INTERNATIONAL STANDARD

ISO 11200

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Acoustics — Noise emitted by machinery and equipment — Guidelines for the use of basic standards for the determination of emission sound pressure levels at a work station and at other specified positions

Acoustique — Bruit émis par les machines et équipements — Guide d'utilisation des normes de base pour la détermination des niveaux de pression acoustique d'émission au poste de travail et en d'autres positions spécifiées

Reference number
ISO 11200:1995(E)

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

International Standard ISO 11200 was prepared by Technical Committee ISO/TC 43, *Acoustics*, Subcommittee SC 1, *Noise*.

Annex A forms an integral part of this International Standard. Annex B is for information only.

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Introduction

0.1 Control of noise from machinery or equipment requires effective exchange of acoustical information among the several parties concerned. These include the manufacturer, installer and user of the machinery or equipment. This acoustical information is obtained from measurements. These measurements are useful only if the conditions under which they are carried out are specified, if they yield defined acoustical quantities, and if they are made using standardized instruments.

Two quantities which complement one another can be used to describe the sound emission of machinery or equipment. One of them is the sound power level and the other is the emission sound pressure level at a specified position. The International Standards which describe the basic methods of determining the sound power level are ISO 3740 to ISO 3747 and ISO 9614-1 and ISO 9614-2. This International Standard introduces a series of four International Standards describing various methods for determining emission sound pressure levels of machinery and equipment. Emission sound pressure levels are sound pressure levels at one or more positions located in the vicinity of an item of machinery or equipment, which arise solely from the noise emitted by that machinery or equipment when it performs a specified function under given operating conditions, on a particular mounting in a defined acoustic environment. The operating and mounting conditions are the same as those used in the determination of sound power levels. The positions with which this series of International Standards is concerned include work stations, normally specified in a noise test code (if one exists), occupied by one or more operators of the machinery, and other positions which may be occupied from time to time by other persons. The positions may be located in the vicinity of the machinery, or in a cab, or in some other enclosure more or less remote from the machinery. Emission sound pressure levels may arise from continuous, steady operational machinery or they may be averages for a defined work cycle; they are not averages over a total working day during which the machinery might perform different functions, operate at different control settings, or undergo changes of work load.

Emission sound pressure levels in conjunction with sound power levels are used for declaration of the noise emitted under the defined conditions, verification of declared values, comparison of the noise emitted by machinery of various types and sizes, comparison with limits specified in a purchasing contract or a regulation, engineering work to reduce the noise emission of machinery, and prediction of noise exposure at the specified positions.

For many products, the sound power level is the primary metric for comparison of noise emissions. Noise test codes and specific declaration codes should state the primary metric for comparison.