



IEC 62561-7

Edition 3.0 2024-02
REDLINE VERSION

INTERNATIONAL STANDARD



**Lightning protection system components (LPSC) –
Part 7: Requirements for earthing enhancing compounds**

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

ICS 29.020, 91.120.40

ISBN 978-2-8322-8353-0

Warning! Make sure that you obtained this publication from an authorized distributor.

CONTENTS

FOREWORD.....	4
INTRODUCTION.....	6
1 Scope.....	7
2 Normative references	7
3 Terms and definitions	7
4 Requirements	8
4.1 General.....	8
4.2 Documentation and installation instructions	8
4.3 Material	9
4.4 Marking.....	9
5 Tests	9
5.1 General.....	9
5.2 Leaching test	10
5.2.1 General	10
5.2.2 Determination of leachable ions.....	10
5.2.3 Passing Acceptance criteria.....	10
5.3 Sulphur determination.....	10
5.3.1 General	10
5.3.2 Passing Acceptance criteria.....	10
5.4 Determination of resistivity.....	10
5.4.1 General	10
5.4.2 Testing apparatus.....	11
5.4.3 Test procedure	12
5.4.4 Passing Acceptance	13
5.5 pH measurement.....	13
5.5.1 General	13
5.5.2 Testing apparatus – Reagents	13
5.5.3 Material preparation.....	13
5.5.4 Test procedure	14
5.5.5 Acceptance criteria	14
5.6 Corrosion tests	14
5.6.1 General	14
5.6.2 Test apparatus	14
5.6.3 Test preparation	14
5.6.4 Test procedure	15
5.6.5 Passing Acceptance	15
5.7 Documentation and installation instructions	15
5.8 Marking and indications	15
6 Structure and content of the test report.....	16
6.1 General.....	16
6.2 Report identification.....	16
6.3 Specimen description.....	16
6.4 Standards and references	17
6.5 Test procedure.....	17
6.6 Testing equipment description	17
6.7 Measuring instruments description.....	17

- 6.8 Results and parameters recorded 17
 - 6.8.1 Measured, observed or derived results 17
 - 6.8.2 Statement of pass or fail 17
- Annex A (informative) Corrosion load..... 18
- Annex B (normative) Applicability of previous tests 20
- Bibliography..... 21

- Figure 1 – Typical configurations for a four-electrode soil box..... 12
- Figure A.1 – Corrosion load (free corrosion without concentration cell) 19

- Table B.1 – Differences in the requirements for earthing enhancing compounds
 complying with IEC 62561-7:2011 or IEC 62561-7:2018..... 20

INTERNATIONAL ELECTROTECHNICAL COMMISSION

LIGHTNING PROTECTION SYSTEM COMPONENTS (LPSC) –

Part 7: Requirements for earthing enhancing compounds

FOREWORD

- 1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as “IEC Publication(s)”). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
- 2) The formal decisions or agreements of IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested IEC National Committees.
- 3) IEC Publications have the form of recommendations for international use and are accepted by IEC National Committees in that sense. While all reasonable efforts are made to ensure that the technical content of IEC Publications is accurate, IEC cannot be held responsible for the way in which they are used or for any misinterpretation by any end user.
- 4) In order to promote international uniformity, IEC National Committees undertake to apply IEC Publications transparently to the maximum extent possible in their national and regional publications. Any divergence between any IEC Publication and the corresponding national or regional publication shall be clearly indicated in the latter.
- 5) IEC itself does not provide any attestation of conformity. Independent certification bodies provide conformity assessment services and, in some areas, access to IEC marks of conformity. IEC is not responsible for any services carried out by independent certification bodies.
- 6) All users should ensure that they have the latest edition of this publication.
- 7) No liability shall attach to IEC or its directors, employees, servants or agents including individual experts and members of its technical committees and IEC National Committees for any personal injury, property damage or other damage of any nature whatsoever, whether direct or indirect, or for costs (including legal fees) and expenses arising out of the publication, use of, or reliance upon, this IEC Publication or any other IEC Publications.
- 8) Attention is drawn to the Normative references cited in this publication. Use of the referenced publications is indispensable for the correct application of this publication.
- 9) IEC draws attention to the possibility that the implementation of this document may involve the use of (a) patent(s). IEC takes no position concerning the evidence, validity or applicability of any claimed patent rights in respect thereof. As of the date of publication of this document, IEC had not received notice of (a) patent(s), which may be required to implement this document. However, implementers are cautioned that this may not represent the latest information, which may be obtained from the patent database available at <https://patents.iec.ch>. IEC shall not be held responsible for identifying any or all such patent rights.

