Kaarkeevitusseadmed. Osa 2: Vedelikjahutussüsteemid

Arc welding equipment - Part 2: Liquid cooling systems (IEC 60974-2:2013)

EESTI STANDARDIKESKUS
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EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN 60974-2:2013 sisaldab Euroopa standardi EN 60974-2:2013 ingliskeelset teksti.	This Estonian standard EVS-EN 60974-2:2013 consists of the English text of the European standard EN 60974-2:2013.
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 31.05.2013.	Date of Availability of the European standard is 31.05.2013.
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.

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Arc welding equipment - Part 2: Liquid cooling systems
(IEC 60974-2:2013)

Matériel de soudage à l'arc - Partie 2: Systèmes de refroidissement par liquide (CEI 60974-2:2013)

Lichtbogenschweißeinrichtungen - Teil 2: Flüssigkeitskühlsysteme (IEC 60974-2:2013)

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CENELEC

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

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Ref. No. EN 60974-2:2013 E

Foreword

The text of document 26/494/FDIS, future edition 3 of IEC 60974-2, prepared by IEC/TC 26 "Electric welding" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 60974-2:2013.

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)	2013-11-30
• latest date by which the national standards conflicting with the document have to be withdrawn	(dow)	2016-02-28

This document supersedes EN 60974-2:2008.

EN 60974-2:2013 includes the following significant technical changes with respect to EN 60974-2:2008:

- changes induced by the publication of EN 60974-1:2012;
- addition of a liquid temperature fixed to 65 °C during the heating test in order to allow testing at different ambient air temperature (see 10 d));
- correction factor of cooling power at 40 °C required in instruction manual (see 12.1 o)).

This standard shall be used in conjunction with EN 60974-1:2012.

In this standard, the following print types are used:

- *conformity statements: in italic type.*

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).

Endorsement notice

The text of the International Standard IEC 60974-2:2013 was approved by CENELEC as a European Standard without any modification.

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 When an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

Publication	Year	Title	EN/HD	Year
IEC 60974-1	2012	Arc welding equipment - Part 1: Welding power sources	EN 60974-1	2012
IEC 60974-7	-	Arc welding equipment - Part 7:Torches	EN 60974-7	-
IEC 60974-10	-	Arc welding equipment - Part 10: Electromagnetic compatibility (EMC) requirements	EN 60974-10	-

CONTENTS

ARC WELDING EQUIPMENT –

Part 2: Liquid cooling systems

1 Scope

This part of IEC 60974 specifies safety and construction requirements for industrial and professional liquid cooling systems used in arc welding and allied processes to cool torches.

This part of IEC 60974 is applicable to stand-alone liquid cooling systems that are either connected to a separate welding power source or built into the welding power source enclosure.

This part of IEC 60974 is not applicable to refrigerated cooling systems.

NOTE 1 Typical allied processes are electric arc cutting and arc spraying.

NOTE 2 This part of IEC 60974 does not include electromagnetic compatibility (EMC) requirements.

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

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

IEC 60974-10, *Arc welding equipment – Part 10: Electromagnetic compatibility (EMC) requirements*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in IEC 60974-1 and IEC 60974-7, as well as the following apply.

3.1
cooling power
P
cooling energy related to the flow rate

3.2
liquid cooling system
system that circulates and cools liquid used for decreasing the temperature of torches

3.3
cooling power at 1 l/min
$P_{1\ l/min}$
cooling power at 1 l/min flow rate defined for comparison