

Specification for

Scheduling, dimensioning, bending and cutting of steel reinforcement for concrete

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- British Cement Association
- British Independent Steel Producers' Association
- British Precast Concrete Federation Ltd.
- British Reinforcement Manufacturers' Association
- British Steel Industry
- British Steel Industry (Wire Section)
- Concrete Society
- County Surveyors' Society
- Department of the Environment (Property Services Agency)
- Department of Transport
- Electricity Supply Industry in England and Wales
- Fabric Reinforcement Development Association
- Federation of Civil Engineering Contractors
- High Yield Bar Development Association
- Institution of Civil Engineers
- Institution of Structural Engineers
- UK Certification Authority Reinforcing Steels

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Foreword

This British Standard has been prepared under the direction of the Iron and Steel Standards Policy Committee and is a revision of BS 4466:1981, which is withdrawn.

This British Standard applies to reinforcement complying with BS 4449, BS 4482, BS 4483 and BS 6744.

The purpose of this standard is to ensure uniformity of practice in the scheduling of steel for the reinforcement of concrete. To establish a clear and unambiguous system for scheduling, it is necessary to specify the method of indicating dimensions and the order in which the information is given on the schedule.

A major difference between this edition of BS 4466 and previous editions is that shape codes 60, 81, 72, 73, 74 and 86, which are specified by their internal dimensions, have been deleted and replaced by shape codes 61, 82, 77, 78, 79 and 87, which are specified by their external dimensions. Shape code 83 has been deleted.

Product testing and certification. Attention is drawn to the provision in this British Standard of a facility for third party certification of product conformity with this British Standard based on testing and continuous product surveillance coupled with assessment of a supplier's quality systems against BS 5750-2.

Enquiries as to the availability of third party certification schemes and of competent test laboratories will be forwarded by BSI to the Association of Certification Bodies. If a third party certification scheme does not already exist, users should consider approaching an appropriate body from the list of Association members.

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 18, 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.

1 Scope

This British Standard specifies requirements for the scheduling, dimensioning, bending and cutting of steel reinforcement complying with BS 4449, BS 4482, BS 4483 and BS 6744.

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

2 Definitions

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

2.1 bar

a steel product of any cross section complying with BS 4449 or BS 6744

2.2 wire

a steel product of any cross section complying with BS 4482

2.3 size

the nominal size of a bar or wire in millimetres

NOTE This is given the symbol “*d*”.

2.4 nominal size

the diameter of a circle with an area equal to the effective cross-sectional area of the bar or wire

2.5 mark number

an identifying number (which also appears on the delivery label) cross-referencing individual line entries on the schedule to the detailed-drawing

2.6 shape code

a two-digit coded definition of the reinforcement shape as given in Table 1 and Table 2

2.7 pitch

the centre-to-centre spacing of bars or wires in a sheet of fabric or the longitudinal spacing of turns in a helix

2.8 mesh

the rectangle defined by the pitch of the longitudinal wires and the pitch of the cross wires in a sheet of fabric

2.9 fabric

a factory-made product of welded bars or wires complying with BS 4483

NOTE There are three categories of fabric as defined in 2.10 to 2.12.

2.10 designated fabric

fabric reinforcement where the wire and mesh arrangement can be defined by an identifiable fabric reference

NOTE The British Standard range of preferred fabrics (see Table 1 of BS 4483:1985) exemplifies designated fabrics.

2.11 scheduled fabric

fabric reinforcement with a regular wire and mesh arrangement that can be defined by specifying the size and spacing in each direction using the notation shown in Figure 1, which assumes that sheets are always viewed with their cross wires uppermost

2.12 detailed fabric

fabric reinforcement not covered by the definitions in 2.10 and 2.11

NOTE A dimensioned drawing is required to define the mesh arrangement.

2.13 fabric reference

an alpha numeric code defining the wire sizes and mesh dimensions of a sheet of designated fabric

3 Notations

The type and grade of reinforcement shall be abbreviated using the following letters.

- | | |
|---|---|
| R | grade 250 reinforcement complying with BS 4449 |
| T | grade 460 type 2 reinforcement complying with BS 4449 or BS 4482 |
| S | stainless reinforcement complying with the grade and type selected from BS 6744 |
| W | grade 460 plain reinforcement complying with BS 4482 |
| D | grade 460 type 1 reinforcement complying with BS 4482 |
| X | reinforcement of a type not included in the above list having material properties that are defined in the design or contract specification. |

4 Form of schedule

4.1 For bar reinforcement, the form of schedule shown in Figure 2 shall used.

NOTE The schedule should be referred to as a “bar schedule” since it is customary for the reinforcement fabricator to prepare separate cutting and bending lists for fabrication. The bar schedule is usually completed in sequence of structural units, whereas the cutting and bending lists are usually sorted into type and size of bar.

