SLOVENSKI STANDARD
SIST EN 60079-19:2011/A1:2015

01-julij-2015

Eksplozivne atmosfere - 19. del: Popravilo, obnova in remont opreme (IEC 60079-19:2010/A1:2015)

Explosive atmospheres -- Part 19: Equipment repair, overhaul and reclamation (IEC 60079-19:2010/A1:2015)

Explosionsgefährdete Bereiche -- Teil 19: Gerätereparatur, Überholung und Regenerierung (IEC 60079-19:2010/A1:2015)

Atmosphères explosives - Partie 19: Réparation, révision et remise en état de l'appareil (IEC 60079-19:2010/A1:2015)

Ta slovenski standard je istoveten z: **EN 60079-19:2011/A1:2015**

ICS:

29.260.20	Električni aparati za eksplozivna ozračja	Electrical apparatus for explosive atmospheres

SIST EN 60079-19:2011/A1:2015 **en,fr,de**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 60079-19:2011/A1

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English Version

Explosive atmospheres - Part 19: Equipment repair, overhaul and reclamation (IEC 60079-19:2010/A1:2015)

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Explosionsgefährdete Bereiche - Teil 19: Gerätereparatur, Überholung und Regenerierung (IEC 60079-19:2010/A1:2015)

This amendment A1 modifies the European Standard EN 60079-19:2011; it was approved by CENELEC on 2015-04-23. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this amendment 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-CENELEC Management Centre or to any CENELEC member.

This amendment 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 CEN-CENELEC Management Centre has the same status as the official versions.

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

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

Ref. No. EN 60079-19:2011/A1:2015 E

Foreword

The text of document 31J/249/FDIS, future IEC 60079-19:2010/A1, prepared by SC 31J "Classification of hazardous areas and installation requirements" of IEC/TC 31 "Explosive atmospheres" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 60079-19:2011/A1:2015.

The following dates are fixed:

• latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement	(dop)	2016-01-23
• latest date by which the national standards conflicting with the document have to be withdrawn	(dow)	2018-04-23

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CENELEC [and/or CEN] shall not be held responsible for identifying any or all such patent rights.

Endorsement notice

The text of the International Standard IEC 60079-19:2010/A1:2015 was approved by CENELEC as a European Standard without any modification.

Annex ZA
(normative)

Normative references to international publications with their corresponding European publications

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

NOTE 1 When an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

NOTE 2 Up-to-date information on the latest versions of the European Standards listed in this annex is available here: www.cenelec.eu

Addition and replacement in Annex ZA of EN 60079-19:2011:

Publication	Year	Title	EN/HD	Year
***Add** after IEC 60079-7 the following new references:*				
IEC 60079-7	1990 [1)]	Electrical apparatus for explosive gas atmospheres - Part 7: Increased safety "e"	-	-
IEC 60079-7	2001	Electrical apparatus for explosive gas atmospheres - Part 7: Increased safety "e"	EN 60079-7	2003 [2)]
***Replace** IEC 60079-15 with the following new references:*				
IEC 60079-15	2005	Electrical apparatus for explosive gas atmospheres - Part 15: Construction, test and marking of type of protection "n" electrical apparatus	EN 60079-15	2005 [3)]
IEC 60079-15	2010	Explosive atmospheres - Part 15: Equipment protection by type of protection "n"	EN 60079-15	2010

[1)] Superseded by IEC 60079-7:2001, which is also superseded by IEC 60079-7:2006.

[2)] Superseded by EN 60079-7:2007 (IEC 60079-7:2006).

[3)] Superseded by EN 60079-15:2010 (IEC 60079-15:2010).

IEC 60079-19

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INTERNATIONAL STANDARD

NORME INTERNATIONALE

AMENDMENT 1
AMENDEMENT 1

Explosive atmospheres –
Part 19: Equipment repair, overhaul and reclamation

Atmosphères explosives –
Partie 19: Réparation, révision et remise en état de l'appareil

INTERNATIONAL
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FOREWORD

This amendment has been prepared by subcommittee 31J: Classification of hazardous areas and installation requirements, of IEC technical committee 31: Explosive atmospheres.

The text of this amendment is based on the following documents:

FDIS	Report on voting
31J/249/FDIS	31J/250/RVD

Full information on the voting for the approval of this amendment can be found in the report on voting indicated in the above table.

The committee has decided that the contents of this amendment and the base publication will remain unchanged until the stability date indicated on the IEC website under "http://webstore.iec.ch" in the data related to the specific publication. At this date, the publication will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

2 Normative references

*Add, after "*IEC 60079-7*, Explosive atmospheres – Part 7: Equipment protection by increased safety "e"" the following new references:*

IEC 60079-7:1990, *Electrical apparatus for explosive gas atmospheres – Part 7: Increased safety "e"*

IEC 60079-7:2001, *Electrical apparatus for explosive gas atmospheres – Part 7: Increased safety "e"*

*Replace "*IEC 60079-15, *Explosive atmospheres – Part 15: Equipment protection by type of protection "n"" with the following new references:*

IEC 60079-15:2005, *Electrical apparatus for explosive gas atmospheres – Part 15: Construction, test and marking of type of protection "n" electrical apparatus*

IEC 60079-15:2010, *Explosive atmospheres – Part 15: Equipment protection by type of protection "n"*

8.2.4 Insulation

Replace the existing text of Subclause 8.2.4 by the following new text:

Comprehensive details of the insulation system of windings, including the type of impregnation varnish, are normally included in the certificate documentation. Where this does not apply, full information shall be sought from the manufacturer or determined by detailed inspection of the original winding.

8.2.6.1 General

Replace the existing text of Subclause 8.2.6.1 by the following new text:

The electrical construction of Type of Protection "e" equipment decisively influences the explosion safety and the repairer shall be in full possession of the necessary information and equipment. The whole of the winding shall be restored to the original condition except that a partial winding replacement may be possible on larger equipment where this may be practicable.

Replace the existing title and text of Subclause 8.2.6.1.1 by the following new text:

8.2.6.1.1 For machines with a rated voltage of 1 000 V or less; machines evaluated to IEC 60079-7:1969, 1990 or 2001:

The following repair techniques are acceptable:

- stator windings replaced with those provided by the manufacturer;
- stator windings replaced based on manufacturer's winding data;
- copy winding techniques;

The following winding data are required to be able to repair the stator winding and maintain the original t_E:

a) type of winding – for example, single-layer, double-layer, etc.;
b) winding diagram;
c) number of turns/conductors/slot, parallel paths per phase;
d) interphase connections;
e) conductor size;
f) insulation system, including slot insulation and the generic varnish system or process such as VPI or trickle;
g) measurement or calculation of resistance/phase or between terminals.
h) coil pitch
i) winding projection, including clearance between coils and enclosure

NOTE 1 Converter-fed motors are not protected using the concept of t_E, but are protected either with embedded temperature sensors or by the inherent design of the converter.

Where copy rewind techniques are being used, all of the following are required:

a) Where there is a risk of damaging the core when stripping out the old winding, a core flux test shall be conducted, at an appropriate value, such as 1,5 T (50 Hz) or 1,32 T (60 Hz), before and after stripping winding to verify condition of core. The core losses after stripping shall be no greater than 110 % of the core losses before stripping.
b) Removal of stator winding shall be by use of chemical stripping, controlled pyrololysis (temperature controlled burn out) where the stator temperature does not exceed 370 °C or cold stripping process.
c) The cross section area of the conductor shall be no less than the cross section area of the original winding and not greater than 103 % of the cross section area of the original winding.