

**Terastraadist trosside otsmuhvid. Ohutus. Osa 3:
Jätkuklemmid ja nende kindlustamine
KONSOLIDEERITUD TEKST**

Terminations for steel wire ropes - Safety - Part 3:
Ferrules and ferrule-securing CONSOLIDATED TEXT

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 13411-3:2004+A1:2008 sisaldab Euroopa standardi EN 13411-3:2004+A1:2008 ingliskeelset teksti.</p> <p>Standard on kinnitatud Eesti Standardikeskuse 10.11.2008 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.</p> <p>Euroopa standardimisorganisatsioonide poolt rahvuslikele liikmetele Euroopa standardi teksti kättesaadavaks tegemise kuupäev on 22.10.2008.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 13411-3:2004+A1:2008 consists of the English text of the European standard EN 13411-3:2004+A1:2008.</p> <p>This standard is ratified with the order of Estonian Centre for Standardisation dated 10.11.2008 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.</p> <p>Date of Availability of the European standard text 22.10.2008.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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English Version

**Terminations for steel wire ropes - Safety - Part 3: Ferrules and
ferrule-securing**

Terminaisons pour câbles en acier - Sécurité - Partie 3:
Manchons et boucles manchonnées

Endverbindungen für Drahtseile aus Stahldraht - Sicherheit
- Teil 3: Pressklemmen und Verpressen

This European Standard was approved by CEN on 16 April 2004 and includes Corrigendum 1 issued by CEN on 19 October 2005 and Amendment 1 approved by CEN 18 September 2008.

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 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 Management Centre has the same status as the official versions.

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Foreword

This document (EN 13411-3:2004+A1:2008) has been prepared by Technical Committee CEN/TC 168 "Chains, ropes, webbing, slings and accessories - Safety", the secretariat of which is held by BSI.

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 2009, and conflicting national standards shall be withdrawn at the latest by December 2009.

This document supersedes EN 13411-3:2004.

This document includes Amendment 1, approved by CEN on 2008-09-18 and includes Corrigendum 1 issued by CEN on 19 October 2005.

The start and finish of text introduced or altered by amendment is indicated in the text by tags $\boxed{A1}$ $\boxed{A1}$.

The modifications of the related CEN Corrigendum have been implemented at the appropriate places in the text and are indicated by the tags \boxed{AC} \boxed{AC} .

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

$\boxed{A1}$ For relationship with EU Directive(s), see informative Annexes ZA and ZB, which are integral parts of this document. $\boxed{A1}$

Annex A is informative.

EN 13411 consists of the following parts:

- Part 1: Thimbles for steel wire rope slings
- Part 2: Splicing of eyes for wire rope slings
- Part 3: Ferrules and ferrule-securing
- Part 4: Metal and resin socketing
- Part 5: U-bolt wire rope grips
- Part 6: Asymmetric wedge socket
- Part 7: Symmetric wedge socket

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

Introduction

This European Standard is a Type C Standard as stated in EN 1070.

This European Standard has been prepared to provide a means of conforming with the essential requirements of the Machinery Directive and associated EFTA regulations.

Purchasers ordering to this standard are advised to specify in their purchasing contract that the supplier operates an independently verified quality assurance system to ensure themselves that products claimed to comply consistently achieve the required level of quality.

It is understood that type testing of a ferrule-secured eye termination system is the responsibility of the ferrule-secured eye termination system designer.

It is also understood that the ferrule supplier is responsible for ensuring that the material, design and quality of the ferrule is in accordance with the ferrule-secured eye system designer's specification.

Ferrule-secured eyes manufactured by the ferrule-secured eye termination producer in accordance with this standard are permitted for use as rope terminations in the production of steel wire rope slings. They are also used as terminations for steel wire rope assemblies for raising, lowering and supporting loads.

The steel wire rope terminations concerned and the extent to which hazards, hazardous situations and events are covered are indicated in the scope of this document.

When provisions of this type C standard are different from those which are stated in type A or B standards, the provisions of this type C standard take precedence over the provisions of the other standards, for steel wire rope terminations that have been designed and produced according to the provisions of this type C standard.

1 Scope

This European Standard deals with the requirements for the ferrule-securing of eyes and endless loops.

It also deals with the requirements for ferrules for the ferrule-securing of eyes and endless loops.

This European Standard applies to the ferrule-securing of eye terminations formed either by a Flemish eye or turn-back eye and covers ferrules made of non alloy carbon steel and aluminium.

This European Standard applies to slings and assemblies using steel wire ropes for general lifting applications up to and including 60mm diameter conforming to EN 12385-4, lift ropes conforming to EN 12385-5 and spiral strand ropes conforming to EN 12385-10.

Type testing of ferrule-secured systems and manufacturing quality control requirements are also specified.

This European standard deals with all significant hazards, hazardous situations and events relevant to this particular steel wire rope termination when used as intended and under conditions of use which are foreseeable by the manufacturer.

This standard applies to terminations of steel wire ropes with ferrules and ferrule-securing which are manufactured after the date of this publication.

NOTE One design of ferrule-secured turn-back eye termination using an oval aluminium ferrule which satisfies the requirements of this European Standard is given for information in annex A.

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 515, *Aluminium and aluminium alloys - Wrought products - Temper designations*

EN 1050:1996, *Safety of machinery – Principles of risk assessment*

EN 12385-1, *Steel wire ropes - Safety - Part 1: General requirements*

EN 12385-2:2002, *Steel wire ropes – Safety – Part 2: Definitions, designation and classification*

EN 12385-4, *Steel wire ropes – Safety – Part 4: Stranded ropes for general lifting applications*

EN 12385-5, *Steel wire ropes – Safety – Part 5: Stranded ropes for lifts*

EN 12385-10, *Steel wire ropes – Safety – Part 10: Spiral ropes for general structural applications*

EN ISO 12100-2, *Safety of machinery - Basic concepts, general principles for design - Part 2: Technical principles (ISO 12100-2:2003)*