

PRATAK (Durability Level of Paving Block: Fly Ash and Plastic Waste Innovation Infrastructure)

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ABSTRACT

The widespread complaints of Indonesian citizens about the condition of sidewalks that continue to experience damage must be followed up immediately. One of the factors causing this road damage is because the quality of the paving blocks used is still inadequate, the damage causes a lack of comfort for citizens to cross the road.

As one of the countries that produces the largest coal in the world, Indonesia also produces a lot of FABA (Fly Ash and Bottom Ash) waste from burning coal in Steam–Electric Power Station which apparently has pozzolanic content that can be used as an additional material to improve the quality of paving blocks. If this waste cannot be used optimally, it will lead to problems such as environmental pollution and adverse effects on living things. Not only that, the plastic waste produced can also trigger environmental pollution such as causing flooding and causing disease for humans. The results of this research are paving blocks with the best material composition produced with a composition of 30% cement, 35% sand and 35% fly ash. Paving blocks have a water absorption capacity of 0.23%. Paving blocks can resist cracking against nails so that they are not damaged when the paving blocks are nailed. Paving blocks can withstand heavy loads so they can withstand pressure on the road as a transportation route.

Keywords: Fly Ash, Plastic Waste, Paving Block.