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Mechanical vibration — Road surface profiles — Reporting of measured data

Vibrations mécaniques — Profils de routes — Méthode de présentation des résultats de mesures

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Foreword

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The committee responsible for this document is ISO/TC 108, *Mechanical vibration, shock and condition monitoring*, Subcommittee SC 2, *Measurement and evaluation of mechanical vibration and shock as applied to machines, vehicles and structures*.

This second edition cancels and replaces the first edition (ISO 8608:1995), of which it constitutes a minor revision. The following changes have been made:

— normative references have been updated;

— subclause numbering has been adjusted;

— figures have been made language independent;

— bibliography has been updated;

— editorially revised.

Introduction

The purpose of this document is to facilitate the compilation and comparison of measured vertical road profile data from various sources. It therefore specifies a uniform method of reporting data from one-track and multiple-track measurements.

It specifies how measurements are to be reported, but not how the measurements are to be made. The measuring equipment can influence the results of the measurement; therefore certain characteristics of the measuring system have also to be reported.

Annex A is an example of a report which meets the minimum requirements of this document.

Annex B gives means of approximately characterizing specific road profiles in order to facilitate the division of road profiles into general classifications. A general classification is also given. A curve fitting method is presented for characterizing spectral data.

Annex C provides general guidance for the use of road profile statistical data for simulation studies and for related studies such as evaluation of comfort, suspensions and road profiles.

Annex D discusses the processing of the power spectral density (PSD) with the fast Fourier transform (FFT) technique. A discussion on the statistical precision is also given.