



IEC 60060-1

Edition 3.0 2010-09

# INTERNATIONAL STANDARD

## NORME INTERNATIONALE

**High-voltage test techniques –  
Part 1: General definitions and test requirements**

**Technique des essais à haute tension –  
Partie 1: Définitions et exigences générales**

INTERNATIONAL  
ELECTROTECHNICAL  
COMMISSION

COMMISSION  
ELECTROTECHNIQUE  
INTERNATIONALE

PRICE CODE  
CODE PRIX

**XB**

ICS 17.220.20

ISBN 978-2-88912-185-4

## CONTENTS

|                                                                                                      |    |
|------------------------------------------------------------------------------------------------------|----|
| FOREWORD.....                                                                                        | 5  |
| 1 Scope.....                                                                                         | 7  |
| 2 Normative references .....                                                                         | 7  |
| 3 Terms and definitions .....                                                                        | 7  |
| 3.1 Definitions related to characteristics of discharges .....                                       | 8  |
| 3.2 Definitions relating to characteristics of the test voltage .....                                | 8  |
| 3.3 Definitions relating to tolerance and uncertainty .....                                          | 9  |
| 3.4 Definitions relating to statistical characteristics of disruptive-discharge voltage values ..... | 9  |
| 3.5 Definitions relating to classification of insulation in test objects .....                       | 10 |
| 4 General requirements .....                                                                         | 11 |
| 4.1 General requirements for test procedures.....                                                    | 11 |
| 4.2 Arrangement of the test object in dry tests .....                                                | 11 |
| 4.3 Atmospheric corrections in dry tests .....                                                       | 12 |
| 4.3.1 Standard reference atmosphere.....                                                             | 12 |
| 4.3.2 Atmospheric correction factors for air gaps.....                                               | 12 |
| 4.3.3 Application of correction factors.....                                                         | 13 |
| 4.3.4 Correction factor components .....                                                             | 13 |
| 4.3.5 Measurement of atmospheric parameters .....                                                    | 16 |
| 4.3.6 Conflicting requirements for testing internal and external insulation.....                     | 17 |
| 4.4 Wet tests .....                                                                                  | 18 |
| 4.4.1 Wet test procedure .....                                                                       | 18 |
| 4.4.2 Atmospheric corrections for wet tests .....                                                    | 19 |
| 4.5 Artificial pollution tests .....                                                                 | 19 |
| 5 Tests with direct voltage .....                                                                    | 19 |
| 5.1 Definitions for direct voltage tests.....                                                        | 19 |
| 5.2 Test voltage .....                                                                               | 20 |
| 5.2.1 Requirements for the test voltage .....                                                        | 20 |
| 5.2.2 Generation of the test voltage.....                                                            | 20 |
| 5.2.3 Measurement of the test voltage.....                                                           | 20 |
| 5.2.4 Measurement of the test current .....                                                          | 21 |
| 5.3 Test procedures .....                                                                            | 21 |
| 5.3.1 Withstand voltage tests .....                                                                  | 21 |
| 5.3.2 Disruptive-discharge voltage tests .....                                                       | 22 |
| 5.3.3 Assured disruptive-discharge voltage tests .....                                               | 22 |
| 6 Tests with alternating voltage .....                                                               | 22 |
| 6.1 Definitions for alternating voltage tests.....                                                   | 22 |
| 6.2 Test Voltage.....                                                                                | 22 |
| 6.2.1 Requirements for the test voltage .....                                                        | 22 |
| 6.2.2 Generation of the test voltage.....                                                            | 23 |
| 6.2.3 Measurement of the test voltage.....                                                           | 24 |
| 6.2.4 Measurement of the test current .....                                                          | 25 |
| 6.3 Test procedures .....                                                                            | 25 |
| 6.3.1 Withstand voltage tests .....                                                                  | 25 |
| 6.3.2 Disruptive-discharge voltage tests .....                                                       | 25 |
| 6.3.3 Assured disruptive-discharge voltage tests .....                                               | 25 |

