AS EN 50052—2008
EN 50052:1986
EN 50052:1986 AMD1:1991
EN 50052:1986 AMD2:1994

AS EN 50052—2008

Australian Standard®

Cast aluminium alloy enclosures for gas-filled high-voltage switchgear and controlgear

This Australian Standard® was prepared by Committee EL-007, Power Switchgear. It was approved on behalf of the Council of Standards Australia on 4 November 2008.
This Standard was published on 9 December 2008.

The following are represented on Committee EL-007:

- Australasian Railway Association
- Australian British Chamber of Commerce
- Australian Electrical and Electronic Manufacturers Association
- Energy Networks Association
- Engineers Australia
- Testing interests (Australia)

This Standard was issued in draft form for comment as DR 08174.

Standards Australia wishes to acknowledge the participation of the expert individuals that contributed to the development of this Standard through their representation on the Committee and through the public comment period.

Keeping Standards up-to-date

Australian Standards® are living documents that reflect progress in science, technology and systems. To maintain their currency, all Standards are periodically reviewed, and new editions are published. Between editions, amendments may be issued.

Standards may also be withdrawn. It is important that readers assure themselves they are using a current Standard, which should include any amendments that may have been published since the Standard was published.

Detailed information about Australian Standards, drafts, amendments and new projects can be found by visiting www.standards.org.au

Standards Australia welcomes suggestions for improvements, and encourages readers to notify us immediately of any apparent inaccuracies or ambiguities. Contact us via email at mail@standards.org.au, or write to Standards Australia, GPO Box 476, Sydney, NSW 2001.

Australian Standard®

Cast aluminium alloy enclosures for gas-filled high-voltage switchgear and controlgear

First published as AS EN 50052—2008.

COPYRIGHT

© Standards Australia

All rights are reserved. No part of this work may be reproduced or copied in any form or by any means, electronic or mechanical, including photocopying, without the written permission of the publisher.

Published by Standards Australia GPO Box 476, Sydney, NSW 2001, Australia

ISBN 0 7337 8976 5

PREFACE

This Standard was prepared by the Standards Australia Committee EL-007, Power Switchgear.

The objective of this Standard is to specify the requirements for cast aluminium enclosures that are to be used in high-voltage switchgear and controlgear and associated gas-filled equipment.

The text of this Standard is identical with, and has been reproduced from, EN 50052:1986, *Cast aluminium alloy enclosures for gas-filled high-voltage switchgear and controlgear* (including its Amendments 1 and 2); however, the formatting has been updated to reflect current style.

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

(a) Its number does not appear on each page of text and its identity is shown only on the cover and title page.

(b) In the source text ‘EN 50052’ should read ‘AS EN 50052’.

The terms ‘normative’ and ‘informative’ are used to define the application of the annex to which they apply. A normative annex is an integral part of a Standard, whereas an informative annex is only for information and guidance.

CONTENTS

STANDARDS AUSTRALIA

Australian Standard

Cast aluminium alloy enclosures for gas-filled high-voltage switchgear and controlgear

0 Introduction

This Standard covers the requirements for the design, construction, testing, inspection and certification of gas-filled enclosures for use specifically in high-voltage switch-gear and controlgear, or for associated gas-filled equipment. Special consideration is given to these enclosures for the following reasons.

(a) The enclosures usually form the containment of electrical equipment, thus their shape is determined by electrical rather than mechanical considerations.

(b) The enclosures are installed in restricted access areas and the equipment is operated by experts and instructed persons only.

(c) As the thorough drying of the inert, non-corrosive gas-filling medium is fundamental to the satisfactory operation of the electrical equipment, it is periodically checked. For this reason, no internal corrosion allowance is required on the wall thickness of these enclosures.

(d) The enclosures are subjected to only small fluctuations of pressure as the gas-filling density shall be maintained within close limits to ensure satisfactory insulating and arc-quenching properties. Therefore the enclosures are not liable to fatigue due to pressure cycling.

(e) The operating pressure is relatively low.

For the foregoing reasons and to ensure the minimum disturbance, hence reducing the risk of moisture and dust entering the enclosures which would prevent correct electrical operation of the switchgear, no pressure tests shall be carried out after installation and before placing in service and no periodic inspection of the enclosure interiors or pressure tests shall be carried out after the equipment is placed in service.

1 Scope

This Standard applies to cast aluminium alloy enclosures pressurized with dry air, inert gases, for example sulphur hexafluoride or nitrogen or a mixture of such gases, used in indoor or outdoor installations of high-voltage switchgear and controlgear, where the gas is used principally for its dielectric and/or arc-quenching properties, and with rated voltages:

- 1 kV up to and including 52 kV and with gas-filled compartments with design pressure greater than 3 bar (gauge);
- 72.5 kV and above.

The enclosures comprise parts of electrical equipment not necessarily limited to the following examples:

- Circuit-breakers
- Switch-disconnectors
- Disconnectors
- Earthing switches
- Current transformers

© Standards Australia