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**Specification for
Pitch-impregnated fibre pipes
and fittings for below and
above ground drainage**

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Committee reference BMB/6 Draft for comment 71/12700

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Association of Waterproof Paper Manufacturers
*British Tar Industry Association
*Department of the Environment
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Association of Public Health Inspectors
British Plastics Federation
Greater London Council
Institute of Plumbing

Institution of Municipal Engineers
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Foreword

This British Standard, issued under the authority of the Bituminous Products Industry Standards Committee has been revised to incorporate BS 2760 : Part 1 : 1966 and BS 2760 : Part 2 : 1967. It also incorporates developments in the manufacture of pitch impregnated pipes and fittings since the 1966 edition.

In this revision details of joints for use above and below ground and details of tests for plastics couplings and fittings have been included.

An Appendix to give guidance on the installation of pitch fibre pipes has been re-introduced and this should be read in conjunction with CP 301, Building drainage, CP 304, Sanitary pipework above ground and CP 2005, Sewerage.

For above ground discharge pipe installations pitch fibre junctions are manufactured with unswept 'direct entry' branches. Swept branch junctions are manufactured in plastics.

This standard is designed to cover the United Kingdom and oversea markets. In tropical climates long term storage should be in shade and the manufacturer's instructions should be followed.

Values in this standard are expressed in metric terms and nominal bores are in accordance with the recommendations prepared under Technical Committee B/94 – Modular Co-ordination in Building – for the metrication of pipe diameters.

The metric values are given in SI units. For further information reference should be made to BS 3763, The International System of units (SI).

British Standard Specification for
Pitch-impregnated fibre pipes and fittings
for below and above ground drainage

1. Scope

This British Standard sets out the dimensions and minimum requirements for pitch fibre pipes, couplings, joints and fittings suitable for foul and surface water drains and sewers, internal soil, waste, ventilating and rainwater systems; and perforated pipes for subsoil drainage, and irrigation. The sizes covered range from 50 mm to 225 mm nominal bore.

NOTE. Titles of British Standards referred to in this standard are listed on the inside back cover

2. Definitions

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

- (1) *Pipe*. A hollow cylinder of uniform bore and having uniform wall thickness throughout its length except for tapered ends when these are specified.
- (2) *Coupling*. A short hollow cylinder for connecting two pipes, or pipe and fittings, of equal nominal bore.
- (3) *Fitting*. A unit in a pipeline other than a pipe or coupling.
- (4) *Below ground*. Buried in the ground.

3. Material

3.1 Pipes shall consist of a preformed felted fibrous structure impregnated with pitch, bitumen or other no less suitable compound.

3.2 Couplings and fittings shall be made of:

- (1) the same material as the pipe, or
- (2) polypropylene or other plastics material no less suitable, or
- (3) mineral fibre moulded from an inert aggregate mixed with an inorganic cement and impregnated with pitch, bitumen or other no less suitable material.

3.3 Where rubber rings are used for jointing, the material shall be to the requirements of BS 2494, Part 2, for drainage purposes or BS 3514, whichever is appropriate.

4. Test requirements

Pipes, couplings and fittings shall meet the specified test requirements appropriate to them. (See detailed requirements and methods of test in Clause 10).

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5. Manufacturer's certificate and tests

The manufacturer shall satisfy himself that his products comply with all the requirements of this standard and, on request, shall furnish the purchaser with a certificate to that effect. Should a purchaser require the manufacturer to carry out tests on the pipes and fittings allocated to his order, such tests shall be the subject of agreement between parties at the time of contract.

6. Marking

Pipes, couplings and fittings complying with the requirements of this standard shall be clearly marked with the following.

- (1) The name or identification mark of the manufacturer.
- (2) The number of this British Standard, i.e. BS 2760.

NOTE. Attention is drawn to certification facilities offered by BSI – see back cover of this standard.

7. Pipes

7.1 General

 7.1.1 The stock length of pipes shall be not less than 1.5 m and not more than 3.5 m. The manufacturer shall declare the length between these limits and this length shall be subject to a manufacturing tolerance of ± 25 mm unless otherwise specified. The length measurement shall include the machined ends when the joint under order requires them (see 7.1.4).

In any one delivery up to 15 % of the specified quantity may be supplied in lengths shorter than the declared stock length but not more than two differing short lengths shall be allowed. No length shorter than 1.2 m shall be supplied unless specially ordered by the purchaser.

7.1.2 The permissible tolerance of a pipe length from straight, measured on the inside of the curve and using a straight edge 1 m long shall not be more than 10 mm.

