Aerospace series - Cables, electrical, aircraft use - Test methods - Part 705: Contrast measurement

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EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 3475-705:2005 sisaldab Euroopa standardi EN 3475-705:2005 ingliskeelset teksti. Käesolev dokument on jõustatud 28.12.2005 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes. Standard on kättesaadav Eesti standardiorganisatsioonist.	This Estonian standard EVS-EN 3475-705:2005 consists of the English text of the European standard EN 3475-705:2005. This document is endorsed on 28.12.2005 with the notification being published in the official publication of the Estonian national standardisation organisation. The standard is available from Estonian standardisation organisation.

Käsitlusala: This standard specifies the process to be applied for measuring the contrast of wire and cable identification markings against the background of the unmarked wire insulation.	**Scope:** This standard specifies the process to be applied for measuring the contrast of wire and cable identification markings against the background of the unmarked wire insulation.

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Võtmesõnad: aerospace transport, air transport, aircraft, cables, colorimetry, colour density, contrast (optical), electric cables, electric conductors, electrical cords, space transport, specification (approval), specifications, testing

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Luft- und Raumfahrt - Elektrische Leitungen für Luftfahrtverwendung - Prüfverfahren - Teil 705: Kontrastmessung

This European Standard was approved by CEN on 12 September 2005.

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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 Central Secretariat has the same status as the official versions.

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

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Foreword

This European Standard (EN 3475-705:2005) has been prepared by the European Association of Aerospace Manufacturers - Standardization (AECMA-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 AECMA, 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 2006, and conflicting national standards shall be withdrawn at the latest by April 2006.

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.

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

Introduction

It is a requirement within the aerospace industry that all wires and cables within an aircraft electrical system are identified with a circuit identification code at regular intervals down the length of the wire. Various marking methods are used for marking these identification codes on to the surface of electrical wires or cables including ink based and laser based processes. The legibility of the markings is dependent upon the process used and the insulation medium. Minimum standards of contrast are required to facilitate reading back of the identity codes.

1 Scope

This standard specifies the process to be applied for measuring the contrast of wire and cable identification markings against the background of the unmarked wire insulation. It has been developed primarily to define a reproducible process of contrast value determination for use both to determine the intrinsic laser markability of wires at the time of manufacture or later, and to enable electrical wiring systems manufacturers to ensure that the whole process of wire marking is carried out to the required standard.

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.

ISO 7724-1, *Paints and varnishes — Colorimetry — Part 1: Principles.*

EN 3475-706, *Aerospace series — Cables, electrical, aircraft use — Test methods — Part 706: Laser markability.*

IEC 15-2, *Colorimetry.*

TR 4543, UV *laser wire marking systems for aircraft wire and cable identification.*[1)]

1) In preparation at the date of publication of this standard.