

Specification for

Round carbon steel wire for wire ropes —

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- British Ironfounders' Association
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- British Steel Corporation*
- British Steel Industry*
- British Steel Industry (Wire Section)*
- Concrete Society Limited
- Council of Ironfoundry Associations
- Department of Industry (National Physical Laboratory)
- Electricity Supply Industry in England and Wales
- Engineering Equipment Users' Association
- Federation of Civil Engineering Contractors
- Institute of Quality Assurance*
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- Process Plant Association
- Royal Institute of British Architects
- Society of Motor Manufacturers and Traders Limited
- Steel Casting Research and Trade Association
- Water-tube Boilermakers' Association

The organizations marked with an asterisk in the above list, together with the following, were directly represented on the Technical Committee entrusted with the preparation of this British Standard:

- British Wire Netting Association
- Federation of Wire Rope Manufacturers of Great Britain
- Fencing Contractors' Association
- Health and Safety Executive
- National Billet Association
- National Coal Board
- Society of Chain Link Fencing Manufacturers

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 31 March 1982

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Foreword

This revision of BS 2763:1968 has been prepared under the direction of the Iron and Steel Standards Committee. It has been extensively revised to take account of ISO 2232:1973, ISO 3154:1976 and other work on the standardization of steel wire by the International Organization for Standardization (ISO) still in progress, where it is relevant to British practice. BS 2763:1968 is now withdrawn.

In line with current international practice, the term “zinc coated” has been adopted in this standard in place of “galvanized”. The terms are synonymous.

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 and ii, pages 1 to 8, 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.

Section 1. General

1 Scope

This British Standard specifies requirements for cold drawn round carbon steel wire as supplied by the wire manufacturer for use in the manufacture of wire ropes.

The specific requirements for wire for general purpose ropes, including those specified in BS 302, BS 329, BS 365 and BS 3530, are given in section 2.

The specific requirements for wire for high duty ropes that are subject to more exacting service conditions than general purpose ropes, and in particular for winding and certain haulage ropes complying with the requirements of BS 236 and BS 330 respectively, are given in section 3.

Wires for both general and high duty purposes are available in a number of tensile strength grades over specific nominal diameter ranges (see Table 2 and Table 8).

2 References

The titles of publications referred to in this standard are listed on the inside back cover.

3 Definitions

For the purposes of this British Standard, the following definitions apply.

3.1

production coil

a production coil of wire is that drawn from one coil of rod. It will usually be at least 800 kg but may be much greater in mass

3.2

package

wire may be wound into coil form or on to spools. It may be wound on to collapsible spools from which it is removed as “cheeses” or, when wound on cardboard centre supports, as “spoolless cores”; the latter are suitable for fitting with flanges as a pay-off spool

to avoid repetition of each term in this specification it is convenient to describe all these forms by the word “package”

3.3

split package

when, for the convenience of the ropemaker, a production coil is split into smaller pieces the latter are described as “split packages”

4 Information to be supplied by the purchaser

When ordering wire complying with the requirements of this standard, the purchaser shall state the following:

a) the number of this British Standard, i.e. BS 2763;

b) the nominal diameter;

NOTE The nominal diameter of zinc coated wire includes the coating.

c) the tensile strength grade;

d) the type of finish, i.e. bright, class A (drawn zinc coated or finally zinc coated) or class Z zinc coated, as defined in clause 7.

Example:

3 mm diameter, class Z zinc coated wire having a minimum tensile strength of 1 570 N/mm²:

BS 2763, 3 mm, grade 1 570, Z zinc coated.

5 Inspection and testing

5.1 General. All inspection and testing shall be carried out by the wire manufacturer and the record of each test shall be available to the ropemaker if required.

5.2 Selection of test pieces

5.2.1 For general purpose rope wire as specified in section 2, test pieces for all tests shall be cut from both ends of each production coil. Where the wire is supplied in split packages, identified to the production coil, the tests on the production coil shall suffice for up to five split packages.

If more than five split packages are taken from one production coil, two extra test pieces (not in adjacent positions) shall be taken from within the group of split packages.

5.2.2 For high duty rope wire as specified in section 3, test pieces for all tests shall be cut from both ends of each package or split package as supplied to the ropemaker.

5.3 Test methods

5.3.1 General. All tests shall be carried out on straight pieces of wire. Any straightening which may be required shall be done cold. The diameter of the wire shall be taken as the arithmetic mean of two micrometer readings made at right angles to each other.

5.3.2 Mechanical tests. Mechanical tests shall be carried out in accordance with the appropriate method described in BS 4545, except that, for the tensile tests in routine testing with fixed gear type tensile testing machines, the straining rate shall be pre-set to give a rate of separation of the grips not greater than 40 % of the test length per minute.