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Environmental conditions – Vibration and shock of electrotechnical equipment – Part 5: Equipment during storage and handling

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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FOREWORD

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The main task of IEC technical committees is to prepare International Standards. However, a technical committee may propose the publication of a technical report when it has collected data of a different kind from that which is normally published as an International Standard, for example "state of the art".

IEC TR 62131-5, which is a technical report, has been prepared by IEC technical committee 104: Environmental conditions, classification and methods of test.

The text of this technical report is based on the following documents:

Enquiry draft	Report on voting
104/620A/DTR	104/639/RVC

Full information on the voting for the approval of this technical report can be found in the report on voting indicated in the above table.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

A list of all the parts in the IEC 62131 series, under the general title *Environmental conditions – Vibration and shock of electrotechnical equipment*, can be found on the IEC website.

The committee has decided that the contents of this publication will remain unchanged until the stability date indicated on the IEC website under "http://webstore.iec.ch" in the data related to the specific publication. At this date, the publication will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

A bilingual version of this standard may be issued at a later date.

IMPORTANT – The 'colour inside' logo on the cover page of this publication indicates that it contains colours which are considered to be useful for the correct understanding of its contents. Users should therefore print this document using a colour printer.

ENVIRONMENTAL CONDITIONS – VIBRATION AND SHOCK OF ELECTROTECHNICAL EQUIPMENT –

Part 5: Equipment during storage and handling

1 Scope

IEC TR 62131-5, which is a technical report, reviews the available dynamic data relating to the handling of electrotechnical equipment. The intention is that from all the available data an environmental description will be generated and compared to that set out in the IEC 60721 series.

For each of the sources identified, the quality of the data is reviewed and checked for self consistency. The process used to undertake this check of data quality and that used to intrinsically categorize the various data sources is set out in IEC TR 62131-1.

This technical report primarily addresses data extracted from a number of different sources for which reasonable confidence exist in its quality and validity. The report also reviews some data for which the quality and validity cannot realistically be verified. These data are included to facilitate validation of information from other sources. The report clearly indicates when utilising information in this latter category.

This technical report addresses data from a number of data gathering exercises. The quantity and quality of data in these exercises varies considerably as does the range of conditions encompassed.

Not all of the data reviewed were made available in electronic form. To permit comparison to be made, in this assessment, a quantity of the original (non-electronic) data has been manually digitized.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 60068 (all parts), *Environmental testing*

IEC 60068-2-27, *Environmental testing – Part 2-27: Tests – Test Ea and guidance: Shock*

IEC 60068-2-29[1], *Environmental testing – Part 2-29: Tests –Test Eb Bump*

IEC 60068-2-64, *Environmental testing – Part 2-64: Tests – Test Fh: Vibration, broadband random and guidance*

IEC 60721 (all parts), *Classification of environmental conditions*

IEC 60721-3-2:1997, *Classification of environmental conditions – Part 3: Classification of groups of environmental parameters and their severities – Section 2: Transportation*

[1] Withdrawn and now incorporated into IEC 60068-2-27.

IEC TR 60721-4-2, *Classification of environmental conditions – Part 4-2: Guidance for the correlation and transformation of environmental condition classes of IEC 60721-3 to the environmental tests of IEC 60068 – Transportation*

IEC TR 62131-1, *Environmental conditions – Vibration and shock of electrotechnical equipment – Part 1: Process for validation of dynamic data*

IEC TR 62131-2, *Environmental conditions – Vibration and shock of electrotechnical equipment – Part 2: Equipment transported in fixed wing jet aircraft*

IEC TR 62131-3, *Environmental conditions – Vibration and shock of electrotechnical equipment – Part 3: Equipment transported in rail vehicles*

IEC TR 62131-4, *Environmental conditions – Vibration and shock of electrotechnical equipment – Part 4: Equipment transported in road vehicles*