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Acoustics — Statistical distribution of hearing thresholds of otologically normal persons in the age range from 18 years to 25 years under free-field listening conditions

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National foreword

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The UK participation in its preparation was entrusted to Technical Committee EH/1/1, Hearing.

A list of organizations represented on this committee can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

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Acoustics — Statistical distribution of hearing thresholds of otologically normal persons in the age range from 18 years to 25 years under free-field listening conditions

Acoustique — Répartition statistique des niveaux liminaires d'audition de personnes otologiquement normales âgées de 18 à 25 ans dans des conditions d'écoute en champ libre

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Foreword

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ISO 28961 was prepared by Technical Committee ISO/TC 43, *Acoustics*.

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Introduction

The threshold of hearing in a free sound field is specified in ISO 226 and ISO 389-7. Threshold data in these documents were obtained from otologically normal persons in the age range 18 years to 25 years inclusive.

As described in ISO 389-7, the threshold of hearing varies among people; the documents merely present median values of hearing thresholds. However, other values on the threshold distribution of individuals are necessary to evaluate the hearing ability of a person in relation to that of the population. Those values have been used also in noise evaluation for estimating the ratio of young people with normal hearing in the population who might be able to detect a sound of concern, e.g. an unwanted sound emitted from a machine.

This International Standard provides a method for calculating percentiles of the hearing threshold distribution for one-third-octave-band and other audiometric frequencies from 20 Hz to 16 000 Hz. The mean value of distribution is set to be the threshold of hearing specified in ISO 226 and ISO 389-7. Furthermore, the method has been developed using many of the hearing threshold data on which those documents were based.

NOTE Percentiles of the hearing threshold distribution can also be determined for bands of noise. However, only percentiles for pure tones are specified in this International Standard because insufficient data for bands of noise are available. Nevertheless, it is possible that this International Standard is applicable to one-third-octave bands of noise.

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