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STANDARDS Australia

Maintenance of electrical switchgear — Code of practice



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Energy Networks Australia
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Maintenance of electrical switchgear — Code of practice

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How to read this Standard

This page explains the meaning of the language and structure of this Standard.

Refer to Standards Australia's Standardisation Guide 006 for more details about drafting rules.

Australian and Australian/New Zealand Standards are voluntary unless they are referenced in legislation or called up in contracts.

Requirements

To conform to a Standard, all requirements in the Standard need to be met.

A requirement is any statement in the Standard which uses the word "shall".

Recommendations, permissions and possibilities

The following words are commonly used in Standards, but statements using them do not have to be followed to conform to the Standard:

(a) "should" means that something is recommended.

(b) "may" means that something is permitted.

(c) "can" means that something is possible.

Structure of Standards

A Standard always has the following parts:

(i) The Preface states who developed the Standard, what the Standard is aiming to do, and how it relates to other documents.

(ii) The Scope states what the Standard is about, what it covers and what it does not cover.

(iii) The Normative references clause lists other documents that are referenced in the Standard as part of requirements.

(iv) The Terms and definitions clause defines important terms to help with understanding the Standard.

A Standard may also include other parts, such as the following:

(1) A normative appendix sets additional requirements that need to be conformed to.

(2) An informative appendix provides additional information or guidance. They usually do not contain requirements. If an informative appendix does contain requirements, the Standard will explain when those requirements apply

(3) A Bibliography lists documents referenced in the Standard but not as part of requirements.

Many Standards include notes. Notes provide recommendations and/or guidance only. They never contain requirements.

Preface

This Standard was prepared by the Standards Australia Committee EL-007, Power Switchgear, to supersede AS 2467—2008.

The objective of this document is to provide basic recommendations, good work practices, and requirements for the safety of personnel in proximity to or engaged in the maintenance of electrical switchgear and provide detailed recommendations for specific types of switchgear.

This edition has been comprehensively reviewed and updated to align with current circumstances and practices.

The terms “normative” and “informative” are used to define the application of the Appendix to which they apply. A normative Appendix is an integral part of a standard, whereas an informative Appendix is only for information and guidance.

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Contents

Preface ..... **iii**

Introduction ..... **ix**

Section 1 Scope and general **1**
1.1 Scope 1
1.2 Normative references 1
1.3 Terms and definitions 1
1.4 Design and maintenance 4

Section 2 Safety of personnel **6**
2.1 General 6
2.2 First aid 6
2.3 Access 6
2.4 Safety rules 6
2.4.1 Electrical safety 6
2.4.2 Working near energised electrical apparatus 6
2.4.3 Safe access to electrical and mechanical apparatus 6
2.4.4 Working on low-voltage electrical circuits of equipment 7
2.4.5 Working on live high-voltage electrical apparatus 7

Section 3 Safety provisions for maintenance operations **8**
3.1 General 8
3.2 Avoidance of moisture and dust 8
3.3 Containment of faults 8
3.4 Fire extinguishing equipment 8
3.4.1 Availability of equipment and training of personnel 8
3.4.2 Suitability for intended purpose 8
3.4.3 Inspection and labelling 9
3.4.4 Renewal or recharge after use 9
3.4.5 Automatic fire extinguishing installations 9
3.5 Emergency exits 9
3.6 Lighting 9
3.7 Access 9
3.8 Earthing equipment 10
3.8.1 Availability of earthing equipment 10
3.8.2 Suitability of earthing equipment 10
3.8.3 Inspection 10
3.8.4 Permanently stored earthing equipment 10
3.9 Earth mats 10
3.10 Insulating mats, stands, screens and other similar equipment 10
3.11 Verifying conductors are not alive 10
3.12 Protection against induction 10
3.13 Detection of hazardous gases 10
3.14 Danger from stored energy 10
3.15 Portable electric tools 11
3.16 Instructions, notices, and labels 11
3.16.1 Availability and display 11
3.16.2 Removal and replacement of identification labels 11
3.16.3 Caution and danger plates 11
3.16.4 Emergency exits 11

Section 4 Frequency of maintenance **12**
4.1 General 12
4.2 Planning the frequency of maintenance 12
4.2.1 Manufacturer's instructions 12
4.2.2 Newly commissioned equipment 12
4.2.3 Records 13

4.2.4 Routine maintenance 13
4.2.5 Post-fault maintenance 14
4.3 Insulating oil 14
4.3.1 General considerations 14
4.3.2 Environmental conditions 14
4.3.3 Deterioration and contamination 14
4.3.4 Normal maintenance tests 14
4.3.5 Auto-reclosing duty 15
4.4 Recommended intervals 15
4.4.1 General 15
4.4.2 Operational check of circuit breakers 15
4.4.3 Indoor switchgear 15
4.4.4 Outdoor switchgear 15
4.4.5 Frequent operation or adverse atmospheric conditions 15

