

AS/NZS 2290.1:2005

AS/NZS 2290.1:2005

Australian/New Zealand Standard™

**Electrical equipment for coal mines—
Introduction and maintenance**

Part 1: For hazardous areas



AS/NZS 2290.1:2005

This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee EL-023, Electrical Equipment in Coal Mines. It was approved on behalf of the Council of Standards Australia on 16 December 2004 and on behalf of the Council of Standards New Zealand on 23 December 2004.

This Standard was published on 15 February 2005.

The following are represented on Committee EL-023:

Australian Chamber of Commerce and Industry
Australian Coal Association
Australian Electrical and Electronic Manufacturers Association
Australian Industry Group
Department of Natural Resources and Mines (Qld)
Department of Primary Industries, Mine Safety (NSW)
Electrical Apparatus Service Association
Electrical Regulatory Authorities Council
Mining Electrical and Mining Mechanical Engineers Society
National Association of Testing Authorities Australia
New Zealand Association of Marine, Aviation and Power Engineers
New Zealand Hazardous Areas Electrical Co-ordinating Committee
Regulatory Interests, New Zealand
Solid Energy
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 Standards may also be withdrawn.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.standards.com.au or Standards New Zealand web site at www.standards.co.nz and looking up the relevant Standard in the on-line catalogue.

Alternatively, both organizations publish an annual printed Catalogue with full details of all current Standards. 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 2290.1:2005

Australian/New Zealand Standard™

Electrical equipment for coal mines— Introduction and maintenance

Part 1: For hazardous areas

Originated as AS 2290.1—1979.
Previous edition AS 2290.1—1990.
Jointly revised and redesignated as AS/NZS 2290.1:2005.

COPYRIGHT

© Standards Australia/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.

Jointly published by Standards Australia, GPO Box 5420, Sydney, NSW 2001 and Standards New Zealand, Private Bag 2439, Wellington 6020

ISBN 0 7337 6476 2

PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee EL-023, Electrical Equipment in Coal Mines to supersede AS 2290.1—1990, *Electrical equipment for coal mines—Maintenance and overhaul*, Part 1: *Maintenance of electrical equipment for hazardous areas*.

The objective of this Standard is to provide guidance for the maintenance of electrical equipment in coal mines. It is part of a series of Standards on the maintenance and overhaul of electrical equipment used in association with underground mining machines.

Each Section of this Standard deals with the maintenance requirements appropriate to one of the types of explosion-protection techniques which may be used to achieve electrical safety or with basic requirements and considerations which are fundamental to the safe use of electrical equipment in hazardous areas.

This Standard differs from the 1990 edition as follows:

- (a) The Scope has been extended to include the introduction and initial commissioning of equipment.
- (b) The preparation and maintenance of a verification dossier has been included.
- (c) The designation of the types of periodic equipment examination has been changed from Codes A, B, C and C1 to External examination, Internal examination and Pre-overhaul audit.
- (d) The recommended frequency of examination has, in some cases, been extended.
- (e) Flameproof enclosures (Ex ‘d’), intrinsically safe equipment (Ex ‘i’), increased safety equipment (Ex ‘e’) and pressurized enclosures (Ex ‘p’) are also now covered.
- (f) Illustrations of the condition of the surfaces of flameproof enclosures and flamepath gaps have been referenced to AS/NZS 3800.
- (g) Typical examination report forms, provided as appendices, have been updated.
- (h) It has been published as a Joint Australian/New Zealand Standard.

The term ‘informative’ has been used in this Standard to define the application of the appendix to which it applies. An ‘informative’ appendix is only for information and guidance.

CONTENTS

	<i>Page</i>
FOREWORD.....	5
 SECTION 1 SCOPE AND GENERAL	
1.1 SCOPE	7
1.2 REFERENCED DOCUMENTS	7
1.3 DEFINITIONS	8
1.4 EQUIPMENT VERIFICATION DOSSIER.....	8
 SECTION 2 INTRODUCTION, COMMISSIONING AND DOCUMENT CONTROL	
2.1 GENERAL	10
2.2 CERTIFICATION DOCUMENTS	10
2.3 PROGRAMMABLE ELECTRONIC SYSTEM	10
2.4 MANUFACTURING, OVERHAUL AND INSPECTION TEST REPORTS	10
2.5 PROTECTION DEVICES	10
2.6 TRAINING.....	11
2.7 DOCUMENTED MAINTENANCE PROCEDURES/FREQUENCY.....	11
2.8 MAINTENANCE OF RECORDS	11
2.9 COMMISSIONING CHECK SHEETS.....	12
 SECTION 3 FLAMEPROOF ENCLOSURE (Ex ‘d’)	
3.1 GENERAL	13
3.2 REPAIR IN SITU	13
3.3 REPLACEMENT OF INTERNAL COMPONENTS.....	13
3.4 EQUIPMENT CERTIFICATION	13
3.5 EXAMINATION FREQUENCY	14
3.6 EQUIPMENT EXAMINATION.....	14
3.7 PERIODIC INSPECTIONS.....	14
3.8 EQUIPMENT OVERHAUL.....	15
 SECTION 4 INTRINSICALLY SAFE EQUIPMENT (Ex ‘i’)	
4.1 GENERAL	18
4.2 REPAIR.....	18
4.3 EQUIPMENT CERTIFICATION	18
4.4 EXAMINATION FREQUENCY	18
4.5 EQUIPMENT EXAMINATION.....	19
4.6 PERIODIC INSPECTION	19
4.7 EQUIPMENT OVERHAUL.....	19
 SECTION 5 INCREASED SAFETY EQUIPMENT (Ex ‘e’)	
5.1 GENERAL	20
5.2 REPAIR IN SITU.....	20
5.3 EQUIPMENT CERTIFICATION	20
5.4 EXAMINATION FREQUENCY	20
5.5 EQUIPMENT EXAMINATION.....	21
5.6 PERIODIC INSPECTIONS.....	21
5.7 EQUIPMENT OVERHAUL.....	22

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
-