

ANALYSIS OF AVAILABLE DATA FOR VALIDATION OF BITUMEN TESTS

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ABSTRACT

The European bitumen/asphalt industry has made major efforts in recent years to define the “performance-related” requirements for paving binders. The binder properties alone do not determine pavement performance because other parameters (aggregate characteristics, mixture design, manufacture, laying) are also important. A process is being followed to ensure that, for the second generation standards, the performance relationships of a binder property are assessed before a specification is developed. The Bitumen Test Validation (BiTVal) project was developed to assist that process. Binder tests have been reviewed together with the conditioning/ageing procedures that might be used to assess binder durability using published papers on the critical performance characteristics, in asphalt mixture tests and/or pavement performance assessments. Overall conclusions have been reached on recommendations for a bitumen test to assess the potential asphalt properties (permanent deformation, stiffness, low temperature cracking, fatigue cracking and adhesion). However, the preferences are conditional and further research is required.

KEY WORDS: Bitumen, test methods, standard, specification, validation