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Comparison of Various Testing Methods for Low-temperature Properties of Asphalts

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The Moriyoshi Breaking Point (MBP) test, Fraass Breaking Point (FBP) test and conventional tests, *i.e.*, performance-related grade tests developed by the Strategic Highway Research Program (SHRP), were performed on asphalt of various ages at low temperatures, and the Thermal Stress Restrained Specimen Test (TSRST) on asphalt mixtures. In addition, a field investigation on relationships between the MBP of asphalt residuals aged by the High Temperature Long Time Durability test (HTLTD) and pavement-cracking temperatures was conducted. A strong correlation was found between the results of the MBP, FBP and conventional tests performed on asphalt concrete. The rate of strain and brittle point of the asphalts were linear during the various tests, and the MBP temperature after HTLTD testing could be used to prevent low-temperature cracking.

Keywords: [Asphalt cement](#), [Asphalt mixture](#), [FBP](#), [MBP](#), [Low-temperature cracking](#), [SHRP](#)



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