

BRITISH STANDARD

Specification for cast iron drain pipes, fittings and their joints for socketed and socketless systems

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Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, pages 1 to 12, an inside back cover and a back cover.

Foreword

Publishing information

This British Standard is published by BSI and came into effect on 30 April 2008. It was prepared by Technical Committee PSE/10, *Iron pipes and fittings*. A list of organizations represented on this committee can be obtained on request to its secretary.

Supersession

This British Standard supersedes BS 437:1978+A1:1988, which is withdrawn.

Information about this document

This is a full revision of the standard, which now includes:

- a) performance requirements for the joints, based on the requirements of BS EN 877;
- b) socketless fittings not previously covered in BS 437;
- c) ductile iron couplings for jointing socketless systems.

The revision takes account of changes to the foundry practice concerned with the making of cast iron drain goods.

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 British Standard specifies the requirements for cast iron drain systems for use in buried applications or suspended within a basement, in areas not subject to fire regulations, where any pressure likely to occur is a maximum of 3.5 bar.

NOTE In this standard, all pressures are relative pressures, expressed in bars (100 kPa = 1 bar).

The nominal sizes of the drain systems are DN 100, DN 150 and DN 225 inclusive.

The standard specifies the requirements for materials, dimensions and tolerances, mechanical properties and surface condition for cast iron pipes and fittings. It also indicates performance requirements for all components, including joints.

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 EN 681-1, *Elastomeric seals – Material requirements for pipe joint seals used in water and drainage applications – Part 1: Vulcanized rubber*

BS EN 877, *Cast iron pipes and fittings, their joints and accessories for the evacuation of water from buildings – Requirements, test methods and quality assurance*

3 Terms and definitions

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

3.1 cast iron

alloy of iron and carbon in which graphite can be present in different forms

NOTE In grey cast iron the graphite is in flake form; in ductile iron it is formed as nodules.

3.2 coupling

connecting piece used to join together the spigots of mating pipes or fittings

3.3 drain

system of pipes, fittings and joints which will be buried in the ground or suspended within basements, in order to connect the discharge system of the building to a sewer or septic tank

3.4 fitting

cast iron component, other than a pipe, which allows deviation, a change in direction or diameter, including access components

3.5 flexible joint

joint which permits significant angular deflection both during and after installation and which can accept a slight offset of the centreline

3.6 gasket

elastomeric sealing component of a joint

3.7 joint

connection between the ends of pipes and/or fittings using various methods of sealing including socket/spigot or coupling, with sealing effected by elastomeric gasket(s) or sealing compounds

3.8 joint assembly

two spigots or a socket and spigot and means of joining them together, assembled into a single unit

3.9 length

effective length of a pipe or fitting

NOTE For socket and spigot pipes and fittings, the effective length is equal to the overall length minus the spigot insertion depth as given in the manufacturer's catalogues.

3.10 nominal size (DN)

alphanumeric designation, used for reference purposes, of the size of components and pipework system comprising the letters DN followed by a dimensionless whole number which is indirectly related to the physical size, in millimetres, of the bore or outside diameter of the end connections

[BS EN ISO 6708:1996, 2.1]

NOTE In this standard it is the bore.

3.11 pipe

casting of uniform bore, straight in axis, normally having plain ends but can also be socketed

3.12 rigid joint

joint that does not permit significant angular deflection either during or after installation

3.13 sewer

system of pipes designed to collect surface water and waste water from buildings and convey them to the point of disposal or treatment

3.14 type test

proof of design test which is carried out once to demonstrate compliance with the requirements of this standard and which is repeated only after significant change in manufacture, design or material

3.15 waste water

water which is contaminated by use and all water discharging into the drainage system, e.g. domestic and trade effluent, condensate water and rainwater when discharged into a waste drainage system