

# INTERNATIONAL STANDARD

# NORME INTERNATIONALE

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**Arc welding equipment –  
Part 2: Liquid cooling systems**

**Matériel de soudage à l'arc –  
Partie 2: Systèmes de refroidissement par liquide**





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ELECTROTECHNICAL  
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## CONTENTS

FOREWORD.....	4
1 Scope.....	6
2 Normative references .....	6
3 Terms and definitions .....	6
4 Environmental conditions.....	7
5 Tests .....	7
5.1 Test conditions .....	7
5.2 Measuring instruments.....	7
5.3 Conformity of components .....	7
5.4 Type tests.....	7
5.5 Routine tests.....	7
6 Protection against electric shock .....	8
6.1 Insulation .....	8
6.1.1 General .....	8
6.1.2 Clearances .....	8
6.1.3 Creepage distances .....	8
6.1.4 Insulation resistance.....	8
6.1.5 Dielectric strength.....	8
6.2 Protection against electric shock in normal service (direct contact) .....	8
6.3 Protection against electric shock in case of a fault condition (indirect contact) .....	8
6.3.1 Protective provisions .....	8
6.3.2 Isolation between windings of the supply circuit and the welding circuit.....	8
6.3.3 Internal conductors and connections.....	8
6.3.4 Touch current in fault condition.....	8
6.4 Connection to the supply network .....	8
6.4.1 Supply voltage.....	8
6.4.2 Multi-supply voltage.....	9
6.4.3 Means of connection to the supply circuit .....	9
6.4.4 Marking of terminals .....	9
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 Cooling liquid overflow .....	10
7.3 Hose coupling devices and hose connections .....	10
8 Cooling system.....	10
8.1 Rated maximum pressure .....	10
8.2 Thermal requirements .....	11
8.2.1 Heating test.....	11
8.2.2 Tolerances of test parameters .....	11

8.2.3	Duration of test.....	11
8.3	Pressure and temperature.....	11
9	Abnormal operation .....	11
9.1	General requirements .....	11
9.2	Stalled test.....	12
10	COOLING POWER .....	12
11	Rating plate .....	13
11.1	General.....	13
11.2	Description .....	13
11.3	Contents .....	14
11.4	Tolerances.....	15
12	Instructions and markings.....	15
12.1	Instructions .....	15
12.2	Markings.....	16
12.2.1	General .....	16
12.2.2	Inlet and outlet.....	16
12.2.3	Pressure warning.....	16
	Annex A (informative) Example diagram of built-in and stand-alone LIQUID COOLING SYSTEMS.....	17
	Annex B (informative) Example for a rating plate of stand-alone cooling system .....	18
	Figure 1 – Leakage current measurement configuration .....	10
	Figure 2 – Measuring circuit for determination of the COOLING POWER.....	13
	Figure 3 – Principle of the rating plate of stand-alone cooling systems.....	14
	Figure A.1 – Example diagram of built-in LIQUID COOLING SYSTEMS.....	17
	Figure A.2 – Example diagram of stand-alone LIQUID COOLING SYSTEMS .....	17
	Figure B.1 – Single-phase stand-alone cooling unit.....	18
	Table 1 – Example of cooling liquid data at 60 °C .....	13

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## ARC WELDING EQUIPMENT –

### Part 2: Liquid cooling systems

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International Standard IEC 60974-2 has been prepared by IEC technical committee 26: Electric welding.

This fourth edition cancels and replaces the third edition published in 2013 and constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

- a) changes induced by the publication of IEC 60974-1:2017;
- b) reference in 11.1 changed.

The text of this International Standard is based on the following documents:

FDIS	Report on voting
26/670/FDIS	26/675/RVD

Full information on the voting for the approval of this International Standard can be found in the report on voting indicated in the above table.

This document has been drafted in accordance with the ISO/IEC Directives, Part 2.

In this standard, the following print types are used:

- conformity statements: *in italic type*.
- terms used throughout this standard which have been defined in clause 3: SMALL ROMAN CAPITALS.

This document shall be used in conjunction with IEC 60974-1:2017.

A list of all parts of IEC 60974, under the general title *Arc welding equipment*, can be found on the IEC web site.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under "<http://webstore.iec.ch>" in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

## 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 document is applicable to LIQUID COOLING SYSTEMS which are stand-alone (separate from the welding equipment) or built-in (housed in a single enclosure with other welding equipment).

This document 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 that are given in IEC 60974-10.

#### 2 Normative references

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.

IEC 60974-1:2017, *Arc welding equipment – Part 1: Welding power sources*

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

IEC 60974-10:2014, *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 and the following apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <http://www.iso.org/obp>

##### 3.1 cooling power

*P*

power related to the coolant flow rate and temperature rise

##### 3.2 liquid cooling system

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