7.1.3 The bore of pipes shall be circular in cross section within the limits specified in Table 1.

Table 1. Nominal bores

Nominal bore, mm	50	75	100	125	150	200	225
	mm	mm	mm	mm	mm	mm	mm
Limits of internal diameter							
min.	50	75	100	125	150	200	225
max.	54	80	105	133	160	213	239

7.1.4 Pipes shall be supplied with ends suitable for the joint specified; square cut plain ends for snap joints and 'C' coupling joints, and with machined ends for taper coupling joints, soil 'O' ring joints and for spigot and socket joints.

7.2 Perforated pipes. Perforations shall be evenly spaced in rows parallel to the axis of the pipe as shown in Fig. 1.

Unless otherwise specified perforations shall be not less than 5 mm dia. and not greater than 16 mm dia. and the spacing in any row of perforations shall be 150 ± 10 mm between adjacent holes in that row.

For pipes up to 100 mm bore there shall be two rows of holes and for larger sizes there shall be four rows of holes unless otherwise specified.

The centre lines of all perforations shall be contained within an arc of 160° and shall be cleanly drilled (see Fig. 1).

Perforated pipes shall comply with the same test requirements as for pitch fibre prior to perforation, but joint tightness tests shall not be required.

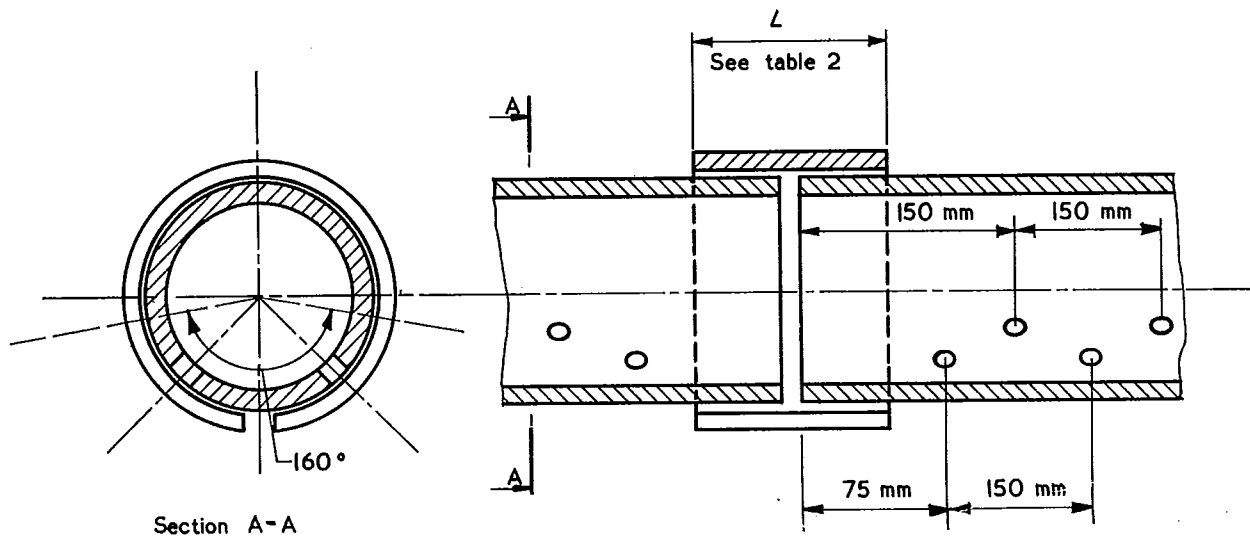


Fig. 1. Perforated pipe

8. Joints

8.1 General. The joints specified in this Clause are each used for specific purposes. All joints of like type and diameter shall be interchangeable. Joints specified in 8.2, 8.3 and 8.4 shall meet the watertightness test in 10.2.3. Those joints specified in 8.5 and 8.6 shall not be required to meet the watertightness test. Where joints require 'O' rings or snap rings the rings shall comply with the requirements of BS 2494, Part 2, or BS 3514.

8.2 Taper coupling joint. These joints shall be machined or moulded and shall conform to the dimensions given in Table 2.

8.3 Snap ring joints. These joints, for use below ground, shall comply with the dimensions shown in Table 3.

8.4 Soil pipe 'O' ring joints. These joints for use only in discharge pipe installations, are telescopic and shall comply with the dimensions shown in Table 4.

8.5 Spigot and socket or rebated joints. These joints shall have a rebate as shown in Table 5 at midwall thickness. They are for use in surface water and subsoil water systems for plain and perforated pipes.

8.6 'C' coupling joints. These joints for perforated pipes shall conform to the dimensions given in Fig. 1.

