SLOVENSKI STANDARD
SIST EN 62430:2010

01-januar-2010

Naḷ rtovanje elektriḷ nih in elektronskih proizvodov glede na okoljske vidike (IEC 62430:2009)

Environmentally conscious design for electrical and electronic products

Umweltbewusstes Gestalten von elektrischen und elektronischen Produkten

Eco-conception pour les produits électriques et électroniques

Ta slovenski standard je istoveten z: **EN 62430:2009**

ICS:

13.020.30	Ocenjevanje vpliva na okolje	Environmental impact assessment
29.020	Elektrotehnika na splošno	Electrical engineering in general
31.020	Elektronske komponente na splošno	Electronic components in general

SIST EN 62430:2010 **en,fr**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 62430

June 2009

ICS 13.020; 43.040.10

English version

Environmentally conscious design for electrical and electronic products (IEC 62430:2009)

Eco-conception pour les produits électriques et électroniques (CEI 62430:2009)

Umweltbewusstes Gestalten von elektrischen und elektronischen Produkten (IEC 62430:2009)

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.

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CENELEC

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

Central Secretariat: Avenue Marnix 17, B - 1000 Brussels

Ref. No. EN 62430:2009 E

Foreword

The text of document 111/104/CDV, future edition 1 of IEC 62430, prepared by IEC TC 111, Environmental standardization for electrical and electronic products and systems, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 62430 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– latest date by which the national standards conflicting with the EN have to be withdrawn	(dow)	2012-05-01

Endorsement notice

The text of the International Standard IEC 62430:2009 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following notes have to be added for the standards indicated:

ISO 9000	NOTE	Harmonized as EN ISO 9000:2005 (not modified).
ISO 9001	NOTE	Harmonized as EN ISO 9001:2008 (not modified).
ISO 14001	NOTE	Harmonized as EN ISO 14001:2004 (not modified).
ISO 14040	NOTE	Harmonized as EN ISO 14040:2006 (not modified).

IEC 62430

Edition 1.0 2009-02

INTERNATIONAL STANDARD

NORME INTERNATIONALE

Environmentally conscious design for electrical and electronic products

Eco-conception pour les produits électriques et électroniques

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

COMMISSION
ELECTROTECHNIQUE
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INTERNATIONAL ELECTROTECHNICAL COMMISSION

ENVIRONMENTALLY CONSCIOUS DESIGN FOR ELECTRICAL AND ELECTRONIC PRODUCTS

FOREWORD

1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of 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, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). 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. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
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International Standard IEC 62430 has been prepared by IEC technical committee 111: Environmental standardization for electrical and electronic products and systems.

It has the status of a horizontal standard in accordance with IEC Guide 108.

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

CDV	Report on voting
111/104/CDV	111/124/RVC

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.

INTRODUCTION

Every product has an effect on the environment, which may occur at any or all stages of its life cycle – raw-material acquisition, manufacture, distribution, use, maintenance, re-use and end of life. These effects may range from slight to significant; they may be short-term or long-term; and they may occur at the local, national, regional or global level (or a combination thereof).

The widespread use of electrical and electronic products has drawn increased awareness to their environmental impacts. As a result, legislation, as well as market-driven requirements for environmentally conscious design, are emerging.

The goal of environmentally conscious design is the reduction of adverse environmental impacts of a product throughout its entire life cycle. This can involve balancing the environmental aspects of the product with other factors, such as its intended use, performance, cost, marketability and quality, and choosing methods to meet legal and regulatory requirements in the most environmentally friendly way. In striving for this goal, multiple benefits can be achieved for the organization, its customers and other stakeholders. Environmentally conscious design is not a separate design activity; rather, it is an integral part of the existing design process. The "design" in this context includes the activities associated with the processes of product planning, development and decision-making as well as the creation of policies within the organization.

The impetus to create an International Standard was triggered by common circumstances impacting many industries in the global marketplace, since the compositional elements of a product (such as materials, components and services) are provided across national borders. The existence of an International Standard provides for a consistent approach to life cycle management.

This International Standard is intended for use by all those involved in the design and development of electrical and electronic products. This includes all parties in the supply chain regardless of organization type, size, location and complexity. It is applicable for all types of products, new as well as modified. Sector-specific documents may be developed to address needs not covered in this standard. The use of this standard as a base reference is encouraged so as to ensure consistency throughout the electrotechnical sector.

This International Standard provides a set of requirements for the process of environmentally conscious design reflecting the contents of IEC Guide 114 and ISO/TR 14062.

ENVIRONMENTALLY CONSCIOUS DESIGN FOR ELECTRICAL AND ELECTRONIC PRODUCTS

1 Scope

This International Standard specifies requirements and procedures to integrate environmental aspects into design and development processes of electrical and electronic products, including combination of products, and the materials and components of which they are composed (hereafter referred to as products).

