AS 1569—1998
Reconfirmed 2020

Australian Standard™

# Copper and copper alloys—Seamless tubes for heat exchangers

This Australian Standard was prepared by Committee MT/2, Copper and Copper Alloys. It was approved on behalf of the Council of Standards Australia on 26 June 1998 and published on 5 October 1998.

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The following interests are represented on Committee MT/2:

AUSTAP

Australian Forging Group

Hunter Water Corporation

Metal Trades Industry Association of Australia

New Zealand Manufacturers Federation

Water Corporation Western Australia

Welding Technology Institute of Australia

Additional interests participating in preparation of Standard:

Copper tube manufacturers

Electrical appliance manufacturers

Ship building organizations

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*This Standard was issued in draft form for comment as DR 97412.*

STANDARDS AUSTRALIA

# RECONFIRMATION

# OF
# AS 1569—1998
# Copper and copper alloys—Seamless tubes for heat exchangers

## RECONFIRMATION NOTICE

Technical Committee MT-002 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 18 November 2020.

The following are represented on Technical Committee MT-002:

Weld Australia
International Copper Association Australia
Consumer Electronics Suppliers Association
Australian Institute of Refrigeration Air Conditioning and Heating
Australian Industry Group

NOTES

AS 1569—1998

Australian Standard™

# Copper and copper alloys—Seamless tubes for heat exchangers

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# PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee MT/2, Copper and Copper Alloys, to supersede AS 1569—1985.

This Standard is the result of a consensus among Australian and New Zealand representatives on the Joint Committee to produce it as an Australian Standard.

The objective of this revision is to upgrade the requirements for seamless copper and copper alloy heat exchanger tube for use in condensers, evaporators, heaters and coolers. Requirements are included for material specified to comply with AS/NZS 1200, *Pressure equipment*.

In this edition the alloy designations have been changed from the three-digit numbering system to a system, which, although aligning with the American Unified Numbering System (UNS), contains minor variations in the manner impurity levels are specified.

During the preparation of this Standard cognizance was taken of ISO 1635-2:1987, *Seamless wrought copper and copper alloy tube*, Part 2: *Technical conditions of delivery for condenser and heat-exchanger tubes*. This International Standard has not been adopted because it—

(a) does not cover U-bend tubes;

(b) does not specify pressure tests; and

(c) contains alloy designations of the type that comprises chemical symbols and digits; such designations are relatively unknown in Australia.

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

STANDARDS AUSTRALIA

# Australian Standard

# Copper and copper alloys—Seamless tubes for heat exchangers

**1 SCOPE** This Standard specifies requirements for round seamless copper and copper alloy heat exchanger tubes with outside diameters of 6.35 mm and above, supplied as straight lengths or U-bends.

NOTES:

1 For the purpose of this Standard, 'heat exchanger tube' includes tubes for use in condensers, evaporators, heaters and coolers. Supplementary requirements are included for material specified to comply with the requirements of AS/NZS 1200.

2 Advice and recommendations on information to be supplied by the purchaser at the time of enquiry or order are contained in the purchasing guidelines set out in Appendix A.

**2 REFERENCED DOCUMENTS** The following documents are referred to in this Standard:

AS
1391 Methods for tensile testing of metals

1515 Copper alloys (all parts)

1696 Copper
1696.1 Method 1: Determination of phosphorus—Spectrophotometric method

1733 Methods for the determination of grain size in metals

1817 Metallic materials—Vickers hardness test

2084 Non-destructive testing—Eddy current testing of metal tubes

2136 Method for detecting the susceptibility of copper and its alloys to stress corrosion cracking using the mercurous nitrate test

2614 Copper and copper alloys—Sampling for chemical and spectrochemical analysis, and physical testing

2706 Numerical values—Rounding and interpretation of limiting values

4041 Pressure piping

AS/NZS
1200 Pressure equipment

ASTM
B 111 Specification for copper and copper-alloy seamless condenser tubes and ferrule stock

E 243 Practice for electromagnetic (eddy-current) examination of copper and copper-alloy tubes

BS
1748 Methods for the analysis of copper alloys (all parts)