Aerospace series - Test method for metallic materials - Ultrasonic inspection of bars, plates, forging stock and forgings - Part 3: Reference blocks

EESTI STANDARDIKESKUS
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NATIONAL FOREWORD

See Eesti standard EVS-EN 4050-3:2012 sisaldab Euroopa standardi EN 4050-3:2012 ingliskeelset teksti.	This Estonian standard EVS-EN 4050-3:2012 consists of the English text of the European standard EN 4050-3:2012.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 26.09.2012.	Date of Availability of the European standard is 26.09.2012.
Standard on kättesaadav Eesti Standardikeskusest.	The standard is available from the Estonian Centre for Standardisation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile standardiosakond@evs.ee.

ICS 49.025.05, 49.025.15

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English Version

Aerospace series - Test method for metallic materials - Ultrasonic inspection of bars, plates, forging stock and forgings - Part 3: Reference blocks

Série aérospatiale - Méthode d'essai applicable aux matériaux métalliques - L'inspection par ultrasons des barres, des assiettes, des stocks de forgeage et de pièces forgées - Partie 3: Blocs de référence

Luft- und Raumfahrt - Prüfverfahren für metallische Werkstoffe - Ultraschallprüfung von Stangen, Platten, Schmiedevormaterial und Schmiedestücken - Teil 3: Referenzblöcke

This European Standard was approved by CEN on 15 July 2011.

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

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Contents

Foreword

This document (EN 4050-3:2012) has been prepared by the Aerospace and Defence Industries Association of Europe - Standardization (ASD-STAN).

After enquiries and votes carried out in accordance with the rules of this Association, this Standard has received the approval of the National Associations and the Official Services of the member countries of ASD, prior to its presentation to CEN.

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 March 2013, and conflicting national standards shall be withdrawn at the latest by March 2013.

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 organisations 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.

1 Scope

This European Standard specifies the requirements for the manufacture, checking and marking of the series of ultrasonic testing reference blocks containing flat bottom holes (FBH) which define the indicated defect size to which reference is made in EN standards.

2 Generality

The application of ultrasonic testing reference blocks containing side-drilled holes (SDH) which define an indicated defect size shall be agreed between manufacturer and purchaser.

This standard is applicable to the production of master and standard test blocks to be used when carrying out ultrasonic inspection to the requirements of EN 4050-1 (FBH method).

It is recognised that particular difficulties are encountered with round forging stock and bars due to the wide range of curvatures. For this application, only one block shall be produced to act as both master and standard test block.

3 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.

EN 2278, *Steel FE-PM 37 — 900 MPa ≤ R_m ≤ 1100 MPa — Bars D_e ≤ 150 mm — Aerospace series*[1)]

EN 2321, *Aluminium alloy 2024-T3 — Bars and section a ≤ 150 mm — Aerospace series*[1)]

EN 3311, *Aerospace series — Titanium alloy TI-64001 — Annealed — 900 MPa ≤ R_m ≤* 1 160 *MPa — Bar for machining — D_e ≤ 150 mm*[2)]

EN 4050-1, *Aerospace series — Test method for metallic materials — Ultrasonic inspection of bars, plates, forging stock and forgings — Part 1: General requirements*

EN 4050-2, *Aerospace series — Test method for metallic materials — Ultrasonic inspection of bars, plates, forging stock and forgings — Part 2: Performance of test*

EN 4050-4, *Aerospace series — Test method for metallic materials — Ultrasonic inspection of bars, plates, forgings stock and forgings — Part 4: Acceptance criteria*

ASTM E 127, *Standard practice for fabricating and checking aluminium alloy ultrasonic standard reference blocks*[3)]

4 Terms and definitions

See EN 4050-1.

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1) Published as ASD-STAN Standard at the date of publication of this standard.

2) Published as ASD-STAN Prestandard at the date of publication of this standard.

3) Published by: American Society for Testing and Materials (ASTM) 1916 Race Street, Philadelphia, PA.