STANDARDS AUSTRALIA

RECONFIRMATION

OF

AS 2331.1.2—2001

Methods of test for metallic and related coatings

Method 1.2: Local thickness tests—Coulometric method

RECONFIRMATION NOTICE

Technical Committee MT-009 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 20 March 2017.

The following are represented on Technical Committee MT-009:

Australasian Institute of Surface Finishing
Australian Chamber of Commerce and Industry
Australian Industry Group
Australian Steel Institute
Bureau of Steel Manufacturers of Australia
Galvanizers Association of Australia
Galvanizing Association of New Zealand
New Zealand Metal Roofing Manufacturers

NOTES

AS 2331.1.2—2001
Reconfirmed 2017

Australian Standard™

AS 2331.1.2

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PREFACE

This Standard has been prepared by the Joint Standards Australia/Standards New Zealand Committee MT-009, Metal Finishing, to supersede AS 2331.1.2—1980. It is the result of a consensus among representatives on the Joint Committee to produce it as an Australian Standard. The objective of this revision is to upgrade the requirements so that they closely align with ISO 2177:1985, *Metallic coatings—Measurement of coating thickness—Coulometric method by anodic dissolution.*

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.

METHOD

1 SCOPE

This Standard specifies a coulometric method based on anodic dissolution for measuring the thickness of metallic coatings.

Typical combinations of coatings and substrates that can be tested by this method are given in Table 1. Other combinations may be tested with electrolytes in current use, or with new electrolytes developed for them; in both cases, it is necessary to verify the suitability of the complete system.

The method is also applicable to multi-layer systems, for example Cu/Ni/Cr (see Clause 7.6).

This method may be used to measure the thickness of coatings applied by various means, if due account is taken of special features, such as the presence of an alloy layer. In some cases, the thickness of diffusion layers can also be measured. The method can also be used to measure the thickness of coatings on cylindrical specimens and wires (see Clause 7.8).

NOTES:

1 The test procedures described in this Standard do not necessarily include all of the precautions required to satisfy health and safety aspects. Care should be taken to ensure that the procedures are carried out only by people who have received suitable training. Guidance in the handling and use of hazardous chemicals is given in AS/NZS 2243.1 and AS/NZS 2243.2.

2 Factors relating to measuring accuracy are given in Appendix A.