INVESTIGATION ON LOW TEMPERATURE LIMITING CRITERIA FOR ASPHALT MIXTURE

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ABSTRACT
In this paper a new low temperature limit criteria for asphalt mixtures is investigated based on the current asphalt binder specification and on rheological modeling. Bending Beam Rheometer (BBR) tests are first performed on asphalt binders and asphalt mixtures and the ENTPE transformation is used to analyze the experimental data. Creep stiffness results measured on long term aged binder are used to predict the limiting asphalt mixture creep stiffness values which are then compared to results available in literature. The BBR creep values determined on short term aged asphalt binder are used to predict creep stiffness of the corresponding short term aged asphalt mixtures. Based on these results, a limit criterion for asphalt mixture stiffness is proposed. Due to large variations in the derived slopes of the mixture creep stiffness curves, a limiting value for the relaxation parameter, *m*-value, cannot be recommended at this stage.