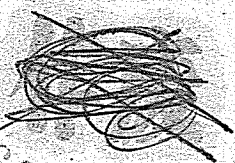


1987年8月5日

BRITISH STANDARD 1407 : 1970 七年十月

UDC 669.14-422

METRIC UNITS



1996年8月7日

SPECIFICATION FOR

HIGH CARBON

98年7月2

BRIGHT STEEL

(SILVER STEEL)

1994年7月19日

1999年6月18日

2000年9月28日

2002年4月29日

2004年6月2日



一九八四年十月三十日

2004年6月28日

2005年7月7日

BRITISH STANDARDS INSTITUTION



SPECIFICATION FOR
HIGH CARBON
BRIGHT STEEL
(SILVER STEEL)

BS 1407 : 1970

Price 8s (40p) net

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THIS BRITISH STANDARD, having been approved by the Iron and Steel Industry Standards Committee, was published under the authority of the Executive Board on 31st March, 1970.

First published, September, 1947.

First revision, February, 1959.

Second revision, March, 1970.

SBN: 580 05859 X

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.

In order to keep abreast of progress in the industries concerned, British Standards are subject to periodical review. Suggestions for improvements will be recorded and in due course brought to the notice of the committees charged with the revision of the standards to which they refer.

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, price £1. The BS Yearbook may be consulted in many public libraries and similar institutions.

This standard makes reference to the following British Standards:

BS 240. Method for Brinell hardness test.

BS 4500. ISO Limits and fits.

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 ISE/67 Draft for comment 69/4187

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CO-OPERATING ORGANIZATIONS

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

- Board of Trade
- British Cast Iron Research Association
- British Constructional Steelwork Association
- *British Electrical and Allied Manufacturers' Association
- British Ironfounders' Association
- British Mechanical Engineering Confederation
- British Railways Board
- *British Steel Industry
- Council of Ironfoundry Associations
- Council of Iron Producers
- Crown Agents for Oversea Governments and Administrations
- Department of Employment and Productivity
(H.M. Factory Inspectorate)
- Engineering Equipment Users' Association
- Federation of Civil Engineering Contractors
- Institute of British Foundrymen
- Institute of Iron and Steel Wire Manufacturers
- Institute of Marine Engineers
- Institution of Civil Engineers
- Institution of Mechanical Engineers (Automobile Division)
- Institution of Production Engineers
- Institution of Structural Engineers
- Joint Iron Council
- Lloyd's Register of Shipping
- *Ministry of Defence (Army)
- Ministry of Defence (Navy)
- National Association of Drop Forgers and Stampers
- National Physical Laboratory (Ministry of Technology)
- Oil Companies Materials Association
- Royal Institute of British Architects
- Shipbuilders and Repairers National Federation
- *Society of British Aerospace Companies Ltd.
- *Society of Motor Manufacturers and Traders Ltd.
- Stainless Steel Development Association
- Steel Castings Research and Trade Association
- Tin Research Institute

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 Bolt, Nut, Screw and Rivet Federation
- British Gear Manufacturers' Association
- British independent steel producers
- Machine Tool Trades Association
- Ministry of Technology (Materials Division)
- National Federation of Engineers' Tool Manufacturers
- Silver Steel Association

BRITISH STANDARD SPECIFICATION FOR HIGH CARBON BRIGHT STEEL (SILVER STEEL)

FOREWORD

The preparation of this British Standard for high carbon bright steel was authorized by the Iron and Steel Industry Standards Committee in March, 1944, in response to a request from users and the first edition was published in September, 1947.

A revision took place during 1959, but the information in regard to material and quality remained unchanged. A more simplified list of standard sizes for round bars was, however, incorporated and an additional list of sizes for square bars was included.

This further revision now takes into account a complete changeover to the metric system of measurement and a further opportunity has been taken to rationalize the list of sizes for both rounds and squares.

The material covered by this standard, usually referred to as 'silver steel', is for general purposes.

SPECIFICATION

1. SCOPE

This British Standard covers high carbon general purpose steel, supplied in rounds and squares.

2. PROCESS OF MANUFACTURE

The steel shall be fully killed and be made by the high frequency, electric arc or acid open hearth process.