This redline version of the official IEC Standard allows the user to identify the changes made to the previous edition IEC 62561-7:2018. A vertical bar appears in the margin wherever a change has been made. Additions are in green text, deletions are in strikethrough red text.

IEC 62561-7 has been prepared by IEC technical committee 81: Lightning protection. It is an International Standard.

This third edition cancels and replaces the second edition published in 2018. This edition constitutes a technical revision.

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

- a) Figure A.1 has been replaced with a simpler one that clearly shows the high and low corrosion load limits of the earth enhancing compounds without the need for special knowledge;
- b) pH measurement has been introduced.

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

Draft	Report on voting
81/755/FDIS	81/761/RVD

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

The language used for the development of this International Standard is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/publications.

A list of all parts in the IEC 62561 series, published under the general title *Lightning protection system components (LPSC)*, 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 webstore.iec.ch in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn, or
- revised.

IMPORTANT – The "colour inside" logo on the cover page of this document indicates that it contains colours which are considered to be useful for the correct understanding of its contents. Users should therefore print this document using a colour printer.

INTRODUCTION

This part of IEC 62561 deals with the requirements and tests for earthing enhancing compounds used as lightning protection system components (LPSC) designed and implemented in accordance with the IEC 62305 series.

LIGHTNING PROTECTION SYSTEM COMPONENTS (LPSC) –

Part 7: Requirements for earthing enhancing compounds

1 Scope

This part of IEC 62561 specifies the requirements and tests for earthing enhancing compounds producing low resistance of an earth termination system.

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.

ISO 4689-3, *Iron ores – Determination of sulfur content – Part 3: Combustion/infrared method*

~~ISO 14869-1, *Soil quality – Dissolution for the determination of total element content – Part 1: Dissolution with hydrofluoric and perchloric acids*~~

EN 12457-2, *Characterisation of waste – Leaching – Compliance test for leaching of granular waste materials and sludges – Part 2: One stage batch test at a liquid to solid ratio of 10 l/kg for materials with particle size below 4 mm (without or with size reduction)*

~~EN 16192, *Characterization of waste – analysis of eluates*~~

CEN/TR 16192, *Waste – Guidance on analysis of eluates*

~~ASTM G57-06, *Standard Test Method for Field Measurement of Soil Resistivity, Using the Wenner, Four-Electrode Method*~~

ASTM G57-20, *Standard Test Method for Measurement of Soil Resistivity Using the Wenner Four-Electrode Method*

ASTM G59-97, *Standard Test Method for Conducting Potentiodynamic Polarization Resistance Measurements*

ASTM G102-89, *Standard Practice for Calculation of Corrosion Rates and Related Information from Electrochemical Measurements*

