

## Arc welding equipment - Part 4: Periodic inspection and testing

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## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 60974-4:2011 sisaldab Euroopa standardi EN 60974-4:2011 ingliskeelset teksti.

Standard on kinnitatud Eesti Standardikeskuse 30.04.2011 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.

Euroopa standardimisorganisatsioonide poolt rahvuslikele liikmetele Euroopa standardi teksti kättesaadavaks tegemise kuupäev on 25.03.2011.

Standard on kättesaadav Eesti standardiorganisatsioonist.

This Estonian standard EVS-EN 60974-4:2011 consists of the English text of the European standard EN 60974-4:2011.

This standard is ratified with the order of Estonian Centre for Standardisation dated 30.04.2011 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.

Date of Availability of the European standard text 25.03.2011.

The standard is available from Estonian standardisation organisation.

ICS 25.160

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English version

**Arc welding equipment -  
Part 4: Periodic inspection and testing  
(IEC 60974-4:2010)**

Matériel de soudage à l'arc -  
Partie 4: Inspection et essais périodiques  
(CEI 60974-4:2010)

Lichtbogenschweißeinrichtungen -  
Teil 4: Wiederkehrende Inspektion und  
Prüfung  
(IEC 60974-4:2010)

This European Standard was approved by CENELEC on 2011-01-02. 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.

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 Central Secretariat 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, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

**CENELEC**

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

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## Foreword

The text of document 26/422/FDIS, future edition 2 of IEC 60974-4, prepared by IEC TC 26, Electric welding, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 60974-4 on 2011-01-02.

This European Standard supersedes EN 60974-4:2007.

The main significant technical changes with respect to EN 60974-4:2007 are the following:

- title is amended;
- scope is extended to equipment designed in accordance with EN 60974-6;
- complementary instructions from the manufacturer shall be followed;
- qualification of test personnel is clarified (see 4.1);
- plasma cutting power sources are excluded from no-load voltage test (see 5.6);
- voltage reducing device functional test is simplified (see 6.3);
- supply voltage is recorded in test report (see 7.1).

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

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) | 2011-10-02 |
| – latest date by which the national standards conflicting with the EN have to be withdrawn   | (dow) | 2014-01-02 |

Annex ZA has been added by CENELEC.

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## Endorsement notice

The text of the International Standard IEC 60974-4:2010 was approved by CENELEC as a European Standard without any modification.

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## Annex ZA (normative)

### Normative references to international publications with their corresponding European publications

The following referenced documents are indispensable for the application 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 When an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60050-151	-	International Electrotechnical Vocabulary (IEV) - Part 151: Electrical and magnetic devices	-	-
IEC 60050-195	-	International Electrotechnical Vocabulary (IEV) - Chapter 195: Earthing and protection against electric shock	-	-
IEC 60050-851	-	International Electrotechnical Vocabulary - Part 851: Electric welding	-	-
IEC 60974-1	2005	Arc welding equipment - Part 1: Welding power sources	EN 60974-1	2005
IEC 60974-6	-	Arc welding equipment - Part 6: Limited duty equipment	EN 60974-6	-
IEC 61557-4	-	Electrical safety in low voltage distribution systems up to 1 000 V a.c. and 1 500 V d.c. - Equipment for testing, measuring or monitoring of protective measures - Part 4: Resistance of earth connection and equipotential bonding	EN 61557-4	-

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## ARC WELDING EQUIPMENT –

### Part 4: Periodic inspection and testing

#### 1 Scope

This part of IEC 60974 specifies test procedures for periodic inspection and, after repair, to ensure electrical safety. These test procedures are also applicable for maintenance.

This standard is applicable to power sources for arc welding and allied processes designed in accordance with IEC 60974-1 or IEC 60974-6. Stand-alone ancillary equipment designed in accordance with other part of IEC 60974 may be tested in accordance with relevant requirement of this part of IEC 60974.

NOTE 1 The welding power source may be tested with any ancillary equipment fitted that could affect the test results.

This standard is not applicable to testing of new power sources or engine-driven power sources.

NOTE 2 For a power source not built in accordance with IEC 60974-1, see Annex C.

#### 2 Normative references

The following referenced documents are indispensable for the application 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 60050-151, *International Electrotechnical Vocabulary (IEV) – Part 151: Electrical and magnetic devices*

IEC 60050-195, *International Electrotechnical Vocabulary (IEV) – Part 195: Earthing and protection against electric shock*

IEC 60050-851, *International Electrotechnical Vocabulary (IEV) – Part 851: Electric welding*

IEC 60974-1:2005, *Arc welding equipment – Part 1: Welding power sources*

IEC 60974-6, *Arc welding equipment – Part 6: Limited duty manual metal arc welding power sources*

IEC 61557-4, *Electrical safety in low voltage distribution systems up to 1 000 V a.c. and 1 500 V d.c. – Equipment for testing, measuring or monitoring of protective measures – Part 4: Resistance of earth connection and equipotential bonding*

#### 3 Terms and definitions

For the purposes of this document, the terms and definitions given in the IEC 60050-151, the IEC 60050-195, the IEC 60050-851, the IEC 60974-1, as well as the following, apply.