

# TECHNICAL REPORT

**High-voltage direct current (HVDC) systems – Guidance to the specification and design evaluation of AC filters – Part 4: Equipment**

Withdrawn



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**High-voltage direct current (HVDC) systems – Guidance to the specification and design evaluation of AC filters – Part 4: Equipment**

INTERNATIONAL  
ELECTROTECHNICAL  
COMMISSION

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## CONTENTS

FOREWORD .....	6
INTRODUCTION .....	8
1 Scope .....	9
2 Steady state rating .....	9
2.1 General .....	9
2.2 Calculation method .....	9
2.2.1 General .....	9
2.2.2 AC system pre-existing harmonics .....	11
2.2.3 Combination of converter and pre-existing harmonics .....	11
2.2.4 Equipment rating calculations .....	12
2.2.5 Application of voltage ratings .....	15
2.3 AC network conditions .....	16
2.4 De-tuning effects.....	16
2.5 Network impedance for rating calculations.....	16
2.6 Outages.....	17
3 Transient stresses and rating.....	17
3.1 General .....	17
3.2 Switching impulse studies .....	18
3.2.1 Energization and switching.....	18
3.2.2 Faults external to the filter .....	19
3.2.3 Faults internal to the filter .....	21
3.2.4 Transformer inrush currents .....	21
3.3 Fast fronted waveform studies.....	21
3.3.1 General.....	21
3.3.2 Lightning strikes .....	21
3.3.3 Busbar flashover studies.....	22
3.4 Insulation co-ordination.....	22
4 Losses .....	23
4.1 Background .....	23
4.2 AC filter component losses.....	24
4.2.1 General .....	24
4.2.2 Filter/shunt capacitor losses.....	24
4.3 Reactor and resistor losses.....	25
4.3.1 General .....	25
4.3.2 Filter resistor losses.....	26
4.3.3 Shunt reactor losses .....	26
4.4 Criteria for loss evaluation .....	27
4.4.1 General .....	27
4.4.2 Fundamental frequency AC filter busbar voltage.....	27
4.4.3 Fundamental frequency and ambient temperature .....	27
4.4.4 AC system harmonic impedance .....	28
4.4.5 Harmonic currents generated by the converter .....	28
4.4.6 Pre-existing harmonic distortion .....	29
4.4.7 The anticipated load profile of the converter station.....	29
5 Design issues and special applications .....	29
5.1 General .....	29

5.2	Performance aspects .....	30
5.2.1	Low order harmonic filtering and resonance conditions with AC system .....	30
5.2.2	Definition of interference factors to include harmonics up to 5 kHz.....	31
5.2.3	Triple-tuned filter circuits .....	31
5.2.4	Harmonic AC filters on tertiary winding of converter transformers .....	32
5.3	Rating aspects .....	33
5.3.1	Limiting high harmonic currents in parallel-resonant filter circuits .....	33
5.3.2	Transient ratings of parallel circuits in multiple tuned filters .....	33
5.3.3	Overload protection of high-pass harmonic filter resistors .....	34
5.3.4	Back-to-back switching of filters or shunt capacitors.....	34
5.3.5	Short time overload – reasonable specification of requirements.....	34
5.3.6	Low voltage filter capacitors without fuses.....	36
5.4	Filters for special purposes .....	36
5.4.1	Harmonic filters for damping transient overvoltages.....	36
5.4.2	Non-linear filters for low order harmonics/transient overvoltages.....	36
5.4.3	Series filters for HVDC converter stations .....	37
5.4.4	Re-tunable AC filters.....	40
5.5	Impact of new HVDC station in vicinity of an existing station.....	41
5.6	Redundancy issues and spares.....	42
5.6.1	Redundancy of filters – savings in ratings and losses.....	42
5.6.2	Internal filter redundancy.....	43
5.6.3	Spare parts.....	43
6	Protection.....	44
6.1	Overview .....	44
6.2	General .....	44
6.3	Bank and sub-bank overall protection.....	46
6.3.1	General .....	46
6.3.2	Short circuit protection.....	46
6.3.3	Overcurrent protection.....	46
6.3.4	Thermal overload protection.....	46
6.3.5	Differential protection.....	47
6.3.6	Earth fault protection.....	47
6.3.7	Overvoltage and undervoltage protection .....	47
6.3.8	Special protection functions and harmonic measurements.....	48
6.3.9	Busbar and breaker failure protection.....	48
6.4	Protection of individual filter components.....	48
6.4.1	Unbalance protection for filter and shunt capacitors .....	48
6.4.2	Protection of low voltage tuning capacitors.....	50
6.4.3	Overload protection and detection of filter detuning .....	50
6.4.4	Temperature measurement for protection .....	50
6.4.5	Measurement of fundamental frequency components.....	50
6.4.6	Capacitor fuses.....	51
6.4.7	Protection and rating of instrument transformers .....	51
6.4.8	Examples of protection arrangements .....	52
6.5	Personnel protection .....	52
7	Audible noise .....	55
7.1	General .....	55
7.2	Sound active components of AC filters .....	55
7.3	Sound requirements.....	56

