Australian Standard®

Insulators—Ceramic or glass—Station post for indoor and outdoor use—Voltages greater than 1000 V a.c.

Part 2: Tests

[Based on and including the full text of IEC 168:1994, Tests on indoor and outdoor post insulators of ceramic material or glass for systems with nominal voltages greater than 1000 V]

This Australian Standard was prepared by Committee EL/10, Overhead Lines. It was approved on behalf of the Council of Standards Australia on 6 May 1996 and published on 5 July 1996.

The following interests are represented on Committee EL/10:

Australasian Railway Association
Australian Chamber of Commerce and Industry
Australian Electrical and Electronic Manufacturers Association
Australian Porcelain Insulators Association
Electricity Supply Association of Australia
Electricity Supply Engineers Association of New Zealand

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Part 2: Tests

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PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee EL/10 on Overhead Lines.

This Standard is based on and has been reproduced from IEC 168 (1994), *Tests on indoor and outdoor post insulators of ceramic material or glass for systems with nominal voltages greater than 1000 V.*

For the purpose of this Australian Standard, the IEC text is amended, supplemented or replaced as set out in Appendix ZZ. The changes are indicated by a marginal bar against each clause, table or figure affected by a reference to Appendix ZZ.

This Standard is Part 2 of AS 4398, *Insulators — Ceramic or glass — Station post for indoor and outdoor use Voltages greater than 1000 V a.c.* The two parts are as follows:

Part 1: Characteristics
Part 2: Tests

The objective of the two parts of AS 4398 is to provide users and manufacturers of station post insulators with definitions of terms, requirements and acceptance criteria to facilitate the specifications of insulators.

Statements expressed in mandatory terms in notes to tables and figures are deemed to be requirements of this Standard.

The term 'normative' has been used in this Standard to define the application of the appendix to which it applies. Appendices designated as 'normative' are essential to the understanding or implementation of this Standard.

As this Standard is reproduced from an international Standard, the following applies:

(a) Its number is shown only on the cover and title pages, while the international Standard number appears only on the cover.

(b) In the source text, 'this International Standard' should read 'this Australian Standard'.

(c) A full point substitutes for a comma when referring to a decimal marker.

(d) Where any cross-references to page numbers appear in the text these relate to page numbering in the International Standard and can be disregarded.

References to international Standards should be replaced by equivalent Australian Standards as follows:

Reference to International Standard		*Australian Standard*	
IEC		AS	
50 (471)	International Electrotechnical Vocabulary Chapter 471: Insulators	1852.471	International Electrotechnical Vocabulary Chapter 471: Insulators
60	High-voltage test techniques	1931	High voltage testing techniques
60-1	Part 1: General definitions and test requirements	1931.1	Part 1: General definitions, test requirements, test procedures and measuring devices.

IEC		AS	
71	Insulation co-ordination	1824	Insulation co-ordination
71-1	Part 1: Definitions, principles and rules	1824.1	Part 1: Definitions principles and rules
71-2	Part 2: Application guide	1824.2	Part 2: Application guide
71-3	Part 3: Phase-to-phase insulation co-ordination. Principles, rules and application guide	—	
273	Characteristics of indoor and outdoor post insulators for systems with nominal voltages greater than 1000 V	4398	Insulators—Ceramic or glass Station post for indoor and outdoor use—Voltages greater than 1000 V a.c.
		4398.1	Part 1: Characteristics
438	Tests and dimensions for high-voltage d.c. insulators	—	
ISO		AS	
1459	Metallic coatings—Protection against corrosion by hot dip galvanizing—Guiding principles	1214	Hot-dip galvanized coatings on threaded fasteners (ISO metric coarse thread series)
1460	Metallic coatings—Hot dip galvanized coatings on ferrous materials—Gravimetric determination of the mass per unit area	1214	Hot-dip galvanized coatings on threaded fasteners (ISO metric coarse thread series)
1461	Metallic coatings—Hot dip galvanized coatings on fabricated ferrous products—Requirements	1214	Hot-dip galvanized coatings on threaded fasteners (ISO metric coarse thread series)
1463	Metallic and oxide coatings—Measurement of coating thickness—Microscopical method	—	
2064	Metallic and other non-organic coatings—Definitions and conventions concerning the measurement of thickness	—	
2178	Non-magnetic coatings on magnetic substrates—Measurement of coating thickness—Magnetic method	—	

The following Australian documents are referred to in this Standard.

AS	
1650	Hot-dipped galvanized coatings on ferrous articles

CONTENTS

Clause *Page*

Section 5: Test procedures for mechanical and other tests

Section 6: Tests applicable to post insulators

Originated as part of AS 1132.3—1972.
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NOTES

AUSTRALIAN STANDARD

Insulators—Ceramic or glass—Station post for indoor and outdoor use—Voltages greater than 1000 V a.c.

Part 2: Tests

Section 1: General

1.1 Scope and object

This International Standard IEC 168 is applicable to post insulators and post insulator units of ceramic material or glass, for indoor and outdoor use in electrical installations or equipment, operating on alternating current with a nominal voltage greater than 1 000 V and a frequency not greater than 100 Hz.

This standard may be regarded as a provisional standard for post insulators for use on d.c. systems. IEC 438 gives general guidance for those insulators.

This standard does not apply to composite insulators or to those indoor post insulators in organic material which are covered by another IEC standard [1]*.

The object of this standard is to define:

— the terms used;

— the electrical and mechanical characteristics of post insulators;

— the conditions under which the specified values of these characteristics are verified;

— the methods of test;

— the acceptance criteria.

Numerical values of characteristics of post insulators are specified in IEC 273.

This standard does not include requirements dealing with the choice of post insulators for specific operating conditions.

NOTES

1 A guide for the choice of insulators under polluted conditions is available, see [2].

2 This standard does not include radio interference tests or artificial pollution tests. These subjects and relevant test methods are dealt with in other IEC publications, see [3], [4] and [5].

3 When this standard is applied to hollow post insulators, other IEC publications should also be taken into account, see [6] and [7].

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* The figures in square brackets refer to annex C (Bibliography).