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English Version

Road and airfield surface characteristics - Part 5: Procedure for determining the skid resistance of a pavement surface using a device with longitudinal controlled slip (LFCRDK): ROAR (Road Analyser and Recorder of Norsemeter)

Caractéristiques de surface des routes et aéroports - Partie 5 : 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 5: Verfahren zur Bestimmung der Griffigkeit von Fahrbahndecken durch Verwendung eines Geräts mit geregelttem Schlupf in Längsrichtung (LFCRDK): das in Dänemark verwendete ROAR-Gerät (Road Analyser and Recorder of Norsemeter)

This Technical Specification (CEN/TS) was approved by CEN on 27 June 2009 for provisional application.

The period of validity of this CEN/TS is limited initially to three years. After two years the members of CEN will be requested to submit their comments, particularly on the question whether the CEN/TS can be converted into a European Standard.

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Foreword

This document (CEN/TS 15901-5:2009) 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 skid resistance of a surface by measurement of the longitudinal friction coefficient *LFCN*.

The method provides a measure of the wet skid resistance properties of a bound surface by measurement of the longitudinal friction coefficient using a continuous reading braked wheel fixed-slip device.

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.

This Technical Specification covers the operation of the Road Analyser and Recorder of Norsemeter (ROAR). The fixed slip ratio is 20 %.

A machine conforming to the general characteristics of the ROAR and the specific provisions of this Technical Specification may also be used for the tests.

In addition to friction measurements, to determine the macrotexture of the pavement surface a laser system is used. 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.

The skid resistance of a pavement is determined by friction measurements and measurements of pavement texture. The skid resistance may be reported either as friction measurement or as a combination of friction and texture measurements.

2 Normative references

The following referenced documents are indispensable for the application of this document. 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 13473-1:1997)*

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

3 Recommended uses

The ROAR is used in the following fields of application:

- network monitoring (Pavement Management);
- approval of new surfacing;
- measurements for project-level compliance;
- investigation of surface skid resistance;
- comparative measurements among different devices;
- research measurements.