



National Standards Authority of Ireland  
Údarás um Chaighdeáin Náisiúnta na hÉireann

IRISH STANDARD

**I.S. EN 15495:2007**

ICS 17.160  
19.100

**NON DESTRUCTIVE TESTING - ACOUSTIC  
EMISSION - EXAMINATION OF METALLIC  
PRESSURE EQUIPMENT DURING PROOF  
TESTING - ZONE LOCATION OF AE SOURCES**

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ICS 17.160; 19.100

English Version

Non Destructive testing - Acoustic emission - Examination of  
metallic pressure equipment during proof testing - Zone location  
of AE sources

Essais non destructifs - Emission acoustique - Vérification  
des équipements métalliques sous pression pendant  
l'épreuve - Localisation par zone des sources d'EA

Zerstörungsfreie Prüfung - Schallemission - Prüfung von  
metallischen Druckgeräten während der Beanspruchung -  
Zonenortung von Schallemissionsquellen

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## **Foreword**

This document (EN 15495:2007) 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of an identical text or by endorsement, at the latest by May 2008, and conflicting national standards shall be withdrawn at the latest by May 2008.

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## **1 Scope**

The purpose of this standard is to describe the methods for conducting an acoustic emission (AE) examination of metallic pressure equipment during acceptance pressure testing using a zone location procedure. General principles of Acoustic Emissions are described in EN 13554.

The objectives of the AE testing are to provide 100 % volumetric testing to define and grade zones of the structure which are acoustically active with burst type AE. The method should be regarded as supplementary to planar location. Planar location provides the source identification and characterisation. Zone location may also be applied in such cases where location of AE sources by planar location procedures according to EN 14584 is not possible.

The method identifies the need for further evaluation or follow-up by other NDT in localized zones.

## **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 1330-9:2000, *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 characteristic*

EN 14584, *Non-destructive testing - Acoustic emission - Examination of metallic pressure equipment during proof testing – Planar location of AE sources*

## **3 Terms and definitions**

For the purpose of this European Standard, the terms and definitions given in EN 1330-1:1998, EN 1330-2:1998 and EN 1330-9:2000 apply.

## **4 Personnel Qualifications**

It is assumed that acoustic emission testing is performed by qualified and capable personnel. To prove this qualification, it is recommended to certify the personnel in accordance with EN 473.

NOTE For pressure equipment see Directive 97/23/EC, Annex 3.1.3: "For pressure equipment in categories III and IV, the personnel must be approved by a third party organization recognized by a Member State."

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