AS 4861—2004
Reconfirmed 2016

Australian Standard™

Aluminium and aluminium alloys—Determination of impurities and alloying elements—Atomic emission spectrometric method

STANDARDS AUSTRALIA

This Australian Standard was prepared by Committee CH-010, Analysis of Metals. It was approved on behalf of the Council of Standards Australia on 02 March 2004 and published on 21 April 2004.

The following are represented on Committee CH-010:

Australasian Institute of Mining and Metallurgy
Australian Aluminium Council
Institute of Materials Engineering Australasia
International Precious Metals Institute
National Association of Testing Authorities Australia
The Royal Australian Chemical Institute
The University of New South Wales

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This Standard was issued in draft form for comment as DR 03142.

STANDARDS AUSTRALIA

RECONFIRMATION

OF

AS 4861—2004

Aluminium and aluminium alloys—Determination of impurities and alloying elements—Atomic emission spectrometric method

RECONFIRMATION NOTICE

Technical Committee CH-010 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.

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Approved for reconfirmation in accordance with Standards Australia procedures for reconfirmation on 1 November 2016.

The following are represented on Technical Committee CH-010:

Bureau of Steel Manufacturers of Australia
International Copper Association Australia
International Precious Metals Institute
National Association of Testing Authorities Australia

NOTES

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PREFACE

This Standard was prepared by the Australian members of the Joint Standards Australia/Standards New Zealand Committee CH-010, Analysis of Metals. After consultation with stakeholders in both countries, Standards Australia and Standards New Zealand decided to develop this Standard as an Australian, rather than an Australian/New Zealand Standard.

The following laboratories participated in the inter-laboratory test in the program, to provide the data given in Table 1:

Comalco Aluminium.

Hydro Aluminium Kurri Kurri Pty Ltd.

MCK Metals Pacific (New Zealand).

New Zealand Aluminium Smelters.

Steel and Lincoln.

Tomago Aluminium Company.

The objective of this Standard is to provide a method for the determination of impurities and alloying elements in aluminium by arc/spark atomic emission spectrometry.

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1 SCOPE

This Standard specifies the atomic emission spectrometric analysis of aluminium and aluminium alloys for the following elements in the concentration ranges indicated.

Element	Concentration range %
Antimony	0.001 – 0.5
Beryllium	0.000003 – 0.1
Bismuth	0.009 – 1.0
Boron	0.0002 – 0.1
Cadmium	0.0004 – 0.04
Calcium	0.00005 – 0.06
Chromium	0.0002 – 6.0
Cobalt	0.0003 – 1.0
Copper	0.0002 – 20.0
Gallium	0.0008 – 0.2
Iron	0.001 – 4.0
Lead	0.0004 – 2.0
Lithium	0.00001 – 0.1
Magnesium	0.0001 – 15.0
Manganese	0.00003 – 10.0
Nickel	0.0003 – 5.0
Phosphorus	0.002 – 0.1
Silicon	0.001 – 25.0
Sodium	0.00009 – 0.05
Strontium	0.00003 – 0.1
Tin	0.0005 – 5.0
Titanium	0.0002 – 1.0
Vanadium	0.0016 – 0.5
Zinc	0.0005 –10
Zirconium	0.0002 – 0.5