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Water quality - General requirements and performance test procedures for water monitoring equipment - Continuous measuring devices

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

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English Version

Water quality - General requirements and performance test procedures for water monitoring equipment - Measuring devices

Qualité de l'eau - Exigences générales et modes
opérateurs d'essai de performance pour les
équipements de surveillance de l'eau - Dispositifs de
mesure en continu

Wasserbeschaffenheit - Allgemeine Anforderungen und
Testverfahren zur Leistungsprüfung von Geräten zum
Wassermonitoring - Messgeräte

This European Standard was approved by CEN on 18 June 2018 and includes Amendment 1 approved by CEN on 20 February 2023.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
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CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

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EN 17075:2018+A1:2023 (E)**European foreword**

This document (EN 17075:2018+A1:2023) has been prepared by Technical Committee CEN/TC 230 “Water analysis”, the secretariat of which is held by DIN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by October 2023, and conflicting national standards shall be withdrawn at the latest by October 2023.

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

This document includes Amendment 1 approved by CEN on 20 February 2023.

This document supersedes EN 17075:2018.

The start and finish of text introduced or altered by amendment is indicated in the text by tags **A1** **A1**.

Any feedback and questions on this document should be directed to the users’ national standards body. A complete listing of these bodies can be found on the CEN website.

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Introduction

This document defines general requirements and test procedures for verifying the performance of \square_{A1} continuous measuring devices (CMDs) $\langle A1 \rangle$ used to monitor the quality of a wide range of waters including drinking waters, waste waters, and natural waters. It covers both portable \square_{A1} continuous measuring devices (PCMDs) $\langle A1 \rangle$ and fixed position \square_{A1} continuous measuring devices (FCMDs) $\langle A1 \rangle$. These devices include: sensors, single and multi-parameter instruments, discrete and batch instruments, probes and sondes. It excludes chemical test kits. For the purposes of this document the acronym \square_{A1} CMD(s) $\langle A1 \rangle$ is used except where it is necessary to be specific about the particular type (e.g. \square_{A1} PCMDs, FCMDs $\langle A1 \rangle$) or component of a \square_{A1} CMD $\langle A1 \rangle$ (e.g. sensor).

This document is associated with EN 16479 [1] which covers automated sampling devices (samplers) for water and waste water.

The general requirements include several features that are necessary to meet users' applications and information that has to be included in associated documents.

The performance tests comprise testing carried out under laboratory and field conditions. They are designed to determine, in a systematic and consistent way, the capability of \square_{A1} CMDs $\langle A1 \rangle$ to make reliable measurements. The testing focuses on key performance characteristics. Statistical procedures are defined for evaluation of the test data.

The range of measurements over which the test procedures will be applied, the test range, is not specified. It is for the \square_{A1} CMD $\langle A1 \rangle$ manufacturer and/or the user to decide on the test range. Similarly, it is for the \square_{A1} CMD $\langle A1 \rangle$ manufacturer and/or the user to decide on the intended uses (applications) which will inform the design of the field trial.

Water monitoring equipment is widely used for compliance monitoring purposes under national and European regulations. This document supports the requirements of the following EU Directives:

- Industrial Emissions Directive (2010/75/EU) [2];
- Water Framework Directive (2000/60/EC) [3];
- Marine Strategy Framework Directive (2008/56/EC) [4];
- Drinking Water Directive (98/83/EC) [5];
- Technical Specifications for Chemical Analysis and Monitoring of Water Status (2009/90/EC) [6].

EN 17075:2018+A1:2023 (E)

1 Scope

This document specifies general requirements and performance test procedures for portable and fixed position A_1 continuous measuring devices A_1 that are used in an in-line or online operating position to measure physical and chemical measurands in water. It excludes chemical test kits and laboratory analysers.

The general requirements include functional facilities that A_1 CMDs A_1 need to meet users' applications and information that needs to be included in associated documents.

The test procedures specify uniform methods to be used when determining key performance characteristics of A_1 CMDs A_1 . The performance tests comprise testing carried out under laboratory and field conditions. It is recognized that for some devices certain test procedures are not applicable.

Statistical procedures are defined for evaluation of the test data.

Example values for performance characteristics for a selection of A_1 CMDs A_1 for monitoring waste water effluents and receiving waters are detailed in Annex A for guidance.

This document requires the manufacturer of a A_1 CMD A_1 to provide more technical data for verification than does EN ISO 15839:2006 [7]. Consequently, EN ISO 15839 [7] will be of greater assistance to manufacturers wishing to characterize a new device whereas this document is more focussed on user requirements for the verification of manufacturer's claims.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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.

EN ISO 5814:2012, *Water quality - Determination of dissolved oxygen - Electrochemical probe method (ISO 5814:2012)*

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