BS 1722-12:2016



BSI Standards Publication

Fences -

Part 12: Steel palisade fences – Manufacturing and installation – Specification



BS 1722-12:2016 BRITISH STANDARD

Publishing and copyright information

The BSI copyright notice displayed in this document indicates when the document was last issued.

© The British Standards Institution 2016

Published by BSI Standards Limited 2016

ISBN 978 0 580 90498 1

ICS 91.090

The following BSI references relate to the work on this document: Committee reference B/201 Draft for comment 16/30325063 DC

Publication history

First published June 1979
Second edition July 1990
Third edition April 1999
Fourth edition November 2006
Fifth (present) edition September 2016

Amendments issued since publication

Date Text affected

BRITISH STANDARD BS 1722-12:2016

Contents

Foreword iii	
Scope 1Normative references 1	
Section 1: Manufacturers 3 3 Dimensions and general characteristics 3 4 Materials 5 5 Construction of the fence 6 6 Security purpose (SP) fences 8 7 Renovation and repair of hot dipped galvanized coatings 9 8 Construction of gates 9	
Section 2: Installers 17 9 Installation 17 10 Statement of conformity 18	
Annex A (normative) Method for the determination of characteristic flexural strength of pales 20 Annex B (normative) Method for the determination of characteristic flexural strength of posts 22 Annex C (normative) Method for the determination of characteristic flexural strength of rails 25 Annex D (normative) Method of determination of tensile strength of cold swaged pin and collar fixings 28 Annex E (normative) Method of determination of the strength of the pale to fence rail fastening assembly 30 Annex F (informative) Specifying a steel palisade fence 33	
Bibliography 36	
Figure 1 – Typical pale top shapes 7 Figure 2 – Example of a constant gap hinge design 12 Figure 3 – Example of a hinge eyebolt 13 Figure 4 – Example of a hinge pin 14 Figure 5 – Example of a drop bolt arrangement 14 Figure 6 – Example of a locking bar arrangement 15 Figure A.1 – Arrangement of loading test specimen 20 Figure B.1 – Arrangement of loading test specimen 23 Figure C.1 – Arrangement of loading test specimen 26 Figure D.1 – Push-out test arrangement 29 Figure D.2 – Pull-out test arrangement 31 Figure F.1 – Typical arrangement for a security purpose (SP) fence 34	
List of tables Table 1 – Dimensions for general purpose (GP) fences with posts at 2.75 m centres 3 Table 2 – Dimensions for security purpose (SP) fences with posts at 2.75 m centres 4 Table 3 – Steel grades 5 Table 4 – Typical frame sizes for individual gate leaf widths (pairs or singles) 1 Table 5 – Typical minimum requirements for fittings for gates 12	1

Table 6 – Typical minimum dimensions for gate fittings 13

Table 7 – Typical dimensions of steel posts (RSJ, UB or UC) for individual gate leaf widths (pairs or singles) 16

Table 8 – Typical steel posts sizes (RHS) for individual gate leaf widths (pairs or singles) 16

Table 9 – Holes for fence post foundations 17

Summary of pages

This document comprises a front cover, an inside front cover, pages i to iv, pages 1 to 36, an inside back cover and a back cover.

BRITISH STANDARD BS 1722-12:2016

Foreword

Publishing information

This British Standard is published by BSI Standards Limited, under licence from The British Standards Institution, and came into effect on 30 September 2016. It was prepared by Technical Committee B/201, Fences and gates. A list of organizations represented on this committee can be obtained on request to its secretary.

Supersession

This British Standard supersedes BS 1722-12:2006, which is withdrawn.

Relationship with other publications

BS 1722, Steel palisade fences, is published in the following parts:

- 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: Steel palisade fences Manufacturing and installation Specification;
- Part 14: Specification for open mesh steel panel fences;
- Part 16: Specification for powder coatings used as a plastics finish to components and mesh;
- Part 17: Specification for electric security fences Design, installation and maintenance;
- Part 18: Specification for free-standing temporary steel mesh perimeter fencing panels.

Information about this document

This is a full revision and introduces additional factors in gate safety and component performance requirements.

The British Standard has also been arranged to make clear the principal responsibility for meeting the requirements of each section between manufacturer and installer.

It is generally assumed in the preparation of this British Standard that the fence is installed in level, normal ground conditions.

Use of this document

It has been assumed in the preparation of this British Standard that the execution of its provisions will be entrusted to appropriately qualified and experienced people. At the time of publication two appropriate qualification schemes are available: the Fencing Industry Skills Scheme (FISS) and the Construction Skills Certification Scheme (CSCS). 1) FISS/CSCS maintain a national register for fence installers and operatives. Other schemes might be available.

Presentational conventions

The provisions of this British 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 British Standard are drafted in accordance with *Rules for the structure and drafting of UK standards*, subclause **J.1.1**, 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 British 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.

FISS and CSCS are a trademarks owned by Lantra, Lantra House, Stoneleigh Park, Nr Coventry, Warwickshire, CV8 2LG and are examples of suitable schemes available commercially. This information is given for the convenience of users of this standard and does not constitute an endorsement by BSI of these schemes

Scope

This part of BS 1722 specifies requirements for steel palisade fences and gates for general purpose (GP) fences for heights up to 2.4 m, and for security purpose (SP) fences for heights of 3 m and 3.6 m, all with posts at 2.75 m centres. This British Standard also covers fences between 2.4 m and 3 m in height with components constructed to the SP specification.

NOTE 1 Where greater resistance against penetration is required for fences below 2.4 m in height, the SP components should be obtained from the purchaser.

NOTE 2 Requirements in this British Standard for the minimum sizes of fence components are based on a design wind loading, q, at right angles to the plane of the fence of 900 N/m² employing a shape factor of 1.9 on the net area presented to the wind.

NOTE 3 In situations of extreme exposure or abnormal loading, a special appraisal should be undertaken and the design criteria should be obtained from the purchaser.

NOTE 4 The responsibility for ensuring the final installation meets this British Standard belongs to the installer. This responsibility can be mitigated by obtaining certificates for materials used from the suppliers (see Clause 10).

Normative references

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

BS 4-1:2005, Structural steel sections – Part 1: Specification for hot-rolled sections

BS 907, Specification for dial gauges for linear measurement 2)

BS 3692:2014, ISO metric precision hexagon bolts, screws and nuts – Specification

BS 3693, Recommendations for design of scales and indexes on analogue indicating instruments

BS 4320, Specification for metal washers for general engineering purposes – Metric series

BS 4484-1, Specification for measuring instruments for constructional works – Part 1: Metric graduation and figuring of instruments for linear measurement

BS 4652, Specification for zinc-rich priming paint (organic media)

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

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

BS 7805-1, Swaged collar grooved rivets – Part 1: Specification for sizes up to and including 10 mm diameter

BS 8500-1:2015+A1:2016, Concrete – Complementary British Standard to BS EN 206 – Part 1: Method of specifying and guidance for the specifier

BS 8500-2:2015+A1:2016, Concrete – Complementary British Standard to BS EN 206 - Part 2: Specification for constituent materials and concrete

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

²⁾ BS 907 has been partially superseded by BS EN ISO 463.