|              |                                                                                                                                               |    |
|--------------|-----------------------------------------------------------------------------------------------------------------------------------------------|----|
| 7            | Tests with lightning-impulse voltage .....                                                                                                    | 26 |
| 7.1          | Definitions for lightning-impulse voltage tests .....                                                                                         | 26 |
| 7.2          | Test Voltage .....                                                                                                                            | 33 |
| 7.2.1        | Standard lightning-impulse voltage .....                                                                                                      | 33 |
| 7.2.2        | Tolerances .....                                                                                                                              | 34 |
| 7.2.3        | Standard chopped lightning-impulse voltage .....                                                                                              | 34 |
| 7.2.4        | Special lightning-impulse voltages .....                                                                                                      | 34 |
| 7.2.5        | Generation of the test voltage .....                                                                                                          | 34 |
| 7.2.6        | Measurement of the test voltage and determination of impulse shape .....                                                                      | 34 |
| 7.2.7        | Measurement of current during tests with impulse voltages .....                                                                               | 35 |
| 7.3          | Test Procedures .....                                                                                                                         | 35 |
| 7.3.1        | Withstand voltage tests .....                                                                                                                 | 35 |
| 7.3.2        | Procedures for assured disruptive-discharge voltage tests .....                                                                               | 36 |
| 8            | Tests with switching-impulse voltage .....                                                                                                    | 36 |
| 8.1          | Definitions for switching-impulse voltage tests .....                                                                                         | 36 |
| 8.2          | Test voltage .....                                                                                                                            | 38 |
| 8.2.1        | Standard switching-impulse voltage .....                                                                                                      | 38 |
| 8.2.2        | Tolerances .....                                                                                                                              | 38 |
| 8.2.3        | Time-to-peak evaluation .....                                                                                                                 | 38 |
| 8.2.4        | Special switching-impulse voltages .....                                                                                                      | 38 |
| 8.2.5        | Generation of the test voltage .....                                                                                                          | 38 |
| 8.2.6        | Measurement of test voltage and determination of impulse shape .....                                                                          | 39 |
| 8.2.7        | Measurement of current during tests with impulse voltages .....                                                                               | 39 |
| 8.3          | Test procedures .....                                                                                                                         | 39 |
| 9            | Tests with combined and composite voltages .....                                                                                              | 39 |
| 9.1          | Definitions for combined- and composite-voltage tests .....                                                                                   | 39 |
| 9.2.4        | Tolerances .....                                                                                                                              | 42 |
| 9.2.5        | Generation .....                                                                                                                              | 42 |
| 9.2.6        | Measurement .....                                                                                                                             | 42 |
| 9.3          | Composite test voltages .....                                                                                                                 | 43 |
| 9.3.1        | Parameters .....                                                                                                                              | 43 |
| 9.3.2        | Tolerances .....                                                                                                                              | 43 |
| 9.3.3        | Generation .....                                                                                                                              | 43 |
| 9.3.4        | Measurement .....                                                                                                                             | 43 |
| 9.4          | Test procedures .....                                                                                                                         | 43 |
| Annex A      | (informative) Statistical treatment of test results .....                                                                                     | 45 |
| Annex B      | (normative) Procedures for calculation of parameters of standard lightning-impulse voltages with superimposed overshoot or oscillations ..... | 54 |
| Annex C      | (informative) Guidance for implementing software for evaluation of lightning-impulse voltage parameters .....                                 | 59 |
| Annex D      | (informative) Background to the introduction of the test voltage factor for evaluation of impulses with overshoot .....                       | 62 |
| Annex E      | (informative) The iterative calculation method in the converse procedure for the determination of atmospheric correction factor .....         | 68 |
| Bibliography | .....                                                                                                                                         | 73 |

Figure 1 – Recommended minimum clearance  $D$  of extraneous live or earthed objects to the energized electrode of a test object, during an a.c. or positive switching impulse test at the maximum voltage  $U$  applied during test ..... 12

