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**Condition monitoring and diagnostics of  
machines — General guidelines on using  
performance parameters**

*Surveillance et diagnostic d'état des machines — Recommandations  
générales sur l'utilisation des paramètres de performance*



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## 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 3.

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 International Standard may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 13380 was prepared by Technical Committee ISO/TC 108, *Mechanical vibration and shock*, Subcommittee SC 5, *Condition monitoring and diagnostics of machines*.

Annexes A to D of this International Standard are for information only.

## Introduction

This International Standard provides guidance for condition monitoring and diagnostics of machines using parameters such as temperatures, flow rates, contamination, power and speed, typically associated with performance, condition, safety and quality criteria. The evaluation of machine function and condition may be based on performance, condition, product quality or safety.

It is part of a series of standards developed under the general title *Condition monitoring and diagnostics of machines*.

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# Condition monitoring and diagnostics of machines — General guidelines on using performance parameters

## 1 Scope

This International Standard describes the general conditions and procedures for recording, assessment, evaluation and diagnostics of machine condition by measuring parameters related to machine performance, condition and safety, including thermal, electrical and hydraulic parameters where applicable.

The procedures relate to operational monitoring of machines, and include all components and sub-assemblies necessary to provide the functional operation of the machine.

## 2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this International Standard. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies. Members of ISO and IEC maintain registers of currently valid International Standards.

ISO 1925, *Mechanical vibration — Balancing — Vocabulary*

ISO 2041, *Vibration and shock — Vocabulary*

ISO 13379, *Condition monitoring and diagnostics of machines — General guidelines on data interpretation and diagnostic techniques*

## 3 Terms and definitions

For the purposes of this International Standard, the terms and definitions given in ISO 1925, ISO 2041 and the following apply.

NOTE A terminology standard for condition monitoring and diagnostics of machines (ISO 13372) is in course of preparation.

### 3.1 fault

(in a machine) condition of a machine when any of its components or their assembly is degraded or exhibits an abnormal behaviour

NOTE This may lead to failure of the machine.

### 3.2 failure

(of a machine) condition of a machine when one or more of its principle functions are no longer available

NOTE This generally happens when one or more of its components is in a fault condition.