STANDARDS AUSTRALIA

RECONFIRMATION

OF
AS 2331.4.4—2001
Methods of test for metallic and related coatings
Method 4.4: Physical tests—Assessment of intensity of shot-peening

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 2331.4.4—2001
Reconfirmed 2017

Australian Standard™

Methods of test for metallic and related coatings

Method 4.4: Physical test—Assessment of intensity of shot-peening

1 SCOPE

This Standard sets out a method for assessing the intensity of shot-peening.

Shot-peening is applied to steels prior to electroplating in cases where they cannot be heat-treated in the temperature range of 400°C to 480°C without loss of temper. Items to be chromium plated are also shot-peened in cases where a drop-off in hardness of chromium, as a result of heat treatment to prevent hydrogen embrittlement, cannot be tolerated.

The method is used to assess that the correct profile height of peening has been obtained prior to plating.

2 REFERENCED DOCUMENTS

The following documents are referred to in this Standard:

AS
1447 Hot-rolled spring steels

1817 Metallic materials—Vickers hardness test

3 PRINCIPLE

Standard steel test panels are shot-peened under known conditions. The resultant profile height is measured by means of a depth gauge. Peening conditions are modified until the correct profile height has been obtained.

4 APPARATUS

The following apparatus is required:

(a) Shot-peening apparatus.

(b) Shot-peening fixture (see Figure 1).

(c) Cut wire or round shot-peening medium.

(d) Carbon steel test panels conforming to AS 1447, Grade K1070S. The nominal thickness of test panels shall be 1.4 mm and the hardness shall be within 400 HV to 500 HV, when determined in accordance with AS 1817.

NOTE: Steel strip complying with the above chemical composition and hardness is commercially available in Australia. If the steel is in the spheroidized condition, oil quenching from 820°C to 830°C, followed by tempering at 420°C to 430°C, should achieve the specified hardness range.