ELEKTRILISED KEEVITUSSEADMED. INIMESTE KIIRITAMISEGA ELEKTROMAGNETVÄLJAS (0 HZ KUNI 300 GHZ) SEOTUD PIIRANGUTE HINDAMINE. OSA 1: TOOTEPEREKONNA STANDARD

Electric welding equipment - Assessment of restrictions related to human exposure to electromagnetic fields (0 Hz to 300 GHz) - Part 1: Product family standard

EESTI STANDARDIKESKUS
ESTONIAN CENTRE FOR STANDARDISATION

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN IEC 62822-1:2018 sisaldab Euroopa standardi EN IEC 62822-1:2018 ingliskeelset teksti.	This Estonian standard EVS-EN IEC 62822-1:2018 consists of the English text of the European standard EN IEC 62822-1:2018.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 28.09.2018.	Date of Availability of the European standard is 28.09.2018.
Standard on kättesaadav Eesti Standardikeskusest.	The standard is available from the Estonian Centre for Standardisation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile standardiosakond@evs.ee.

ICS 25.160.30

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN IEC 62822-1

September 2018

ICS 25.160; 25.160.30

Supersedes EN 50445:2008

English Version

Electric welding equipment - Assessment of restrictions related to human exposure to electromagnetic fields (0 Hz to 300 GHz) - Part 1: Product family standard (IEC 62822-1:2016 , modified)

Matériels de soudage électrique - Évaluation des restrictions relatives à l'exposition humaine aux champs électromagnétiques (0 Hz à 300 GHz) - Partie 1: Norme de famille de produits
(IEC 62822-1:2016 , modifiée)

Bewertung elektrischer Schweißeinrichtungen in Bezug auf Begrenzungen der Exposition von Personen gegenüber elektromagnetischen Feldern (0 Hz bis 300 GHz) - Teil 1: Produktfamiliennorm
(IEC 62822-1:2016 , modifiziert)

This European Standard was approved by CENELEC on 2016-03-21. 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 CEN-CENELEC Management Centre 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 CEN-CENELEC Management Centre has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

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

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

Ref. No. EN IEC 62822-1:2018 E

European foreword

The text of document 26/583/FDIS, future edition 1 of IEC 62822-1, prepared by IEC/TC 26 "Electric welding" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 62822-1:2018.

The following dates are fixed:

- latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2019-06-28
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2021-09-28

This document supersedes EN 50445:2008.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CENELEC shall not be held responsible for identifying any or all such patent rights.

This document has been prepared under a mandate given to CENELEC by the European Commission and the European Free Trade Association.

Endorsement notice

The text of the International Standard IEC 62822-1:2016 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 62822-2	NOTE	Harmonized as EN 62822-2.

Annex ZA
(normative)

Normative references to international publications with their corresponding European publications

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.

NOTE 1 Where an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

NOTE 2 Up-to-date information on the latest versions of the European Standards listed in this annex is available here: www.cenelec.eu.

Publication	Year	Title	EN/HD	Year
IEC 60050-851	2008	International Electrotechnical Vocabulary - Part 851: Electric welding	-	-
IEC 60974-1	-	Arc welding equipment -- Part 1: Welding power sources	EN 60974-1	-
IEC 60974-2	-	Arc welding equipment -- Part 2: Liquid cooling systems	EN 60974-2	-
IEC 60974-5	-	Arc welding equipment -- Part 5: Wire feeders	EN 60974-5	-
IEC 60974-6	-	Arc welding equipment -- Part 6: Limited duty equipment	EN 60974-6	-
IEC 60974-8	-	Arc welding equipment -- Part 8: Gas consoles for welding and plasma cutting systems	EN 60974-8	-
IEC 62135-1	-	Resistance welding equipment -- Part 1: Safety requirements for design, manufacture and installation	-	-
IEC 62311	-	Assessment of electronic and electrical equipment related to human exposure restrictions for electromagnetic fields (0 Hz - 300 GHz)	EN 62311	-
IEC 62822-2	-	Electric welding equipment - Assessment of restrictions related to human exposure to electromagnetic fields (0 Hz to 300 GHz) - Part 2: Arc welding equipment	EN 62822-2	-

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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ELECTRIC WELDING EQUIPMENT – ASSESSMENT OF RESTRICTIONS RELATED TO HUMAN EXPOSURE TO ELECTROMAGNETIC FIELDS (0 Hz to 300 GHz) –

Part 1: Product family standard

FOREWORD

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International Standard IEC 62822-1 has been prepared by IEC technical committee 26: Electric welding.

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

FDIS	Report on voting
26/583/FDIS	26/590/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.

This Standard has the status of a product family standard.

A list of all parts in the IEC 62822 series, published under the general title *Electric welding equipment – Assessment of restrictions related to human exposure to electromagnetic fields (0 Hz to 300 GHz)*, can be found on the IEC website.

The committee has decided that the contents of this publication will remain unchanged until the stability date indicated on the IEC website 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.

ELECTRIC WELDING EQUIPMENT – ASSESSMENT OF RESTRICTIONS RELATED TO HUMAN EXPOSURE TO ELECTROMAGNETIC FIELDS (0 Hz to 300 GHz) –

Part 1: Product family standard

1 Scope

This part of IEC 62822, which is a product family standard, applies to equipment for resistance welding, arc welding and allied processes designed for occupational use by professionals and for use by laymen.

NOTE 1 Typical allied processes are resistance hard and soft soldering, resistance heating by means comparable to resistance welding equipment, electric arc cutting and arc spraying.

The frequency range covered is 0 Hz to 300 GHz.

This product family standard specifies assessment methods and criteria to evaluate electromagnetic field (EMF) emissions of electric welding equipment with regard to national and international requirements for human exposure to EMF.

NOTE 2 Magnetic fields generated by the operation of welding equipment and the resulting non-thermal effects are the main assessment concern.

This product family standard does not define requirements and methods for workplace assessment regarding the risks arising from electromagnetic fields. However, the EMF exposure data that results from the application of this product family standard can be used to assist in workplace assessment.

NOTE 3 The equipment manufacturer is unaware of the overall exposure environment in which the equipment will be used (e.g. multiple sources) and is not responsible for all requirements for workplace assessment (e.g. information and training of workers, design and layout of the workplace).

Other standards may apply to products covered by this standard. In particular this standard cannot be used to demonstrate electromagnetic compatibility with other equipment. It does not specify any product safety requirements other than those specifically related to human exposure to electromagnetic fields.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 60050-851:2008, *International Electrotechnical Vocabulary – Part 851: Electric welding*

IEC 60974-1, *Arc welding equipment – Part 1: Welding power sources*

IEC 60974-2, *Arc welding equipment – Part 2: Liquid cooling systems*

IEC 60974-5, *Arc welding equipment – Part 5: Wire feeders*

IEC 60974-6, *Arc welding equipment – Part 6: Limited duty equipment*