

CURRENT STANDARDS FOR ROAD SURFACE PROPERTIES

ERPUG 2024

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ORGANIZATIONAL

EUROPE

- CEN
 - TC 227 „Road materials“
 - WG 5 „Surface characteristics“



WORLD

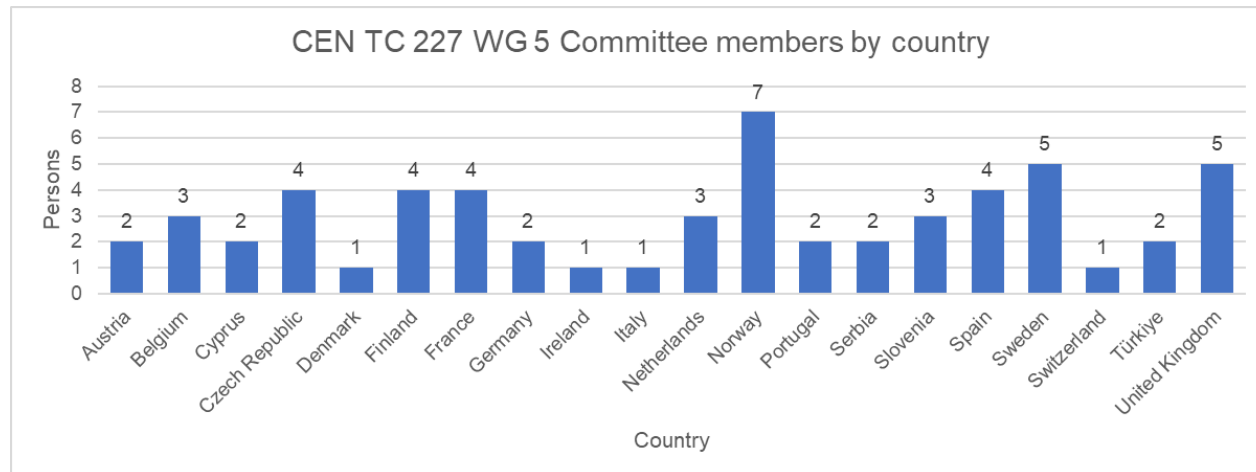
- ISO
 - TC 43 “Acoustics”
 - SC 1 “Noise”
 - WG 27 “Joint ISO/TC 43/SC 1 - ISO/TC 22 WG: Effect of temperature on tyre/road noise testing”
 - WG 33 “Measuring method for comparing traffic noise on different road surfaces”
 - WG 39 “Characterization of pavement texture using surface profiles”



ORGANIZATIONAL - INSIGHTS

EUROPE

- CEN
 - TC 227 „Road materials“
 - WG 5 „Surface characteristics“
 - 58 committee members appointed by national standardization bodies



RECENT STANDARDS - CEN

EN 13036-5 - Road and airfield surface characteristics - Test methods - Part 5:
Determination of **longitudinal** unevenness indices

- Published 2019
- includes IRI, WLP (new!), WBA
- Implementation support by ERPUG!

EN 13036-8 - Road and airfield surface characteristics - Test methods - Part 8:
Determination of **transverse** unevenness indices

- to be published (early) next year
- (sliding wire) rut depth, theoretical water depth, crossfall
- additional parameters like edge slump
- Implementation support by ERPUG!

NOT SO RECENT STANDARDS - CEN

EN 13036-1:2010 Road and airfield surface characteristics - Test methods - Part 1: Measurement of pavement surface macrotexture depth using a volumetric patch technique – **Sand patch test**

EN 13036-3:2002 Road and airfield surface characteristics - Test methods - Part 3: Measurement of pavement surface horizontal drainability – **Outflow meter**

- **Still widely used**
- **Application is cheap and without costly equipment**

STANDARDS IN REVISION - CEN

EN 13036-4:2011 Road and airfield surface characteristics - Test methods - Part 4: Method for measurement of slip/skid resistance of a surface: **The pendulum test**

- currently in revision
- to be published next year

Plans

- a new standard on measuring rolling resistance in-situ
- revision of EN 13036-7:2003 - Road and airfield surface characteristics - Test methods - Part 7: Irregularity measurement of pavement courses: the straightedge test
- revision of EN 13036-6 (Measurement of transverse and longitudinal profiles in the evenness and megatexture wavelength ranges)
 - new title: “Classification of equipment used for measurement of transverse and longitudinal profiles”

RECENT STANDARDS – CEN/ISO

EN ISO 13473-1:2019 - Characterization of pavement texture by use of surface profiles - Part 1: Determination of **mean profile depth** (ISO 13473-1:2019, Corrected version 2021-06, Published 2019)

- Implementation support by ERPUG!

EN ISO 13473-5 Characterization of pavement texture by use of surface profiles — Part 5: Determination of **megatexture**

- currently ISO/DIS 13473-5:2024
- new default measure for megatexture will be RMS_{Me} in [mm] instead of L_{me} in [dB].
- same pre-processing procedures as for MPD (drop-out and spikes)
- same filtering technique as for MPD
- Implementation support by ERPUG (work in progress)!



WHAT ELSE? ASTM!

Committee E17 on Vehicle - Pavement Systems

Subcommittee E17.31 on Methods for Measuring Profile and Roughness

- ASTM E950/E950M-22 - Standard Test Method for Measuring the Longitudinal Profile of Traveled Surfaces – **Inertial Profiler Method**

Subcommittee E17.24 on Tire and Slider Characteristics

- New Specification for Standard Tire for use on Side Force Pavement Skid-Resistance Tests – “*the SCRIM/SKM/ISAVE tyre*”

Subcommittee E17.33 on Methodology for Analyzing Pavement Roughness

- Standards in IRI, Ride number, ... calculation
- **New Guide for Boeing Bump Index Computations Based on Bump Template Simulations**

THANK YOU!

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