

Specification For

Copper and Copper Alloys —

Tubes —

Part 2: Tubes for general purposes

UDC 669.3-462:621.643.24

Co-operating organizations

The Non-ferrous Metals Industry Standards Committee, under whose supervision this British Standard was prepared, consists of representatives from the following Government departments, and scientific and industrial organizations:

Aluminium Federation	Institution of Mining and Metallurgy
Association of Bronze and Brass Founders	Institution of Production Engineers
British Bronze and Brass Ingot Manufacturers' Association	Institution of Structural Engineers
British Electrical and Allied Manufacturers' Association*	Lead Development Association
British Lead Manufacturers' Association	Light Metal Founders' Association
British Non-ferrous Metals Federation*	London Metal Exchange
British Non-ferrous Metals Federation High Conductivity Copper Group	Magnesium Industry Council
British Non-ferrous Metals Research Association*	Ministry of Defence (Army Department)*
Copper Development Association*	Ministry of Defence (Navy Department)*
Department of Trade and Industry (Marine Division)	National Brassfoundry Association
Electric Cable Makers' Confederation	Non-ferrous Metal Stockists*
Institute of British Foundrymen	Post Office
Institute of Metals	Royal Institute of British Architects
Institution of Mechanical Engineers (Automobile Division)*	Society of Motor Manufacturers and Traders Limited
	Tin Research Institute
	Zinc Development Association
	Individual manufacturers

The Government departments and scientific and industrial organizations marked with an asterisk in the above list, together with the following, were directly represented on the committee entrusted with the preparation of this British Standard:

British Waterworks Association	Institution of Gas Engineers
Copper Tube Fittings Manufacturers' Association	Institution of Heating and Ventilating Engineers
Department of the Environment	Institution of Mechanical Engineers
Department of Trade and Industry	Metropolitan Water Board
Electricity Council, The Central Electricity Generating Board and the Area Boards for England and Wales	National Federation of Plumbers and Domestic Heating Engineers
Engineering Industries Association	National Physical Laboratory (Department of Trade and Industry)
Gas Council	Oil Companies' Materials Association
Institute of Plumbing	

This British Standard, having been approved by the Non-ferrous Metals Industry Standards Committee, was published under the authority of the Executive Board on 29 February 1972

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Foreword

A complete list of British Standards, numbering over 9,000, fully indexed and with a note of the contents of each, will be found in the BSI Catalogue which may be purchased from BSI Sales Department. The Catalogue may be consulted in many public libraries and similar institutions.

This standard makes reference to the following British Standards:

BS 18, *Methods for tensile testing of metals. Part 1: Non-ferrous metals.*

BS 427, *Method for Vickers hardness test.*

BS 1957, *Presentation of numerical values (fineness of expression; rounding of numbers).*

BS 3889, *Methods for non-destructive testing of pipes and tubes. Part 2B: Eddy current testing of non-ferrous tubes.*

This British Standard is the first revision in metric terms of one of a series for copper and copper alloys in various wrought forms, the preparation of which was authorized by the Non-ferrous Metals Industry Standards Committee.

Others in the series are:

BS 2870, *Rolled copper and copper alloys. Sheet, strip and foil.*

BS 2872, *Copper and copper alloys. Forging stock and forgings.*

BS 2873, *Copper and copper alloys. Wire.*

BS 2874, *Copper and copper alloys. Rods and sections.*

BS 2875, *Copper and copper alloys. Plate.*

In preparing this metric revision of BS 2871 it was decided to produce it in three parts thereby eliminating the large section of particular applications which forms Part 3 of the 1957 edition.

This Part specifies requirements for tubes for general purposes expressed in metric units based on those previously expressed in imperial units in the following standards, which have now been withdrawn:

BS 61, *Copper tubes (heavy gauge) for general purposes. Part 1: Copper tubes (heavy gauge).*

BS 885, *Brass tubes for general purposes. 70/30 arsenical brass, aluminium brass.*

BS 1306, *Non-ferrous pipes and tubes for steam services. Part 2: Seamless copper tubes for steam services.*

BS 2017, *Copper tubes for general purposes.*

In addition the opportunity has been taken to include a table of pipeline sizes of tubes used specifically in the shipbuilding industry but also suitable for many other purposes. This table of sizes is in accordance with the sizes agreed by ISO and will be included in the revision of ISO Recommendation R 274. They will also meet the requirements of surveying authorities. The outside diameter of these tubes accord with some steel tube diameters and ensure correct mating of flanges, etc. In addition they are similar to those supplied to many European countries for shipbuilding purposes for many years.

Further rationalization of sizes has been effected in the various tables of copper tubes suitable for screwing, and for steam services, e.g. similar to previously existing BS 61-1 and BS 1306-2. The outside diameters of tubes suitable for screwing are a direct conversion of the existing dimensions but the thicknesses have been re-calculated using the design stress values currently accepted and specified which has in many instances enabled reductions to be effected. As a result, the six tables previously given in BS 1306-2 have been reduced to four by eliminating the medium pressure table and extending the higher pressure table to cover these requirements. The two tables of screwed tubes are the same as the previously existing BS 61 tables and one table of plain tubes is the same as Table Y of Part 1:1971 of this standard.

The tolerances on the outside diameters specified in Part 1 and also the pipeline sizes specified in Table 2 of Part 2 are tighter than those covered in the revision of R 274; in all these cases the maximum diameters are in agreement in order to avoid difficulties in assembling flanges, fittings etc., due to interference fit. This course of action has been taken because the tighter tolerances have been adhered to in this country for many years without undue difficulty and it is universally accepted that where joints using the capillary principle are produced using soft solder or silver brazing as appropriate to the service conditions then more satisfactory joints result. Consequently whilst the maximum outside diameters are in accordance with the ISO draft recommendation and the minimum outside diameters are in some cases above the ISO sizes, they do completely meet the ISO requirements.

NOTE Attention is drawn to certification facilities offered by BSI; see the back cover of this standard.

A British Standard does not purport to include all the necessary provisions of a contract. Users of British Standards are responsible for their correct application.

Compliance with a British Standard does not of itself confer immunity from legal obligations.

Summary of pages

This document comprises a front cover, an inside front cover, pages i to iv, pages 1 to 9 and a back cover.

This standard has been updated (see copyright date) and may have had amendments incorporated. This will be indicated in the amendment table on the inside front cover.