Section 5 Maintenance of switchgear operating at voltages up to 1 000 V a.c. and 1 500 V d.c. 17
5.1 Pre-maintenance requirements and precautions 17
5.1.1 Safety of personnel 17
5.1.2 Equipment to be rendered inoperative 17
5.1.3 Manufacturer's operation and maintenance instructions 17
5.1.4 Replacement parts 17
5.2 Frequency of maintenance 17
5.3 Diagnostic testing 17
5.4 Routine maintenance 18
5.4.1 Inspection 18
5.4.2 Examination and overhaul 18
5.5 Post-fault maintenance 21
5.6 Maintenance of auxiliary equipment 21
5.7 Summary of maintenance operations 21

Section 6 Maintenance of air-break switchgear operating at voltages above 1 000 V a.c. and 1 500 V d.c. 23
6.1 Pre-maintenance requirements and precautions 23
6.1.1 Safety of personnel 23
6.1.2 Equipment to be rendered inoperative 23
6.1.3 Manufacturer's operation and maintenance instructions 23
6.1.4 Replacement parts 23
6.2 Frequency of maintenance 24
6.3 Diagnostic testing 24
6.4 Operational check 24
6.5 Routine maintenance 24
6.5.1 Inspection 24
6.5.2 Examination and overhaul 24
6.6 Post-fault maintenance 30
6.7 Maintenance of auxiliary equipment 30
6.8 High-voltage fuse connections and associated linkage 30
6.9 Summary of maintenance operations 31

Section 7 Maintenance of oil switchgear 32
7.1 Application of section 32
7.2 Special precautions for oil switchgear 32
7.3 Routine maintenance 32
7.3.1 General 32
7.3.2 Examination and overhaul 32
7.4 Post-fault maintenance 35
7.4.1 Isolation of withdrawable metal-clad switchgear 35
7.4.2 Insulating oil 35
7.4.3 Joints and seals 35
7.4.4 General mechanical inspection 35

7.5 Summary of maintenance operations 36

Section 8 Maintenance of air-blast circuit-breaker switchgear 37
8.1 Application of section 37
8.2 Pre-maintenance requirements and precautions 37
8.2.1 Reduction in air pressure 37
8.2.2 Adjacent unsilenced circuit breakers 37
8.2.3 Avoidance of hydraulic tests on air receivers 37
8.3 Routine maintenance 37
8.3.1 General 37
8.3.2 Examination and overhaul 37
8.4 Post-fault maintenance 41
8.5 Summary of maintenance operations 41

Section 9 Maintenance of vacuum circuit-breaker switchgear 43
9.1 Application of section 43
9.2 General 43
9.3 Frequency of maintenance 43
9.3.1 General 43
9.3.2 Determination of frequency of maintenance 43
9.4 Routine maintenance 43
9.4.1 General 43
9.4.2 Examination and overhaul 43
9.5 Post-fault maintenance 44
9.6 Summary of maintenance operations 45

Section 10 Maintenance of sulfur hexafluoride circuit-breaker switchgear 46
10.1 Application of section 46
10.2 Special considerations arising from the use of sulfur hexafluoride 46
10.2.1 Properties of sulfur hexafluoride 46
10.2.2 SF_6 circuit breakers 46
10.2.3 Statutory regulations 46
10.2.4 Warnings to personnel 46
10.3 Pre-maintenance requirements and precautions 47
10.3.1 General 47
10.3.2 Access to equipment in contact with SF_6 47
10.3.3 Maintenance opening or closing jacks 47
10.4 Frequency of maintenance 47
10.4.1 General 47
10.4.2 Factors to be considered for SF_6 circuit breakers 48
10.5 Routine maintenance 48
10.5.1 General 48
10.5.2 Examination and overhaul 48
10.6 Post-fault maintenance 52
10.7 Summary of maintenance operations 53

Section 11 Diagnostic testing 54
11.1 General 54
11.2 Diagnostic tests for correct operation 54
11.2.1 Time-travel test 54
11.2.2 Timing test 54
11.2.3 Operating voltages 54
11.2.4 Operation of pressure switches 55
11.2.5 Compressed air and gas systems 55
11.2.6 Hydraulic systems 55
11.3 Diagnostic tests for contacts and connections 55
11.3.1 Resistance tests 55
11.3.2 Infrared detection 55
11.4 Diagnostic tests for insulation 55
11.4.1 Insulation tests—General 55

11.4.2 Insulation resistance test 56
11.4.3 Measurement of dielectric dissipation factor 56
11.4.4 Gas leakage test (SF_6 circuit-breaker switchgear) 56
11.4.5 Air quality (air-blast circuit-breaker switchgear) 56

