BS EN 61482-1-2:2014



BSI Standards Publication

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)



This British Standard is the UK implementation of EN 61482-1-2:2014. It is identical to IEC 61482-1-2:2014. It supersedes BS EN 61482-1-2:2007, which will be withdrawn on 13 November 2017.

The UK participation in its preparation was entrusted to Technical Committee PEL/78, Tools for live working.

A list of organizations represented on this committee can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

© The British Standards Institution 2015

Published by BSI Standards Limited 2015.

ISBN 978 0 580 79850 4

ICS 13.220.40; 29.260; 29.260.99

Compliance with a British Standard cannot confer immunity from legal obligations.

This British Standard was published under the authority of the Standards Policy and Strategy Committee on 31 January 2015.

Amendments/corrigenda issued since publication

Date Text affected

EUROPÄISCHE NORM

December 2014

ICS 13.220.40; 29.260; 29.260.99

Supersedes EN 61482-1-2:2007

English Version

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) (IEC 61482-1-2:2014)

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)

(CEI 61482-1-2:2014)

Arbeiten unter Spannung - Schutzkleidung gegen die thermischen Gefahren eines elektrischen Lichtbogens - Teil 1-2: Prüfverfahren - Verfahren 2: Bestimmung der Lichtbogen-Schutzklasse des Materials und der Kleidung unter Verwendung eines gerichteten Prüflichtbogens (Box-Test) (IEC 61482-1-2:2014)

This European Standard was approved by CENELEC on 2014-11-13. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CENELEC member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.



European Committee for Electrotechnical Standardization Comité Européen de Normalisation Electrotechnique Europäisches Komitee für Elektrotechnische Normung

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

Foreword

The text of document 78/1053/FDIS, future edition 2 of IEC 61482-1-2, prepared by IEC/TC 78 "Live working" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 61482-1-2:2014.

The following dates are fixed:

- latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement
- latest date by which the national standards conflicting with (dow) 2017-11-13 the document have to be withdrawn

This document supersedes EN 61482-1-2:2007.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CENELEC [and/or CEN] shall not be held responsible for identifying any or all such patent rights.

Endorsement notice

The text of the International Standard IEC 61482-1-2:2014 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following notes have to be added for the standards indicated:

IEC 61482-1-1	NOTE	Harmonized as EN 61482-1-1.
ISO 3175-2	NOTE	Harmonized as EN ISO 3175-2.
ISO 6330	NOTE	Harmonized as EN ISO 6330.
ISO 13688:2013	NOTE	Harmonized as EN ISO 13688:2013 (not modified).
ISO 15797	NOTE	Harmonized as EN ISO 15797.

(normative)

Normative references to international publications with their corresponding European publications

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

NOTE 1 When an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

NOTE 2 Up-to-date information on the latest versions of the European Standards listed in this annex is available here: www.cenelec.eu.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	EN/HD	<u>Year</u>
ISO 9151	1995	Protective clothing against heat and flame - Determination of heat transmission on exposure to flame	-	-

CONTENTS

1	Scob	e	0				
2	Norm	rmative references					
3	Term	s, definitions and symbols	6				
	3.1	Terms and definitions	6				
	3.2	Symbols and units used in this document					
4	Princ	iple of the test method					
	4.1	Material box test procedure	11				
	4.2	Garment box test procedure	11				
5	Signi	ficance and use of the test method	12				
6	Test	apparatus	12				
	6.1	Test apparatus and test box	12				
	6.2	Material box test procedure					
	6.2.1	Arrangement of the material box test procedure	15				
	6.2.2	Test plate (panel) construction	16				
	6.2.3	Sensor construction	17				
	6.2.4	Sensor response	17				
	6.3	Garment box test procedure	17				
	6.3.1	Arrangement of the garment box test procedure	17				
	6.3.2	Mannequin construction	17				
	6.4	Electric supply and electrodes					
	6.4.1						
	6.4.2						
	6.4.3						
	6.4.4						
	6.5	Electric test arc characteristics					
_	6.6	Measurement and data acquisition system					
7	•	ator safety					
8	Spec	imen preparation	20				
	8.1	Description of the test specimens					
	8.1.1	· '					
	8.1.2	Test specimens for garment box test procedure	20				
	8.2	Pre-treatment by cleaning					
	8.3	Pre-conditioning of the test specimens					
9	Calib	ration					
	9.1	Data acquisition system pre-calibration					
	9.2	Calorimeter calibration check					
	9.3	Arc exposure calibration					
	9.4	Calibration of the electric test circuit and testing					
	9.5	Confirmation of test apparatus setting					
	9.6	Preparing and conditioning of the box					
10		ratus care and maintenance					
	10.1	Surface reconditioning of the sensors					
	10.2	Care of test plate and mannequin					
	10.3	Care of electrodes	23				