INTERNATIONAL STANDARD

NORME INTERNATIONALE

**Lightning protection system components (LPSC) –
Part 7: Requirements for earthing enhancing compounds**

**Composants des systèmes de protection contre la foudre (CSPF) –
Partie 7: Exigences pour les enrichisseurs de terre**

CONTENTS

FOREWORD.....	4
INTRODUCTION.....	6
1 Scope.....	7
2 Normative references	7
3 Terms and definitions	7
4 Requirements	8
4.1 General.....	8
4.2 Documentation and installation instructions	8
4.3 Material	8
4.4 Marking.....	8
5 Tests	9
5.1 General.....	9
5.2 Leaching test	9
5.2.1 General	9
5.2.2 Determination of leachable ions.....	10
5.2.3 Acceptance criteria	10
5.3 Sulphur determination.....	10
5.3.1 General	10
5.3.2 Acceptance criteria	10
5.4 Determination of resistivity.....	10
5.4.1 General	10
5.4.2 Testing apparatus.....	10
5.4.3 Test procedure	11
5.4.4 Acceptance criteria	12
5.5 pH measurement.....	12
5.5.1 General	12
5.5.2 Testing apparatus – Reagents	12
5.5.3 Material preparation.....	12
5.5.4 Test procedure	13
5.5.5 Acceptance criteria	13
5.6 Corrosion tests	13
5.6.1 General	13
5.6.2 Test apparatus	13
5.6.3 Test preparation	13
5.6.4 Test procedure	14
5.6.5 Acceptance criteria	14
5.7 Documentation and installation instructions	14
5.8 Marking.....	14
6 Structure and content of the test report.....	14
6.1 General.....	14
6.2 Report identification.....	15
6.3 Specimen description.....	15
6.4 Standards and references	15
6.5 Test procedure.....	15
6.6 Testing equipment description	16
6.7 Measuring instruments description.....	16

- 6.8 Results and parameters recorded 16
 - 6.8.1 Measured, observed or derived results 16
 - 6.8.2 Statement of pass or fail 16
- Annex A (informative) Corrosion load..... 17
- Annex B (normative) Applicability of previous tests 18
- Bibliography..... 19

- Figure 1 – Typical configurations for a four-electrode soil box..... 11
- Figure A.1 – Corrosion load (free corrosion without concentration cell) 17

- Table B.1 – Differences in the requirements for earthing enhancing compounds
complying with IEC 62561-7:2011 or IEC 62561-7:2018..... 18

INTERNATIONAL ELECTROTECHNICAL COMMISSION

LIGHTNING PROTECTION SYSTEM COMPONENTS (LPSC) –

Part 7: Requirements for earthing enhancing compounds

FOREWORD

- 1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as “IEC Publication(s)”). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
- 2) The formal decisions or agreements of IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested IEC National Committees.
- 3) IEC Publications have the form of recommendations for international use and are accepted by IEC National Committees in that sense. While all reasonable efforts are made to ensure that the technical content of IEC Publications is accurate, IEC cannot be held responsible for the way in which they are used or for any misinterpretation by any end user.
- 4) In order to promote international uniformity, IEC National Committees undertake to apply IEC Publications transparently to the maximum extent possible in their national and regional publications. Any divergence between any IEC Publication and the corresponding national or regional publication shall be clearly indicated in the latter.
- 5) IEC itself does not provide any attestation of conformity. Independent certification bodies provide conformity assessment services and, in some areas, access to IEC marks of conformity. IEC is not responsible for any services carried out by independent certification bodies.
- 6) All users should ensure that they have the latest edition of this publication.
- 7) No liability shall attach to IEC or its directors, employees, servants or agents including individual experts and members of its technical committees and IEC National Committees for any personal injury, property damage or other damage of any nature whatsoever, whether direct or indirect, or for costs (including legal fees) and expenses arising out of the publication, use of, or reliance upon, this IEC Publication or any other IEC Publications.
- 8) Attention is drawn to the Normative references cited in this publication. Use of the referenced publications is indispensable for the correct application of this publication.
- 9) IEC draws attention to the possibility that the implementation of this document may involve the use of (a) patent(s). IEC takes no position concerning the evidence, validity or applicability of any claimed patent rights in respect thereof. As of the date of publication of this document, IEC had not received notice of (a) patent(s), which may be required to implement this document. However, implementers are cautioned that this may not represent the latest information, which may be obtained from the patent database available at <https://patents.iec.ch>. IEC shall not be held responsible for identifying any or all such patent rights.

IEC 62561-7 has been prepared by IEC technical committee 81: Lightning protection. It is an International Standard.

This third edition cancels and replaces the second edition published in 2018. This edition constitutes a technical revision.

