AS 1571:2020

Copper — Seamless tubes for air-conditioning and refrigeration

AS 1571:2020

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

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Australian STANDARD®

Copper — Seamless tubes for air conditioning and refrigeration

Originated in Australia as part of AS B2—1928.
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Jointly revised and designated as AS/NZS 1571:1995.
Revised and redesignated as AS 1571:2020.

Preface

This document was prepared by the Standards Australia Committee MT-002, Copper and Copper Alloys, to supersede AS/NZS 1571:1995, *Copper — Seamless tubes for airconditioning and refrigeration*.

After consultation with stakeholders in both countries, Standards Australia and Standards New Zealand decided to develop this document as an Australian Standard rather than an Australian/New Zealand Standard.

The objective of this document is to specify requirements for round seamless copper tubes for use in air-conditioning and refrigeration.

The major changes in this edition include —

(a) increase in the range of sizes for 1/2H tubes;

(b) provision that combination of selection of diameter and wall thickness must conform to AS 4041;

(c) limitations on the minimum wall thickness of tubes being flared;

(d) refinement of the method of testing for cleanness; and

(e) addition of the calculation for determining safe working pressure.

The terms "normative" and "informative" are used in Standards to define the application of the appendices to which they apply. A "normative" appendix is an integral part of a Standard, whereas an "informative" appendix is only for information and guidance.

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Australian Standard®

Copper — Seamless tubes for air-conditioning and refrigeration

1 Scope

This document specifies the requirements for round, seamless copper tubes, manufactured from phosphorus-deoxidized copper containing high residual phosphorus and intended for use in air-conditioning and refrigeration.

NOTE Guidance on information to be supplied by the purchaser to the manufacturer or supplier at the time of enquiry and order are contained in Appendix A.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document.

AS 1733, *Methods for the determination of grain size in metals*

AS 1817.1, *Metallic materials—Vickers hardness test, Method 1: Test method (ISO 6507-1:1997, MOD)*

AS 2084, *Non-destructive testing—Eddy current testing of metal tubes*

AS 2706, *Numerical values—Rounding and interpretation of limiting values*

AS 4041, *Pressure piping*

ASTM B280, *Standard specification for seamless copper tube for air conditioning and refrigeration field service*

ASTM E243, *Standard practice for electromagnetic (Eddy current) examination of copper and copper-alloy tubes*

EN 723, *Copper and Copper Alloys — Combustion Method for Determination of the Carbon Content on the inner surface of copper tubes or fitting*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1
coil
annealed copper tube supplied in a coiled form

EXAMPLE Pancake coil, wound pack, or pair coil.

3.2
may
indicates the existence of an option

3.3
mean outside diameter
half the sum of two outside diameter measurements taken at right angles to each other on one cross-section of the tube

3.4
shall
indicates that a statement is mandatory