

Fences —

Part 14: Specification for open mesh steel panel fences

Committees responsible for this British Standard

The preparation of this British Standard was entrusted by the Road Engineering Standards Policy Committee (RDB/-) to Technical Committee RDB/34, upon which the following bodies were represented:

- Aluminium Federation
- British Independent Steel Producers' Association
- British Precast Concrete Federation Ltd.
- British Steel Industry
- British Timber Merchants' Association
- Country Landowners' Association
- County Surveyors' Society
- Department of Agriculture and Fisheries for Scotland
- Department of the Environment (Building Research Establishment)
- Department of the Environment (Property Services Agency)
- Department of Transport
- Electricity Supply Industry in United Kingdom
- Fencing Contractors' Association
- Forestry Commission
- Institute of Clerks of Works of Great Britain Inc.
- Landscape Institute
- Ministry of Agriculture, Fisheries and Food
- National Council of Building Material Producers
- National Farmers' Union
- Royal Institution of Chartered Surveyors
- Society of Chain Link Fencing Manufacturers
- Timber Growers United Kingdom
- Timber Research and Development Association
- Wire Products Association

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

- British Gas plc
- British Wire Netting Association
- Cold Rolled Sections Association
- Consumer Policy Committee of BSI
- Fencing Industry Association
- Institute of Leisure and Amenity Management
- Timber Trade Federation

Amendments issued since publication

Amd. No.	Date	Comments

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Foreword

This Part of BS 1722 has been prepared under the direction of the Road Engineering Standards Policy Committee. It is a new standard that takes into account the growing current practice of the use of established materials as fencing in panel form.

BS 1772 is published in separate Parts as follows:

- *Part 1: Specification for chain link fences;*
- *Part 2: Specification for rectangular wire mesh and hexagonal wire netting fences;*
- *Part 3: Specification for strained wire fences;*
- *Part 4: Specification for cleft chestnut pale fences;*
- *Part 5: Specification for closeboarded fences;*
- *Part 6: Specification for wooden palisade fences;*
- *Part 7: Specification for wooden post and rail fences;*
- *Part 8: Specification for mild steel (low carbon steel) continuous bar fences;*
- *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 woven wood and lap boarded panel fences;*
- *Part 12: Specification for steel palisade fences;*
- *Part 13: Specification for chain link fences for tennis court surrounds;*
- *Part 14: Specification for open mesh steel panel fences;*
- *Part 16: Specification for organic powder coatings for use as a plastics finish to components and mesh¹⁾.*

The various Parts specify requirements for the types of fence that are considered suitable for standardization. It should be noted that no attempt has been made to standardize fences or gates of a purely decorative nature, or to suit special requirements, or to specify requirements for “patent” proprietary fencing systems. It is recommended that the structure of such fences or gates should comply with those clauses of this Part of BS 1722 that are applicable.

It has been assumed in the drafting of this British Standard that the execution of its provisions is entrusted to appropriately qualified and experienced people.

The purpose of this standard is to establish minimum performance requirements for materials and workmanship. It specifies requirements for open mesh steel panel fences of four types:

- a) a fence for boundary or general purposes up to 2 400 mm in height;
- b) a fence for security purposes of minimum 2 400 mm in height;
- c) a fence for high security use of minimum 3 000 mm in height;
- d) a fence for maximum security of minimum 3 000 mm in height.

The general purpose fence is intended for use as a boundary marker or for those locations where it is deemed necessary merely to deter the casual intruder or trespasser.

The security fence is designed for use in areas where greater protection is required from vandalism or trespass, and can be considered suitable for use for general industrial security such as for industrial estates, airfields and oil installations.

¹⁾ In preparation.

The high security fence is designed for areas where protection against determined intrusion is required. However, it should be appreciated that it is not possible to erect a fence that cannot be negotiated by a determined intruder given adequate time, freedom from observation and suitable climbing aids or tools for forcing an entry.

The maximum security fence does not permit finger holds and therefore cannot be scaled without climbing aids.

The choice of a fence is affected by factors such as the intended purpose of the fence, the desired service life²⁾, aesthetic considerations and the availability of components. The specifier of the fence will know its intended purpose and by reference to Table 1 and Table 2, a suitable choice can be made. This then gives those erecting the fence the basic characteristics that need to be provided. This standard includes requirements for steel components to be galvanized. However an important aspect of providing an extended service life is the maintenance of the fence after its erection which is outside the scope of the standard. Premature failure can be avoided by taking care not to damage protective treatments during installation.

Ground conditions may indicate that a variation in the length of a post or strut, or of the depth to which it should be set, is desirable. The posts and struts and setting depths specified in this standard are intended for use in normal ground but if special conditions exist that warrant a change in the specification, e.g. ground that is softer or firmer than usual, such a change needs to be agreed with the specifier, as for other variations.

To assist those specifying and/or providing a fence, Appendix A provides guidance on the more important details that often take the form of selected options which need to be specified at the time of ordering a fence.

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 to iv, pages 1 to 16, 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.

²⁾ The service life/durability is dependent on environmental conditions and may vary considerably. For this reason, service life/durability is not included in this standard. For information relating to finishes and durability refer to the manufacturer.

Section 1. General

1.1 Scope

This Part of BS 1722 specifies basic requirements for open mesh steel panel fences in four categories.

- a) Category 1: general purpose fences up to 2 400 mm high;
- b) Category 2: security fences at least 2 400 mm high;
- c) Category 3: high security fences at least 3 000 mm high;
- d) Category 4: maximum security fences at least 3 000 mm high.

Requirements for the performance of panel fences for this standard are based upon loadings described in section 3.

Maintenance of the fence after erection is outside the scope of the standard.

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

1.2 Dimensions and general characteristics

Panel fences shall be constructed to the requirements of Table 1 and Table 2 and shall comply with section 3.

NOTE Details of the general design are referred to in Appendix A.

Table 1 — Basic characteristics of suitable expanded metal for panel fences

Category	Height of fence	Typical applications	Typical expanded metal specifications						
			BS 405 reference	Long way of mesh (LW)	Short way of mesh (SW)	Strand		Mass	Solidity
						Thickness	Width		
1	mm As specified	General purpose boundary fencing	Special	mm 76 Vertical	mm 64	mm 2.00	mm 2.00	kg 0.96	% 12
		General purpose boundary fencing	EX41	100 Vertical	50	2.50	2.69	2.08	11
2	Minimum 2 400	Security. Anti intruder	Special	76 Vertical	64	3.00	3.00	2.21	14
		Security. Anti intruder	EX42	100 Vertical	50	3.00	3.53	3.106	16
3	Minimum 3 000	High security	EX44	100 Vertical	50	3.00	5.03	3.66	20
		High security	EX37	76 Vertical	34	3.00	3.58	4.96	24
		High security	EX32	50 Vertical	23	3.00	3.12	6.52	31
4	Minimum 3 000	Maximum security	Special ^a	10 Aperture vertical	70 Aperture	3.00	5.50 Main strand	9.00	38
NOTE “Special” refers to meshes designed by manufacturers in accordance with BS 405 but they do not have a specific reference number.									
^a Category 4. Aperture finger grip proof. Probe “no go” 11 mm diameter.									