

# 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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**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 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://websec.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- withdrawn,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 the 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