AUSTROADS TEST METHOD AG:AM/T014

VALIDATION OF A LASER PROFILOMETER FOR MEASURING PAVEMENT SURFACE TEXTURE (REFERENCE DEVICE METHOD)

COMMENTARY

1 SCOPE

No comment.

2 REFERENCED DOCUMENTS

No comment.

3 DEFINITIONS

No comment.

4 EQUIPMENT

No comment.

5 PROCEDURE

5.1 Validation of distance measurement

No comment.

5.2 Validation of surface texture measurement

It is preferable that the surface texture measurements made by the laser profilometer are validated against an objective reference measuring device which is not influenced by human error. The *reference device method* must be followed when undertaking such a validation. However, if access to such a reference device is not possible, then comparisons can be made against manual sand patch measurements. In such cases the *volumetric method* must be followed. Both of these methods are detailed in the test method.

5.2.1 Reference device method

(a) The characteristics of the validation sites have been selected to ensure a reasonable spread of texture depths, over which the performance of the profilometer can be assessed. The validation limits listed in 7.2.2 cannot be used if the selected validation sites do not match the characteristics listed. The r^2 statistic is heavily dependent upon the range of data over which it is determined.

The test method assesses the performance of the laser profilometer when compared to reference data. It is vital, therefore, that the reference data be accurate.

(b) No comment.

(c) No comment.

(d) No comment.

(e) Test method AG:AM/T016 assesses the ongoing repeatability and bias error of measurement of the profilometer

5.2.2 Volumetric method

(a) No comment.

(b) No comment.

(c) No comment.

6 CALCULATIONS

6.1 Reference device method

No comment.

6.2 Volumetric method

No comment.

6.3 Effect of speed

No comment.

7 REPORTING

7.1 Validation of distance measurement

No comment.

7.2 Validation of surface texture measurement

The accuracy to which the reference data can be measured using automated or manual methods is reflected in the different statistic limits listed in 7.2.2 and 7.2.3.

7.2.1 General details

No comment.

7.2.2 Static measurement

The validation limits in 7.2.2(d) cannot be used if the selected validation sites no not match the characteristics listed 5.2.1(a). As the test method assesses the performance of the laser profilometer when compared to reference data, it is important that the reference data be accurate.

7.2.3 Comparative measurement

The validation limits in 7.2.3(d) cannot be used if the selected validation sites no not match the characteristics listed 5.2.1(a). As the test method assesses the performance of the laser profilometer when compared to reference data, it is important that the reference data be accurate.

7.2.4 Effect of speed

No comment.

7.2.5 Validation notes

No comment.

8 FAILED VALIDATION

No comment.

AMENDMENT RECORD

Amendment No.	Sections amended	Action [1]	Date
1 (Initial release)	All (Michael Moffatt, ARRB)	New	26 March 2007

[1] Key:

Format	change in format
Substitution	old section removed and replaced with new section
New	insertion of new section
Removed	old section removed

This commentary is relevant to the 26 March 2007 release of Austroads Test Method AG:AM/T014.