7.4	Noise reduction.....	57
8	Seismic requirements .....	58
8.1	General .....	58
8.2	Load specification .....	59
8.2.1	Seismic loads .....	59
8.2.2	Additional loads .....	59
8.2.3	Soil quality.....	60
8.3	Method of qualification .....	60
8.3.1	General .....	60
8.3.2	Qualification by analytical methods .....	60
8.3.3	Design criteria .....	61
8.3.4	Documentation for qualification by analytical methods .....	62
8.4	Examples of improvements in the mechanical design.....	62
9	Equipment design and test parameters .....	62
9.1	General .....	62
9.1.1	Technical information and requirements .....	62
9.1.2	Technical information to be provided by the customer.....	63
9.1.3	Customer requirements.....	63
9.1.4	Technical information to be presented by the bidder.....	65
9.1.5	Ratings.....	65
9.2	Capacitors .....	66
9.2.1	General .....	66
9.2.2	Design aspects .....	66
9.2.3	Electrical data.....	67
9.2.4	Tests .....	68
9.3	Reactors.....	68
9.3.1	General .....	68
9.3.2	Design aspects .....	69
9.3.3	Electrical data.....	70
9.3.4	Tests .....	71
9.4	Resistors.....	72
9.4.1	General .....	72
9.4.2	Design aspects .....	72
9.4.3	Electrical data.....	73
9.4.4	Tests .....	74
9.5	Arresters.....	75
9.5.1	General .....	75
9.5.2	Design aspects .....	76
9.5.3	Electrical data.....	76
9.5.4	Arresters: Tests .....	77
9.6	Instrument transformers .....	77
9.6.1	Voltage transformers.....	77
9.6.2	Current transformers.....	78
9.7	Filter switching equipment.....	80
9.7.1	Filter switching equipment: Introduction.....	80
9.7.2	Design aspects .....	80
9.7.3	Electrical data.....	83
9.7.4	Test requirements.....	84
Annex A	(informative) Background to loss evaluation .....	86

Annex B (informative) Example of response spectra (from IEEE Std 693-2005) .....	88
Bibliography .....	89
Figure 1 – Circuit for rating evaluation .....	10
Figure 2 – Inrush current into a 12/24 <sup>th</sup> double-tuned filter .....	19
Figure 3 – Voltage across the low voltage capacitor of a 12/24 <sup>th</sup> double-tuned filter at switch-on .....	19
Figure 4 – Voltage across the HV capacitor bank of a 12/24 <sup>th</sup> double-tuned filter under fault conditions .....	20
Figure 5 – Typical arrangements of surge arresters .....	22
Figure 6 – Non-linear low order filter for Vienna Southeast HVDC station .....	37
Figure 7 – Single-tuned series filter and impedance plot .....	38
Figure 8 – Triple-tuned series filter and impedance plot .....	38
Figure 9 – Mixed series and shunt AC filters at Uruguaiana HVDC station .....	39
Figure 10 – Re-tunable AC filter branch .....	41
Figure 11 – Example of a protection scheme for an unearthed shunt capacitor .....	53
Figure 12 – Example of a protection scheme for a C-type filter .....	54
Figure 13 – Electrical spectrum .....	56
Figure 14 – Force spectrum .....	56
Figure B.1 – Response spectra .....	88
Table 1 – Typical losses in an all-film capacitor unit .....	24
Table 2 – Electrical data for capacitors .....	67
Table 3 – Electrical data for reactors .....	71
Table 4 – Electrical data for resistors .....	73
Table 5 – Electrical data for arresters .....	77
Table 6 – Electrical data for current transformers .....	79
Table 7 – Electrical data for filter switching equipment .....	84
Table A.1 – Capitalized costs of the future losses .....	86

## INTERNATIONAL ELECTROTECHNICAL COMMISSION

**HIGH-VOLTAGE DIRECT CURRENT (HVDC) SYSTEMS –  
GUIDANCE TO THE SPECIFICATION AND DESIGN  
EVALUATION OF AC FILTERS –****Part 4: Equipment**

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IEC TR 62001-4, which is a Technical Report, has been prepared by subcommittee 22F: Power electronics for electrical transmission and distribution systems, of IEC technical committee 22: Power electronic systems and equipment.

This first edition of IEC TR 62001-4, together with IEC TR 62001-1, IEC TR 62001-2<sup>1</sup> and IEC TR 62001-3<sup>1</sup>, cancels and replaces IEC TR 62001 published in 2009. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to IEC TR 62001:

- a) Clauses 10 to 16, 18, Annexes F and G have been expanded and supplemented.

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

Enquiry draft	Report on voting
22F/379/DTR	22F/385A/RVC

Full information on the voting for the approval of this document 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.

A list of all parts in the IEC TR 62001 series, published under the general title *High-voltage direct current (HVDC) systems – Guidance to the specification and design evaluation of AC filters*, 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 the specific publication. At this date, the publication will be

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

A bilingual version of this publication may be issued at a later date.

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<sup>1</sup> To be published.

## INTRODUCTION

IEC TR 62001 is structured in four parts:

### Part 1 – Overview

This part concerns specifications of AC filters for high-voltage direct current (HVDC) systems with line-commutated converters, permissible distortion limits, harmonic generation, filter arrangements, filter performance calculation, filter switching and reactive power management and customer specified parameters and requirements.

### Part 2 – Performance

This part deals with current-based interference criteria, design issues and special applications, field measurements and verification.

### Part 3 – Modelling

This part addresses the harmonic interaction across converters, pre-existing harmonics, AC network impedance modelling, simulation of AC filter performance.

### Part 4 – Equipment

This part concerns steady-state and transient ratings of AC filters and their components, power losses, audible noise, design issues and special applications, filter protection, seismic requirements, equipment design and test parameters.

Withhold