The Characteristics of Asphalt Concrete Binder Course (AC-BC) Mixture with Bottom Ash as Aggregate Substitute

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Abstract	Highways serve nearly 80-90% of the population mobility and flow of goods. Utilization of bottom ash, a waste from coal combustion, in highway construction is one of the alternatives to reduce environmental pollution and support Clean Development Mechanism Program of Kyoto Protocol. The aim of this study is to analyze the characteristics of AC-BC mixture that uses bottom ash as partial substitute of fine aggregate and comparing with a standard mixture. Laboratory tests are performed on two different types of mixtures. The tests show that optimum asphalt content for AC-BCStandard mixture is 5.20% while AC-BCBottom Ash mixture is 5.25%. Bottom ash has higher porosity along with a little break field and has round shape so that the asphalt absorption is bigger than the crushed stone. Bottom ash can be used as an alternative aggregate to increase the value of flow of the AC-BC mixture, thus converting waste to valuable material.
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