

BRITISH STANDARD

Fences –

Part 8: Specification for mild steel (low carbon steel) continuous bar fences and hurdles

ICS 91.090

Confirmed December 2011

BSi
British Standards

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ISBN 0 580 49505 1

The following BSI references relate to the work on this standard:

Committee reference B/201

Draft for comment 06/30139503 DC

Publication history

First published November 1951

Second edition September 1966

Third edition November 1978

Fourth edition December 1992

Fifth edition November 1997

Sixth (present) edition November 2006

Amendments issued since publication

Amd. no.	Date	Text affected
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Summary of pages

This document comprises a front cover, an inside front cover, pages i to iv, pages 1 to 17 and a back cover.

Foreword

This British Standard was published by BSI and came into effect on 30 November 2006. It was prepared by Technical Committee B/201, *Fences*. A list of organizations represented on this committee can be obtained on request to its secretary.

Supersession

This part of BS 1722 supersedes BS 1722-8:1997, which is withdrawn.

Relationship with other publications

BS 1722 is published in parts as follows:

- *Part 1: Specification for chain link fences;*
- *Part 2: Specification for strained wire and wire mesh netting fences;*
- *Part 4: Specification for cleft chestnut pale fences;*
- *Part 5: Specification for close-boarded and wooden palisade fences;*
- *Part 7: Specification for wooden post and rail fences;*
- *Part 8: Specification for mild steel (low carbon steel) continuous bar fences and hurdles;*
- *Part 9: Specification for mild steel (low carbon steel) fences with round or square verticals and flat horizontals;*
- *Part 10: Specification for anti-intruder fences in chain link and welded mesh;*
- *Part 11: Specification for prefabricated wood panel fences;*
- *Part 12: Specification for steel palisade fences;*
- *Part 13: Chain link fences for tennis court surrounds¹⁾;*
- *Part 14: Specification for open mesh steel panel fences;*
- *Part 16: Specification for organic powder coatings to be used as a plastics finish to components and mesh;*
- *Part 17: Specification for electric security fences – Design, installation and maintenance;*
- *Part 18: Specification for steel mesh site perimeter temporary fencing systems²⁾.*

Information about this document

It should be noted that no attempt has been made to standardize fences or gates of a purely decorative nature, or those suited to special requirements; nor to specify requirements for “patent” proprietary fencing systems. It is recommended, however, that the structure of such fences or gates should conform to those clauses of this part of BS 1722 that are applicable.

¹⁾ Obsolescent.

²⁾ Part 18 is in development and will be published as a Draft for Development (DD).

This standard aims to establish minimum requirements for materials and workmanship of the more common types of fence in order to ensure satisfactory service for the purchaser, and to assist manufacturers and installing contractors by eliminating unnecessary minor variations in the demands of purchasers. It specifies requirements for the components that make up a fence and the way in which the fence should be constructed.

Throughout this standard there are requirements for sizes of components, together with the permissible tolerances on size. These are minimum requirements and it will normally be acceptable to use larger sizes, except where this would adversely affect the fitting of components, or where replacement parts are needed to match up with those already present. The choice of fence is affected by factors such as its intended purpose, the desired service life, aesthetic considerations, and the availability of components. By reference to Table 1, the specifier is able to match a suitable choice of fence to its intended purpose and is also able to inform those installing the fence of the basic characteristics that need to be provided.

This standard includes requirements for protective treatments but does not include maintenance requirements. Premature failure of the fence can be avoided by taking care not to damage protective treatments during installation.

The post setting depths specified in this standard are for normal ground conditions, but where special ground conditions exist, e.g. if the ground is softer or firmer than usual, such variations should be agreed with the specifier. This also applies to other similar variations.

It is assumed in this part of BS 1722 that continuous bar fences and welded hurdle fences are installed on horizontal ground. Where gradients are encountered, continuous bar fencing is suitable, but special design measures may be deemed necessary.

This part of BS 1722 amends and augments the former part 8 of BS 1722 in the following respects:

- a) Steel specifications and horizontal lengths are amended to cover current material availability and welding details are included.
- b) Obsolete fence types are deleted, and new additions made; guidance on foundations is improved and post designs and types are amended accordingly.
- c) Design detail improvements are made; particularly for posts, wedges, gates and connectors.
- d) Criteria for design and loading capacity of gates and gate posts are given.

It should be noted that in this part of BS 1722, the fence post spacing is given in terms of centre distances.

To assist the procedure of specifying fences, Annex A provides guidance on the most important details that should be specified at the time of ordering.

Annex B provides some typical gate designs that meet aesthetic requirements and loading criteria.

