Australian/New Zealand Standard™

Competencies for working with electrical equipment for hazardous areas (EEHA)

Part 2: Guide to assessing competency





This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee P-012, Hazardous Areas Competency Standards Advisory Panel. It was approved on behalf of the Council of Standards Australia on 23 May 2008 and on behalf of the Council of Standards New Zealand on 09 April 2008.

This Standard was published on 30 June 2008.

The following are represented on Committee P-012:

Auckland Regional Chamber of Commerce

Australian Chamber of Commerce and Industry

Australian Coal Association

Australian Electrical and Electronic Manufacturers Association

Australian Industry Group

Australian Institute of Petroleum

Australian Petroleum Production and Exploration Association

Certification Interests, Australia

Department of Infrastructure, Energy and Resources, Tasmania

ElectroComms and Energy Utilities Industries Skills Council

Electrotechnology Industry Training Organisation (ETITO)

Energy Networks Association

Engineers Australia

Institute of Electrical Inspectors

Institute of Instrumentation, Control and Automation Australia

Mining Electrical and Mining Mechanical Engineering Society

Ministry of Economic Development, New Zealand

NSW Department of Primary Industries, Mineral Resources

New South Wales Grain Corporation

New Zealand Hazardous Areas Electrical Coordinating Committee

Simtars (Natural Resources, Mines and Water)

TAFE NSW

The Royal Australian Chemical Institute

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 Standards may also be withdrawn.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.

This Standard was issued in draft form for comment as DR 07374.

Australian/New Zealand Standard™

Competencies for working with electrical equipment for hazardous areas (EEHA)

Part 2: Guide to assessing competency

Originated as part of AS/NZS 4761.1(Int):2000, AS/NZS 4761.2(Int):2000, AS/NZS 4761.3(Int):2000 and AS/NZS 4761.4(Int):2000. Previous edition AS/NZS 4761.2:2003. Second edition 2008.

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 476, Sydney, NSW 2001 and Standards New Zealand, Private Bag 2439, Wellington 6020

This is a free 7 page sample. Access the full version online.

PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee, P-012, Hazardous Areas Competency Standards Advisory Panel, to supersede AS/NZS 4761.2:2003, in accordance with its charter.

An equivalent set of competency (unit) Standards has been formatted for the New Zealand's National Qualifications Framework (NQF) by the ElectroTechnology Industry Training Organization (ETITO) and endorsed by the Joint Committee P-012. The Unit Standards are registered with the New Zealand Qualifications Authority (NZQA), under the domain *Electrical Equipment for Hazardous Areas*.

The objective of this Standard is to provide guidance for the set-up of assessment programs applicable to the Units of Competency needed for work associated with electrical equipment for hazardous areas and contained in Part 1.

These Competency Standards are a replica of those included in the EE-Oz Training Standards *National Electrotechnology Training Package*, endorsed by the National Training Quality Council (NTQC) (the endorsing body). To ensure consistency and concurrence between the two sets of documents (this series of Standards and the National Electrotechnology Training Package), maintenance and revision of these documents will always be carried out simultaneously through the established Joint Standards Committee P-012, Hazardous Areas Competency Standards Advisory Panel and amendments thereto processed in accordance with the respective organizational requirements. However, it should be noted that from time to time there may be instances where there are differences between versions and therefore appears to be a lack of consistency. This is caused by the processes used by Standards Australia and Standards New Zealand and the NTQC in finalizing approval of their respective documents. In all instances it is recommended that the latest version be used.

This Standard forms part of a series covering the competencies for working with equipment for hazardous areas and the training materials/components supporting such competencies.

The series is as follows:

AS/NZS

Competencies for working with electrical equipment for hazardous areas (EEHA)

4761.1 Part 1: Competency Standards

4761.2 Part 2 Guide to assessing competency

The terms 'normative' and 'informative' have been used in this Standard to define the application of the appendices to which they apply. A normative appendix is an integral part of a Standard, whereas an informative appendix is only for information and guidance.

