

Lifting slings —

Part 1: Methods of rating

UDC 621.86.065

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Committees responsible for this British Standard

The preparation of this British Standard was entrusted by the Mechanical Handling Standards Committee (MHE/-) to Technical Committee MHE/11, upon which the following bodies were represented:

- British Ports Association and the National Association of Ports Employers
- Chain Testers' Association of Great Britain
- Engineering Equipment and Materials Users' Association
- Health and Safety Executive
- Ministry of Defence

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

- British Chain Manufacturers' Association
- National Coal Board

This British Standard, having been prepared under the direction of the Mechanical Handling Standards Committee, was published under the authority of the Board of BSI and comes into effect on 29 August 1986

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First published, as BS 6166, September 1981
First part revision, as BS 6166-1, August 1986

The following BSI references relate to the work on this standard:
Committee reference MHE/11
Draft for comment 84/78984 DC

ISBN 0 580 15174 3

Amendments issued since publication

Amd. No.	Date of issue	Comments

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Foreword

This Part of BS 6166 has been prepared under the direction of the Mechanical Handling Standards Committee. The purpose of this standard is:

- a) to provide methods of rating for BSI Committees responsible for various types of lifting slings;
- b) to provide a specification for the marking of lifting slings (see BS 6166-2);
- c) to provide guidance to designers, manufacturers, importers, suppliers and users and to all who are concerned with the rating, selection and safe use of lifting slings (see BS 6166-3¹⁾).

While there is a wide range of materials and constructions for lifting gear, there are certain factors relating to terminology and safe usage that should be specified on a common basis in the individual standards in order to assist the user. It is implied that the methods of rating will be adopted both in future revisions and in new British Standards in the field of lifting gear.

Account has been taken in preparing the methods of rating of the latest developments in the international standardization of lifting slings, such as ISO 4778, which is identical to BS 6304, for welded chain slings and ISO 4878, which is related to BS 3481-2, for flat woven webbing slings, together with some which are in preparation including ISO/DIS 7593²⁾ for chain slings assembled by methods other than welding and ISO/DIS 7531³⁾ for wire rope slings for general purposes, characteristics and specifications, and at national level the draft British Standard for round slings made of man-made fibre.

This standard, with Part 2, supersedes BS 6166:1981 "Rating of lifting gear for general purposes" which is withdrawn. It also deals with the subject matter of PD 6464 "Slinging practice" which was withdrawn in April 1978.

This revised edition of BS 6166 is published in the following three Parts.

- *Part 1: Methods of rating;*
- *Part 2: Specification for marking;*
- *Part 3: Guide to selection and safe use¹⁾.*

BS 6166-3 gives principles for the selection and use of general purpose slings and is based on appendix 1.6 of the Code of Practice for safe use of lifting equipment published by the Chain Testers Association of Great Britain to whom acknowledgement is made. Users wishing to obtain more detailed information are recommended to refer to the code which is obtainable from the Chain Testers Association of Great Britain, 21/23 Woodgrange Road, Forest Gate, London E7 8BA.

Attention is also drawn to a publication entitled "Recommendations for safe slinging" available from National Association of Port Employers, Commonwealth House, 1-19 New Oxford Street, London WC1A 1DZ or the General Council of British Shipping, 30/32 St Mary Axe, London EC3.

Commentary on legal requirements

Section 6 of the Health and Safety at Work etc. Act 1974 gives details of the general duties of manufacturers, etc. as regards articles and substances for use at work to ensure that as far as is reasonably practicable the article is so designed and constructed as to be safe and without risks to health when properly used. These duties include carrying out tests and examinations as may be necessary.

¹⁾ In preparation.

²⁾ ISO/DIS 7593 Chain slings assembled by methods other than welding. [Grade T(8)] (in preparation)

³⁾ ISO/DIS 7531 Wire rope slings for general purposes — Characteristics and specifications (in preparation)

Section 26(1) of the Factories Act 1961 requires that a table showing the safe working load of every chain, rope or lifting tackle in use, and, in the case of a multi-legged sling, the safe working load at different angles of the legs is posted in the store in which the chains, ropes or lifting tackle are kept and in prominent positions on the premises, and that no chain, rope or lifting tackle not shown in the table is used.

Section 26(2) stipulates that the requirements of Section 26(1)(b) do not apply to any lifting tackle if its safe working load, or, in the case of a multi-legged sling, the safe working load at different angles of the legs, is plainly marked upon it.

Regulation 38 of the Shipbuilding and Ship Repairing Regulations 1960 includes similar requirements to Section 26 of the Factories Act 1961.

Regulation 34 of the Construction (Lifting Operations) Regulations 1961 requires that all lifting gear is marked in plain legible figures and letters with the safe working load and with means of identification. Rope slings need not be marked with their safe working load if the sling is so identified that its SWL can be ascertained from the report of thorough examination.

Regulation 24 of the Docks Regulations 1934 requires that for chain slings the safe working load is marked in plain figures or letters upon the sling or upon a tag or ring of durable material attached securely to it. Wire rope slings are required to be marked either as for chain slings or notices are to be exhibited stating the safe working loads for the various sizes of wire rope slings in use.

NOTE 1 The Docks Regulations 1934 are under revision.

NOTE 2 The use of tables which may be some distance from the scene of the lifting operations both requires recognition of the sling size, grade of material and, in the case of a multi-legged sling, the sling angle and also requires correct interpretation of the tables before the maximum safe working load can be calculated. It may be considered that this places too much reliance on the human factor. For this reason British Standards normally require that lifting gear be marked with its safe working load; reliance is not placed on tables even though their use is legal.

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

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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.

