INTERNATIONAL STANDARD

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Fourth edition
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Acoustics — Specification of test tracks for measuring sound emitted by road vehicles and their tyres

Acoustique — Spécification des surfaces d'essai pour le mesurage du son émis par les véhicules routiers et leurs pneumatiques

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Foreword

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The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 43, *Acoustics*, Subcommittee SC 1, *Noise*.

This fourth edition cancels and replaces the third edition (ISO 10844:2014), which has been technically revised.

The main changes compared to the previous edition are as follows:

— various revisions to improve track reproducibility;

— reduce ambiguity in the document.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

In general, the road surface parameters affecting the sound emission of vehicles are the texture and sound absorption characteristics. In addition, the mechanical impedance and the skid resistance properties of the surface layer can influence measured sound levels.

In order to minimize the variation in rolling sound emission and vehicle sound emission measurements made at different testing locations, it is therefore necessary to specify the relevant surface properties and recommend carefully the properties of the materials, design, and construction of the test surface.

The principal objective of this document is to provide a specification of the surface which improves the reproducibility of measurement.

This document is designed in a way that test tracks conforming to this document are compatible with previous editions, but in addition the variability of properties is reduced.

It is important that the test provides a high degree of reproducibility between different test sites and that the surface design should not only minimize the inter-site variation of tyre or road sound, but should also ensure that the propagation of sound is unaffected by the surface used. This latter consideration precludes the use of road surfaces which have open textures and which have the property of absorbing sound from the power unit and other related sources.

In relation to the previous editions, this document includes more restrictive specifications of the surface and recommendations for the test track construction process and maintenance. The basic properties of the surface remain unchanged.

Furthermore, this document recommends a non-destructive test method for periodic checking of the surface characteristics.