

EVALUATION OF THE AASHTO PAVEMENT ME SOFTWARE FOR THE CONTROL OF THERMAL CRACKING

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ABSTRACT

An important part of the AASHTO Pavement ME software is used to predict low temperature cracking. Superpave™ grades for the asphalt cement can be used to provide rudimentary predictions of cracking. More accurate results can be obtained from indirect tensile test (IDT) data obtained for the asphalt mixture. This paper discusses cracking predictions for a number of pavements in Ontario, Canada. Superpave grades appeared to predict satisfactory performance but a majority of mixes failed early when IDT properties were used. This discrepancy is analyzed with tests on the recovered asphalt cements. It was found that the current aging protocols underestimate the degree of hardening that occurs during HMA production. This leads to an overestimation of a pavement's cracking performance when Superpave grades are used as input. Improving the asphalt cement aging and conditioning protocols, test methods and specifications, will go a long way towards rectifying this problem.