STUDY OF THE LAPINDO MUD AS ADDITIVE FOR MAKING PERVIOUS PAVING WITH CERAMIC FRAGMENTS FOR REDUCING RUNOFF

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Abstract

Flood commonly happens in many cities in Indonesia. One of the causes is because the infiltration areas have been decreased. Asphalt pavements are also makes the runoff is high since the runoff cannot seeps into the ground. Pervious paving stones can be used for reducing runoff since they have ability to seep runoff.

Many studies related to the use of the Lapindo mud have been done. They include the uses for concrete roof tiles, paving stone, and bricks. In this study, the Lapindo mud is used as additive for making pervious paving stones in which ceramic fragments are used as filler materials. In this research, Portland cement is mixed with the Lapindo mud with different types of variation of ratio for making the dough. The ratio between the dough and ceramic fragments is also varied. The resulting paving stones are then tested for runoff rate, infiltration rate, and strength. The pervious paving that fulfill the SNI standard for using on garden is able to reduce runoff up to 61.8% with the infiltration rate of 1.34 cm/second, and 10.9 Mpa of strenght.

Keywords: Pervious paving, Lapindo mud, ceramic fragments.