

Laser Texture Meter – A Safer Way

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Through the Ministry of Science and Innovation, Fulton Hogan and the Auckland University of Technology have worked together to improve the safety and technology for chipseal designs. Undertaking sand circles to measure texture for chipseal designs requires a person on the road working under an approved traffic management plan. This has a safety risk, is expensive to carry out and the data is not very accurate or consistent.

The Laser Texture meter offers an innovative solution to texture measurement and eliminates working in the live lanes. With the prototype completed in early 2013, the device was trialled and then used to complete all of the texture measurements for Auckland Transport and NZTA North Contract in the last two sealing seasons. It is now proven and working well.

The Laser Texture Meter system is portable and provides accurate and repeatable longitudinal profile measurements of the macro texture of the road. The system is tow-bar mounted and includes 3 laser profilers, a laptop and processing software. A GPS-positioning system is used to link the data to a location on the road. The system records a high-accuracy, average texture depth profile every 10m of the road and can be operated between the speeds of 30 and 55km/hr.

Chipseal resurfacing is a significant part of Fulton Hogan's business. An accurate chipseal design is required for a high quality chipseal surface. By developing and using the Laser Texture Meter, we have kept our workers safe and improved the accuracy of the texture data enabling more robust chipseal designs, and therefore longer-lasting treatments.