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Date: 17 March 2025

Origin: International

Latest date for receipt of comments: 10 May 2025

Project No. 2024/03034

Responsible committee: GME/21/7 Mechanical vibration, shock and condition monitoring - Condition monitoring

Interested committees:

Title: Draft BS ISO 18436-8 Condition monitoring and diagnostics of machines - Requirements for training and certification of personnel. Part 8: Ultrasound.

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Introduction

This draft standard is based on national and international discussions. Your comments on this draft are invited and will assist in the preparation of the consequent standard.

For international standards, comments will be reviewed by the relevant UK national committee before sending the consensus UK vote and comments to the international committee, which will then decide appropriate action. If the international standard is approved, it is usual for the text to be published as a British Standard.

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UK Vote

Please indicate whether you consider the UK should submit a negative (with supporting technical reasons) or positive vote on this draft. Please indicate if you are aware of any reason why this draft standard should not be published as a British Standard.

Submission of Comments

- **Annotated drafts are not acceptable and will be rejected.**
- All comments should be submitted online at <https://standardsdevelopment.bsigroup.com/>. You will need to register in order to comment.

Template for comments and secretariat observations

Date: xx/xx/20xx	Document: ISO/DIS xxxx
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1	2	(3)	4	5	(6)	7
MB	Clause No./ Subclause No./Annex (e.g. 3.1)	Paragraph/ Figure/Table/Note	Type of comment	Comment (justification for change) by the MB	Proposed change by the MB	Secretariat observations on each comment submitted
	3.1	Definition 1	ed	Definition is ambiguous and needs clarifying.	Amend to read '...so that the mains connector to which no connection...'	
	6.4	Paragraph 2	te	The use of the UV photometer as an alternative cannot be supported as serious problems have been encountered in its use in the UK.	Delete reference to UV photometer.	



DRAFT International Standard

ISO/DIS 18436-8

Condition monitoring and diagnostics of machines — Requirements for training and certification of personnel —

Part 8: Ultrasound

ICS: 17.160; 03.100.30

ISO/TC 108/SC 5

Secretariat: **SA**

Voting begins on:
2025-03-17

Voting terminates on:
2025-06-09

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Reference number
ISO/DIS 18436-8:2025(en)

Full document details: 25/30502416 DC

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Published in Switzerland

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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.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2, www.iso.org/directives.

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This document was prepared by Technical Committee ISO/TC 108, *Mechanical vibration, shock and condition monitoring*, Subcommittee SC 5, *Condition monitoring and diagnostics of machine systems*.

This second edition of ISO 18436-8 cancels and replaces the first edition (ISO 18436-8:2013), of which it is a revision. This edition adds extra information to the syllabus in section A.2, and revises the Bibliography. Minor editorial changes are also made.

[Annex A](#) is a normative part of this Standard.

A list of all parts in the ISO 18436 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

The use of ultrasound technology in condition monitoring is one of the key activities in predictive or condition-based maintenance programmes for most industries. Other non-intrusive technologies including acoustic emission, infrared thermography, vibration analysis, lubricant analysis, wear debris analysis, and motor current analysis are also used as condition monitoring techniques. Those in the manufacturing industry who have diligently and consistently applied these technologies have experienced a return on investment far exceeding their expectations. However, the effectiveness of these programmes depends on the capabilities of individuals who perform the measurements and analyse the data. This part of ISO 18436 defines the requirements for personnel to become qualified to apply the non-intrusive condition monitoring and diagnostics technology of ultrasound.

Ultrasound expands the concepts of condition monitoring to non-rotating applications such as:

- Compressed air leaks
- Vacuum leaks
- Steam leaks
- Steam traps
- Valves
- Low-, Medium- and High-Voltage electrical systems
- Tightness testing of plant, shipping and structures

Ultrasound also plays an important part in developing an on-condition lubrication programme for bearings.

A programme, administered by assessment certification body, has been developed to train and assess the competence of personnel whose duties require the appropriate theoretical, practical and application knowledge of this condition monitoring technique.

This part of ISO 18436 defines the requirements for personnel to become certified to apply the non-intrusive condition monitoring and diagnostics technology of ultrasound.