

Non-destructive testing - Acoustic emission testing (AT)
- Leak detection by means of acoustic emission (ISO
18081:2016)

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

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English Version

Non-destructive testing - Acoustic emission testing (AT) -
Leak detection by means of acoustic emission (ISO
18081:2016)

Essais non destructifs - Contrôle par émission
acoustique - Détection de fuites par émission
acoustique (ISO 18081:2016)

Zerstörungsfreie Prüfung - Schallemissionsprüfung -
Dichtheitsprüfung mittels Schallemission (ISO
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European foreword

This document (EN ISO 18081:2016) has been prepared by Technical Committee CEN/TC 138 “Non-destructive testing” the secretariat of which is held by AFNOR, in collaboration with Technical Committee ISO/TC 135 “Non-destructive testing”.

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of an identical text or by endorsement, at the latest by December 2016, and conflicting national standards shall be withdrawn at the latest by December 2016.

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Endorsement notice

The text of ISO 18081:2016 has been approved by CEN as EN ISO 18081:2016 without any modification.

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Foreword

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ISO 18081 was prepared by the European Committee for Standardization (CEN) Technical Committee CEN/TC 138, *Non-destructive testing*, in collaboration with ISO Technical Committee TC 135, *Non-destructive testing*, Subcommittee SC 9, *Acoustic emission testing*, in accordance with the agreement on technical cooperation between ISO and CEN (Vienna Agreement).

Non-destructive testing — Acoustic emission testing (AT) — Leak detection by means of acoustic emission

1 Scope

This International Standard specifies the general principles required for leak detection by acoustic emission testing (AT). It is addressed to the application of the methodology on structures and components, where a leak flow as a result of pressure differences appears and generates acoustic emission (AE).

It describes phenomena of the AE generation and influence of the nature of fluids, shape of the gap, wave propagation and environment.

The different application methods, instrumentation and presentation of AE results is discussed. Also included are guidelines for the preparation of application documents which describe specific requirements for the application of the AE method.

Different application examples are given.

Unless otherwise specified in the referencing documents, the minimum requirements of this International Standard are applicable.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 9712, *Non-destructive testing — Qualification and certification of NDT personnel*

ISO/IEC 17025, *General requirements for the competence of testing and calibration laboratories*

EN 1330-1, *Non-destructive testing — Terminology — Part 1: General terms*

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

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

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

EN 13477-2, *Non-destructive testing — Acoustic emission — Equipment characterisation — Part 2: Verification of operating characteristics*

EN 13554, *Non-destructive testing — Acoustic emission testing — General principles*

EN 60529, *Degrees of protection provided by enclosures (IP Code)*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 1330-1, EN 1330-2 and EN 1330-9 and the following apply.

NOTE The definitions of leak, leakage rate, leak tight are those defined in EN 1330-8.