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## Arbete med spänning – Isolerande rep

*Live working –  
Insulating ropes*

Som svensk standard gäller europastandarden EN 62192:2009. Den svenska standarden innehåller den officiella engelska språkversionen av EN 62192:2009.

### Nationellt förord

Europastandarden EN 62192:2009

består av:

- **europastandardens ikraftsättningsdokument**, utarbetat inom CENELEC
- **IEC 62192, First edition, 2009 - Live working - Insulating ropes**

utarbetad inom International Electrotechnical Commission, IEC.

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ICS 13.260; 29.240.20; 29.260.99

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Det finns många fördelar med att ha gemensamma tekniska regler för bl a säkerhet, prestanda, dokumentation, utförande och skötsel av elprodukter, elanläggningar och metoder. Genom att utforma sådana standarder blir säkerhetskraven tydliga och utvecklingskostnaderna rimliga samtidigt som marknadens acceptans för produkten eller tjänsten ökar.

Många standarder inom elområdet beskriver tekniska lösningar och metoder som åstadkommer den elsäkerhet som föreskrivs av svenska myndigheter och av EU.

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Standardiseringsarbetet inom SEK är organiserat i referensgrupper bestående av ett antal tekniska kommittéer som speglar hur arbetet inom IEC och CENELEC är organiserat.

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Du som vill dra nytta av dessa möjligheter är välkommen att kontakta SEKs kansli för mer information.

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English version

**Live working -  
Insulating ropes  
(IEC 62192:2009)**

Travaux sous tension -  
Cordes isolantes  
(CEI 62192:2009)

Arbeiten unter Spannung -  
Isolierende Seile  
(IEC 62192:2009)

This European Standard was approved by CENELEC on 2009-05-01. CENELEC 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 Central Secretariat or to any CENELEC 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 CENELEC member into its own language and notified to the Central Secretariat has the same status as the official versions.

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

# CENELEC

European Committee for Electrotechnical Standardization  
Comité Européen de Normalisation Electrotechnique  
Europäisches Komitee für Elektrotechnische Normung

**Central Secretariat: Avenue Marnix 17, B - 1000 Brussels**

## Foreword

The text of document 78/773/FDIS, future edition 1 of IEC 62192, prepared by IEC TC 78, Live working, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 62192 on 2009-05-01.

The following dates were fixed:

- latest date by which the EN has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2010-02-01
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 2012-05-01

Annex ZA has been added by CENELEC.

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## Endorsement notice

The text of the International Standard IEC 62192:2009 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following note has to be added for the standard indicated:

IEC 60743 + A1      NOTE Harmonized as EN 60743:2001 + A1:2008 (not modified).

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**Annex ZA**  
(normative)

**Normative references to international publications  
with their corresponding European publications**

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.

NOTE When an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60060-1	- <sup>1)</sup>	High-voltage test techniques - Part 1: General definitions and test requirements	HD 588.1 S1	1991 <sup>2)</sup>
IEC 60212	1971	Standard conditions for use prior to and during the testing of solid electrical insulating materials	HD 437 S1	1984
IEC 60417	Data- base	Graphical symbols for use on equipment	-	-
IEC 61318	2007	Live working - Conformity assessment applicable to tools, devices and equipment	EN 61318	2008
IEC 61477	- <sup>1)</sup>	Live working - Minimum requirements for the utilization of tools, devices and equipment	EN 61477	2009 <sup>2)</sup>
ISO 2307	- <sup>1)</sup>	Fibre ropes - Determination of certain physical and mechanical properties	EN ISO 2307	2005 <sup>2)</sup>

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<sup>1)</sup> Undated reference.

<sup>2)</sup> Valid edition at date of issue.



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## INTRODUCTION

Insulating ropes designed and manufactured according to this standard contribute to the safety of the users, provided they are used by skilled persons, in accordance with safe methods of work and the instructions for use.

This International Standard defines the required electrical properties of insulating ropes which already meet other specifications relating to mechanical strength, physical and construction properties, for use in live working at the power frequency system voltages up to and including 800 kV r.m.s.

This standard does not propose to address all the safety factors associated with the use of the insulating rope. It is the responsibility of the user to establish appropriate safety practices.

Ropes which meet this standard can bridge two or more live phase conductors, or one phase conductor and earth as required during live working. Effects of the use of insulating ropes on the dielectric strength of the installation have to be evaluated. Depending on the configuration of an installation, the use of insulating ropes will have different effects on its dielectric strength.

Cotton, sisal and hemp ropes are unsuitable for this application, as are any other ropes that exhibit electrical conductivity. Examples of ropes which are able to meet the requirements of this standard are formed from fibres that have been treated with a wax or other chemical which causes the surface of the rope to become hydrophobic.

This document has been prepared according to the requirements of IEC 61477 where applicable.

The product covered by this standard may have an impact on the environment during some or all stages of its life cycle. These impacts can range from slight to significant, be of short-term or long-term, and occur at the global, regional or local level.

Except for a requirement for the selection of a testing dye and the disposal statement in the instructions for use, this standard does not include requirements and test provisions for the manufacturers of the product, or recommendations to the users of the product for environmental improvement. However, all parties intervening in its design, manufacture, packaging, distribution, use, maintenance, repair, reuse, recovery and disposal are invited to take account of environmental considerations.

# LIVE WORKING – INSULATING ROPES

## 1 Scope

This International Standard covers insulating ropes that are utilized during live working procedures in contact with parts of installations operating at voltages up to and including 800 kV r.m.s.

Insulating ropes for live working procedure under rain and/or d.c. conditions are not covered by this 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.

IEC 60060-1, *High-voltage test techniques – Part 1: General definitions and test requirements*

IEC 60212:1971, *Standard conditions for use prior to and during the testing of solid electrical insulating materials*

IEC 60417, *Graphical symbols for use on equipment*

IEC 61318:2007, *Live working – Conformity assessment applicable to tools, devices and equipment*

IEC 61477, *Live working – Minimum requirements for the utilization of tools, devices and equipment*

ISO 2307, *Ropes – Determination of certain physical and mechanical properties*

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