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

- a) Figure A.1 has been replaced with a simpler one that clearly shows the high and low corrosion load limits of the earth enhancing compounds without the need for special knowledge;
- b) pH measurement has been introduced.

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

Draft	Report on voting
81/755/FDIS	81/761/RVD

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

The language used for the development of this International Standard is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/publications.

A list of all parts in the IEC 62561 series, published under the general title *Lightning protection system components (LPSC)*, 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 webstore.iec.ch in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn, or
- revised.

INTRODUCTION

This part of IEC 62561 deals with the requirements and tests for earthing enhancing compounds used as lightning protection system components (LPSC) designed and implemented in accordance with the IEC 62305 series.

LIGHTNING PROTECTION SYSTEM COMPONENTS (LPSC) –

Part 7: Requirements for earthing enhancing compounds

1 Scope

This part of IEC 62561 specifies the requirements and tests for earthing enhancing compounds producing low resistance of an earth termination system.

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.

ISO 4689-3, *Iron ores – Determination of sulfur content – Part 3: Combustion/infrared method*

EN 12457-2, *Characterisation of waste – Leaching – Compliance test for leaching of granular waste materials and sludges – Part 2: One stage batch test at a liquid to solid ratio of 10 l/kg for materials with particle size below 4 mm (without or with size reduction)*

CEN/TR 16192, *Waste – Guidance on analysis of eluates*

ASTM G57-20, *Standard Test Method for Measurement of Soil Resistivity Using the Wenner Four-Electrode Method*

ASTM G59-97, *Standard Test Method for Conducting Potentiodynamic Polarization Resistance Measurements*

ASTM G102-89, *Standard Practice for Calculation of Corrosion Rates and Related Information from Electrochemical Measurements*

SOMMAIRE

AVANT-PROPOS	22
INTRODUCTION.....	24
1 Domaine d'application	25
2 Références normatives	25
3 Termes et définitions	25
4 Exigences.....	26
4.1 Généralités	26
4.2 Documentation et instructions d'installation.....	26
4.3 Matériau	26
4.4 Marquage	27
5 Essais	27
5.1 Généralités	27
5.2 Essai de lixiviation	27
5.2.1 Généralités	27
5.2.2 Détermination des ions de lixiviation.....	28
5.2.3 Critères d'acceptation	28
5.3 Détermination de la teneur en soufre	28
5.3.1 Généralités	28
5.3.2 Critères d'acceptation	28
5.4 Détermination de la résistivité	28
5.4.1 Généralités	28
5.4.2 Appareillage d'essai	29
5.4.3 Procédure d'essai	30
5.4.4 Critères d'acceptation	30
5.5 Mesurage du pH	30
5.5.1 Généralités	30
5.5.2 Appareillage d'essai – Réactifs	30
5.5.3 Préparation du matériau	31
5.5.4 Procédure d'essai	31
5.5.5 Critères d'acceptation	31
5.6 Essais de corrosion	31
5.6.1 Généralités	31
5.6.2 Appareillage d'essai	32
5.6.3 Préparation des essais	32
5.6.4 Procédure d'essai	32
5.6.5 Critères d'acceptation	32
5.7 Documentation et instructions d'installation.....	33
5.8 Marquage	33
6 Structure et contenu du rapport d'essai	33
6.1 Généralités	33
6.2 Identification du rapport	33
6.3 Description de l'échantillon	34
6.4 Normes et références.....	34
6.5 Procédure d'essai	34
6.6 Description des équipements d'essai	34
6.7 Description des instruments de mesure.....	34

6.8	Résultats et paramètres enregistrés.....	34
6.8.1	Mesures, observations ou résultats annexes.....	34
6.8.2	Déclaration d'acceptation ou de refus	34
Annexe A (informative)	Force corrosive	35
Annexe B (normative)	Applicabilité d'essais précédents.....	36
Bibliographie.....		37
Figure 1	– Configurations types pour un récipient à quatre électrodes pour l'analyse du sol	29
Figure A.1	– Force corrosive (corrosion libre sans cellule de concentration)	35
Tableau B.1	– Différences des exigences pour les enrichisseurs de terre conformes à l'IEC 62561-7:2011 ou à l'IEC 62561-7:2018.....	36

