BS EN 1330-9:2017

BSI Standards Publication

Non-destructive testing - Terminology

Part 9: Terms used in acoustic emission testing

National foreword

This British Standard is the UK implementation of EN 1330-9:2017. It supersedes BS EN 1330-9:2009, which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee WEE/46, Non-destructive testing.

A list of organizations represented on this committee can be obtained on request to its secretary.

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© The British Standards Institution 2017
Published by BSI Standards Limited 2017

ISBN 978 0 580 92165 0

ICS 01.040.19; 19.100

Compliance with a British Standard cannot confer immunity from legal obligations.

This British Standard was published under the authority of the Standards Policy and Strategy Committee on 31 August 2017.

Amendments/corrigenda issued since publication

Date	Text affected

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 1330-9

July 2017

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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CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

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Ref. No. EN 1330-9:2017 E

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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of an identical text or by endorsement, at the latest by January 2018, and conflicting national standards shall be withdrawn at the latest by January 2018.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 tes*ting;

— *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.

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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