|                                                                                                                                                                         |    |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|
| Figure 2 – $k$ as a function of the ratio of the absolute humidity $h$ to the relative air density $\delta$ (see 4.3.4.2 for limits of applicability) .....             | 14 |
| Figure 3 – Values of exponents $m$ and $w$ .....                                                                                                                        | 16 |
| Figure 4 – Absolute humidity of air as a function of dry- and wet-bulb thermometer readings .....                                                                       | 17 |
| Figure 5 – Full lightning-impulse voltage .....                                                                                                                         | 26 |
| Figure 6 – Test voltage function .....                                                                                                                                  | 28 |
| Figure 7 – Full impulse voltage time parameters .....                                                                                                                   | 29 |
| Figure 8 – Voltage time interval .....                                                                                                                                  | 30 |
| Figure 9 – Voltage integral .....                                                                                                                                       | 30 |
| Figure 10 – Lightning-impulse voltage chopped on the front .....                                                                                                        | 31 |
| Figure 11 – Lightning-impulse voltage chopped on the tail .....                                                                                                         | 32 |
| Figure 12 – Linearly rising front chopped impulse .....                                                                                                                 | 32 |
| Figure 13 – Voltage/time curve for impulses of constant prospective shape .....                                                                                         | 33 |
| Figure 14 – Switching-impulse voltage .....                                                                                                                             | 37 |
| Figure 15 – Circuit for a combined voltage test .....                                                                                                                   | 40 |
| Figure 16 – Schematic example for combined and composite voltage .....                                                                                                  | 41 |
| Figure 17 – Circuit for a composite voltage test .....                                                                                                                  | 42 |
| Figure 18 – Definition of time delay $\Delta t$ .....                                                                                                                   | 43 |
| Figure A.1 – Example of a multiple-level (Class 1) test .....                                                                                                           | 48 |
| Figure A.2 – Examples of decreasing and increasing up-and-down (Class 2) tests for determination of 10 % and 90 % disruptive-discharge probabilities respectively ..... | 49 |
| Figure A.3 – Examples of progressive stress (Class 3) tests .....                                                                                                       | 50 |
| Figure B.1 – Recorded and base curve showing overshoot and residual curve .....                                                                                         | 55 |
| Figure B.2 – Test voltage curve (addition of base curve and filtered residual curve) .....                                                                              | 55 |
| Figure B.3 – Recorded and test voltage curves .....                                                                                                                     | 56 |
| Figure D.1 – “Effective” test voltage function in IEC 60060-1:1989 .....                                                                                                | 63 |
| Figure D.2 – Representative experimental points from European experiments and test voltage function .....                                                               | 65 |
| Figure E.1 – Atmospheric pressure as a function of altitude .....                                                                                                       | 69 |
| Table 1 – Values of exponents, $m$ for air density correction and $w$ for humidity correction, as a function of the parameter $g$ .....                                 | 15 |
| Table 2 – Precipitation conditions for standard procedure .....                                                                                                         | 19 |
| Table A.1 – Discharge probabilities in up-and-down testing .....                                                                                                        | 52 |
| Table E.1 – Altitudes and air pressure of some locations .....                                                                                                          | 69 |
| Table E.2 – Initial $K_t$ and its sensitivity coefficients with respect to $U_{50}$ for the example of the standard phase-to-earth a.c. test voltage of 395 kV .....    | 70 |
| Table E.3 – Initial and converged $K_t$ values for the example of the standard phase-to-earth a.c. test voltage of 395 kV .....                                         | 72 |

## INTERNATIONAL ELECTROTECHNICAL COMMISSION

**HIGH-VOLTAGE TEST TECHNIQUES –****Part 1: General definitions and test requirements**

## FOREWORD

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International Standard IEC 60060-1 has been prepared by IEC technical committee 42: High-voltage test techniques.

This third edition of IEC 60060-1 cancels and replaces the second edition, published in 1989, and constitutes a technical revision.

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

- a) The general layout and text was updated and improved to make the standard easier to use.
- b) Artificial pollution test procedures were removed as they are now described in IEC 60507.
- c) Measurement of impulse current has been transferred to a new standard on current measurement (IEC 62475).
- d) The atmospheric correction factors are now presented as formulas.

- e) A new method has been introduced for the calculation of the time parameters of lightning impulse waveforms. This improves the measurement of the time parameters of lightning impulses with oscillations or overshoot.

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

| FDIS        | Report on voting |
|-------------|------------------|
| 42/277/FDIS | 42/282/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 2:2010

A list of all the parts in the IEC 60060 series, under the general title *High-voltage test techniques*, 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 website under "<http://webstore.iec.ch>" in the data related to this specific publication. At this date, the publication will be:

- reconfirmed;
- withdrawn;
- replaced by a revised edition or
- amended.

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## HIGH-VOLTAGE TEST TECHNIQUES –

### Part 1: General definitions and test requirements

#### 1 Scope

This part of IEC 60060 is applicable to:

- dielectric tests with direct voltage;
- dielectric tests with alternating voltage;
- dielectric tests with impulse voltage;
- dielectric tests with combinations of the above.

This part is applicable to tests on equipment having its highest voltage for equipment  $U_m$  above 1 kV.

NOTE 1 Alternative test procedures may be required to obtain reproducible and significant results. The choice of a suitable test procedure should be made by the relevant Technical Committee.

NOTE 2 For voltages  $U_m$  above 800 kV meeting some specified procedures, tolerances and uncertainties may not be achievable.

