

ISO

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION

ISO RECOMMENDATION R 717

RATING OF SOUND INSULATION FOR DWELLINGS

1st EDITION

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BRIEF HISTORY

The ISO Recommendation R 717, *Rating of sound insulation for dwellings*, was drawn up by Technical Committee ISO/TC 43, *Acoustics*, the Secretariat of which is held by the British Standards Institution (BSI).

Work on this question by the Technical Committee began in 1962 and led, in 1964, to the adoption of a Draft ISO Recommendation.

In November 1965, this Draft ISO Recommendation (No. 880) was circulated to all the ISO Member Bodies for enquiry. It was approved, subject to a few modifications of an editorial nature, by the following Member Bodies :

Argentina	Germany	Sweden
Australia	Hungary	Switzerland
Austria	Israel	U.A.R.
Brazil	Japan	United Kingdom
Canada	Netherlands	U.S.S.R.
Chile	New Zealand	Yugoslavia
Czechoslovakia	Poland	

6 Member Bodies opposed the approval of the Draft :

Belgium	Italy
Denmark	Norway
France	U.S.A.

The Draft ISO Recommendation was then submitted by correspondence to the ISO Council which decided, in May 1968, to accept it as an ISO RECOMMENDATION.

RATING OF SOUND INSULATION FOR DWELLINGS

INTRODUCTION

A method of measurement of airborne and impact sound insulation has been standardized in ISO Recommendation R 140, *Field and laboratory measurements of airborne and impact sound transmission*. This has enabled objective measurements by different laboratories to be compared. The establishment of requirements for sound insulation and a method of determining whether particular measured values satisfy these requirements are also necessary.

Various countries have their own methods of evaluation such as single figures, comparison curves used as grades etc., which do not allow international comparisons to be made easily. It is the purpose of this ISO Recommendation to formalize a method of comparison which can be used internationally and by means of which the individual countries can specify their own requirements for dwellings. It is not intended that this method should restrict the choice of individual countries in setting up their requirements.

1. SCOPE

This ISO Recommendation describes a method of evaluating the airborne sound insulation and impact sound level for dwellings when the results of measurements made by the method described in ISO Recommendation R 140 are available. Reference values are given with which the measured results should be compared by the method described.

A method is given to derive from this comparison a single index, in terms of which the sound insulation requirements can be defined.

2. DEFINITIONS

2.1 Airborne sound insulation

The quantity to be measured is

$$R' = L_1 - L_2 + 10 \log_{10}(S/A) \quad \text{dB} \quad (1)$$

where

L_1 is the average sound pressure level in the source room;

L_2 is the average sound pressure level in the receiving room;

S is the common surface wall or floor area between the two rooms;

A is the equivalent absorption area of the receiving room.