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Small-scale Accelerated Pavement Testing Machine

Road & Transport Research: A Journal of Australian and New Zealand Research and Practice
Volume 20 Issue 3 (Sep 2011)

Patrick, John¹; Kathirgamanathan, Padmanathan²; Cook, Shaun³; Herrington, Philip⁴;
Arapamoorthy, Haran⁵

Abstract: A simple apparatus for the testing of granular pavement materials at near full-scale and with realistic tyre loadings was developed and validated. The system allows for construction and testing of pavement materials and designs in a manner similar to that achieved with full-scale accelerated loading facilities, but at a much reduced cost. An inexpensive, non-contact, laser-based method for the measurement of pavement profile has also been developed for use with the apparatus. Software analysis of digital photographs allows detailed profiles to be determined and rut depth to be calculated with minimal delay to pavement trafficking.

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