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Table 2. Taper coupling joints

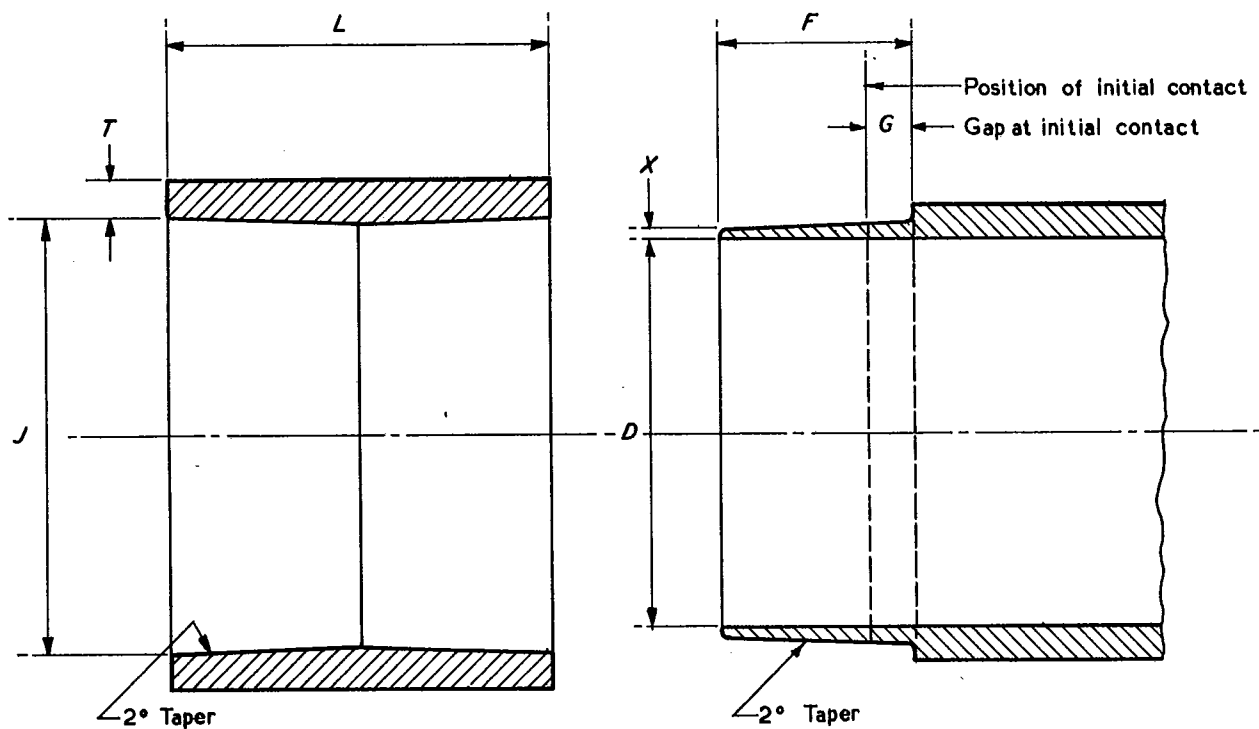


Table 2. Taper coupling joints (continued)

Nominal bore, mm	50	75	100	125	150	200	225
	mm	mm	mm	mm	mm	mm	mm
Coupling length, <i>L</i>							
min.	73.7	86.9	99.6	99.6	99.6	127.0	127.0
max.	76.2	89.4	102.1	102.1	102.1	129.5	129.5
Pipe joint length, <i>F</i> tolerance ± 0.25 mm	36.3	42.9	49.3	49.3	49.3	63.0	63.0
Gap at initial contact, <i>G</i>							
min.	6.4	6.4	6.4	6.4	6.4	9.4	12.7
max.	12.7	12.7	12.7	12.7	12.7	22.0	25.4
Coupling wall thickness, <i>T</i> (impregnated fibre)							
min.	6.4	7.1	8.1	10.4	11.7	14.5	16.0
Coupling wall thickness, <i>T</i> (polypropylene, tapered ends)							
min.	3.8	4.1	4.6	5.8	6.9	9.1	9.1
Diameter inside large end of coupling at point of initial contact on pipe taper, <i>J</i> *	62.7	87.6	114.0	145.5	172.2	231.3	254.5
Wall thickness at end of male taper, pitch fibre joint, <i>X</i> (min)	2.5	2.5	2.5	4.8	5.1	6.6	6.6

*Dimension *J* is given primarily for the direction of manufacturers in making gauges and such gauges are to be used for ensuring the interchangeability of joint components. The dimension *J* is not intended for the inspection of pipes in the field.