COMMISSION ÉLECTROTECHNIQUE INTERNATIONALE

COMPOSANTS DES SYSTÈMES DE PROTECTION CONTRE LA Foudre (CSPF) –

Partie 7: Exigences pour les enrichisseurs de terre

AVANT-PROPOS

- 1) La Commission Électrotechnique Internationale (IEC) est une organisation mondiale de normalisation composée de l'ensemble des comités électrotechniques nationaux (Comités nationaux de l'IEC). L'IEC a pour objet de favoriser la coopération internationale pour toutes les questions de normalisation dans les domaines de l'électricité et de l'électronique. À cet effet, l'IEC – entre autres activités – publie des Normes internationales, des Spécifications techniques, des Rapports techniques, des Spécifications accessibles au public (PAS) et des Guides (ci-après dénommés "Publication(s) de l'IEC"). Leur élaboration est confiée à des comités d'études, aux travaux desquels tout Comité national intéressé par le sujet traité peut participer. Les organisations internationales, gouvernementales et non gouvernementales, en liaison avec l'IEC, participent également aux travaux. L'IEC collabore étroitement avec l'Organisation Internationale de Normalisation (ISO), selon des conditions fixées par accord entre les deux organisations.
- 2) Les décisions ou accords officiels de l'IEC concernant les questions techniques représentent, dans la mesure du possible, un accord international sur les sujets étudiés, étant donné que les Comités nationaux de l'IEC intéressés sont représentés dans chaque comité d'études.
- 3) Les Publications de l'IEC se présentent sous la forme de recommandations internationales et sont agréées comme telles par les Comités nationaux de l'IEC. Tous les efforts raisonnables sont entrepris afin que l'IEC s'assure de l'exactitude du contenu technique de ses publications; l'IEC ne peut pas être tenue responsable de l'éventuelle mauvaise utilisation ou interprétation qui en est faite par un quelconque utilisateur final.
- 4) Dans le but d'encourager l'uniformité internationale, les Comités nationaux de l'IEC s'engagent, dans toute la mesure possible, à appliquer de façon transparente les Publications de l'IEC dans leurs publications nationales et régionales. Toutes divergences entre toutes Publications de l'IEC et toutes publications nationales ou régionales correspondantes doivent être indiquées en termes clairs dans ces dernières.
- 5) L'IEC elle-même ne fournit aucune attestation de conformité. Des organismes de certification indépendants fournissent des services d'évaluation de conformité et, dans certains secteurs, accèdent aux marques de conformité de l'IEC. L'IEC n'est responsable d'aucun des services effectués par les organismes de certification indépendants.
- 6) Tous les utilisateurs doivent s'assurer qu'ils sont en possession de la dernière édition de cette publication.
- 7) Aucune responsabilité ne doit être imputée à l'IEC, à ses administrateurs, employés, auxiliaires ou mandataires, y compris ses experts particuliers et les membres de ses comités d'études et des Comités nationaux de l'IEC, pour tout préjudice causé en cas de dommages corporels et matériels, ou de tout autre dommage de quelque nature que ce soit, directe ou indirecte, ou pour supporter les coûts (y compris les frais de justice) et les dépenses découlant de la publication ou de l'utilisation de cette Publication de l'IEC ou de toute autre Publication de l'IEC, ou au crédit qui lui est accordé.
- 8) L'attention est attirée sur les références normatives citées dans cette publication. L'utilisation de publications référencées est obligatoire pour une application correcte de la présente publication.
- 9) L'IEC attire l'attention sur le fait que la mise en application du présent document peut entraîner l'utilisation d'un ou de plusieurs brevets. L'IEC ne prend pas position quant à la preuve, à la validité et à l'applicabilité de tout droit de brevet revendiqué à cet égard. À la date de publication du présent document, l'IEC n'avait pas reçu notification qu'un ou plusieurs brevets pouvaient être nécessaires à sa mise en application. Toutefois, il y a lieu d'avertir les responsables de la mise en application du présent document que des informations plus récentes sont susceptibles de figurer dans la base de données de brevets, disponible à l'adresse <https://patents.iec.ch>. L'IEC ne saurait être tenue pour responsable de ne pas avoir identifié de tels droits de brevets.

