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Non-destructive testing - Terminology - Part 9: Terms used in acoustic emission testing

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN 1330-9:2017 sisaldab Euroopa standardi EN 1330-9:2017 ingliskeelset teksti.	This Estonian standard EVS-EN 1330-9:2017 consists of the English text of the European standard EN 1330-9:2017.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.
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ICS 01.040.19, 19.100

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EUROPEAN STANDARD

EN 1330-9

NORME EUROPÉENNE

EUROPÄISCHE NORM

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ICS 01.040.19; 19.100

Supersedes EN 1330-9:2009

English Version

Non-destructive testing - Terminology - Part 9: Terms used in acoustic emission testing

Essais non destructifs - Terminologie - Partie 9 :
Termes utilisés en contrôle par émission acoustique

Zerstörungsfreie Prüfung - Terminologie - Teil 9:
Begriffe der Schallemissionsprüfung

This European Standard was approved by CEN on 11 May 2017.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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European foreword

This document (EN 1330-9:2017) 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of an identical text or by endorsement, at the latest by January 2018, and conflicting national standards shall be withdrawn at the latest by January 2018.

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 supersedes EN 1330-9:2009.

EN 1330, *Non destructive testing — Terminology*, is currently composed with the following parts:

- *Part 1: List of general terms;*
- *Part 2: Terms common to the non-destructive testing methods;*
- *Part 3: Terms used in industrial radiographic testing;*
- *Part 8: Terms used in leak tightness testing;*
- *Part 9: Terms used in acoustic emission testing;*
- *Part 10: Terms used in visual testing;*
- *Part 11: Terms used in X-ray diffraction from polycrystalline and amorphous materials (EN 1330-11).*

And

- EN ISO 5577 Non-destructive testing - Ultrasonic testing - Vocabulary
- EN ISO 12706 Non-destructive testing - Penetrant testing - Vocabulary
- EN ISO 12707 Non-destructive testing - Magnetic particle testing - Vocabulary
- EN ISO 12718 Non-destructive testing - Eddy current testing - Vocabulary

Note 1: EN ISO 5577 was published formerly as EN 1330-4.

Note 2: EN ISO12706 was published formerly as EN 1330-6.

Note 3: EN ISO 12707 was published formerly as EN 1330-7.

Note 4: EN ISO 12718 was published formerly as EN 1330-5.

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

1 Scope

This European Standard is concerned only with terms used specifically in acoustic emission testing (AT) and these fall into four parts:

- a) terms relating to the physical phenomenon;
- b) terms relating to the detection of the acoustic emission;
- c) terms relating to the measured characteristics of the signal(s);
- d) terms relating to acoustic emission applications.

2 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

2.1 General

2.1.1

acoustic emission

AE

phenomena whereby transient elastic waves are generated by, e.g. plastic deformation, crack propagation, erosion, corrosion, impact, leakage

2.2 Terms relating to the physical phenomenon

2.2.1

acoustic emission event

physical phenomenon giving rise to acoustic emission

2.2.2

acoustic emission source

spatial element from where one (or more) acoustic emission event(s) originate(s)

2.2.3

acoustic emission event mechanism

dynamic process or combination of processes occurring within a material, generating acoustic emission events

Note 1 to entry: AE event mechanisms can be subdivided into several categories: material and mechanical, macroscopic and microscopic, primary and secondary.

2.2.4

acoustic emission wave

transient elastic wave generated by an acoustic emission event

2.2.5

acoustic emission wave energy

elastic wave energy released by an acoustic emission event

2.2.6

acoustic emission stimulation

application of a stimulus such as force, pressure, heat, and so forth, to a test object to cause activation of acoustic emission sources