

STANDARDS AUSTRALIA

---

RECONFIRMATION

OF

AS 3894.2—2002

Site testing of protective coatings

Method 2: Non-conductive coatings—Continuity testing—Wet sponge method

---

RECONFIRMATION NOTICE

Technical Committee CH-003 has reviewed the content of this publication and in accordance with Standards Australia procedures for reconfirmation, it has been determined that the publication is still valid and does not require change.

Certain documents referenced in the publication may have been amended since the original date of publication. Users are advised to ensure that they are using the latest versions of such documents as appropriate, unless advised otherwise in this Reconfirmation Notice.

Approved for reconfirmation in accordance with Standards Australia procedures for reconfirmation on 25 September 2013.

The following are represented on Technical Committee CH-003:

Australasian Corrosion Association  
Australian Paint Approval Scheme  
Australian Paint Manufacturers' Federation  
Australian Pipeline Industry Association  
Water Corporation Western Australia

---

## NOTES

# Australian Standard™

AS 3894.2

## Site testing of protective coatings

### Method 2: Non-conductive coatings—Continuity testing—Wet sponge method

#### PREFACE

This Standard was prepared by the Australian members of the Joint Standards Australia/Standards New Zealand Committee CH-003, Paints and Related Materials, to supersede AS/NZS 3894.2:1991. 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 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> |
|--------------------------------------------------------------|-------------|
| 1 SCOPE .....                                                | 2           |
| 2 REFERENCED DOCUMENTS .....                                 | 2           |
| 3 DEFINITIONS .....                                          | 2           |
| 4 PRINCIPLE .....                                            | 3           |
| 5 MATERIALS AND REAGENTS .....                               | 3           |
| 6 APPARATUS .....                                            | 3           |
| 7 ELECTRICAL SAFETY .....                                    | 4           |
| 8 CALIBRATION .....                                          | 4           |
| 9 TESTING CONDITIONS .....                                   | 4           |
| 10 PRELIMINARY INSPECTION OF TEST ITEM .....                 | 4           |
| 11 FIELD CHECKING OF TEST EQUIPMENT .....                    | 4           |
| 12 PROCEDURE .....                                           | 5           |
| 13 REPORT .....                                              | 5           |
| APPENDIX A A SAMPLE REPORT FORM FOR CONTINUITY TESTING ..... | 7           |

## METHOD

### 1 SCOPE

This Standard provides a practical test method for the on-site determination of the presence of pinholes, holidays, cracks and other discontinuities that penetrate to the substrate in a non-conductive, protective thin film coating of less than 250 µm thickness, or where metal particles protrude through the coating (see Note 1).

This test will not detect areas of low film thickness or inclusions in the coating. For a test method that accurately detects areas of low film thickness or inclusions, see AS/NZS 3894.1.

This Standard is applicable to coated metal items, equipment or structures that may be subjected to long-term burial or immersion, are in continuous contact with a moist, chemically aggressive environment, and require a greater degree of protection than is normally necessary for items exposed to the atmosphere. Examples of such items include structural steel, pipelines, storage vessels, bridges and mobile/transportable containers. The Standard is not intended to apply to coating types incorporating components that conduct an electric current, such as zinc dust and aluminium flakes. The method is confined to measuring instruments that provide a maximum voltage of 90 V d.c.

Although it may be used in the laboratory for inspecting panels and relatively small test items, the method is intended for use in the field (see also Clause 9).

#### NOTES:

- 1 Where coatings are greater than 150 µm thick, an alternative method such as the high voltage (brush) method may be used.
- 2 This test is not recommended for use on intermediate coats of a multicoat system, as intercoat adhesion may be affected.

### 2 REFERENCED DOCUMENTS

The following documents are referred to in this Standard:

#### AS/NZS

|            |                                                                                                                      |
|------------|----------------------------------------------------------------------------------------------------------------------|
| 1580       | Paints and related materials—Methods of test                                                                         |
| 1580.101.5 | Method 101.5: Conditions of test, temperature and humidity control                                                   |
| 2243       | Safety in laboratories                                                                                               |
| 2243.7     | Part 7: Electrical aspects                                                                                           |
| 2310       | Glossary of paint and painting terms                                                                                 |
| 3100       | Approval and test specification—General requirements for electrical equipment                                        |
| 3108       | Approval and test specification—Particular requirements for isolating transformers and safety isolating transformers |
| 3894       | Site testing of protective coatings                                                                                  |
| 3894.1     | Method 1: Non-conductive coatings—Continuity testing—High voltage (brush) method                                     |
| 3894.6     | Method 7: Determination of residual contamination                                                                    |
| ISO        |                                                                                                                      |
| 9001       | Quality management systems—Requirements                                                                              |
| NACE       |                                                                                                                      |
| RP 0188    | Discontinuity (holiday) testing of protective coatings                                                               |

### 3 DEFINITIONS

For the purpose of this Standard, the definitions of AS/NZS 2310 and those below apply