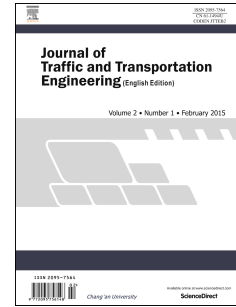


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Original research paper

Laboratory investigation on the properties of asphalt mixtures modified with double-adding admixtures and sensitivity analysis

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Abstract

In order to improve the high temperature stability and low temperature cracking resistance of asphalt mixtures, two varieties of admixtures (anti-rutting agent and lignin fiber) were selected and then combined. This is called double-mixture technology. A series of tests about pavement performance of base asphalt mixtures and asphalt mixtures with admixture of anti-rutting agent or lignin fiber were conducted. Meanwhile sensitivity analyses were used to study the influence of three factors (i.e., asphalt grade, aggregate type and gradation) on the high and low temperature performance and water stability of said asphalt mixtures. Test results indicated that the dynamic stability, residual stability, TSR and low temperature failure strain of asphalt mixtures have increased significantly with the additions of 0.40% anti-rutting agent and 0.36%

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