#### 2 Normative references

The following referenced documents are indispensable for the application 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 60060-2, *High-voltage test techniques – Part 2: Measuring systems*

IEC 60270, *High-voltage test techniques – Partial discharge measurements*

IEC 60507:1991, *Artificial pollution tests on high-voltage insulators to be used on a.c. systems*

IEC 61083-1, *Instruments and software used for measurement in high-voltage impulse tests – Part 1: Requirements for instruments*

IEC 61083-2, *Digital recorders for measurements in high-voltage impulse tests – Part 2: Evaluation of software used for the determination of the parameters of impulse waveforms*

IEC 62475, *High-current test techniques: Definitions and requirements for test currents and measuring systems*

## SOMMAIRE

|                                                                                                        |    |
|--------------------------------------------------------------------------------------------------------|----|
| AVANT-PROPOS .....                                                                                     | 78 |
| 1 Domaine d'application .....                                                                          | 80 |
| 2 Références normatives .....                                                                          | 80 |
| 3 Termes et définitions .....                                                                          | 80 |
| 3.1 Les définitions qui relate à caractéristiques relatives aux décharges .....                        | 81 |
| 3.2 Les définitions qui relate à caractéristiques relatives à la tension d'essai .....                 | 81 |
| 3.3 Les définitions qui relate à tolérance et incertitude .....                                        | 82 |
| 3.4 Les définitions qui relate à statistiques des valeurs des tensions de<br>décharge disruptive ..... | 82 |
| 3.5 Les définitions qui relate à classification des isolations en des objets en<br>essai .....         | 84 |
| 4 Exigences générales .....                                                                            | 84 |
| 4.1 Exigences générales pour les procédures d'essai .....                                              | 84 |
| 4.2 Disposition de l'objet en essai dans les essais à sec .....                                        | 84 |
| 4.3 Corrections atmosphériques dans les essais à sec .....                                             | 85 |
| 4.3.1 Atmosphère normalisée de référence .....                                                         | 85 |
| 4.3.2 Facteurs de correction atmosphérique pour les entrefers .....                                    | 86 |
| 4.3.3 Application des facteurs de correction .....                                                     | 86 |
| 4.3.4 Composantes du facteur de correction .....                                                       | 87 |
| 4.3.5 Mesure des paramètres atmosphériques .....                                                       | 90 |
| 4.3.6 Exigences contradictoires résultant des essais de l'isolation interne<br>et externe .....        | 91 |
| 4.4 Essais sous pluie .....                                                                            | 91 |
| 4.4.1 Procédure d'essai sous pluie .....                                                               | 91 |
| 4.4.2 Corrections atmosphériques pour les essais sous pluie .....                                      | 93 |
| 4.5 Essais de pollution artificielle .....                                                             | 93 |
| 5 Essais en tension continue .....                                                                     | 93 |
| 5.1 Définitions concernant les essais en tension continue .....                                        | 93 |
| 5.2 Tension d'essai .....                                                                              | 93 |
| 5.2.1 Exigences relatives à la tension d'essai .....                                                   | 93 |
| 5.2.2 Génération de la tension d'essai .....                                                           | 94 |
| 5.2.3 Mesure de la tension d'essai .....                                                               | 94 |
| 5.2.4 Mesure du courant d'essai .....                                                                  | 94 |
| 5.3 Procédures d'essai .....                                                                           | 95 |
| 5.3.1 Essais de tension de tenue .....                                                                 | 95 |
| 5.3.2 Essais de tension de décharge disruptive .....                                                   | 95 |
| 5.3.3 Essais de tension de décharge disruptive assurée .....                                           | 95 |
| 6 Essais en tension alternative .....                                                                  | 96 |
| 6.1 Définitions concernant les essais en tension alternative .....                                     | 96 |
| 6.2 Tension d'essai .....                                                                              | 96 |
| 6.2.1 Exigences relatives à la tension d'essai .....                                                   | 96 |
| 6.2.2 Génération de la tension d'essai .....                                                           | 97 |
| 6.2.3 Mesure de la tension d'essai .....                                                               | 98 |
| 6.2.4 Mesure du courant d'essai .....                                                                  | 99 |
| 6.3 Procédures d'essai .....                                                                           | 99 |
| 6.3.1 Essais de tension de tenue .....                                                                 | 99 |

