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

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

EESTI STANDARDI EESSÕNA **NATIONAL FOREWORD**

Käesolev Eesti standard EVS-EN 15495:2007 sisaldab Euroopa standardi EN 15495:2007 ingliskeelset teksti. Käesolev dokument on jõustatud 18.12.2007 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes. Standard on kättesaadav Eesti standardiorganisatsioonist.	This Estonian standard EVS-EN 15495:2007 consists of the English text of the European standard EN 15495:2007. This document is endorsed on 18.12.2007 with the notification being published in the official publication of the Estonian national standardisation organisation. The standard is available from Estonian standardisation organisation.

Käsitlusala: 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.	**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.

ICS 17.160, 19.100

Võtmesõnad:

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 15495

November 2007

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

This European Standard was approved by CEN on 30 September 2007.

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

Management Centre: rue de Stassart, 36 B-1050 Brussels

Ref. No. EN 15495:2007: E

Contents

Page

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.

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.

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, 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

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."