CONTENTS

		Page
SECTIO	ON 1 SCOPE AND GENERAL	
1.1	SCOPE	5
1.1	APPLICATION	
1.3	REFERENCED DOCUMENTS	
1.4	DEFINITIONS	
1.4	DEFINITIONS	0
SECTIO	ON 2 EVIDENCE OF COMPETENCY	
2.1	GENERAL AND TABLES OF EVIDENCE OF COMPETENCY	7
2.2	UNIT—REPORT ON THE INTEGRITY OF EXPLOSION-PROTECTED	
	EQUIPMENT IN HAZARDOUS AREAS	8
2.3	UNIT—ATTEND TO BREAKDOWNS IN HAZARDOUS AREAS	
2.4	UNIT—USE AND MAINTAIN THE INTEGRITY OF PORTABLE GAS	
	DETECTION DEVICES	10
2.5	UNIT—INSTALL EXPLOSION-PROTECTED EQUIPMENT AND WIRING	
	SYSTEMS	11
2.6	UNIT—INSTALL AND MAINTAIN INTEGRITY OF FIXED GAS	
	DETECTION EQUIPMENT	12
2.7	UNIT—MAINTAIN EQUIPMENT IN HAZARDOUS AREAS	
2.8	UNIT—OVERHAUL AND REPAIR EXPLOSION-PROTECTED EQUIPMENT	
2.9	UNIT—CONDUCT A CONFORMITY ASSESSMENT OF EXPLOSION-	
	PROTECTED EQUIPMENT	15
2.10	UNIT—CONDUCT TESTING OF HAZARDOUS AREAS INSTALLATIONS	
	UNIT—CONDUCT VISUAL INSPECTION OF HAZARDOUS AREAS	
	INSTALLATIONS	17
2.12		
	INSTALLATIONS	18
2.13	UNIT—DEVELOP AND MANAGE MAINTENANCE PROGRAMS FOR	
	HAZARDOUS AREAS ELECTRICAL EQUIPMENT	19
2.14	UNIT—MANAGE COMPLIANCE OF HAZARDOUS AREAS	20
2.15	UNIT—DESIGN AND DEVELOP MODIFICATIONS TO EXPLOSION-	
	PROTECTED EQUIPMENT	21
2.16	UNIT—CLASSIFY HAZARDOUS AREAS	22
2.17	UNIT—PLAN ELECTRICAL INSTALLATIONS FOR HAZARDOUS AREAS	23
	UNIT—DESIGN EXPLOSION-PROTECTED ELECTRICAL SYSTEMS AND	
	INSTALLATIONS	24
2.19	UNIT—DESIGN GAS DETECTION SYSTEMS AND INSTALLATIONS	25
2.20	UNIT—CARRY OUT OVERHAUL AND REPAIR OF EXPLOSION-	
	PROTECTED EQUIPMENT	26
2.21	UNIT—CONDUCT AUDIT OF HAZARDOUS AREAS INSTALLATIONS	
2.22	UNIT—ASSESS THE FITNESS-FOR-PURPOSE OF HAZARDOUS AREAS	
	EXPLOSION-PROTECTED EQUIPMENT	28
2.23	UNIT—REPAIR REELING, TRAILING AND FLEXIBLE CABLES	29
	UNIT—TEST REELING, TRAILING AND FLEXIBLE CABLES	
	UNIT—INSPECT AND FIT PLUGS/COUPLERS FOR REELING,	
	TRAILING AND FLEXIBLE CABLES	31
2.26	UNIT—VERIFY COMPLIANCE OF REPAIRED REELING, TRAILING AND	
	FLEXIBLE CABLES	32
2.27	UNIT—DISCONNECT AND RECONNECT EXPLOSION-PROTECTED	
	EQUIDMENT CONNECTED TO LOW VOLTACE SUDDLY	22

		Page
SECTIO	ON 3 ASSESSING COMPETENCY	
3.1	GENERAL	34
3.2	SOURCES OF EVIDENCE	34
3.3	ASSESSMENT ACTIVITIES	34
3.4	MAKING JUDGEMENTS ON COMPETENCY	35
APPEN	DICES	
A	GUIDE TO ASSESSMENT METHODS AND INSTRUMENTS	37

STANDARDS AUSTRALIA/STANDARDS NEW ZEALAND

Australian/New Zealand Standard

Competencies for working with electrical equipment for hazardous areas (EEHA)

Part 2: Guide to assessing competency

SECTION 1 SCOPE AND GENERAL

1.1 SCOPE

This Standard provides guidance on assessing competency based on the knowledge and skills that define the Units of Competency(AUS)/Unit Standards(NZ) described in Part 1.

1.2 APPLICATION

This Standard may be used by training providers to develop assessment programs and by learners as a guide to the extent of knowledge and skills required for them to be deemed competent.

It may also be referenced by—

- (a) bodies certifying/recognizing overhaul and repair workshops; and
- (b) enterprises in establishing the competency of their personnel.

1.3 REFERENCED DOCUMENTS

The following documents are referred to in this Standard:

AS/NZS	
1802	Electric cables—Reeling and trailing—For underground coal mining purposes
2802	Electrical cables—Reeling and railing for mining and general use (other than underground coal mining)
2381	Electrical equipment for explosive atmospheres—Selection, installation and maintenance
2381.1	Part 1: General requirements
3000	Electrical installations (known as the Australian/New Zealand Wiring Rules)
4761	Competencies for working with electrical equipment for hazardous areas (EEHA)
4761.1	Part 1: Competency Standards
60079 60079.10	Electrical apparatus for explosive gas atmospheres Part 10: Classification of hazardous areas (IEC 60079-10:2002 MOD)
61241 61241.0 61241.1 61241.4	Electrical apparatus for use in the presence of combustible dust Part 0: General requirements Part 1: Protection by enclosures 'tD' Part 4: Type of protection 'pD'



The remainder of this document is available for purchase online at



www.saiglobal.com/shop