Use of this document

It has been assumed in the drafting of this part of BS 1722 that the execution of its provisions is entrusted to appropriately qualified and experienced people. Before installation commences the lead installer should hold a current FISS/CSCS registration card skilled level (blue card) or equivalent and all other operatives should hold the basic fence operative card (green card) or equivalent.

At the time of publication of this British Standard, the registration cards are validated by the Joint Fencing Industry Scheme (FISS) and Construction Scheme Skills Certification Scheme (CSCS). FISS/CSCS maintains a national register of fence installers and operatives. There might be other schemes available.

Presentational conventions

The provisions of this standard are presented in roman (i.e. upright) type. Its requirements are expressed in sentences in which the principal auxiliary verb is “shall”.

Commentary, explanation and general informative material is presented in smaller italic type, and does not constitute a normative element.

Requirements in this standard are drafted in accordance with *The BSI guide to standardization – Section 2: Rules for the structure, drafting and presentation of British Standards*, subclause **11.3.1**, which states, “Requirements should be expressed using wording such as: ‘When tested as described in Annex A, the product shall ...’”. This means that only those products that are capable of passing the specified test will be deemed to conform to this standard.

Contractual and legal considerations

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

Compliance with a British Standard cannot confer immunity from legal obligations.

1 Scope

This part of BS 1722 specifies requirements for mild steel (low carbon steel) continuous bar fences for farm animal containment applications and welded hurdle fences of continuous bar type. A range of five specifications of fence of both types available, in three heights, is listed in Table 1 and Table 3.

Requirements for the construction of suitable gates for these fences is given in Clause 5, which states certain functional requirements for the designs, but does not specify the designs in detail.

A list of information that should be obtained from the purchaser at the time of enquiry and/or order is given in Annex A.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

BS 1722-16, *Fences – Part 16: Specification of organic powder coatings for use as a plastics finish to components and mesh*

BS 4620, *Specification for rivets for general engineering purposes*

BS 7371-3, *Coatings on metal fasteners – Part 3: Specification for electroplated zinc and cadmium coatings*

BS 7371-6, *Coatings on metal fasteners – Part 6: Specification for hot dipped galvanized coatings*

BS 7371-8, *Coatings on metal fasteners – Part 8: Specification for sherardized coatings*

BS EN 287-1, *Qualification test of welders – Fusion welding – Part 1: Steels*

BS EN 1011-1, *Welding – Recommendations for welding of metallic materials – Part 1: General guidance for arc welding*

BS EN 1011-2, *Welding – Recommendations for welding of metallic materials – Part 2: Arc welding of ferritic steels*

BS EN ISO 1461:1999, *Hot dip galvanized coatings in fabricated iron and steel articles – Specifications and test methods*

BS EN ISO 2063, *Thermal spraying – Metallic and other inorganic coatings – Zinc, aluminium and their alloys*

BS EN ISO 4014, *Hexagon head bolts – Product grades A and B*

BS EN ISO 12944 (all parts), *Paints and varnishes – Corrosion protection of steel structures by protective paint systems*

3 Dimensions and general characteristics

The general dimensions of continuous bar fences and welded hurdle fences shall be as given in Table 1 and Table 3.

Table 1 Types, categories and dimensions of continuous bar fences

Type reference	Category	Height of fence m	Posts			Horizontals		
			Depth in ground (min.)		Distance apart (max.) M	Number	Diameter of top horizontal mm	Lower flat horizontal mm
			With pronged feet or base plates mm	With thrust plate Mm				
CB/100/4	Light duty	1.00	300	400	1.00	4	16	25 × 6
CB/120/5	Medium duty	1.20	350	500	1.00	5	20	25 × 6
CB/120/6/H	Heavy duty	1.20	350	500	1.00	6	25	30 × 6
CB/150/6	Medium duty	1.50	350	600	1.00	6	20	25 × 6
CB/150/6/H	Heavy duty	1.50	350	600	1.00	6	25	30 × 6

4 Materials and construction

4.1 Material form

Steel posts, gates and rails shall be produced from the following:

- Rolled steel angle (RSA)³⁾;
- Flat section bar⁴⁾ and round section bar⁵⁾;
- Rectangular or square hollow sections (RHS)⁶⁾⁷⁾;
- Circular hollow sections (CHS)⁵⁾⁶⁾ or round tubes⁵⁾⁶⁾.

4.2 Material grades

The steel grade(s) employed shall be specified by the customer (the purchaser, fence designer, supplier, component manufacturer, fabricator or installer, as applicable) on the basis of the mechanical properties, formability and weldability required.

Appropriate mild steel grades shall be selected from national or international standards.

³⁾ Fence posts only.

⁴⁾ Intermediate posts, joiner posts and horizontal rails.

⁵⁾ Top rails only.

⁶⁾ End, gate or corner posts only.

⁷⁾ Gates.