Aerospace series - Metallic materials - Test method - Shear test for wires and rivets

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NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 3238:2010 sisaldab Euroopa standardi EN 3238:2010 ingliskeelset teksti.	This Estonian standard EVS-EN 3238:2010 consists of the English text of the European standard EN 3238:2010.
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English Version

Aerospace series - Metallic materials - Test method - Shear test for wires and rivets

Série aérospatiale - Matériaux métalliques - Méthodes d'essais - Essai de cisaillement pour fils et rivets

Luft- und Raumfahrt - Metallische Werkstoffe - Prüfverfahren - Prüfung der Scherfestigkeit von Drähten und Nieten

This European Standard was approved by CEN on 5 May 2010.

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

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Contents

Page

Foreword

This document (EN 3238:2010) 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of an identical text or by endorsement, at the latest by April 2011, and conflicting national standards shall be withdrawn at the latest by April 2011.

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Introduction

This standard is part of the series of EN metallic material standards for aerospace applications. The general organization of this series is described in EN 4258.

1 Scope

This standard specifies the requirements for shear testing rivet wire and rivets in metallic materials for aerospace applications.

It shall be applied when referred to in the EN technical specification or material standard unless otherwise specified on the drawing, order or inspection schedule.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 4259, *Aerospace series — Metallic materials — Definition of general terms* [1)]

EN ISO 7500-1, *Metallic materials — Verification of static uniaxial testing machines — Part 1: Tension/ compression testing machines — Verification and calibration of the force-measuring system (ISO 7500-1:2004)*

ISO 286-1:1988, *ISO system of limits and fits — Part 1: Bases of tolerances, deviations and fits*

3 Terms, definitions, parameters and symbols

For the purposes of this standard, the terms and definitions given in EN 4259 and the parameters and symbols given in Table 1 apply.

3.1 General terms

See EN 4259.

3.2 Other terms

3.2.1 Shear strength

Shear strength (R_c) is given by:

$$R_c = \frac{F_m}{2\,S_o} \qquad \text{or} \qquad R_c = 2\frac{F_m}{\pi {d_o}^2}$$

where

d_0 is the original diameter of the test piece;

F_m is the maximum force;

S_o is the original cross-sectional area of the test piece.

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