SIST

SLOVENSKI STANDARD
SIST EN ISO 18563-3:2016

01-marec-2016

Neporušitveno preskušanje - Ugotavljanje značilnosti in preverjanje ultrazvočne opreme faznih sistemov - 3. del: Kombinirani sistemi (ISO 18563-3:2015)

Non-destructive testing - Characterization and verification of ultrasonic phased array equipment - Part 3: Combined systems (ISO 18563-3:2015)

Zerstörungsfreie Prüfung - Charakterisierung und Verifizierung der Ultraschall-Prüfausrüstung mit phasengesteuerten Arrays - Teil 3: Vollständige Prüfsysteme (ISO 18563-3:2015)

Essais non destructifs - Caractérisation et vérification de l'appareillage ultrasonore multi-éléments - Partie 3: Appareillage complet (ISO 18563-3:2015)

Ta slovenski standard je istoveten z: EN ISO 18563-3:2015

ICS:

19.100 Neporušitveno preskušanje Non-destructive testing

SIST EN ISO 18563-3:2016 en,fr,de

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN ISO 18563-3

December 2015

ICS 19.100

English Version

Non-destructive testing - Characterization and verification of ultrasonic phased array equipment - Part 3: Combined systems (ISO 18563-3:2015)

Essais non destructifs - Caractérisation et vérification de l'appareillage ultrasonore multi-éléments - Partie 3: Système complet (ISO 18563-3:2015)

Zerstörungsfreie Prüfung - Charakterisierung und Verifizierung der Ultraschall-Prüfausrüstung mit phasengesteuerten Arrays - Teil 3: Vollständige Prüfsysteme (ISO 18563-3:2015)

This European Standard was approved by CEN on 21 November 2015.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of 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, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.

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

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

Ref. No. EN ISO 18563-3:2015 E

Contents

Page

European foreword

This document (EN ISO 18563-3:2015) 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 June 2016, and conflicting national standards shall be withdrawn at the latest by June 2016.

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, 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, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Endorsement notice

The text of ISO 18563-3:2015 has been approved by CEN as EN ISO 18563-3:2015 without any modification.

INTERNATIONAL STANDARD

ISO 18563-3

First edition
2015-12-15

Non-destructive testing — Characterization and verification of ultrasonic phased array equipment —

Part 3: Combined systems

Essais non destructifs — Caractérisation et vérification de l'appareillage ultrasonore multi-éléments — Partie 3: Système complet

Reference number
ISO 18563-3:2015(E)

ISO copyright office
Ch. de Blandonnet 8 • CP 401
CH-1214 Vernier, Geneva, Switzerland
Tel. +41 22 749 01 11
Fax +41 22 749 09 47
copyright@iso.org
www.iso.org

Contents

Page

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: Foreword - Supplementary information

This document was prepared by the European Committee for Standardization (CEN) Technical Committee CEN/TC 138, *Non-destructive testing*, in collaboration with ISO Technical Committee ISO/TC 135, *Non-destructive testing*, Subcommittee SC 3, *Ultrasonic Testing*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

ISO 18563 consists of the following parts, under the general title *Non-destructive testing — Characterization and verification of ultrasonic phased array systems*:

— *Part 1: Instruments*

— *Part 3: Combined systems*

Non-destructive testing — Characterization and verification of ultrasonic phased array equipment —

Part 3: Combined systems

1 Scope

This part of ISO 18563 addresses ultrasonic test systems implementing linear phased array probes, in contact (with or without wedge) or in immersion, with centre frequencies in the range of 0,5 MHz–10 MHz.

It provides methods and acceptance criteria for verifying the performance of combined equipment (i.e. instrument, probe and cables connected). The methods described are suitable for users working under on-site or shop floor conditions. Its purpose is for the verification of the correct operation of the system prior to testing, and also the characterization of sound beams or verification of the absence of degradation of the system.

The methods are not intended to prove the suitability of the system for particular applications, but are intended to prove the capability of the combined equipment to generate ultrasonic beams according to the settings used.

The calibration of the system for a specific application is outside of the scope of part of ISO 18563 and it is intended that it be covered by the test procedure.

This part of ISO 18563 does not address the following:

— encircling arrays;

— series of apertures having a different number of elements;

— different settings for transmitting and receiving (e.g. active aperture, number of active elements, delays);

— techniques using post-processing of the signals of individual elements in a more complex manner than a simple delay law (e.g. full matrix capture).

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 5577, *Non-destructive testing — Ultrasonic inspection — Vocabulary*

ISO 18563-1, *Non-destructive testing — Characterization and verification of ultrasonic phased array equipment — Part 1: Instruments*

EN 1330-4, *Non-destructive testing — Terminology — Part 4: Terms used in ultrasonic testing*

EN 16018, *Non-destructive testing — Terminology — Terms used in ultrasonic testing with phased arrays*

EN 16392-2, *Non-destructive testing — Characterization and verification of ultrasonic phased array test equipment — Part 2: Probes*