Abstract

Lightweight concrete in Indonesia continues to grow with a wide range of mixture composition to be applied in buildings. Lightweight concrete was applied to the brick, stairs, wall and floor panels. In this study the building bricks of lightweight concrete were made from, cement type I, fine Sidoarjo mud, foam, natural fiber (kenaf fiber), and water taps. In the manufacture of lightweight concrete curing system was done by using an autoclave with 1.38 MPa pressure for 2 hours. The addition of foam into the mixture can be made to concrete expand and form a porous structure so that the concrete will be lighter in weight reduction in the volume of the concrete.

Based on the analysis that has been done, it was found to strongly press the pasta lightly with the age of 7 days is 5.20 MPa PR-401/75 composition and heavy volume of 0.95 gr/cm³. As for the compressive strength of lightweight fiber pasta age of 7 days with MR-401/75 composition, is 5.25 MPa and 0.2 volume of 0.97 gr/cm³ weight.

Key words: lightweight concrete, Sidoarjo mud, foam, natural fiber