

# INTERNATIONAL STANDARD

**Arc welding equipment –  
Part 13: Welding current return clamp**



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## Arc welding equipment – Part 13: Welding current return clamp

INTERNATIONAL  
ELECTROTECHNICAL  
COMMISSION

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ICS 25.160.30

ISBN 978-2-8322-9694-3

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## ARC WELDING EQUIPMENT –

## Part 13: Welding current return clamp

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International Standard IEC 60974-13 has been prepared by IEC technical committee 26: Electric welding.

This second edition cancels and replaces the first edition, published in 2011, and constitutes a technical revision.

The significant technical changes with respect to the previous edition are the following:

- Modified the title from "Welding clamp" to "Welding current return clamp" and updated the term through the document.
- Updated all values of test current in Table 1 corrected to 40 °C.
- Updated the reference to EN 50565-1:2014, *Electric cables – Guide to use for cables with a rated voltage not exceeding 450/750 V (U0/U) – Part 1: General guidance*

This part of IEC 60974 is to be used in conjunction with IEC 60974-1.

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

FDIS	Report on voting
26/717/FDIS	26/722/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 defined in Clause 3: in SMALL ROMAN CAPITALS.

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

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- withdrawn,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 13: Welding current return clamp

#### 1 Scope

This part of IEC 60974 is applicable to WELDING CURRENT RETURN CLAMPS for arc welding processes, designed to make an electrical connection to the workpiece without using tools.

This document is not applicable to WELDING CURRENT RETURN CLAMPS for underwater welding and plasma cutting.

This document specifies safety and performance requirements of WELDING CURRENT RETURN CLAMPS.

This document does not specify requirements for welding cables.

#### 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 60050-151:2001, *International Electrotechnical Vocabulary (IEV) – Part 151: Electrical and magnetic devices*

IEC 60050-151:2001/AMD1:2013

IEC 60050-151:2001/AMD2:2014

IEC 60050-151:2001/AMD3:2019

IEC 60050-151:2001/AMD4:2020

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

IEC 60974-1:2017/AMD1:2019

#### 3 Terms and definitions

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

**WELDING CURRENT RETURN CLAMP**

**WORK CLAMP, US**

**RETURN CURRENT CLAMP, UK**

clamp that is attached to, or in contact with, the workpiece, to connect the welding return cable to the workpiece

[SOURCE: IEC 60050-851:2008, 851-14-36]