
British Standard Specification for

Ductile iron pipes and fittings

Spécification des tuyaux et raccords en fonte ductile

Spezifikation für Rohre und Formstücke aus ductilem Gusseisen

Foreword

This British Standard constitutes the second revision of BS 4772 and has been prepared under the direction of the Piping Systems Components Standards Committee. It supersedes the 1980 edition which is withdrawn.

This British Standard is related to ISO 2531, published by the International Organization for Standardization (ISO), but is not identical in technical content. This standard covers a smaller range of sizes but includes a greater range of fittings; it specifies some different and some extra requirements and generally gives more detail than ISO 2531. The main extra requirements are for externally applied protective zinc coatings, related to those given in ISO 8179, which are included in this standard for the first time and for cement mortar linings, which are related to those given in ISO 4179 (see section three). Although related to the relevant ISO publications this standard is not identical to them.

This British Standard also introduces a new concept for the design of fittings in appendix K which are designated 'unified design'. Because of the large numbers of fittings of unified design included in appendix K, it is envisaged that their introduction will be phased over a long period of time; for this reason, the corresponding fittings which were included in BS 4772 : 1980 have been retained in this edition. The object of the new designs is to minimize the number of component parts of foundry tackle and so optimize efficiency and at the same time extend the range of fittings made available.

Other new concepts which have been incorporated in this revision for the first time are requirements for verification and testing, in particular, non-destructive testing and the use of smaller high tensile bolting for certain flanges.

In addition to cement mortar linings and zinc coatings, this British Standard also provides for protective surface coatings of bitumen applied to both external and internal surfaces. All the new requirements can be applied to:

- (a) ductile iron pipe with flexible joints;
- (b) ductile iron pipe with flanges welded-on or screwed-on;
- (c) ductile iron pipe with flanges cast-on;
- (d) ductile iron fittings (including unified design fittings).

Spigot and socket pipes in accordance with BS 1211 and fittings in accordance with BS 78 : Part 2 are not interchangeable with metric size units, and therefore the following optional methods of connecting metric size pipe with imperial size pipe are provided in this standard:

- (1) a change collar in accordance with table 33;
- (2) a spigot and socket change piece in accordance with table 34 with a metric size collar in accordance with table 32, where required;
- (3) a double spigot change piece in accordance with table 35 with a metric size collar in accordance with table 32 and/or an imperial size collar, where required.

Flanges specified in this standard have been rationalized dimensionally to facilitate production. This does not affect their interchangeability with the corresponding flanges given in BS 4504 : Part 1.

Detailed guidance on the use of components specified in this British Standard in pipelines and pipe systems is given in BS 8010 : Section 2.1.

Purchasers ordering to this standard are advised to specify in their purchasing contract that the manufacturer operate a quality system in compliance with BS 5750 : Part 2 to assure themselves that products claimed to comply with BS 4772 consistently achieve the required level of quality.

Compliance with a British Standard does not of itself confer immunity from legal obligations.