3. CHEMICAL COMPOSITION

The steel as delivered shall contain:

Element	Min.	Max.
	%	%
Carbon	0.95	1.25
Silicon	—	0.4
Manganese	0.25	0.45
Chromium (optional)	—	0.5
Sulphur	—	0.045
Phosphorus	—	0.045

4. FINISH

4.1 Round silver steel (or Rounds). The material shall have ground or polished surfaces, shall be commercially straight and free from seams or other surface defects. Ground material shall be free from decarburization.

4.2 Square silver steel (or Squares). The material shall have a drawn surface, be commercially straight and free from seams.

5. CONDITION OF MATERIAL ON DELIVERY

Unless otherwise specified on the enquiry and order, the material as delivered shall have a hardness of not more than 285 HB when measured in accordance with BS 240*.

The material shall be supplied suitably oiled or greased to resist rusting in transit.

6. TOLERANCES

6.1 Rounds. Tolerances on diameter shall be as follows:

Diameter range	Tolerance
mm	mm
Up to and including 3	+0 -0.014
Over 3 up to and including 6	+0 -0.018
Over 6 up to and including 10	+0 -0.022
Over 10 up to and including 18	+0 -0.027
Over 18 up to and including 30	+0 -0.033
Over 30 up to and including 50	+0 -0.039

NOTE. The foregoing are in accordance with the tolerance h8 in ISO/R286, 'ISO system of limits and fits', and BS 4500, 'ISO limits and fits'.

6.2 Squares. Tolerances on squares shall be as follows:

Size across flats	Tolerance
mm	mm
Up to and including 3	+0 -0.060
Over 3 up to and including 6	+0 -0.075
Over 6 up to and including 10	+0 -0.090
Over 10 up to and including 18	+0 -0.110
Over 18 up to and including 30	+0 -0.130

NOTE. The foregoing are in accordance with the tolerance h11 in ISO/R286, 'ISO system of limits and fits', and BS 4500, 'ISO limits and fits'.

* BS 240, 'Method for Brinell hardness test'.

7. LENGTHS

The material shall be supplied in lengths of 333 mm, 1 m and 2 m. Sizes over 13 mm diameter may be supplied in random lengths.

8. SIZES

A list of standard sizes is given in Appendix A.

APPENDIX A
STANDARD SIZES
ROUNDS

Diameter

mm	mm
0.5	15.5
1.0	16.0
1.5	16.5
2.0	17.0
2.5	17.5
3.0	18.0
3.5	18.5
4.0	19.0
4.5	19.5
5.0	20.0
5.5	21.0
6.0	22.0
6.5	23.0
7.0	24.0
7.5	25.0
8.0	26.0
8.5	27.0
9.0	28.0
9.5	29.0
10.0	30.0
10.5	31.0
11.0	32.0
11.5	33.0
12.0	34.0
12.5	35.0
13.0	36.0
13.5	37.0
14.0	38.0
14.5	39.0
15.0	40.0

SQUARES

Size across flats	
mm	mm
3·0	12·0
4·0	13·0
5·0	14·0
6·0	15·0
7·0	16·0
8·0	17·0
9·0	18·0
10·0	19·0
11·0	20·0

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BRITISH STANDARDS INSTITUTION

The British Standards Institution was founded in 1901 and incorporated by Royal Charter in 1929.

The principal objects of the Institution as set out in the charter are to co-ordinate the efforts of producers and users for the improvement, standardization and simplification of engineering and industrial materials; to simplify production and distribution; to eliminate the waste of time and material involved in the production of an unnecessary variety of patterns and sizes of articles for one and the same purpose; to set up standards of quality and dimensions, and to promote the general adoption of British Standards.

In carrying out its work the Institution endeavours to ensure adequate representation of all viewpoints. Before embarking on any project it must be satisfied that there is a strong body of opinion in favour of proceeding and that there is a recognized need to be met.

The Institution is a non-profit-making concern. It is financed by subscriptions from members—individuals, companies, technical and trade associations, and other bodies interested in its work, by a Government grant and by the sale of its publications. Membership of the Institution confers a number of specific rights and privileges. The demands on the services of the Institution are steadily increasing and can only be met if continuing and increased support is provided by those who use British Standards.

AMD 2157

Amendment Slip No.1, published 30 November 1976
to BS 1407 : 1970

High carbon bright steel (silver steel)

Revised text

Appendix A. Standard sizes. In the table headed 'Rounds' delete the first three entries '0.5', '1.0' and '1.5'. Insert two new final entries '45.0' and '50.0'.

In the table headed 'Squares' delete the entries '11.0', '13.0', '15.0', '17.0' and '19.0'.