L'IEC 62561-7 a été établie par le comité d'études 81 de l'IEC: Protection contre la foudre. Il s'agit d'une Norme internationale.

Cette troisième édition annule et remplace la deuxième édition parue en 2018. Cette édition constitue une révision technique.

Cette édition inclut les modifications techniques majeures suivantes par rapport à l'édition précédente:

- a) la Figure A.1 a été remplacée par une figure plus simple, qui indique clairement les limites haute et basse de la force corrosive des enrichisseurs de terre sans nécessiter aucune connaissance particulière;
- b) le mesurage du pH a été ajouté.

Le texte de cette Norme internationale est issu des documents suivants:

Projet	Rapport de vote
81/755/FDIS	81/761/RVD

Le rapport de vote indiqué dans le tableau ci-dessus donne toute information sur le vote ayant abouti à son approbation.

La langue employée pour l'élaboration de cette Norme internationale est l'anglais.

Ce document a été rédigé selon les Directives ISO/IEC, Partie 2, il a été développé selon les Directives ISO/IEC, Partie 1 et les Directives ISO/IEC, Supplément IEC, disponibles sous www.iec.ch/members_experts/refdocs. Les principaux types de documents développés par l'IEC sont décrits plus en détail sous www.iec.ch/publications.

Une liste de toutes les parties de la série IEC 62561, publiée sous le titre général *Composants des systèmes de protection contre la foudre (CSPF)*, se trouve sur le site web de l'IEC.

Le comité a décidé que le contenu de ce document ne sera pas modifié avant la date de stabilité indiquée sur le site web de l'IEC sous webstore.iec.ch dans les données relatives au document recherché. À cette date, le document sera

- reconduit,
- supprimé, ou
- révisé.

INTRODUCTION

La présente partie de l'IEC 62561 spécifie les exigences et les essais pour les enrichisseurs de terre utilisés comme composants des systèmes de protection contre la foudre (CSPF) conçus et mis en œuvre conformément à la série IEC 62305.

COMPOSANTS DES SYSTÈMES DE PROTECTION CONTRE LA Foudre (CSPF) –

Partie 7: Exigences pour les enrichisseurs de terre

1 Domaine d'application

La présente partie de l'IEC 62561 spécifie les exigences et les essais pour les enrichisseurs de terre qui génèrent une faible résistance d'un réseau de prises de terre.

2 Références normatives

Les documents suivants sont cités dans le texte de sorte qu'ils constituent, pour tout ou partie de leur contenu, des exigences du présent document. Pour les références datées, seule l'édition citée s'applique. Pour les références non datées, la dernière édition du document de référence s'applique (y compris les éventuels amendements).

ISO 4689-3, *Minerais de fer – Dosage du soufre – Partie 3: Méthode par combustion et infrarouge*

EN 12457-2, *Caractérisation des déchets – Lixiviation – Essai de conformité pour la lixiviation des déchets fragmentés et des boues – Partie 2: Essai en bûchée unique avec un rapport liquide-solide de 10 l/kg et une granularité inférieure à 4 mm (sans ou avec réduction de la granularité)*

CEN/TR 16192, *Déchets – Recommandations pour analyse des éluats*

ASTM G57-20, *Standard Test Method for Measurement of Soil Resistivity Using the Wenner Four-Electrode Method* (disponible en anglais seulement)

ASTM G59-97, *Standard Test Method for Conducting Potentiodynamic Polarization Resistance Measurements* (disponible en anglais seulement)

ASTM G102-89, *Standard Practice for Calculation of Corrosion Rates and Related Information from Electrochemical Measurements* (disponible en anglais seulement)