BS EN 60974-2:2013



BSI Standards Publication

Arc welding equipment

Part 2: Liquid cooling systems



BS EN 60974-2:2013 BRITISH STANDARD

This is a preview of "BS EN 60974-2:2013". Click here to purchase the full version from the ANSI store.

This British Standard is the UK implementation of EN 60974-2:2013. It is identical to IEC 60974-2:2013. It supersedes BS EN 60974-2:2008 which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee WEE/6, Electric arc welding equipment.

A list of organizations represented on this committee can be obtained on request to its secretary.

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

© The British Standards Institution 2013.

Published by BSI Standards Limited 2013

ISBN 978 0 580 74266 8 ICS 25.160.30

Compliance with a British Standard cannot confer immunity from legal obligations.

This British Standard was published under the authority of the Standards Policy and Strategy Committee on 31 July 2013.

Amendments/corrigenda issued since publication

Date Text affected

TOTAL LONG! LEMIL

EUROPÄISCHE NORM

May 2013

ICS 25.160

Supersedes EN 60974-2:2008

English version

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)

This European Standard was approved by CENELEC on 2013-02-28. 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.

CENELEC

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

Management Centre: Avenue Marnix 17, B - 1000 Brussels

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.

(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.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	EN/HD	<u>Year</u>
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

1	Scop	cope6						
2	Norm	rmative references						
3	Term	s and d	efinitions	6				
4	Envir	onment	onmental conditions					
5	Tests							
Ü	5.1		onditions					
	5.2							
	5.3 Conformity of components							
	5.4 Type tests							
	5.5	· · · · · · · · · · · · · · · · · · ·						
6	Protection against electric shock							
•	6.1 Insulation							
	0.1	6.1.1	General					
		6.1.2	Clearances					
		6.1.3	Creepage distances					
		6.1.4	Insulation resistance					
		6.1.5	Dielectric strength					
	6.2	· · · · · · · · · · · · · · · · · · ·						
	6.3	·						
	0.0	6.3.1	Protective provisions					
		6.3.2	Isolation between windings of the supply circuit and the welding circuit					
		6.3.3	Internal conductors and connections					
		6.3.4	Touch current in fault condition					
	6.4 Connection to the supply network							
		6.4.1	Supply voltage					
		6.4.2	Multi-supply voltage					
		6.4.3	Means of connection to the supply circuit					
		6.4.4	Marking of terminals					
		6.4.5	Protective circuit	9				
		6.4.6	Cable anchorage	9				
		6.4.7	Inlet openings	9				
		6.4.8	Supply circuit on/off switching device	9				
		6.4.9	Supply cables	9				
		6.4.10	Supply coupling device (attachment plug)	9				
	6.5 Leakage current between welding circuit and protective earth			9				
7	Mechanical provisions			10				
	7.1 General			10				
	7.2	7.2 Cooling liquid overflow						
	7.3	7.3 Hose coupling devices and hose connections						
	Cooli	ing syst	em	10				
	8.1	8.1 Rated maximum pressure						
	8.2 Thermal requirements			11				
		8.2.1	Heating test	11				
		8.2.2	Tolerances of test parameters	11				