For cutting and bending purposes, schedules shall be provided on separate sheets of paper of size A4 of BS 4000 and not as part of the detailed reinforcement drawings.

Fabric reinforcement shall be specified on the fabric schedule form shown in Figure 3.

When used for detailed fabric, the schedule shall include a cross-reference to the relevant dimensional drawing.

4.2 For schedules that are not produced on a computer, the minimum width of the columns in the bar and fabric schedules shall be as shown in Figure 2 and Figure 3.

For computer produced schedules, the column widths and the size of the schedule may vary from those shown in Figure 2 and Figure 3, but the sequence of columns shall be maintained. The schedule shall not be significantly larger than size A4 of BS 4000.

4.3 The schedule reference shall appear at the top right-hand corner of the schedule form and shall comprise consecutive numbers, which include a cross-reference to the drawing. Such terms as “sheet number” or “page number” shall not be used. The styles “1 (of 6)” and “6 (and last)” may be used on manually prepared schedules but the words in parentheses shall not form part of the schedule reference.

The first three characters of the schedule reference shall be the last three characters of the drawing number, starting at, for example, drawing number 001. The schedule number shall occupy the fourth and fifth spaces, starting at 01 and not exceeding 99 for any one drawing. The sixth space shall be used for schedule revision letters.

Example:

	Drawing	Schedule	Revision
Bar schedule reference	0 4 6	0 3	A

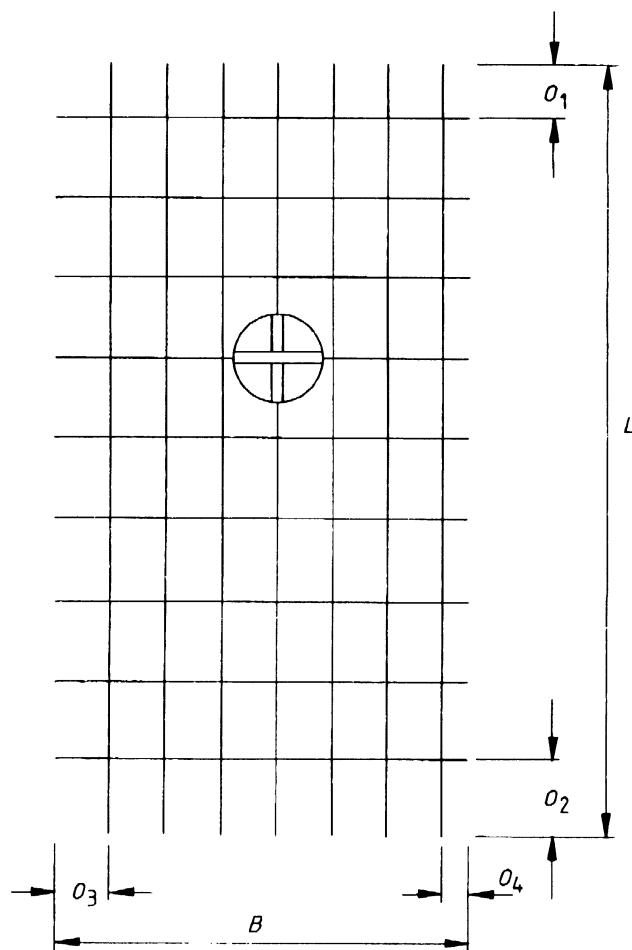
NOTE Where a schedule revision is necessary, the line or lines affected may be indicated by a suitable reference on the schedule, e.g. “A” at the right-hand side of the schedule in Figure 2.

If a job contains more than 999 drawings it can be broken down into groups by the use of a job number, e.g. job number 1234A foundations and job number 1234B ground floor.

4.4 The bar or fabric schedule shall include the statement “This schedule complies with BS 4466”.

4.5 The bar or fabric mark shall comprise simple and consecutive numbers or letters with a maximum of six characters. Where special end preparation is required (e.g. for couplers), the bar mark shall commence with “E”.

4.6 In the “Type and size” column, the notations specified in clause 3 for the type and grade of bar shall be given and this shall be followed by the nominal size of the bar in millimetres.

**Key**

L is the length of the longitudinal wires (which are not necessarily the longer wires in the sheet).

B is the length of the cross wires.

O_1 and O_2 are the overhangs of the longitudinal wires.

O_3 and O_4 are the side overhangs of the cross wires.

Figure 1 — Scheduled fabric

All dimensions are in millimetres.

Figure 2 — Form of bar schedule