|                        |                                                                                                                                           |     |
|------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|-----|
| 6.3.2                  | Essais de tension de décharge disruptive .....                                                                                            | 99  |
| 6.3.3                  | Essais de tension de décharge disruptive assurée .....                                                                                    | 99  |
| 7                      | Essais en tension de choc de foudre .....                                                                                                 | 100 |
| 7.1                    | Définitions concernant les essais aux chocs de foudre .....                                                                               | 100 |
| 7.2                    | Tension d'essai .....                                                                                                                     | 108 |
| 7.2.1                  | Tension de choc de foudre normalisée .....                                                                                                | 108 |
| 7.2.2                  | Tolérances .....                                                                                                                          | 108 |
| 7.2.3                  | Tension de choc de foudre coupée normalisée .....                                                                                         | 108 |
| 7.2.4                  | Tensions de choc de foudre spéciales .....                                                                                                | 108 |
| 7.2.5                  | Génération de la tension d'essai .....                                                                                                    | 108 |
| 7.2.6                  | Mesure de la tension d'essai et détermination de la forme du choc .....                                                                   | 108 |
| 7.2.7                  | Mesure du courant lors des essais avec des tensions de choc .....                                                                         | 109 |
| 7.3                    | Procédures d'essai .....                                                                                                                  | 109 |
| 7.3.1                  | Essais de tension de tenue .....                                                                                                          | 109 |
| 7.3.2                  | Procédures d'essai de tension de décharge disruptive assurée .....                                                                        | 110 |
| 8                      | Essais avec tension de choc de manœuvre .....                                                                                             | 111 |
| 8.1                    | Définitions concernant les essais de tension de choc de manœuvre .....                                                                    | 111 |
| 8.2                    | Tension d'essai .....                                                                                                                     | 112 |
| 8.2.1                  | Tension de choc de manœuvre normalisée .....                                                                                              | 112 |
| 8.2.2                  | Tolérances .....                                                                                                                          | 112 |
| 8.2.3                  | Évaluation de la durée jusqu'à la crête .....                                                                                             | 112 |
| 8.2.4                  | Tensions de choc de foudre spéciales .....                                                                                                | 113 |
| 8.2.5                  | Génération de la tension d'essai .....                                                                                                    | 113 |
| 8.2.6                  | Mesure de la tension d'essai et détermination de la forme du choc .....                                                                   | 113 |
| 8.2.7                  | Mesure du courant lors des essais avec des tensions de choc .....                                                                         | 113 |
| 8.3                    | Procédures d'essai .....                                                                                                                  | 113 |
| 9                      | Essais avec des tensions combinées et composites .....                                                                                    | 114 |
| 9.1                    | Définitions concernant les essais sous tensions combinées et composites .....                                                             | 114 |
| 9.2.4                  | Tolérances .....                                                                                                                          | 116 |
| 9.2.5                  | Génération .....                                                                                                                          | 116 |
| 9.2.6                  | Mesure .....                                                                                                                              | 116 |
| 9.3                    | Tensions d'essai composites .....                                                                                                         | 117 |
| 9.3.1                  | Paramètres .....                                                                                                                          | 117 |
| 9.3.2                  | Tolérances .....                                                                                                                          | 117 |
| 9.3.3                  | Production .....                                                                                                                          | 117 |
| 9.3.4                  | Mesure .....                                                                                                                              | 117 |
| 9.4                    | Procédures d'essai .....                                                                                                                  | 118 |
| Annexe A (informative) | Traitement statistique des résultats d'essais .....                                                                                       | 119 |
| Annexe B (normative)   | Procédures de calcul des paramètres des tensions de chocs de foudre normalisées avec superposition de dépassement ou d'oscillations ..... | 129 |
| Annexe C (informative) | Directives pour la mise en œuvre d'un logiciel d'évaluation des paramètres de tension de choc de foudre .....                             | 134 |
| Annexe D (informative) | Arrière plan de l'introduction du facteur de tension d'essai pour l'évaluation des chocs avec dépassement .....                           | 137 |
| Annexe E (informative) | Méthode par calcul itératif dans la procédure réciproque pour la détermination du facteur de correction atmosphérique .....               | 143 |
| Bibliographie          | .....                                                                                                                                     | 149 |

