

Australian/New Zealand Standard™

Electrical equipment for explosive atmospheres—Repair and overhaul



AS/NZS 3800:2012

This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee EL-023, Electrical Equipment in Mines and Quarries. It was approved on behalf of the Council of Standards Australia on 5 November 2012 and on behalf of the Council of Standards New Zealand on 1 November 2012. This Standard was published on 22 November 2012.

The following are represented on Committee EL-023:

Australian Chamber of Commerce and Industry
Australian Coal Association
Australian Industry Group
Consult Australia
Department of Industry and Investment, NSW
Department of Mines and Petroleum, WA
Department of Mines and Energy, Qld
Electrical Apparatus Service Association
Mining Electrical and Mining Mechanical Engineering Society
National Association of Testing Authorities Australia
Queensland Department of Environment and Resource Management
Solid Energy New Zealand
The Aviation and Marine Engineers Association
University of Newcastle
WorkCover New South Wales

Keeping Standards up-to-date

Standards are living documents which 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 Standards may also be withdrawn.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 which may have been published since the Standard was purchased.

Detailed information about joint Australian/New Zealand Standards can be found by visiting the Standards Web Shop at www.saiglobal.com.au or Standards New Zealand web site at www.standards.co.nz and looking up the relevant Standard in the on-line catalogue.

For more frequent listings or notification of revisions, amendments and withdrawals, Standards Australia and Standards New Zealand offer a number of update options. For information about these services, users should contact their respective national Standards organization.

We also welcome suggestions for improvement in our Standards, and especially encourage readers to notify us immediately of any apparent inaccuracies or ambiguities. Please address your comments to the Chief Executive of either Standards Australia or Standards New Zealand at the address shown on the back cover.

AS/NZS 3800:2012

Australian/New Zealand Standard™

Electrical equipment for explosive atmospheres—Repair and overhaul

Originated in Australia as AS 2290.2—1979.
Originated in New Zealand as NZS 6112:1989.
Previous edition AS/NZS 3800:2005.
Third edition 2012.

COPYRIGHT

© Standards Australia Limited/Standards New Zealand

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, unless otherwise permitted under the Copyright Act 1968 (Australia) or the Copyright Act 1994 (New Zealand).

Jointly published by SAI Global Limited under licence from Standards Australia Limited, GPO Box 476, Sydney, NSW 2001 and by Standards New Zealand, Private Bag 2439, Wellington 6140.

ISBN 978 1 74342 303 5

PREFACE

This Standard was prepared by Joint Standards Australia/Standards New Zealand Committee EL-023, Electrical Equipment in Mines and Quarries, to supersede AS/NZS 3800:2005 two years after publication.

The basic content of this Standard was prepared by the International Electrotechnical Commission (IEC) with participation of Joint Standards Australia/Standards New Zealand Committees EL-014, Equipment for Explosive Atmospheres, and EL-023, Electrical Equipment in Mines and Quarries, and Australian and New Zealand experts.

The objective of this Standard is to establish specific requirements for and give instruction, principally of a technical nature on, the repair, overhaul, reclamation and modification of equipment designed for use in explosive atmospheres.

This Standard is based on but not equivalent to IEC 60079-19, Ed.3.0 (2011), *Explosive atmospheres, Part 19: Equipment repair, overhaul and reclamation*, and as such represents changes in presentation and content. It has been varied to take account of Australian/New Zealand conditions and the changes are listed in Appendix L.

The major changes from IEC 60079-19, Ed.3.0 (2011) include the addition of Clauses covering the following types of protection:

- (a) Encapsulation 'm'.
- (b) Oil filled 'o'.
- (c) Powder filled 'q'.
- (d) Special 's'.

Additional requirements for evaluation procedures and parameters are given in Appendices D, E, G, H, I and J.

The major differences/variations between this document and AS/NZS 3800:2005 are as follows:

- (i) Changes to the definition of 'Alteration' and 'Modification'.
- (ii) Changes to symbols referred to in Appendix A of this document.
- (iii) Relocation of sample report formats to SA/SNZ Handbook HB 239, *Guidance on the repair and overhaul of electrical equipment for explosive atmospheres*.
- (iv) Relocation of evaluation procedures to protection technique-specific appendices.

The terms 'normative' and 'informative' have been used in this Standard 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.

Statements expressed in mandatory terms in footnotes to tables are deemed to be requirements of this Standard.

CONTENTS

	<i>Page</i>
FOREWORD.....	9
1 SCOPE.....	10
2 NORMATIVE REFERENCES	10
3 TERMS AND DEFINITIONS	11
4 GENERAL.....	14
4.1 GENERAL PRINCIPLES.....	14
4.1.1 OVERHAUL-REPAIR COMPLIANCE DOCUMENTATION	14
4.1.2 OVERHAUL-REPAIR WITH DOCUMENTATION	14
4.1.3 OVERHAUL-REPAIR WITHOUT DOCUMENTATION	14
4.2 STATUTORY REQUIREMENTS FOR REPAIR FACILITY.....	15
4.2.1 REPAIR FACILITY	15
4.2.2 USER.....	15
4.3 INSTRUCTIONS FOR THE USER.....	15
4.3.1 CERTIFICATES AND DOCUMENTS.....	15
4.3.2 RECORDS AND WORK INSTRUCTIONS	15
4.3.3 RE-INSTALLATION OF REPAIRED EQUIPMENT	15
4.3.4 REPAIR FACILITIES.....	16
4.4 INSTRUCTIONS FOR THE REPAIR FACILITY	16
4.4.1 REPAIR AND OVERHAUL.....	16
4.4.2 RECLAMATIONS.....	21
4.4.3 ALTERATIONS AND MODIFICATIONS	23
4.4.4 TEMPORARY REPAIRS	24
4.4.5 ROTATING MACHINERY	25
4.4.6 INVERTER SUPPLIED EQUIPMENT	25
5 ADDITIONAL REQUIREMENTS FOR THE REPAIR AND OVERHAUL OF EQUIPMENT WITH TYPE OF PROTECTION ‘d’ (FLAMEPROOF).....	26
5.1 APPLICATION	26
5.2 REPAIR AND OVERHAUL	26
5.2.1 ENCLOSURES	26
5.2.2 CABLE AND CONDUIT ENTRIES.....	27
5.2.3 TERMINATIONS	27
5.2.4 INSULATION.....	27
5.2.5 INTERNAL CONNECTIONS	27
5.2.6 WINDINGS	27
5.2.7 AUXILIARY EQUIPMENT	29
5.2.8 LIGHT-TRANSMITTING PARTS	30
5.2.9 ENCAPSULATED PARTS.....	30
5.2.10 BATTERIES	30
5.2.11 LAMPS	30
5.2.12 LAM HOLDERS	30
5.2.13 BALLASTS	30
5.2.14 BREATHING DEVICES	30
5.2.15 FASTENERS	30
5.2.16 FLAMEPROOF JOINTS.....	30

This is a free preview. Purchase the entire publication at the link below:

[Product Page](#)

-
- [Looking for additional Standards? Visit Intertek Inform Infostore](#)
 - [Learn about LexConnect, All Jurisdictions, Standards referenced in Australian legislation](#)
-