

# INTERNATIONAL STANDARD

## NORME INTERNATIONALE

**Installations for electroheating and electromagnetic processing – Test methods for electroslag remelting furnaces**

**Installations pour traitement électrothermique et électromagnétique – Méthodes d'essai des fours de refusion sous laitier électroconducteur**



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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

**INSTALLATIONS FOR ELECTROHEATING  
AND ELECTROMAGNETIC PROCESSING –  
TEST METHODS FOR ELECTROSLAG REMELTING FURNACES**

## FOREWORD

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International Standard IEC 60779 has been prepared by IEC technical committee 27: Industrial electroheating and electromagnetic processing.

This third edition cancels and replaces the second edition published in 2005. It constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

- the structure has been redrafted according to IEC 60398:2015;
- the scope and object have been redrafted;
- the terms/definitions, normative references and bibliography have been updated and completed;
- all test methods and content from IEC 60779:2005 that have been included in IEC 60398:2015 have been removed to avoid any duplication.

The text of this International Standard is based on the following documents:

FDIS	Report on voting
27/1128/FDIS	27/1130/RVD

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

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

This standard is to be read in conjunction with IEC 60398:2015. It supplements or modifies the corresponding clauses of IEC 60398:2015. Where the text indicates a "modification" of "addition" to or a "replacement" of the relevant provision of IEC 60398:2015, these changes are made to the relevant text of IEC 60398:2015. Where no change is necessary, the words "This clause of IEC 60398:2015 is applicable" are used. When a particular subclause of IEC 60398:2015 is not mentioned in this standard, that subclause applies as far as is reasonable. When a particular subclause of IEC 60398:2015 is not applicable, the word "Void" is used.

Additional specific provisions to those in IEC 60398:2015, given as individual clauses or subclauses, are numbered starting from 101.

NOTE The following numbering system is used:

- subclauses, tables and figures that are numbered starting from 101 are additional to those in IEC 60398:2015;
- unless notes are in a new subclause or involve notes in IEC 60398:2015, they are numbered starting from 101, including those in a replaced clause or subclause;
- additional annexes are lettered AA, BB, etc.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under "<http://webstore.iec.ch>" in the data related to the specific document. At this date, the document will be

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

# INSTALLATIONS FOR ELECTROHEATING AND ELECTROMAGNETIC PROCESSING – TEST METHODS FOR ELECTROSLAG REMELTING FURNACES

## 1 Scope

Clause 1 of IEC 60398:2015 is replaced by the following.

### *Replacement:*

This International Standard specifies the test procedures, conditions and methods for determining the main performance parameters and operational characteristics of electroslag remelting furnaces.

Measurements and tests that are solely used for the verification of safety requirements of the installations are outside the scope of this document and are covered by IEC 60519-1 and IEC 60519-8.

This document applies to industrial electroslag remelting furnaces, the rated capacity of which is equal to, or greater than, 50 kg.

This document is applicable to industrial electroslag remelting furnaces having one or more electrodes and having different melting power supplies, such as alternating current, direct current, or low-frequency current.

This document includes the concept and material on energy efficiency dealing with the electrical and processing parts of the installations, as well as the overall performance.

## 2 Normative references

Clause 2 of IEC 60398:2015 is applicable except as follows.

### *Replacement:*

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.

### *Modification:*

Delete the footnotes.

### *Additions:*

IEC 60398:2015, *Installations for electroheating and electromagnetic processing – General performance test methods*

IEC 60519-8, *Safety in installations for electroheating and electromagnetic processing – Part 8: Particular requirements for electroslag remelting furnaces*

IEC 60676:2011, *Industrial electroheating equipment – Test methods for direct arc furnaces*