

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

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## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

See Eesti standard EVS-EN 4050-4:2012 sisaldab Euroopa standardi EN 4050-4:2012 ingliskeelset teksti.	This Estonian standard EVS-EN 4050-4:2012 consists of the English text of the European standard EN 4050-4:2012.
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.
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ICS 49.025.05, 49.025.15

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ICS 49.025.05; 49.025.15

English Version

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

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 4: Critères d'acceptation

Luft- und Raumfahrt - Prüfverfahren für metallische  
Werkstoffe - Ultraschallprüfung von Stangen, Platten,  
Schmiedevormaterial und Schmiedestücken - Teil 4:  
Abnahmekriterien

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

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.

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EUROPEAN COMMITTEE FOR STANDARDIZATION  
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EUROPÄISCHES KOMITEE FÜR NORMUNG

Management Centre: Avenue Marnix 17, B-1000 Brussels

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## Foreword

This document (EN 4050-4:2012) 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.

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## 1 Scope

This European Standard specifies the acceptance criteria for products ultrasonically inspected in accordance with EN 4050-1.

## 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.

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

## 3 Acceptance criteria

The acceptance criteria, class 1 to 7, are given in Table 1.

**Table 1 — Acceptance criteria**

Class	Maximum single discontinuity, non linear <sup>1)</sup> FBH mm	Maximum multiple discontinuities <sup>2)</sup> mm	Single discontinuity linear <sup>1)</sup> FBH mm	
			Response	Length
7	0,6	0,4	Not applicable	
6	0,8	0,6	0,4	6
5	1,2	0,8	0,8	12,5
4	1,6	1,2	1,2	12,5
3	2,0	1,2	1,2	25
2	3,2	2,0	2,0	25
1	5,0	3,2	3,2	50

<sup>1)</sup> Spacing between indications larger than or equal to 25 mm (defect spacing horizontal and vertical to beam direction).  
<sup>2)</sup> Spacing between indications less than 25 mm (defect spacing horizontal and vertical to beam direction).

The FBH reference value for multiple discontinuities shall be set for the corresponding class in each case.

Reject within each particular class:

- Ultrasonic indications shall be not greater than the value given in Table 1 within the corresponding class.
- Loss in back wall echo shall be not greater than the value in dB/mm, or % screen height agreed between the manufacturer and purchaser.
- Noise levels shall be not greater than the monitor threshold level.