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**Sistemi električne izolacije – Toplotno vrednotenje sprememb preverjenega  
EIS z žičnim navitjem**

Electrical insulation systems – Thermal evaluation of modifications to an established  
wire-wound EIS

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EUROPEAN STANDARD

**EN 61858**

NORME EUROPÉENNE

EUROPÄISCHE NORM

March 2005

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Supersedes EN 61858:2000

English version

**Electrical insulation systems –  
Thermal evaluation of modifications to an established wire-wound EIS  
(IEC 61858:2004)**

Systèmes d'isolation électrique -  
Evaluation thermique des modifications  
apportées à un système d'isolation  
électrique éprouvé à enroulements à fil  
(CEI 61858:2004)

Elektrische Isoliersysteme –  
Thermische Bewertung von  
Veränderungen an einem erprobten,  
drahtgewickelten EIS  
(IEC 61858:2004)

**iTeh STANDARD PREVIEW**

This European Standard was approved by CENELEC on 2005-02-01. 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, 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.

**CENELEC**

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

**Central Secretariat: rue de Stassart 35, B - 1050 Brussels**

## Foreword

The text of document 98/221/FDIS, future edition 2 of IEC 61858, prepared by IEC TC 98, Electrical insulation systems (EIS), was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 61858 on 2005-02-01.

This European Standard supersedes EN 61858:2000.

It constitutes a technical revision that incorporates test procedures referenced in EN 60034-18-22.

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) 2005-11-01
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 2008-02-01

Annex ZA has been added by CENELEC.

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## iTeh STANDARD PREVIEW

### Endorsement notice

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The text of the International Standard IEC 61858:2004 was approved by CENELEC as a European Standard without any modification.

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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 Where 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 60172	- <sup>1)</sup>	Test procedure for the determination of the temperature index of enamelled winding wires	EN 60172	1994 <sup>2)</sup>
IEC 60216-5	- <sup>1)</sup>	Electrical insulating materials - Thermal endurance properties Part 5: Determination of relative thermal endurance index (RTE) of an insulating material	EN 60216-5	2003 <sup>2)</sup>
IEC 60317	Series	Specifications for particular types of winding wires	EN 60317	Series
IEC 60505	- <sup>1)</sup>	Evaluation and qualification of electrical insulation systems	EN 60505	2004 <sup>2)</sup>
IEC 60791	- <sup>1)</sup>	Performance evaluation of insulation systems based on service experience and functional tests	-	-
IEC 61033	- <sup>1)</sup>	Test methods for the determination of bond strength of impregnating agents to an enamelled wire substrate	-	-
IEC 61857	Series	Electrical insulation systems - Procedures for thermal evaluation	EN 61857	Series
IEC 61857-1	- <sup>1)</sup>	Electrical insulation systems - Procedures for thermal evaluation Part 1: General requirements - Low-voltage	EN 61857-1	2005 <sup>2)</sup>
IEC 62114	- <sup>1)</sup>	Electrical insulation systems (EIS) - Thermal classification	EN 62114	2001 <sup>2)</sup>

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1) Undated reference.

2) Valid edition at date of issue.

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Deuxième édition  
Second edition  
2004-11

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Международная Электротехническая Комиссия

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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

**ELECTRICAL INSULATION SYSTEMS –  
THERMAL EVALUATION OF MODIFICATIONS TO  
AN ESTABLISHED WIRE-WOUND EIS**

## FOREWORD

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International Standard IEC 61858 has been prepared by IEC technical committee 98: Electrical insulation systems (EIS).

This second edition cancels and replaces the first edition, published in 1999, and constitutes a technical revision that incorporates test procedures referenced in IEC 60034-18-22.

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

FDIS	Report on voting
98/221/FDIS	98/227/RVD

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

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

The committee has decided that the contents of this publication will remain unchanged until the maintenance result date indicated on the IEC web site 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.

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## INTRODUCTION

This International Standard describes procedures for the evaluation of changes to an established electrical insulation system (EIS) for wire-wound electrotechnical devices and the effect of these changes on the thermal classification of the established EIS.

General principles for evaluation and qualification of EIS can be found in IEC 60505. Unless the procedures of this standard indicate otherwise, the principles of IEC 60505 should be followed.

The thermal classification of an EIS is established either by known service life, in accordance with IEC 60791, or evaluated in accordance with IEC 61857 (all parts).

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