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Road and airfield surface characteristics

Part 14: Procedure for determining the skid resistance of a pavement surface using a device with longitudinal controlled slip (LFCN): ViaFriction (Road Analyser and Recorder of ViaTech AS)

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English Version

Road and airfield surface characteristics - Part 14: Procedure for determining the skid resistance of a pavement surface using a device with longitudinal controlled slip (LFCN): ViaFriction (Road Analyser and Recorder of ViaTech AS)

Caractéristiques de surface des routes et aéroports - Partie 14: Mode opératoire de détermination de l'adhérence d'un revêtement de chaussée à l'aide d'un dispositif à frottement longitudinal contrôlé (CFLRDK): le ROAR (Analyseur de Route et Enregistreur du Norsemeter)

Oberflächeneigenschaften von Straßen und Flugplätzen - Teil 14: Verfahren zur Bestimmung der Griffigkeit von Fahrbahndecken durch Verwendung eines Geräts mit geregeltem Schlupf in Längsrichtung (LFCN): Das ViaFriction-Messgerät (Road Analyser and Recorder of ViaTech AS)

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European foreword

This document (CEN/TS 15901-14:2016) has been prepared by Technical Committee CEN/TC 227 "Road materials", the secretariat of which is held by DIN.

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1 Scope

This Technical Specification describes a method for determining the wet road skid resistance of a surface by measurement of the longitudinal friction coefficient LFCN. The described method is also used to determine the skid resistance on a surface covered by ice or snow.

The method provides friction coefficient measurements of the pavement by using an electrically braked test wheel.

ViaFriction can operate in the following modes:

— Fixed slip: The slip ratio is fixed. The slip ratio can be set to a value from 1 % to 75 %.

— Fixed slip speed: The slip speed is fixed. The slip speed has to be lower than the vehicle speed.

— Variable slip: The test wheel is braked from 0 % to 75 % slip ratio recording F 30, F 60 and the slip ratio/friction curve.

The test tyre is dragged over a pre-wetted pavement under controlled speed conditions while the test tyre is parallel to the direction of motion and perpendicular to the pavement. Skid resistance measurement on winter roads do not require pre-wetted pavement.

To determine the macrotexture of the pavement surface a laser system can be added. This system is placed in front of the towing vehicle in order to measure the macrotexture (mean profile depth — MPD) on dry pavements and on the same path as the skid resistance measurement is done. The standard for this measurement and the device is described in EN ISO 13473-1.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN ISO 13473-1, *Characterization of pavement texture by use of surface profiles — Part 1: Determination of Mean Profile Depth (ISO 13473-1)*

ISO 13473-2, *Characterization of pavement texture by use of surface profiles — Part 2: Terminology and basic requirements related to pavement texture profile analysis*

ASTM 1551, *Standard Specification for Special Purpose, Smooth–Tread Tire, Operated on Fixed Braking Slip Continuous Friction Measuring Equipment*

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