

**Non-destructive testing - Acoustic emission -
Equipment characterisation - Part 2: Verification of
operating characteristic**

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EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 13477-2:2010 sisaldab Euroopa standardi EN 13477-2:2010 ingliskeelset teksti.</p> <p>Standard on kinnitatud Eesti Standardikeskuse 31.10.2010 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.</p> <p>Euroopa standardimisorganisatsioonide poolt rahvuslikele liikmetele Euroopa standardi teksti kättesaadavaks tegemise kuupäev on 15.09.2010.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 13477-2:2010 consists of the English text of the European standard EN 13477-2:2010.</p> <p>This standard is ratified with the order of Estonian Centre for Standardisation dated 31.10.2010 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.</p> <p>Date of Availability of the European standard text 15.09.2010.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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English Version

Non-destructive testing - Acoustic emission - Equipment characterisation - Part 2: Verification of operating characteristic

Essais non destructifs, émission acoustique -
Caractérisation de l'équipement - Partie 2: Vérifications des
caractéristiques de fonctionnement

Zerstörungsfreie Prüfung - Schallemissionsprüfung -
Gerätecharakterisierung - Teil 2: Überprüfung der
Betriebskenngrößen

This European Standard was approved by CEN on 30 July 2010.

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Foreword

This document (EN 13477-2:2010) has been prepared by Technical Committee CEN/TC 138 "Non-destructive testing", the secretariat of which is held by AFNOR.

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of an identical text or by endorsement, at the latest by March 2011, and conflicting national standards shall be withdrawn at the latest by March 2011.

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

This document supersedes EN 13477-2:2001.

EN 13477 consists of the following parts under the general title *Non-destructive testing — Acoustic emission — Equipment characterisation*:

- *Part 1: Equipment description*;
- *Part 2: Verification of operating characteristic*.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

1 Scope

This part of the standard specifies methods for routine verification of the performance of AE equipment comprising one or more sensing channels. It is intended for use by operators of the equipment under laboratory conditions. Verification of the measurement characteristics is recommended after purchase of equipment, modifications, use under extraordinary conditions, or if one suspects a malfunction. The procedures described in this European Standard do not exclude other qualified methods, e.g. verification in the frequency domain.

2 Normative references

The following referenced documents are indispensable for the application 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 1330-1:1998, *Non destructive testing — Terminology — Part 1: List of general terms*

EN 1330-2:1998, *Non destructive testing — Terminology — Part 2: Terms common to the non-destructive testing methods*

EN 1330-9:2009, *Non-destructive testing — Terminology — Part 9: Terms used in acoustic emission testing*

EN 13477-1:2001, *Non-destructive testing — Acoustic emission — Equipment characterisation — Part 1: Equipment description*

IEC 60050 (all parts), *International Electrotechnical Vocabulary*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 1330-1:1998, EN 1330-2:1998, EN 1330-9:2009 and IEC 60050 (all parts) and the following apply.

3.1

AE signal processor

part of an AE channel for the conversion of the output of the preamplifier to digital signal parameters

NOTE The AE signal processor may include additional support functions, e.g. preamplifier power supply, test pulse control, transient recorder, and more.

3.2

arbitrary function generator (AFG)

electronic device for generating a programmable test signal (burst)

3.3

DC calibrator

electronic device for generating an adjustable or programmable DC voltage of appropriate accuracy for stimulating an external parametric input

4 Required test equipment

4.1 List of required equipment

The following minimum test equipment is required: