

# INTERNATIONAL STANDARD

## NORME INTERNATIONALE

**Live working – Protective clothing against the thermal hazards of an electric arc –**

**Part 1-2: Test methods – Method 2: Determination of arc protection class of material and clothing by using a constrained and directed arc (box test)**

**Travaux sous tension – Vêtements de protection contre les dangers thermiques d'un arc électrique –**

**Partie 1-2: Méthodes d'essai – Méthode 2: Détermination de la classe de protection contre l'arc de matériaux et de vêtements au moyen d'un arc dirigé et contraint (enceinte d'essai)**



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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

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**LIVE WORKING – PROTECTIVE CLOTHING AGAINST  
THE THERMAL HAZARDS OF AN ELECTRIC ARC –**
**Part 1-2: Test methods –  
Method 2: Determination of arc protection class of material  
and clothing by using a constrained and directed arc (box test)**

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International Standard IEC 61482-1-2 has been prepared by IEC technical committee 78: Live working.

This second edition cancels and replaces the first edition, published in 2007. This edition constitutes a technical revision.

It includes the following significant technical changes with regard to the previous edition:

- new mean values of main control parameters *arc energy* and *incident energy* based on an extended statistical database consisting of parameter values measured in four laboratories;
- reduction of validity check ranges of main control parameters;

- determination of the *incident energy* by averaging the two *sensor* values of a test (instead of considering each single *sensor* value);
- determination of the heat curves of transmitted *incident energy* and an amendment to the *heat flux* acceptance criterion;
- information on precision (repeatability and reproducibility) of the test method;
- clarification of the scope;
- selection of the *arc protection classes* (test classes) by the amount of the *arc energy* and *incident energy* instead of the short-circuit current;
- permitting electrode design without bores;
- recommendations of the heat resistance *materials* to be used for the box and for the test plate;
- clarification of the conditions for cleaning and replacing the box;
- requirement for including in the test report the differences  $\Delta E_i$  of the *transmitted energy* values to the Stoll limit value at  $t_{\max}$  and the information if the heat curves of transmitted *incident energy* exceed the *Stoll curve* during the *exposure time*;
- preconditioning of the samples according to manufacturer's instruction.

The text of this standard is based on the following documents:

FDIS	Report on voting
78/1053/FDIS	78/1089/RVD

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

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

In this standard terms defined in Clause 3 appear in *italics*.

A list of all parts in the IEC 61482 series, published under the general title *Live working – Protective clothing against the thermal hazards of an electric arc*, can be found on the IEC website.

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

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