

# INTERNATIONAL STANDARD

# NORME INTERNATIONALE



**Live working – Conductive clothing**

**Travaux sous tension – Vêtements conducteurs**



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**Travaux sous tension – Vêtements conducteurs**

INTERNATIONAL  
ELECTROTECHNICAL  
COMMISSION

COMMISSION  
ELECTROTECHNIQUE  
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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

## LIVE WORKING – CONDUCTIVE CLOTHING

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International Standard IEC 60895 has been prepared by IEC technical committee 78: Live working.

This third edition cancels and replaces the second edition, published in 2002. This edition constitutes a technical revision.

This 3edition includes the following significant technical changes with respect to the previous edition:

- a) increase of the use up to 1 000 kV AC and  $\pm 800$  kV DC;
- b) introduction of two classes of conductive clothing with different electrical requirements;
- c) revision of the electrical requirements of conductive clothing;
- d) definition of specific resistance values for each component part of the conductive clothing;
- e) introduction of conductive helmet and conductive scarf as *component parts* of conductive clothing;
- f) introduction of mechanical requirements and new tests for fabrics;
- g) update of the cleaning test procedures;

- h) revision of the efficiency test of the conductive clothing to improve the feasibility and repeatability;
- i) preparation of the elements of classification of defects, and general application of IEC 61318:2007;
- j) the normative Annex B for the classification of tests has been replaced by normative Annex C for the general type tests procedure, the normative Annex D for the classification of defects and the informative Annex E providing the justification for the classification of defects;
- k) the normative Annex C on sampling procedure has been deleted (not applicable according to IEC 61318:2007);
- l) modification of the recommended frequency of the periodic tests.

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

FDIS	Report on voting
78/1309/FDIS	78/1312/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.

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## INTRODUCTION

This document provides specifications for protective *conductive clothing* currently being used without incident in live work by qualified electrical workers throughout the world. The adequacy of this clothing is established by its *screening efficiency* and the electrical resistance of material and *component parts* of the *conductive clothing*. Based on resistance measurements carried out by manufacturers and utilities of used clothing being successfully worn in the field, differences of up to 1 000 fold have been reported.

The whole set-up and preparation work in very high voltage is made to limit the power of electric arcs during work activities.

When, in the preparation phase of the work, the risk assessment leads to a high probability that there may be electric arcs, due to the short distances or unsuitable equipment insulation, the work is not done.

This approach is dictated by the fact that the electric arcs produced by high-voltage installations have very significant thermal and electrical effects, which are hardly attenuated by protective clothing worn by operators.

If protection against electric arc value is required by agreements between customer and manufacturer, it is possible to perform tests on the fabric and/or on the *garment* complete with accessories using the reference standards already published on this topic by IEC TC 78.

This document has been prepared according to the requirements of IEC 61477, where applicable.

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