

Australian Standard™

Cathodic protection of metals

Part 3: Fixed immersed structures



This Australian Standard was prepared by Committee MT-014, Corrosion of Metals. It was approved on behalf of the Council of Standards Australia on 27 October 2005.
This Standard was published on 22 November 2005.

The following are represented on Committee MT-014:

Australasian Corrosion Association
Australasian Institute of Metal Finishing
Australian Chamber of Commerce and Industry
Australian Electrolysis Committee
Australian Paint Manufacturer's Federation
Australian Paint Approval Scheme
Austroads
Bureau of Steel Manufacturers of Australia
Department of Defence
Division of Building, Construction and Engineering, CSIRO
Galvanizers Association of Australia
Telstra
United Water International
Water Corporation of Western Australia
Corrosion consultants
Water Services Association of Australia (WSAA)
Water Authority of Western Australia

Additional Interests:

Corrosion Consultants

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 Standards may also be withdrawn.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 Standards can be found by visiting the Standards Web Shop at www.standards.com.au and looking up the relevant Standard in the on-line catalogue.

Alternatively, the printed Catalogue provides information current at 1 January each year, and the monthly magazine, *The Global Standard*, has a full listing of revisions and amendments published each month.

Australian Standards™ and other products and services developed by Standards Australia are published and distributed under contract by SAI Global, which operates the Standards Web Shop.

We also welcome suggestions for improvement in our Standards, and especially encourage readers to notify us immediately of any apparent inaccuracies or ambiguities. Contact us via email at mail@standards.org.au, or write to the Chief Executive, Standards Australia, GPO Box 476, Sydney, NSW 2001.

This Standard was issued in draft form for comment as DR 05048.

Australian Standard™

Cathodic protection of metals

Part 3: Fixed immersed structures

Originated as AS 2832.3—1992.
Second edition 2005.

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 7007 X

PREFACE

This Standard has been prepared by the Australian members of the Joint Standards Australia/Standards New Zealand Committee MT-014, Corrosion of Metals, to supersede AS 2832.3—1992, *Cathodic protection of metals, Part 3: Fixed immersed structures*.

After consultation with stakeholders in both countries, Standards Australia and Standards New Zealand decided to develop this Standard as an Australian Standard rather than an Australian/New Zealand Standard.

The objective of this Standard is to provide Regulatory Authorities and the Australian corrosion mitigation industry with requirements for the cathodic protection of fixed immersed structures, such as wharves and piling, in order to minimize corrosion rates.

The objective of this revision is to specify the new design requirements for designing cathodic protection systems for fixed immersed structures.

This Standard is Part 3 of the AS 2832 series of Standards. The other parts are as follows:

AS

2832 Cathodic protection of metals

2832.1 Part 1: Pipes and cables

2832.2 Part 2: Compact buried structures

2832.4 Part 4: Internal surfaces

2832.5 Part 5: Steel in concrete structures

The Committee determined that there were no International Standards (ISO) which were suitable to be used as an Australian Standard.

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, where 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	8
1.3 DEFINITIONS	8
1.4 COMPETENCE OF PERSONNEL	12
SECTION 2 CRITERIA FOR CATHODIC PROTECTION	
2.1 SCOPE AND GENERAL	13
2.2 PROTECTION CRITERIA	13
2.3 OVERPROTECTION	15
SECTION 3 MEASUREMENT AND EQUIPMENT	
3.1 GENERAL	16
3.2 POTENTIAL MEASUREMENT AND EQUIPMENT	16
SECTION 4 DESIGN OF STRUCTURES FOR CATHODIC PROTECTION	
4.1 SCOPE AND GENERAL	17
4.2 STRUCTURE COATING	18
4.3 TEST POINTS.....	18
4.4 ISOLATION OF STRUCTURE	18
4.5 ELECTRICAL CONTINUITY	19
SECTION 5 DESIGN OF CATHODIC PROTECTION SYSTEMS	
5.1 GENERAL	20
5.2 SAFETY PRECAUTIONS	20
5.3 DESIGN REQUIREMENTS	21
5.4 DESIGN DATA.....	21
5.5 CONTROL OF INTERFERENCE CURRENTS	22
5.6 CABLES.....	22
5.7 SYSTEM DESIGN DOCUMENTATION	23
SECTION 6 CATHODIC PROTECTION OF STRUCTURES SUBJECT TO STRAY DIRECT TRACTION CURRENT	
6.1 SCOPE AND GENERAL	25
6.2 MINIMIZATION OF STRAY CURRENT EFFECTS.....	25
SECTION 7 INSTALLATION OF CATHODIC PROTECTION SYSTEMS	
7.1 SCOPE	28
7.2 APPROVAL TO INSTALL.....	28
7.3 INSTALLATION PRACTICE.....	28
7.4 MATERIALS AND EQUIPMENT ACCEPTANCE TESTS.....	28
7.5 INSTALLATION OF GALVANIC ANODE SYSTEMS	29
7.6 INSTALLATION OF IMPRESSED CURRENT SYSTEMS.....	30
7.7 INSTALLATION OF INSULATING FLANGES AND DEVICES	31

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](#)
-