Section 12 Maintenance of auxiliary items 58
12.1 Equipment for tripping and closing current supply 58
12.2 General precautions for battery installations 58
12.2.1 Precautions to be taken in battery charging areas 58
12.2.2 Handling electrolyte 58
12.2.3 Avoid mixing or contamination of electrolytes 58
12.3 Secondary cell batteries 58
12.3.1 General 58
12.3.2 Electrolyte condition 59
12.4 Primary cell batteries 60
12.5 Compressed air plant 60
12.6 Current transformers 60
12.6.1 Precautions 60
12.6.2 Current transformers which are accessible 60
12.6.3 Oil-filled current transformers 60
12.6.4 SF_6 insulated current transformers 60
12.6.5 Current transformers enclosed in metal-clad gear or otherwise inaccessible 60
12.7 Voltage transformers 61
12.7.1 Precautions 61
12.7.2 Maintenance and inspection 61
12.8 Equipment earthing connections 61
12.9 Other auxiliary devices 61
12.9.1 Lifting devices 61
12.9.2 Oil handling plant 61
12.9.3 Portable earthing devices 61
12.10 Replacement parts 61

Section 13 Maintenance of protective apparatus 62
13.1 General 62
13.2 Removal of dust 62
13.3 Connections 62
13.4 Routine tripping tests 62
13.5 Protective apparatus incorporating semiconductors 62
13.6 Injection tests 62
13.6.1 Primary injection 62
13.6.2 Secondary injection 62
13.7 Relays 62

Section 14 Maintenance and testing of insulation 64
14.1 General 64
14.2 Routine testing and inspection 64
14.2.1 Materials susceptible to deterioration 64
14.2.2 Systematic testing and recording methods 64
14.2.3 Measurement of the dielectric dissipation factor tan δ 64
14.2.4 Lift rods 64
14.2.5 Ambient temperature 64
14.3 Electrostatically graded (condenser) bushings 65
14.3.1 General 65
14.3.2 Ingress of moisture 65
14.3.3 Sampling of oil 65
14.3.4 Compound-filled bushings 65
14.4 Oil barrier bushings 65
14.5 Laminated insulation 65
14.6 Porcelain insulation 65
14.7 Silicone polymer insulation 66

14.8 Applied voltages for insulation-resistance tests 66
14.9 Power frequency withstand tests after maintenance 66

Appendix A (informative) **Maintenance record forms** **67**

Appendix B (normative) **Fire protection equipment** **71**

Bibliography **72**

Introduction

Electrical switchgear, by the nature of the service it renders, does not automatically call for the maintenance attendance which is necessary to always ensure its effective functioning. Its normally quiescent state does not generally draw attention to incipient faults or deterioration or to the danger resulting from neglect.

It follows, therefore, that only an organized system of routine maintenance planned to include all necessary details can ensure the continued safe and satisfactory operation of an electrical system with a minimum risk of breakdown and the consequent interruption of supply.

The electricity supply system, including incidents with electrical switchgear, has resulted in many fatalities, and many serious injuries, each year. These incidents have resulted in severe burns, internal bleeding, and damage to lungs, eyes, heart, internal organs, and hearing.

Adequate maintenance is critical to reducing the likelihood of these safety risks as well as ensuring reliable and acceptable operation. Adequate maintenance relies on many aspects such as safe work method statements, legislation, and the use of trained and competent personnel.

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NOTES

Australian Standard®

Maintenance of electrical switchgear — Code of practice

Section 1 Scope and general

1.1 Scope

The objective of this document is to provide basic recommendations, good work practices, and requirements for the safety of personnel in proximity to or engaged in the maintenance of electrical switchgear and provide detailed recommendations for specific types of switchgear.

This document applies to electrical switchgear above 1 000 V a.c. and 1 500 V d.c.

NOTE 1 At voltages above 145 kV, the design of equipment, system operations and maintenance requirements and practices may differ significantly from those operating at voltages up to this level. However, the principles formulated in this document, especially those related to the safety of personnel, are mostly applicable at the higher voltages.

NOTE 2 While the design, system operations, and maintenance requirements and practices for equipment operating above 145 kV may differ significantly from those operating at voltages below this level, the principles formulated in this document, especially those related to the safety of personnel, may be applicable at the lower voltages.

This document does not apply to live work.

This document does not apply to the maintenance of electrical switchgear that is —

(a) of sealed construction, intended only to be returned to the manufacturer for adjustment or repair;

(b) used in explosive atmospheres and in coal mines; or

(c) used in live (or live-line) electrical work techniques.

1.2 Normative references

AS/NZS 60137, *Insulated bushings for alternating voltages above 1000 V*

AS 60422, *Mineral insulating oils in electrical equipment — Supervision and maintenance guidance*

AS 2067, *Substations and high voltage installations exceeding 1 kV a.c.*

AS/NZS 3000, *Electrical installations*

AS/NZS 3160, *Approval and test specification—Hand-held portable electric tools*

AS/NZS 60598.2.8, *Luminaires, Part 2.8: Particular requirements—Handlamps*

IEC 60480, *Specifications for the re-use of sulphur hexafluoride (SF_6) and its mixtures in electrical equipment*

1.3 Terms and definitions

For this document, the following terms and definitions apply.

1.3.1
acceptable condition
condition in which an item performs its required function or meets the relevant specification

Note 1 to entry: See Figure 1.3.

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