

INTERNATIONAL STANDARD

ISO
1635-2

First edition
1987-06-01



INTERNATIONAL ORGANIZATION FOR STANDARDIZATION
ORGANISATION INTERNATIONALE DE NORMALISATION
МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ

Seamless wrought copper and copper alloy tube —

Part 2 :

Technical conditions of delivery for condenser and
heat-exchanger tubes

Tubes sans soudure en cuivre et en alliages de cuivre corroyés —

*Partie 2 : Conditions techniques de livraison des tubes pour condenseurs et échangeurs
thermiques*

Reference number
ISO 1635-2:1987 (E)

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work.

Draft International Standards adopted by the technical committees are circulated to the member bodies for approval before their acceptance as International Standards by the ISO Council. They are approved in accordance with ISO procedures requiring at least 75 % approval by the member bodies voting.

International Standard ISO 1635-2 was prepared by Technical Committee ISO/TC 26, *Copper and copper alloys*.

Users should note that all International Standards undergo revision from time to time and that any reference made herein to any other International Standard implies its latest edition, unless otherwise stated.

Seamless wrought copper and copper alloy tube —

Part 2 :

Technical conditions of delivery for condenser and heat-exchanger tubes

1 Scope and field of application

This part of ISO 1635 specifies the technical conditions of delivery of seamless wrought copper and copper alloy tube for condenser and heat-exchanger applications, currently available in commercial quantities.

For the purpose of this part of ISO 1635, the definitions for copper and copper alloys in ISO 197-1 and for tube in ISO 197-3 as well as the principles for designation in ISO 1190-1 and ISO 1190-2 apply.

For technical conditions of delivery for seamless tubes

- for water, gas and sanitation, see ISO 1635-1;¹⁾
- for general purposes, see ISO 1635-3.²⁾

2 References

2.1 Definitions

ISO 197, *Copper and copper alloys — Terms and definitions*

- Part 1 : *Materials.*
- Part 3 : *Wrought products.*

2.2 Designations

ISO 1190, *Copper and copper alloys — Code of designation*

- Part 1 : *Designation of materials.*
- Part 2 : *Designation of tempers.*

2.3 Chemical composition

ISO 426, *Wrought copper-zinc alloys — Chemical composition and forms of wrought products*

- Part 1 : *Non-leaded and special copper-zinc alloys.*
- Part 2 : *Leaded copper-zinc alloys.*

ISO 429, *Wrought copper-nickel alloys — Chemical composition and forms of wrought products.*

ISO 1337, *Wrought coppers (having minimum copper content of 99,85 %) — Chemical composition and forms of wrought products.*

2.4 Technical conditions of delivery

ISO 1635, *Seamless wrought copper and copper alloy tubes*

- Part 1 : *Technical conditions of delivery for tubes for water, gas and sanitation.*³⁾
- Part 3 : *Technical conditions of delivery for tubes for general purposes.*³⁾

2.5 Methods of test

2.5.1 Sampling

ISO 4739, *Wrought copper and copper alloy products — Selection and preparation of specimens and test pieces for mechanical testing.*

2.5.2 Tensile testing

ISO 6892, *Metallic materials — Tensile testing.*

2.5.3 Hardness testing

ISO 6507, *Metallic materials — Hardness tests — Vickers test*

- Part 1 : HV 5 to HV 100.

ISO 6508, *Metallic materials — Hardness test — Rockwell test (scales A — B — C — D — E — F — G — H — K).*

2.5.4 Technological testing

ISO 196, *Wrought copper and copper alloys — Detection of residual stresses — Mercury(I) nitrate test.*

1) At present at the stage of draft. (Revision of ISO 274 : 1975.)

2) At present at the stage of draft. (Revision of ISO 1635 : 1974.)

3) At present at the stage of draft.