STANDARDS AUSTRALIA

RECONFIRMATION

OF

AS 2331.3.5—2001

Methods of test for metallic and related coatings

Method 3.5: Corrosion and related property tests—Sulfur dioxide/hydrogen sulfide porosity tests

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 2331.3.5—2001
Reconfirmed 2017

Australian Standard™

Methods of test for metallic and related coatings

Method 3.5: Corrosion and related property tests—Sulfur dioxide/hydrogen sulfide porosity tests

PREFACE

This Standard has been prepared by the Australian members of the Joint Standards Australia/Standards New Zealand Committee MT-009, Metal Finishing, to supersede AS 2331.3.5—1980. 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 revision is to upgrade the requirements so that they closely align with ISO 6988:1985, *Metallic and other non-organic coatings—Sulfur dioxide test with general condensation of moisture.*

METHOD

1 SCOPE

This Standard sets out methods for assessing the degree of porosity in electroplated metallic coatings, such as gold, palladium and rhodium, that cover undercoats and basis metals that form visible compounds due to coating porosity, when exposed to sulfur dioxide-hydrogen sulfide atmospheres.

Electroplated coatings of non-tarnishing precious metals, such as gold and rhodium for engineering purposes, are required to retain their design characteristics over long periods of storage and use. These characteristics include the following:

(a) Low contact resistance.

(b) Solderability.

(c) A stable surface suitable for carrying high frequency currents.

Impairment of performance may result from—

(i) the formation of corrosion products at discontinuities in the coating; or

(ii) corrosion of the coating itself due to its composition not being adequate to withstand the environmental conditions.

Environments containing sulfur compounds can cause these types of corrosion on precious metal coatings.

The test methods described in this Standard employ the use of hydrogen sulfide (H_2S) which will affect silver and copper but not nickel or tin, and, for thicker coatings, the additional use of sulfur dioxide (SO_2) which will produce visible effects on any basis metal or undercoat.