on decreasing the absorption value of the concrete. The highest decrease in absorption value is found in the variation of 1.50 kg/m², which is 70.26% of the concrete without waterproofing coating.

Keywords: Concrete, Penetron Waterproofing Coating, Absorbstion.