

## **Terastrrosside otsadetailid. Ohutus. Osa 8: Trossiotsad ja survetöötlus**

Terminations for steel wire ropes - Safety - Part 8: Swage terminals and swaging

## EESTI STANDARDI EESSÕNA

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ICS 53.020.30; 77.140.99

English Version

## Terminations for steel wire ropes - Safety - Part 8: Swage terminals and swaging

Terminaisons pour câbles en acier - Sécurité - Partie 8:  
Terminaisons à sertir et sertissage

Endverbindungen für Drahtseile aus Stahldraht - Sicherheit  
- Teil 8: Stahlfittinge und Verpressungen

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

Management Centre: Avenue Marnix 17, B-1000 Brussels

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## Foreword

This document (EN 13411-8:2011) 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of an identical text or by endorsement, at the latest by March 2012, and conflicting national standards shall be withdrawn at the latest by March 2012.

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.

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.

For relationship with EU Directive, see informative Annex ZA, which is an integral part of this document.

EN 13411, under the general title *Terminations for steel wire ropes — Safety*, 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;*
- *Part 8: Swage terminals and swaging.*

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, Croatia, 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 the United Kingdom.

## Introduction

This European Standard is a type C standard as stated in EN ISO 12100.

The machinery concerned and the extent to which hazards, hazardous situations and events are covered are indicated in the scope of this standard.

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 machines that have been designed and built according to the provisions of this type C standard.

## 1 Scope

This European Standard specifies the minimum requirements for swage terminals and the securing of such terminals by a swaging process to carbon steel rope conforming to EN 12385-4 and EN 12385-5, spiral strand rope conforming to EN 12385-10 and stainless steel stranded rope.

This European Standard is not applicable to spiral rope incorporating full lock wires – see EN 12385-10 –, nor ropes with coverings and /or fillings (see 3.6.3 of EN 12385-2:2002+A1:2008).

This European Standard is applicable to swaged terminations that have a terminal efficiency factor,  $K_T$ , of at least 0,9 and are used as part of a wire rope accessory such as a sling, or wire rope assembly that performs a raising, lowering, hauling or supporting function on lifting machinery.

This European Standard is applicable to terminals of the following types that are made of carbon or stainless steel:

- open swage socket;
- closed swage socket;
- swage terminal with thread;
- swage terminal end stop.

This European Standard deals with all significant hazards, hazardous situations and events relevant to swaged terminations, when used as intended and under conditions of misuse which are reasonably foreseeable (see Clause 4).

This European Standard applies to swaged terminations which are manufactured after the date of its publication.

This European Standard is not applicable to swaged terminations used for anchoring ropes to winch drums.

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

EN 12385-2:2002+A1:2008, *Steel wire ropes — Safety — Part 2: Definitions, designation and classification*

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)*

EN ISO 12100-1:2003, *Safety of machinery — Basic concepts, general principles for design — Part 1: Basic terminology, methodology (ISO 12100-1:2003)*

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

EN ISO 14121-1, *Safety of machinery — Risk assessment — Part 1: Principles (ISO 14121-1:2007)*