Irish Standard
I.S. EN 60974-6:2016

Arc welding equipment - Part 6: Limited duty equipment

I.S. EN 60974-6:2016

Incorporating amendments/corrigenda/National Annexes issued since publication:

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National Foreword

I.S. EN 60974-6:2016 is the adopted Irish version of the European Document EN 60974-6:2016, Arc welding equipment - Part 6: Limited duty equipment

This document does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

Compliance with this document does not of itself confer immunity from legal obligations.

In line with international standards practice the decimal point is shown as a comma (,) throughout this document.

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 60974-6

January 2016

ICS 25.160.30

Supersedes EN 60974-6:2011

English Version

Arc welding equipment - Part 6: Limited duty equipment (IEC 60974-6:2015)

Matériel de soudage à l'arc - Partie 6: Matériel à service limité
(IEC 60974-6:2015)

Lichtbogenschweißeinrichtungen - Teil 6: Schweißstromquellen mit begrenzter Einschaltdauer
(IEC 60974-6:2015)

This European Standard was approved by CENELEC on 2015-10-27. 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, 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: Avenue Marnix 17, B-1000 Brussels

Ref. No. EN 60974-6:2016 E

European foreword

The text of document 26/572/FDIS, future edition 3 of IEC 60974-6, prepared by IEC/TC 26 "Electric welding" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 60974-6:2016.

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) 2016-07-27
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2018-10-27

This document supersedes EN 60974-6:2011.

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

This standard covers the Principle Elements of the Safety Objectives for Electrical Equipment Designed for Use within Certain Voltage Limits (LVD - 2006/95/EC).

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 60974-6:2015 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:

IEC 60085	NOTE	Harmonized as EN 60085.
IEC 60127-1	NOTE	Harmonized as EN 60127-1.
IEC 60269-1	NOTE	Harmonized as EN 60269-1.
IEC 60974	NOTE	Harmonized in EN 60974 series.
IEC 61558-1:2005	NOTE	Harmonized as EN 61558-1:2005 (not modified).

Annex ZA
(normative)

Normative references to international publications with their corresponding European publications

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.

NOTE 1 When 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 60529	-	Degrees of protection provided by enclosures (IP Code)	EN 60529	-
IEC 60974-1	2012	Arc welding equipment - Part 1: Welding power sources	EN 60974-1	2012
IEC 60974-5	2013	Arc welding equipment - Part 5: Wire feeders	EN 60974-5	2013
IEC 60974-7	2013	Arc welding equipment - Part 7:Torches	EN 60974-7	2013
IEC 60974-10	-	Arc welding equipment - Part 10: Electromagnetic compatibility (EMC) requirements	EN 60974-10	-
IEC 60974-11	-	Arc welding equipment - Part 11: Electrode holders	EN 60974-11	-
IEC 61032	1997	Protection of persons and equipment by enclosures - Probes for verification	EN 61032	1998
ISO 2503	-	Gas welding equipment - Pressure regulators and pressure regulators with flow-metering devices for gas cylinders used in welding, cutting and allied processes up to 300 bar (30 MPa)	EN ISO 2503	-

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IEC 60974-6

Edition 3.0 2015-09

INTERNATIONAL STANDARD

NORME INTERNATIONALE

colour inside

Arc welding equipment – Part 6: Limited duty equipment

Matériel de soudage à l'arc – Partie 6: Matériel à service limité

IEC 60974-6:2015-09(en-fr)

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IEC 60974-6

Edition 3.0 2015-09

INTERNATIONAL STANDARD

NORME INTERNATIONALE

colour inside

Arc welding equipment – Part 6: Limited duty equipment

Matériel de soudage à l'arc – Partie 6: Matériel à service limité

INTERNATIONAL ELECTROTECHNICAL COMMISSION

COMMISSION ELECTROTECHNIQUE INTERNATIONALE

ICS 25.160.30

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CONTENTS

INTERNATIONAL ELECTROTECHNICAL COMMISSION

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ARC WELDING EQUIPMENT –

Part 6: Limited duty equipment

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 60974-6 has been prepared by IEC technical committee 26: Electric welding.

This third edition cancels and replaces the second edition published in 2010. It constitutes a technical revision.

The main significant technical changes with respect to the previous edition are the following:

– modified measurement conditions (see 7.3.1);
– improved values for temperature limits according to the class of insulation (see Table 1);
– improved maximum temperature limits (see Table 2);
– deleted overload test.

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

FDIS	Report on voting
26/572/FDIS	26/581/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 is to be used in conjunction with IEC 60974-1:2012.

In this standard, the following print types are used:

– *conformity statements: in italic type.*

A list of all the parts in the IEC 60974 series, published under the general title *Arc welding equipment*, 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 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.

IMPORTANT – The "colour inside" logo on the cover page of this publication indicates that it contains colours which are considered to be useful for the correct understanding of its contents. Users should therefore print this publication using a colour printer.

ARC WELDING EQUIPMENT –

Part 6: Limited duty equipment

1 Scope

This part of IEC 60974 specifies safety and performance requirements applicable to limited duty arc welding and cutting power sources and auxiliaries designed for use by laymen. Electrically powered equipment is intended to be connected to the single phase public low-voltage supply system. Engine driven power sources cannot exceed output power of 7,5 kVA.

NOTE 1 This equipment is typically used by non-professionals in residential areas.

This part of IEC 60974 is not applicable to arc welding and cutting power sources that require for operation:

- arc striking and stabilizing devices;
- liquid cooling systems;
- gas consoles;
- three-phase input supply;

and which are intended for industrial and professional use only.

This part of IEC 60974 is not applicable to arc welding and cutting power sources and ancillary equipment used in:

- mechanically guided applications;
- submerged arc welding process;
- plasma gouging process;
- plasma welding process;

that are covered by other parts of IEC 60974.

NOTE 2 Power sources, wire feeders, torches and electrode holders designed for industrial and professional use are respectively covered by IEC 60974-1, IEC 60974-5, IEC 60974-7 and IEC 60974-11.

NOTE 3 This part of IEC 60974 does not specify electromagnetic compatibility (EMC) requirements that are given in IEC 60974-10.

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 60529, *Degrees of protection provided by enclosures (IP Code)*

IEC 60974-1:2012, *Arc welding equipment – Part 1: Welding power sources*

IEC 60974-5:2013, *Arc welding equipment – Part 5: Wire feeders*

IEC 60974-7:2013, *Arc welding equipment – Part 7: Torches*