MEASURING SKID RESISTANCE OF GROOVED PAVEMENTS

L. Chu & T. F. Fwa
School of Highway, Chang'an University, China

ABSTRACT
Runway pavement grooves on pavement surfaces improve pavement skid resistance in wet weather. The effects of grooves vary with groove dimensions and direction. This study examines how the measured values of the British pendulum tester (BPT) are affected by groove dimensions. The study focuses on skid resistance of grooves installed perpendicular to the traffic. It was found that parameters related to the contact area between pavement surface and BPT rubber slider had significant impacts on BPT measurements. The measured BPT value increased with the following groove parameters: between-groove top surface width L, groove spacing Sp, and surface ratio of L/Sp. Groove width and groove depth had weak correlation with measured BPT values. The measured BPT value correlated positively with groove depth, but negatively with groove width. A statistical relationship was established between the geometric dimensions of grooved pavements and their friction values measured by BPT.