

BRITISH STANDARD 125 : 1970

**SPECIFICATION FOR
HARD-DRAWN COPPER
AND
COPPER-CADMIUM
CONDUCTORS
FOR OVERHEAD POWER
TRANSMISSION PURPOSES**

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BS 125 : 1970

THIS BRITISH STANDARD, having been approved by the Non-ferrous Metals Industry Standards Committee, was published under the authority of the Executive Board on 25 June, 1970.

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BS 672. First published, May 1936
First revision, July 1957
Second revision, June 1970.

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The Institution desires to call attention to the fact that this British Standard does not purport to include all the necessary provisions of a contract.

A complete list of British Standards, numbering over 5000, fully indexed and with a note of the contents of each, will be found in the British Standards Yearbook, The BS Yearbook 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 205. Glossary of terms used in electrical engineering.
BS 1036. Electrolytic tough pitch high conductivity copper.
BS 1037. Fire refined tough pitch high conductivity copper.
BS 2755. Copper and cadmium-copper stranded conductors for overhead electric traction systems.
BS 2873. Copper and copper alloys. Wire.
BS 3239. Determination of resistivity of metallic electrical conductor materials.

British Standards are revised, when necessary, by the issue either of amendment slips or of revised editions. It is important that users of British Standards should ascertain that they are in possession of the latest amendments or editions.

The following BSI references relate to the work on this standard:
Committee reference NFE/12 Draft for comment 69/11298

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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
 Association of Bronze and Brass Founders
 Association of Consulting Engineers
 Board of Trade
 British Bronze and Brass Ingot Manufacturers' Association
 *British Electrical and Allied Manufacturers' Association
 British Lead Manufacturers' Association
 *British Non-ferrous Metals Federation
 *British Non-ferrous Metals Research Association
 *Copper Development Association
 Crown Agents for Oversea Governments and Administrations
 *Electric Cable Makers' Confederation
 Institute of British Foundrymen
 *Institute of Metals
 Institution of Mechanical Engineers (Automobile Division)
 Institution of Mining and Metallurgy
 Institution of Production Engineers
 Institution of Structural Engineers
 Lead Development Association
 Light Metal Founders' Association
 London Metal Exchange
 Magnesium Industry Council
 Ministry of Defence (Army Dept.)
 Ministry of Defence (Navy Dept.)
 National Brassfoundry Association
 *Non-ferrous Metal Stockists
 *Post Office
 Royal Institute of British Architects
 Society of British Aerospace Companies
 Society of Motor Manufacturers and Traders
 Tin Research Institute
 Zinc Development Association
 Individual manufacturers

The Government department 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 Railways Board
 Electricity Council, the Central Electricity Generating Board
 and the Area Boards in England and Wales
 Institute of Sheet Metal Engineering
 Ministry of Technology
 National Physical Laboratory (Ministry of Technology)

BRITISH STANDARD SPECIFICATION FOR HARD-DRAWN COPPER AND COPPER- CADMIUM CONDUCTORS FOR OVERHEAD POWER TRANSMISSION PURPOSES

FOREWORD

This British Standard is a metric revision of BS 125 : 1954 and BS 672 : 1957. It brings together into a single standard the requirements for hard-drawn copper conductors (formerly covered in BS 125) and for hard-drawn copper-cadmium conductors (formerly covered in BS 672). It retains all the main provisions and details of the previous editions which it supersedes. With the publication of this revision, BS 672 is withdrawn.

In this revision due regard has been given to the work of the International Organization for Standardization (ISO) on testing requirements, properties and sizes of conductor, but in some cases it has been necessary to go outside the ISO sizes to produce conductors that will be fully metric and yet be suitable for use with existing fittings.

Resistivity. The values of maximum and standard resistances for solid and stranded copper-cadmium conductors have been reduced to the equivalent of a rounded off value of 80 % I.A.C.S. conductivity, in place of the 79.2 % specified in BS 672 : 1957.

Lay ratio. The definition of lay ratio has been amended in line with international practice.

Testing procedure. The detailed procedure for selection of test samples which appeared in BS 672 : 1957 now applies to copper conductors as well as to copper-cadmium conductors.

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

SPECIFICATION

1. SCOPE

This British Standard specifies requirements for hard-drawn copper and copper-cadmium solid and stranded circular conductors for overhead power transmission systems.

NOTE. Stranded copper-cadmium conductors for overhead electric traction systems are specified in BS 2755*.

2. GENERAL

The wire shall comply with the appropriate requirements of the following clauses and Tables 3 to 6 inclusive.

*BS 2755, 'Copper and copper-cadmium stranded conductors for overhead electric traction systems'.