

INTERNATIONAL STANDARD



Environmental considerations specific to insulated electrical power and control cables



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INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

ICS 29.060.20

ISBN 978-2-8322-7374-6

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CONTENTS

FOREWORD.....	4
INTRODUCTION.....	6
1 Scope.....	7
2 Normative references	7
3 Terms, definitions and symbols.....	7
3.1 Terms and definitions.....	7
3.2 Symbols.....	9
4 General principles	11
5 Environmental checklist approach.....	11
5.1 What is the checklist approach?.....	11
5.2 Checklist.....	12
6 Life cycle assessment (LCA) of cables	12
6.1 General.....	12
6.2 Goal and scope.....	13
6.2.1 LCA study goal	13
6.2.2 Functional unit.....	13
6.2.3 Reference flow	14
6.2.4 System boundary.....	14
6.2.5 Cut-off criteria	15
6.2.6 Assumptions and limitations	15
6.3 Life cycle inventory (LCI)	15
6.3.1 General	15
6.3.2 Data collection.....	15
6.3.3 Data selection.....	16
6.3.4 Allocation procedure.....	16
6.4 Life cycle impact assessment (LCIA).....	16
6.5 Interpretation	17
6.6 Single environmental indicator approach.....	17
7 Environmental and energy cost-based conductor size optimization – ECSO	18
7.1 Overview.....	18
7.2 Basic rule.....	18
7.3 Factors	20
7.4 CO ₂ evaluation.....	20
7.4.1 General	20
7.4.2 CO ₂ emissions during manufacturing, transportation, installation and final disposal	20
7.4.3 CO ₂ emissions at the use phase	20
7.5 Calculation method	20
7.5.1 General	20
7.5.2 Calculation of initial cost.....	20
7.5.3 Calculation of running costs.....	21
7.5.4 Conductor resistance.....	21
7.5.5 Optimum current.....	21
7.5.6 Optimum conductor size	22
7.5.7 Energy reduction related to the use phase of the cable.....	22
7.6 Example.....	23

8	Environment-related communication	24
8.1	General.....	24
8.2	General principles.....	24
8.3	Composition and compliancy to legislation on substances.....	25
8.4	Life cycle assessment.....	25
8.5	End of life	25
Annex A	(informative) Checklist for the checklist approach	26
A.1	Preliminary considerations	26
A.2	Design considerations.....	26
A.3	Production considerations.....	26
A.4	Considerations for use and end of life phase.....	27
Annex B	(informative) Example for ECSO	28
B.1	General.....	28
B.2	Cable data	28
B.3	Calculation condition.....	28
B.4	Initial cost	29
B.4.1	Initial investment	29
B.4.2	Conversion of CO ₂ emissions during material/cable production, removal, transportation and disposal to cost	29
B.4.3	Initial cost (sum).....	29
B.4.4	Conductor resistance.....	30
B.5	Calculation of running costs.....	30
B.5.1	Costs for Joule losses during anticipated life time.....	30
B.5.2	Costs for CO ₂ emission during anticipated life time	30
B.6	Life cycle cost.....	31
B.7	Optimum current.....	31
B.8	Efficiency.....	32
B.8.1	Calculation of energy efficiency	32
B.9	Life cycle cost versus service life.....	33
Annex C	(informative) Example of environmental communication.....	34
Bibliography	35
Figure 1	– Life cycle phases	13
Figure 2	– Life cycle costs for conductor size for a certain current	19
Figure 3	– Optimum current range for minimizing life cycle cost.....	19
Table B.1	– Life cycle cost versus service life.....	33
Table B.2	– Life cycle cost versus service life, relative to 3C 70 mm ²	33

INTERNATIONAL ELECTROTECHNICAL COMMISSION

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INSULATED ELECTRICAL POWER AND CONTROL CABLES**

FOREWORD

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International Standard IEC 62125 has been prepared by IEC technical committee 20: Electric cables.

This first edition cancels and replaces IEC TR 62125, published in 2007. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to IEC TR 62125:2007:

- a) development of the document from TR to international standard;
- b) inclusion of a methodology for LCA;
- c) inclusion of a methodology for conductor size optimization.

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

FDIS	Report on voting
20/1876/FDIS	20/1881/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 stability date indicated on the IEC web site under "<http://webstore.iec.ch>" in the table related to the specific publication. At this date, the publication will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
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INTRODUCTION

The cable sector has, for many years, considered the impact of electric cables on the environment with respect to their operating conditions. Transmission system operators, distribution system operators, manufacturers, installers/contractors, users and authorities have considerably increased their requirements to take into account the environmental impact of electric cables.

IEC TC 20 regularly reviews its approach to the incorporation of environmental aspects into standards for electric cables and their components. Environmental considerations should be included in both design and redesign work with respect to the raw materials used, energy consumption, emissions and generation of waste during production, end of life recycling or disposal, and in-service performance.

This document supersedes IEC TR 62125 published 2007, which intended to give assistance to writers of standards within IEC Technical Committee 20, to take into account the relevant environmental aspects that are specific to electric cables in normal use.

This document is addressed to writers of standards, manufacturers and users of power cables to provide guidance when evaluating:

- the qualitative environmental impact (checklist approach), or
- the quantitative environmental impact (LCA approach), and
- the environmental and energy cost-based conductor size optimization (ECSO).

ENVIRONMENTAL CONSIDERATIONS SPECIFIC TO INSULATED ELECTRICAL POWER AND CONTROL CABLES

1 Scope

This document provides methodologies addressing environmental evaluation and communication related to cables in normal use.

It includes an environmental checklist for power cables, the method for life cycle assessment (LCA) and a methodology for conductor size optimization.

The results obtained by applying such methodologies can be used for external communication. Environmental communication can also include other topics, such as material declaration.

2 Normative references

The following documents are referred to in the text in such a way, that some or all of their content constitutes requirements 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 60287-3-2:2012, *Electric cables – Calculation of the current rating – Part 3-2: Sections on operating conditions – Economic optimization of power cable size*

ISO 14040:2006, *Environmental management – Life cycle assessment – Principles and framework*

ISO 14044:2006, *Environmental management – Life cycle assessment – Requirements and guidelines*

3 Terms, definitions and symbols

3.1 Terms and definitions

3.1.1

life cycle assessment

LCA

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

[SOURCE: ISO 14040:2006, 3.2]

3.1.2

life cycle inventory

LCI

phase of life cycle assessment involving the compilation and quantification of inputs and outputs for a product throughout its life cycle

[SOURCE: ISO 14040:2006, 3.3]