SLOVENSKI STANDARD
SIST EN 60034-18-22:2002

01-september-2002

Rotating electrical machines - Part 18-22: Functional evaluation of insulation systems - Test procedures for wire-wound-windings (IEC 60034-18-22:2000)

Rotating electrical machines -- Part 18-22: Functional evaluation of insulation systems - Test procedures for wire-wound windings - Classification of changes and insulation component substitutions

Drehende elektrische Maschinen -- Teil 18-22: Funktionelle Bewertung von Isoliersystemen - Prüfverfahren für Runddrahtwicklungen - Klassifizierung von Änderungen und Substitutionen von Systemkomponenten

Machines électriques tournantes -- Partie 18-22: Evaluation fonctionnelle des systèmes d'isolation - Procédures d'essai pour enroulement à fils - Classification des modifications et des substitutions de composants d'isolation

Ta slovenski standard je istoveten z: EN 60034-18-22:2001

ICS:

29.080.30	Izolacijski sistemi	Insulation systems
29.160.01	Rotacijski stroji na splošno	Rotating machinery in general

SIST EN 60034-18-22:2002 en

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 60034-18-22

March 2001

ICS 29.080.01;29.160.01

English version

Rotating electrical machines
Part 18-22: Functional evaluation of insulation systems - Test procedures for wire-wound windings - Classification of changes and insulation component substitutions
(IEC 60034-18-22:2000)

Machines électriques tournantes
Partie 18-22: Evaluation fonctionnelle des systèmes d'isolation - Procédures d'essai pour enroulement à fils - Classification des modifications et des substitutions de composants d'isolations
(CEI 60034-18-22:2000)

Drehende elektrische Maschinen
Teil 18-22: Funktionelle Bewertung von Isoliersystemen - Prüfverfahren für Runddrahtwicklungen - Klassifizierung von Änderungen und Substitutionen von Systemkomponenten
(IEC 60034-18-22:2000)

This European Standard was approved by CENELEC on 2000-11-01. 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, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, 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

Ref. No. EN 60034-18-22:2001 E

Foreword

The text of document 2/1088/FDIS, future edition 2 of IEC 60034-18-22, prepared by IEC TC 2, Rotating machinery, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 60034-18-22 on 2000-11-01.

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)	2001-08-01
– latest date by which the national standards conflicting with the EN have to be withdrawn	(dow)	2003-11-01

Annexes designated "normative" are part of the body of the standard.
In this standard, annex ZA is normative.
Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 60034-18-22:2000 was approved by CENELEC as a European Standard without any modification.

Annex ZA
(normative)

Normative references to international publications with their corresponding European publications

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).

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

Publication	Year	Title	EN/HD	Year
IEC 60034-18-21	1992	Rotating electrical machines Part 18: Functional evaluation of insulation systems -- Section 21: Test procedures for wire-wound windings - Thermal evaluation and classification	EN 60034-18-21	1994
IEC 60172	1987	Test procedure for the determination of the temperature index of enamelled winding wires	EN 60172	1994
IEC 60216	Series	Electrical insulating materials - Thermal endurance properties	EN 60216/HD 611	Series
IEC 60317	Series	Specifications for particular types of winding wires	EN 60317	Series
IEC 61033	1991	Test methods for the determination of bond strength of impregnating agents to an enamelled wire substrate	-	-

NORME INTERNATIONALE

INTERNATIONAL STANDARD

CEI
IEC

60034-18-22

Deuxième édition
Second edition
2000-06

Machines électriques tournantes –

Partie 18-22:
Evaluation fonctionnelle des systèmes d'isolation – Procédures d'essai pour enroulements à fils – Classification des modifications et des substitutions de composants d'isolation

Rotating electrical machines –

Part 18-22:
Functional evaluation of insulation systems – Test procedures for wire-wound windings – Classification of changes and insulation component substitutions

International Electrotechnical Commission 3, rue de Varembé Geneva, Switzerland
Telefax: +41 22 919 0300 e-mail: inmail@iec.ch IEC web site http://www.iec.ch

Commission Electrotechnique Internationale
International Electrotechnical Commission
Международная Электротехническая Комиссия

CODE PRIX
PRICE CODE N

Pour prix, voir catalogue en vigueur
For price, see current catalogue

CONTENTS

INTERNATIONAL ELECTROTECHNICAL COMMISSION

ROTATING ELECTRICAL MACHINES –

Part 18-22: Functional evaluation of insulation systems – Test procedures for wire-wound windings – Classification of changes and insulation component substitutions

FOREWORD

1) The IEC (International Electrotechnical Commission) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of the IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, the IEC publishes International Standards. Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. The IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.

2) The formal decisions or agreements of the IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested National Committees.

3) The documents produced have the form of recommendations for international use and are published in the form of standards, technical specifications, technical reports or guides and they are accepted by the National Committees in that sense.

4) In order to promote international unification, IEC National Committees undertake to apply IEC International Standards transparently to the maximum extent possible in their national and regional standards. Any divergence between the IEC Standard and the corresponding national or regional standard shall be clearly indicated in the latter.

5) The IEC provides no marking procedure to indicate its approval and cannot be rendered responsible for any equipment declared to be in conformity with one of its standards.

6) Attention is drawn to the possibility that some of the elements of this International Standard may be the subject of patent rights. The IEC shall not be held responsible for identifying any or all such patent rights.

International Standard IEC 60034-18-22 has been prepared by IEC technical committee 2: Rotating machinery.

This second edition cancels and replaces the first edition published in 1996 of which it constitutes a technical revision.

This bilingual version (2001-04) replaces the English version.

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

FDIS	Report on voting
2/1088/FDIS	2/1096/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 3.

It forms part of a series under the general title *Rotating electrical machines:*

Part 18-1:1992, Functional evaluation of insulation systems – General guidelines

Part 18-21:1992, Functional evaluation of insulation systems – Test procedures for wire-wound windings – Thermal evaluation and classification

Part 18-31:1992, Functional evaluation of insulation systems – Test procedures for form-wound windings – Thermal evaluation and classification of insulation systems used in machines up to and including 50 MVA and 15 kV

Part 18-32:1995, Functional evaluation of insulation systems – Test procedures for form-wound windings – Electrical evaluation of insulation systems used in machines up to and including 50 MVA and 15 kV

Part 18-33:1995, Functional evaluation of insulation systems – Test procedures for form-wound windings – Multifactor functional evaluation – Endurance under combined thermal and electrical stresses of insulation systems used in machines up to and including 50 MVA and 15 kV

The committee has decided that the contents of this publication will remain unchanged until 2005. At this date, the publication will be

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

INTRODUCTION

IEC 60034-18-1 presents general principles for evaluation and classification of insulation systems used in rotating electrical machines. Unless the procedures of this part indicate otherwise, the principles of IEC 60034-18-1 should be followed.

IEC 60034-18-21 deals with the thermal evaluation and classification of insulation systems for wire-wound windings in respect of normal procedures as referred to in 5.3.2.1 of IEC 60034-18-1.

This part of IEC 60034 is concerned with procedures of verification of the effects of changes in insulation systems for wire-wound windings covered by 5.3.2.2 of IEC 60034-18-1.