|                                                                                                                                                                                                                                                                                     |     |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|
| Figure 1 – Distance minimale $D$ recommandée entre les objets sous tension ou mis à la terre et l'électrode sous tension d'un objet en essai, pendant un essai en courant alternatif ou de surtension de manœuvre positive avec tension maximale $U$ appliquée pendant l'essai..... | 85  |
| Figure 2 – $k$ en fonction du rapport entre l'humidité absolue $h$ et la densité relative de l'air $\delta$ (voir 4.3.4.2 pour les limites d'application).....                                                                                                                      | 88  |
| Figure 3 – Valeurs des exposants $m$ et $w$ .....                                                                                                                                                                                                                                   | 89  |
| Figure 4 – Humidité absolue de l'air en fonction des indications du thermomètre à bulbes sec et humide .....                                                                                                                                                                        | 90  |
| Figure 5 – Tension de choc de foudre plein .....                                                                                                                                                                                                                                    | 100 |
| Figure 6 – Fonction de tension d'essai.....                                                                                                                                                                                                                                         | 102 |
| Figure 7 – Paramètres de temps de la tension de choc pleine.....                                                                                                                                                                                                                    | 103 |
| Figure 8 – Intervalle temps–tension .....                                                                                                                                                                                                                                           | 104 |
| Figure 9 – Intégrale de tension .....                                                                                                                                                                                                                                               | 104 |
| Figure 10 – Tension de choc de foudre coupée sur le front .....                                                                                                                                                                                                                     | 105 |
| Figure 11 – Tension de choc de foudre coupée sur la queue .....                                                                                                                                                                                                                     | 106 |
| Figure 12 – Choc coupé ayant un front augmentant linéairement .....                                                                                                                                                                                                                 | 106 |
| Figure 13 – Courbe tension/temps pour des chocs ayant une forme présumée constante.....                                                                                                                                                                                             | 107 |
| Figure 14 – Tension de choc de commutation .....                                                                                                                                                                                                                                    | 111 |
| Figure 15 – Circuit pour un essai sous tension combinée.....                                                                                                                                                                                                                        | 114 |
| Figure 16 – Exemple schématique de tension combinée et composite .....                                                                                                                                                                                                              | 115 |
| Figure 17 – Circuit pour un essai sous tension composite .....                                                                                                                                                                                                                      | 116 |
| Figure 18 – Définition du retard de temps $\Delta t$ .....                                                                                                                                                                                                                          | 117 |
| Figure A.1 – Exemple d'essai à paliers multiples (Classe 1) .....                                                                                                                                                                                                                   | 122 |
| Figure A.2 – Exemples d'essais de diminution (Classe 2) et augmentation de haut en bas, pour la détermination des probabilités de décharges disruptives à 10 % et 90 % respectivement .....                                                                                         | 123 |
| Figure A.3 – Exemples d'essais de contraintes progressives (Classe 3) .....                                                                                                                                                                                                         | 124 |
| Figure B.1 – Courbe enregistrée et courbe de référence montrant le dépassement et la courbe résiduelle .....                                                                                                                                                                        | 130 |
| Figure B.2 – Courbe de tension d'essai (somme de la courbe de référence et de la courbe résiduelle filtrée) .....                                                                                                                                                                   | 130 |
| Figure B.3 – Courbes enregistrée et de tension d'essai .....                                                                                                                                                                                                                        | 131 |
| Figure D.1 – Fonction tension d'essai « efficace » dans la CEI 60060:1989 .....                                                                                                                                                                                                     | 138 |
| Figure D.2 – Points expérimentaux représentatifs provenant de l'expérimentation européenne et fonction de tension d'essai .....                                                                                                                                                     | 140 |
| Figure E.1 – Pression atmosphérique en fonction de l'altitude .....                                                                                                                                                                                                                 | 144 |
| Tableau 1 – Valeurs des exposants, $m$ pour la correction de la densité de l'air et $w$ pour la correction de l'humidité, en fonction du paramètre $g$ .....                                                                                                                        | 89  |
| Tableau 2 – Caractéristiques d'aspersion pour la procédure normalisée .....                                                                                                                                                                                                         | 92  |
| Tableau A.1 – Probabilités de décharge dans les essais de montée et de descente.....                                                                                                                                                                                                | 126 |
| Tableau E.1 – Altitudes et pression atmosphérique à certains emplacements .....                                                                                                                                                                                                     | 144 |
| Tableau E.2 – Valeur initiale $K_1$ et ses coefficients de sensibilité par rapport à $U_{50}$ pour l'exemple de la tension d'essai alternative normale de 395 kV entre phase et terre .....                                                                                         | 145 |

|                                                                                                                                                                    |     |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|
| Tableau E.3 – Valeurs initiales et après convergence $K_t$ pour l'exemple de la tension normale d'essai en courant alternatif entre phase et terre de 395 kV ..... | 147 |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|

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