NOTE The existence of this standard does not preclude particular sectors from generating their own, more specific, standards or guidelines. Where such documents are produced it is recommended that they use this standard as the reference in order to ensure consistency throughout the electrotechnical sector.

2 Normative references

No normative references are cited. Informative references are noted in the bibliography.

NOTE This clause is included in order to retain typical clause numbering.

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1
design and development
activities that take an idea or requirement and transform these into a product

NOTE The process of design and development usually follows a series of defined steps starting with an initial idea, transforming that into a formal specification, and resulting in the creation of a working prototype and whatever documentation is required to support production of the goods or provision of the service.

3.2
environment
surroundings in which an organization operates, including air, water, land, natural resources, flora, fauna, humans and their interrelation

NOTE Surroundings in this context extend from within an organization to the global system.

[ISO 14001: 2004, definition 3.5]

3.3
environmental aspect
element of an organization's activities or products that can interact with the environment

NOTE A significant environmental aspect has or can have a significant environmental impact.

[ISO 14001:2004, definition 3.6, modified]

3.4
environmental impact
any change to the environment, whether adverse or beneficial, wholly or partly resulting from an organization's environmental aspects

[ISO 14001:2004, definition 3.7]

3.5
environmental parameter
quantifiable attribute of an environmental aspect

EXAMPLE Environmental parameters include the type and quantity of materials used (weight, volume), power consumption, emissions, rate of recyclability, etc.

3.6
environmentally conscious design
ECD
systematic approach which takes into account environmental aspects in the design and development process with the aim to reduce adverse environmental impacts

3.7
environmentally conscious design tool
formalized method which facilitates qualitative or quantitative analysis, comparison and/or solution finding during the ECD process

3.8
life cycle
consecutive and interlinked stages of a product system, from raw material acquisition or generation from natural resources to the final disposal

[ISO 14040:2006, definition 3.1]

3.9
life cycle assessment
LCA
compilation and evaluation of the inputs, outputs and the potential environmental impacts of a product system throughout its life cycle

[ISO 14040:2006, definition 3.2]

3.10
life cycle stage
element of a life cycle

NOTE 1 The phrase 'life cycle phase' is sometimes used interchangeably with 'life cycle stage'.

NOTE 2 Examples of life cycle stages are: raw material acquisition and production; manufacturing; packaging and distribution; installation and use, maintenance and upgrading and end of life.

3.11
life cycle thinking
LCT
consideration of all relevant environmental aspects during the entire life cycle of products

[IEC Guide 109:2003, modified]

3.12
organization
group of people and facilities with an arrangement of responsibilities, authorities and relationships

[ISO 9000:2005, definition 3.3.1,modified]

3.13
process
set of interrelated or interacting activities which transform inputs into outputs

NOTE 1 Inputs to a process are generally outputs of other processes.

NOTE 2 Processes in an organization are generally planned and carried out under controlled conditions to add value.

[ISO 9000:2005, definition 3.4.1, modified]

3.14
product
any goods or service

NOTE This includes interconnected and/or interrelated goods or services.

[ISO 14040:2006, definition 3.9, modified]

3.15
product category
group of technologically or functionally similar products where the environmental aspects can reasonably be expected to be similar

3.16
stakeholder
individual, group or organization that has an interest in an organization or activity

NOTE Usually a stakeholder can affect or is affected by the organization or the activity.

[ISO 14050, definition 3.5, modified]

4 Fundamentals of environmentally conscious design (ECD)

NOTE More detailed information relating to Clause 4 is provided in Annex A.

4.1 General

Clause 4 describes the fundamental requirements of ECD to be implemented by the organization. Clause 5 describes the ECD process to be implemented on an operational basis.

4.2 Life cycle thinking

Environmentally conscious design shall be based on the concept of life cycle thinking (LCT), which requires consideration during the design and development process of the significant environmental aspects of a product in all life cycle stages.

Key elements of life cycle thinking are as follows:

a) having an objective to minimize the overall adverse environmental impact of the product;

b) identifying, qualifying and where feasible, quantifying the significant environmental aspects of the product;

c) considering the trade-offs between environmental aspects and life cycle stages.

The above shall be initiated as early as possible in the design and development process, when most opportunities exist to make changes and improvements to the product affecting its overall environmental performance throughout its life cycle.

NOTE 1 As a first step in LCT, the intended function of the product should be determined. In subsequent design and development stages the influence of any applied business model should be recognized.

NOTE 2 The life cycle stages of any product under control of the organization usually include the processing of materials, manufacturing, distribution, use, maintenance and end-of-life management (including reuse, recycling, recovery and final disposal).

NOTE 3 When a product is part of a system, the environmental performance of one product during one or more life cycle stages can be altered by other products in that system.

NOTE 4 ECD requires collaboration and contributions of all stakeholders along the supply chain.