

Specification for

Material identification of steel, nickel alloy and titanium alloy tubes by continuous character marking and colour coding of steel tubes

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Committees responsible for this British Standard

The preparation of this British Standard was entrusted by the Iron and Steel Standards Committee (ISM/-) to Technical Committee ISM/73, upon which the following bodies were represented:

- Associated Offices Technical Committee
- BEAMA Ltd.
- British Compressed Air Society
- British Gas Corporation
- British Shipbuilders
- British Steel Industry
- Electricity Supply Industry in England and Wales
- Engineering Equipment and Materials Users' Association
- High Pressure Pipework Consultative Committee
- Process Plant Association
- Water-tube Boilermakers' Association
- Welding Institute
- Co-opted members

The following bodies were also represented in the drafting of the standard, through subcommittees and panels:

- Association of Hydraulic Equipment Manufacturers
- British Forging Industry Association
- British Industrial Truck Association
- British Welded Steel Tube Association
- Confederation of British Industry
- Energy Industries Council
- Institution of Gas Engineers
- Co-opted member

This British Standard, having been prepared under the direction of the Iron and Steel Standards Committee, was published under the authority of the Board of BSI and comes into effect on 30 September 1986

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Foreword

This British Standard has been prepared under the direction of the Iron and Steel Standards Committee and supersedes BS 5383:1976, which is withdrawn.

The first edition was prepared following difficulties and dangers resulting from the installation in piping systems in process plant of items of pipe or components which were made from a material other than that intended.

This edition takes account of work being carried out within the International Organization for Standardization (ISO) in the preparation of a standard for continuous character marking of steel tubes. It is divided into three sections which specify the general requirements for marking, specific requirements for character marking and specific requirements for optional colour coding when this option is required by the purchaser.

The main technical differences between this edition and the previous one are that this edition includes colour coding for steel tubes as an additional option for use in conjunction with character marking, that it specifies larger character sizes for larger diameter tubes and that it specifies black for the colour of characters used for marking stainless steel tubes. Also, this edition specifies the minimum details to be marked and the marking sequence when the product standard does not specify a special sequence.

Two changes have been made to the colour of stripes used for colour coding. For carbon-manganese steel with a minimum specified tensile strength up to and including 435 N/mm^2 , the colour is changed from dark grey to white, and for chromium-molybdenum steels up to and including 2.0 % (*m/m*) chromium, the colour is changed from pink to red.

This standard requires that for the purpose of identification all pipes are marked clearly with the details required by the relevant product standard; the marking is continuous. A simple colour code in the form of a stripe is also used to identify different groups of steels. These groups have been chosen so that if by error a different steel within the same group were used instead of the specified steel, it is improbable that catastrophic failure would result. It is necessary to take care that any steel included in a specific group exhibits the general characteristics of the group (see clause 5). The groups are defined by nominal chemical composition or mechanical properties.

The method of marking of materials during manufacture is detailed and does not affect in any way the use of colour marking in accordance with BS 1710 which defines a limited number of colours for the identification of the contents of piping systems in service. Where confusion might occur the user should ensure that the colour marking applied in accordance with BS 5383 is obliterated after installation.

Attention is drawn to the importance of ensuring that any marking obliterated during fabrication is repaired before despatch. Although the responsibility for marking is a contractual matter and therefore not specified in this British Standard, attention is drawn to the guidance given in notes to 4.1.1 and 5.1.

It is intended that this standard should be applied when it is specifically referred to by relevant product standards, but it may be used in other instances when agreed between the purchaser and the manufacturer.

NOTE For the purposes of this standard the terms “pipe” and “tube” are synonymous although idiomatic use prefers sometimes the one and sometimes the other.

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.

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Summary of pages

This document comprises a front cover, an inside front cover, pages i to iv, pages 1 to 6, an inside back cover 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.