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Mechanical vibration and shock — Resilient mounting systems —

Part 1: Technical information to be exchanged for the application of isolation systems

Vibrations et chocs mécaniques — Systèmes de montage résilients —

Partie 1: Informations techniques à échanger pour l'application des systèmes d'isolation

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Contents

Page

Foreword ... iv

Introduction ... v

1 Scope ... 1

2 Normative references ... 1

3 Terms and definitions ... 2

4 Purpose of vibration isolation (why isolate mechanical systems) ... 2

5 What is to be isolated ... 3
5.1 Source isolation ... 3
5.2 Receiver isolation ... 3

6 Applicability of vibration isolation (when to isolate structures or mechanical systems) ... 3

7 Measurement and evaluation of vibration conditions ... 4

8 Information for the choice of an isolation mounting system ... 4

9 Information to be supplied by the producer of the source or receiver ... 4
9.1 General ... 4
9.2 Information to be supplied by the source producer ... 5
9.3 Information to be supplied by the receiver producer ... 6

10 Information to be supplied by the customer ... 7
10.1 Information to be supplied by the user of the source ... 7
10.2 Information to be supplied by the user of the receiver ... 8

11 Information to be provided by the supplier of the isolation system ... 8
11.1 Physical data of the isolation system ... 8
11.2 Dynamic behaviour ... 9
11.3 Durability ... 9
11.4 Environmental data ... 9
11.5 Maintenance data ... 10

12 Guidelines for the validation of isolation performance ... 10

Annex A (informative) **Elements for vibration isolation** ... 11

Bibliography ... 17

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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. 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.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 2017-1 was prepared by Technical Committee ISO/TC 108, *Mechanical vibration and shock*.

This first edition of ISO 2017-1, together with ISO 2017-2, cancels and replaces ISO 2017:1982, which has been technically revised.

ISO 2017 consists of the following parts, under the general title *Mechanical vibration and shock — Resilient mounting systems*:

— *Part 1: Technical information to be exchanged for the application of isolation systems*

— *Part 2: Technical information to be exchanged for the application of vibration isolation associated with railway systems*

Introduction

This International Standard is limited to the consideration of resilient devices.

Some suppliers of shock and vibration isolators (resilient mounts) have experience covering a wide variety of applications. In most instances, they are willing to use this background information for solving the user's problems with isolators. However, it is frequently difficult for the supplier to provide this service, because the customer, the user or the producer of the vibration source or receiver has not furnished sufficient information regarding the application.

On the other hand, the user is sometimes handicapped in applying isolators properly because the supplier does not furnish sufficient technical information. Consequently, the users must conduct their own experimental evaluation of the isolator and may unknowingly duplicate work already carried out by the supplier.

With some vibration sources or receivers, the producer provides the isolating system. To do that, the producer needs all the information from the customer relating to the future application, site and environment.

This International Standard is intended to serve as guide for the exchange of technical information between the customer, the supplier of resilient devices, and the producer of vibration sources or receivers, as required for their proper application.

Mechanical vibration and shock — Resilient mounting systems —

Part 1: Technical information to be exchanged for the application of isolation systems

1 Scope

This part of ISO 2017 establishes requirements to ensure the appropriate exchange of information between users, manufacturers and suppliers of vibration sources and receivers regarding the application of isolation systems. The sources and the receivers can be machines, structures, people or sensitive equipment subjected to vibrations and shocks generated by machines, railways, road traffic and other external and internal sources where the vibrations are usually transmitted through the ground to a building.

This part of ISO 2017 is applicable to the use of new products (source or receiver), and can also be applied to previously installed products when the user wishes to solve a newly arisen vibration problem.

It is not to be considered as a manual for the design or installation of an isolation system. Examples of elements of vibration isolation are shown in Annex A for information only.

This part of ISO 2017 is intended to provide appropriate responses to questions highlighted by the producer and users (e.g. why, what, when and how to isolate mechanical systems).

2 Normative references

The following normative documents are indispensable for the application of this document. For dated references only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 2041:1990, *Vibration and shock — Vocabulary*

ISO 9688:1990, *Mechanical vibration and shock — Analytical methods of assessing shock resistance of mechanical systems — Information exchange between suppliers and users of analyses*

ISO 10846-4:2003, *Acoustics and vibration — Laboratory measurement of vibro-acoustic transfer properties of resilient elements — Part 4: Dynamic stiffness of elements other than resilient supports for translatory motion*