

Vibrations in rotating machinery and its equipment – requirements and recommendations for procurement, operation and maintenance
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Scope

This document describes requirements and recommendations for vibration conditions in rotating machinery. Low levels of vibration reduce costly and unnecessary maintenance.

The requirements and recommendations are intended both for procurement and operation of machinery and equipment. The goal is that a machine assembled and commissioned in its intended location, must not under normal operating conditions vibrate or emit vibrations which:

- reduce or limits full availability, performance and/or quality exchange
- affect its service life in a negative way
- result in increased maintenance costs under normal operating conditions.

This document deals with the technical vibration bases of major importance for achieving this goal. The document is based on practical experience within industry and above all ISO standards. These applied ISO standards from ISO TC 108 are also available as Swedish standard with the prefix SS.

ISO/TC 108 attempt to be a sector-neutral organisation and these vibration standards apply both to testing and operating conditions. Sometimes various industrial associations have their own ISO standards which also partly deal with vibration, usually for delivery tests in the workshop. These are not referred to in this document. There are international guidelines for the alignment of machinery set-up and couplings but no standards. Therefore, this standard addresses some of the basic instructions and points of view.

Vibration levels in the document are based on measurement outside bearing arrangements. In certain special cases vibration levels may be measured using a relative sensor (so-called B-sensor) directly against the shafts involved. This is not dealt with in the present document, since few types of machinery are involved and detailed knowledge is needed of it for assessment.

Changes since the previous edition

This edition differs from the previous one in that:

- The standard has been checked and verified regarding several new editions of ISO-standards that handles vibrations.
- A revision in terms of structure and readability.
- Previous Appendix 1 – “Vibration data and technical vibration properties” and Appendix 2 – “Procurement contract with vibration guarantees” has been replaced by the new Appendix 1.
- Previous Appendix 3 – “Inspection certificate/self-inspection” has been changed to Appendix 2.



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SSG 3030E

Date
2020-07-03

Edition
7

Designation
TKM

Page
2 (20)

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Appendix 1: Vibration data, technical vibration properties and vibration guarantees

Appendix 2: Inspection certificate/self-inspection