

Destructive tests on welds in metallic materials - Method for taking samples for delta ferrite measurement

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Method for taking samples for delta ferrite
measurement

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN ISO 17655:2003 sisaldab Euroopa standardi EN ISO 17655:2003 ingliskeelset teksti. Käesolev dokument on jõustatud 06.06.2003 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes. Standard on kättesaadav Eesti standardiorganisatsioonist.	This Estonian standard EVS-EN ISO 17655:2003 consists of the English text of the European standard EN ISO 17655:2003. This document is endorsed on 06.06.2003 with the notification being published in the official publication of the Estonian national standardisation organisation. The standard is available from Estonian standardisation organisation.
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Käsitlusala: This European Standard specifies the determination of the delta ferrite content of welds, of surfacings with austenitic weld metal, welding being carried out on welding procedure tests and production coupon test plates using any fusion welding process that is suitable for austenitic materials, with or without filler metal including welds made on components	Scope: This European Standard specifies the determination of the delta ferrite content of welds, of surfacings with austenitic weld metal, welding being carried out on welding procedure tests and production coupon test plates using any fusion welding process that is suitable for austenitic materials, with or without filler metal including welds made on components
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Võtmesõnad: determination of co, ferrites, iron inorganic compounds, measurement, measuring techniques, metal welding, metallic materials, metals, sampling, sampling methods, structure, testing, testing and instruments, welded joints, welding, welding engineering

English version

Destructive tests on welds in metallic materials

**Method for taking samples for delta ferrite
measurement**

(ISO 17655 : 2000)

Essais destructifs des soudures sur
matériaux métalliques – Méthode
d'échantillonnage pour la mesure de
la ferrite delta (ISO 17655 : 2003)

Zerstörende Prüfung von Schweiß-
verbindungen an metallischen Werk-
stoffen – Verfahren zur Probenahme
für die Bestimmung des Deltaferrit-
Anteils (ISO 17655 : 2003)

This European Standard was approved by CEN on 2002-11-25.

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 Management Centre or to any CEN member.

The European Standards exist 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 Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, the Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Luxembourg, Malta, the Netherlands, Norway, Portugal, Slovakia, Spain, Sweden, Switzerland, and the United Kingdom.

CEN

European Committee for Standardization
Comité Européen de Normalisation
Europäisches Komitee für Normung

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

Contents

	Page
Foreword.....	2
Introduction.....	2
1 Scope.....	3
2 Normative references.....	3
3 Terms and definitions.....	3
4 Symbols and descriptions.....	4
5 General.....	4
6 Principle.....	4
7 Designation.....	4
8 Procedure.....	4
8.1 Location of measurement surface.....	4
8.2 Preparation of measurement surface.....	5
8.3 Instruments.....	5
8.4 Calibration.....	5
8.5 Procedure.....	5
9 Test report.....	6
Bibliography.....	6

Foreword

This document (EN ISO 17655:2003) has been prepared by Technical Committee CEN/TC 121, "Welding", the secretariat of which is held by DS, in collaboration with ISO/TC 44 "Welding and allied processes".

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 September 2003, and conflicting national standards shall be withdrawn at the latest by September 2003.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Slovakia, Spain, Sweden, Switzerland and the United Kingdom.

Introduction

By way of departure from this European Standard, EN ISO 8249 describes methods of manufacturing of primary and secondary standards for calibration of ferrite testing instruments and gives information for determining the ferrite content of all-weld metal under specified and reproducible conditions.

1 Scope

This European Standard specifies the determination of the delta ferrite content of welds, of surfacings with austenitic weld metal, welding being carried out on welding procedure tests and production coupon test plates using any fusion welding process that is suitable for austenitic materials, with or without filler metal including welds made on components.

It is intended that the ferrite number be used exclusively for stating the delta ferrite content of austenitic weld metal as determined by the method described here.

2 Normative references

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

EN 1597-1, *Welding consumables — Test methods — Part 1: Test piece for all-weld metal test specimens in steel, nickel and nickel alloys*.

EN ISO 8249:2000, *Welding - Determination of Ferrite Number (FN) in austenitic and duplex ferritic-austenitic Cr-Ni stainless steel weld metals (ISO 8249:2000)*.

3 Terms and definitions

For the purposes of this European Standard, the following terms and definitions apply.

3.1

all-weld metal

filler metal that has solidified after welding and has not mixed with the parent metal

3.2

weld metal

metal composed of parent metal and/or filler metal or a metal deposited during surfacing

3.3

delta ferrite

body centred modification of iron formed at high temperatures stable at ambient temperature

3.4

primary weld metal standards

samples of carbon steel parent metal covered with non-magnetic layers of different thickness

[EN ISO 8249:2000]

3.5

secondary weld metal standards

calibrated with primary weld metal standards

3.6

ferrite number

measure of the force required to detach a permanent magnet from an austenitic weld metal sample ("tear-off force", for short)