Irish Standard
I.S. EN ISO 15548-1:2013

Non-destructive testing - Equipment for eddy current examination - Part 1: Instrument characteristics and verification (ISO 15548-1:2013)

I.S. EN ISO 15548-1:2013

Incorporating amendments/corrigenda/National Annexes issued since publication:

The National Standards Authority of Ireland (NSAI) produces the following categories of formal documents:

I.S. xxx: Irish Standard — national specification based on the consensus of an expert panel and subject to public consultation.

S.R. xxx: Standard Recommendation — recommendation based on the consensus of an expert panel and subject to public consultation.

SWiFT xxx: A rapidly developed recommendatory document based on the consensus of the participants of an NSAI workshop.

This document replaces/revices/consolidates the NSAI adoption of the document(s) indicated on the CEN/CENELEC cover/Foreword and the following National document(s):

NOTE: The date of any NSAI previous adoption may not match the date of its original CEN/CENELEC document.

This document is based on:	*Published:*
EN ISO 15548-1:2013	2013-12-04

This document was published under the authority of the NSAI and comes into effect on:	ICS number:
2013-12-14	19.100
	NOTE: If blank see CEN/CENELEC cover page

NSAI	T +353 1 807 3800	Sales:
1 Swift Square,	F +353 1 807 3838	T +353 1 857 6730
Northwood, Santry	E standards@nsai.ie	F +353 1 857 6729
Dublin 9	W NSAI.ie	W standards.ie

Údarás um Chaighdeáin Náisiúnta na hÉireann

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN ISO 15548-1

December 2013

ICS 19.100

Supersedes EN ISO 15548-1:2008

English Version

Non-destructive testing - Equipment for eddy current examination - Part 1: Instrument characteristics and verification (ISO 15548-1:2013)

Essais non destructifs - Appareillage pour examen par courants de Foucault - Partie 1: Caractéristiques de l'appareil et vérifications (ISO 15548-1:2013)

Zerstörungsfreie Prüfung - Technische Ausrüstung für die Wirbelstromprüfung - Teil 1: Kenngrößen von Prüfgeräten und deren Verifizierung (ISO 15548-1:2013)

This European Standard was approved by CEN on 11 November 2013.

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

Contents

page

Foreword

This document (EN ISO 15548-1:2013) has been prepared by Technical Committee ISO/TC 135 “Non-destructive testing” in collaboration with 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 June 2014, and conflicting national standards shall be withdrawn at the latest by June 2014.

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.

This document supersedes EN ISO 15548-1:2008.

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 15548-1:2013 has been approved by CEN as EN ISO 15548-1:2013 without any modification.

This page is intentionally left blank

INTERNATIONAL STANDARD

ISO 15548-1

Second edition
2013-12-01

Non-destructive testing — Equipment for eddy current examination —

Part 1: Instrument characteristics and verification

Essais non destructifs — Appareillage pour examen par courants de Foucault —

Partie 1: Caractéristiques de l'appareil et vérifications

Reference number
ISO 15548-1:2013(E)

ISO copyright office
Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
Web www.iso.org

Published in Switzerland

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. 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. 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.

The committee responsible for this document is ISO/TC 135, *Non-destructive Testing*, Subcommittee SC 4, *Eddy current methods*.

This second edition cancels and replaces the first edition (ISO 15548-1:2008), of which it constitutes a minor revision. It also incorporates the Correction ISO 15548-1:2008/Cor 1:2010.

ISO 15548 consists of the following parts, under the general title *Non-destructive testing — Equipment for eddy current examination*:

— *Part 1: Instrument characteristics and verification*

— *Part 2: Probe characteristics and verification*

— *Part 3: System characteristics and verification*

Non-destructive testing — Equipment for eddy current examination —

Part 1: Instrument characteristics and verification

1 Scope

This part of ISO 15548 identifies the functional characteristics of a general-purpose eddy current instrument and provides methods for their measurement and verification.

The evaluation of these characteristics permits a well-defined description and comparability of eddy current equipment.

By careful choice of the characteristics, a consistent and effective eddy current examination system can be designed for a specific application.

Where accessories are used, these are characterised using the principles of this part of ISO 15548.

This part of ISO 15548 gives neither the extent of verification nor acceptance criteria for the characteristics. They are given in the application documents.

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 12718, *Non-destructive testing — Eddy current testing — Vocabulary*

ISO 15549, *Non-destructive testing — Eddy current testing — General principles*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 12718 apply.

4 Eddy current instrument characteristics

4.1 General characteristics

4.1.1 Type of instrument

a) An instrument has a general-purpose application when the relationship between the measured quantity and the display or output is established by the user. A range of probes can be connected to the instrument. The instrument manufacturer shall provide details of the internal electrical characteristics, in order that the user can design the examination system. The examination system shall be in accordance with ISO 15549. The user shall be able to vary the value of frequency, gain, balance (unless an automatic balance is used), phase, filters and gain and zero of the display.