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Roterande elektriska maskiner – Del 3: Särskilda fordringar på synkrogeneratorer drivna av ång- eller gasturbiner

*Rotating electrical machines –
Part 3: Specific requirements for synchronous generators
driven by steam turbines or combustion gas turbines*

Som svensk standard gäller europastandarden EN 60034-3:2008. Den svenska standarden innehåller den officiella engelska språkversionen av EN 60034-3:2008.

Nationellt förord

Europastandarden EN 60034-3:2008

består av:

- **europastandardens ikraftsättningsdokument**, utarbetat inom CENELEC
- **IEC 60034-3, Sixth edition, 2007 - Rotating electrical machines - Part 3: Specific requirements for synchronous generators driven by steam turbines or combustion gas turbines**

utarbetad inom International Electrotechnical Commission, IEC.

Tidigare fastställd svensk standard SS-EN 60034-3, utgåva 2, 2005, gäller ej fr o m 2011-06-01.

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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.

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English version

**Rotating electrical machines -
Part 3: Specific requirements for synchronous generators
driven by steam turbines or combustion gas turbines
(IEC 60034-3:2007)**

Machines électriques tournantes -
Partie 3: Règles spécifiques pour
les alternateurs synchrones entraînés
par turbines à vapeur ou par turbines
à gaz à combustion
(CEI 60034-3:2007)

Drehende elektrische Maschinen -
Teil 3: Besondere Anforderungen
an Synchrongeneratoren angetrieben
durch Dampfturbinen oder Gasturbinen
(IEC 60034-3:2007)

This European Standard was approved by CENELEC on 2008-06-01. 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: rue de Stassart 35, B - 1050 Brussels

Foreword

The text of document 2/1461/FDIS, future edition 6 of IEC 60034-3, prepared by IEC TC 2, Rotating machinery, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 60034-3 on 2008-06-01.

This European Standard supersedes EN 60034-3:2005.

The significant technical changes with respect to EN 60034-3:2005 are as follows:

- the contents is now restricted to synchronous generators driven by steam turbines or combustion gas turbines, but covers as well cylindrical rotor and salient-pole generators;
- synchronous motors have been taken out of the scope of Part 3.

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) 2009-03-01
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 2011-06-01

Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 60034-3:2007 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 60034-8 NOTE Harmonized as EN 60034-8:2007 (not modified).

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 60034-1	- ¹⁾	Rotating electrical machines - Part 1: Rating and performance	EN 60034-1	2004 ²⁾
IEC 60034-4	- ¹⁾	Rotating electrical machines - Part 4: Methods for determining synchronous machine quantities from tests	EN 60034-4	1995 ²⁾
IEC 60045-1	- ¹⁾	Steam turbines - Part 1: Specifications	EN 60045-1	1993 ²⁾
IEC 60079 (mod)	Series	Explosive atmospheres	EN 60079	Series

¹⁾ Undated reference.

²⁾ Valid edition at date of issue.

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ROTATING ELECTRICAL MACHINES –

Part 3: Specific requirements for synchronous generators driven by steam turbines or combustion gas turbines

1 Scope

This part of IEC 60034 applies to three-phase synchronous generators, having rated outputs of 10 MVA and above driven by steam turbines or combustion gas turbines. It supplements the basic requirements for rotating machines given in IEC 60034-1.

Common requirements are prescribed together with specific requirements for air, for hydrogen or for liquid cooled synchronous generators.

This part of IEC 60034 also gives the precautions to be taken when using hydrogen cooled generators including:

- rotating exciters driven by synchronous generators;
- auxiliary equipment needed for operating the generators;
- parts of the building where hydrogen might accumulate.

NOTE 1 These requirements also apply to a synchronous generator driven by both a steam turbine and a combustion gas turbine as part of a single shaft combined cycle unit.

NOTE 2 These requirements do not apply to synchronous generators driven by water (hydraulic) turbine or wind turbine.

NOTE 3 The precautions to be taken when using hydrogen are valid for all cases where hydrogen is used as a coolant.

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 60034-1, *Rotating electrical machines – Part 1: Rating and performance*

IEC 60034-4, *Rotating electrical machines – Part 4: Methods for determining synchronous machine quantities from tests*

IEC 60045-1, *Steam turbines – Part 1: Specifications*

IEC 60079 (all parts), *Electrical apparatus for explosive gas atmospheres*

