

Pipes and fittings of longitudinally welded stainless steel pipes with spigot and socket for waste water systems —

Part 1: Requirements, testing, quality control

The European Standard EN 1124-1:1999, with the incorporation of amendment A1:2004, has the status of a British Standard

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National foreword

This British Standard is the English language version of EN 1124-1:1999, including amendment A1:2004.

The start and finish of text introduced or altered by CEN amendment is indicated in the text by tags **A1** **A1**. Tags indicating changes to CEN text carry the number of the CEN amendment. For example, text altered by CEN amendment A1 is indicated by **A1** **A1**.

The UK participation in its preparation was entrusted to Technical Committee ISE/8, Steel pipes, which has the responsibility to:

- aid enquirers to understand the text;
- present to the responsible international/European committee any enquiries on the interpretation, or proposals for change, and keep UK interests informed;
- monitor related international and European developments and promulgate them in the UK.

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English version

Pipes and fittings of longitudinally welded stainless steel pipes with spigot and socket for waste water systems — Part 1: Requirements, testing, quality control

(including amendment A1:2004)

Tubes et raccords de tube soudés longitudinalement en acier inoxydable, à manchon enfichable pour réseaux d'assainissement — Partie 1: Prescriptions, essais, contrôle de qualité
(inclut l'amendement A1:2004)

Rohre und Formstücke aus längsnahtgeschweißtem, nichtrostendem Stahlrohr mit Steckmuffe für Abwasserleitungen — Teil 1: Anforderungen, Prüfungen, Güteüberwachung
(enthält Änderung A1:2004)

This European Standard was approved by CEN on 16 December 1998; amendment A1:2004 was approved by CEN on 1 July 2004.

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CEN

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Foreword

This European Standard has been prepared by Technical Committee CEN/TC 165, Waste water engineering, the Secretariat of which is held by DIN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by July 1999, and conflicting national standards shall be withdrawn at the latest by July 1999.

This European Standard consists of the following parts:

- *Part 1: Requirements, testing, quality control;*
- *Part 2: System S — Dimensions;*
- *Part 3: System X — Dimensions.*

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

Foreword to amendment A1

This document (EN 1124-1:1999/A1:2004) has been prepared by Technical Committee CEN/TC 165 “Waste water engineering”, the secretariat of which is held by DIN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by March 2005, and conflicting national standards shall be withdrawn at the latest by March 2005.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

For relationship with EU Directive(s), see informative annex ZA, which is an integral part of this document.

This annex includes the requirements of the Mandate given under the EU Construction Products Directive (89/106). CE marking is affixed to the product only after compliance with the requirements of Annex ZA is achieved.

For reasons of conformity with Mandate M 131 for harmonized European Standards on pipes, tanks and ancillaries not in contact with water intended for human consumption, EN 1124-1:1999 has been amended by the addition of Annex ZA (see Resolution CEN/BT 113/1994 and CEN/BT 63/1996) and the following amendments to the text of the standard.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

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1 Scope

This European Standard specifies requirements, tests and quality control for longitudinally welded, stainless steel pipes and fittings with spigot and socket, for use in waste water systems usually operating under gravity or at a low head of pressure.

For the purposes of this standard, components are pipes, fittings, joints and seals.

This standard is for components used for the discharge of:

- domestic waste water;
- surface water; and
- groundwater.

This standard is also for components discharging other waste water (e.g. industrial waste water), as long as it does not damage the components or endanger the health and safety of personnel.

2 Normative references

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references, the latest edition of the publication referred to applies.

EN 476, *General requirements for components used in discharge pipes, drains and sewers for gravity systems*.

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

EN 1123-1:1999, *Pipes and fittings of longitudinally welded hot-dip galvanized steel pipes with spigot and socket for waste water systems — Part 1: Requirements, testing, quality control*.

EN 1124-2:1999, *Pipes and fittings of longitudinally welded stainless steel pipes with spigot and socket for waste water systems — Part 2: System S — Dimensions*.

EN 1124-3:1999, *Pipes and fittings of longitudinally welded stainless steel pipes with spigot and socket for waste water systems — Part 3: System X — Dimensions*.

EN 12068, *Cathodic protection — External organic coatings for the corrosion protection of buried or immersed steel pipelines used in conjunction with cathodic protection — Tapes and shrinkable materials*.

ISO 559:1991, *Steel tubes for water and sewage*.

ISO 683-13:1986, *Heat-treatable steels, alloy steels and free-cutting steels — Part 13: Wrought stainless steel*.

ISO 8770:1991, *High-density polyethylene (PE-HD) pipes and fittings for soil and waste discharge (low and high temperature) systems inside buildings — Specification*.

3 Definitions

For the purposes of this standard, the definitions of nominal size (DN), inside diameter (ID) and outside diameter (OD) as specified in EN 476 apply.

4 Materials and prefabricated components

Pipe and fittings are made of precision steel tube of austenitic stainless steels, manufactured generally of material No. 11 ISO 683-13:1986, No. 19a ISO 683-13:1986 and No. 21 ISO 683-13:1986. Comparable materials are permissible.

Until a European Standard for as-welded precision steel pipes is produced, national specifications remain available for the testing of steel pipe before finished into pipes and fittings for drainage.

The choice of the material depends on the application (see ISO 683-13:1986, EN 10088-2). The steel tube from which the pipes and fittings are made shall be of the materials specified in the first paragraph.

Prefabricated components are assembled at the manufacturers plant. They shall be designed so as to function permanently and be interchangeable.

5 Dimensions

The dimensions shall comply with EN 1124-2 or EN 1124-3.

5.1 Socket shape

The socket shape shall comply with EN 1124-2 or EN 1124-3.

5.2 Nominal sizes

The nominal sizes for pipes and fittings to EN 1124-2 shall be in the range of DN/OD 50, 75, 110 and 160. The nominal sizes for pipes and fittings to EN 1124-3 shall be in the range of DN/ID 40, 50, 70, 80, 100, 125, 150 and 200.

6 Requirements of pipes and fittings

6.1 Straightness

The pipes shall be straight. In the pipe axis, the bend over a length of 1 m shall not be more than 1,5 mm.

6.2 Ends of pipes and fittings

The pipes and fittings shall be cut perpendicular to the pipe axis. For fittings up to DN/OD 110 or DN/ID 100 a variation of the right angle of up to 3° is allowed. For the ends of pipes and fittings with a nominal size larger than DN/ID 100 or DN/OD 110, the deviation of the right angle shall not be more than 1° 45'. All burrs shall be removed.

6.3 Inner surface finish

The inner surface shall be smooth and free from cracks and defects affecting flow. The inner surface of sockets shall be free from sharp irregularities and shall meet the requirements given in 6.4. Both requirements also apply to the weld area.

There shall be no visible annealing colour or material impurities.

6.4 Outside surface finish

The outside surface shall be smooth and free from sharp irregularities which could damage the seals during insertion.

There shall be no visible annealing colour or material impurities.

6.5 Roundness

The permissible variations of the pipe diameter according to Table 4 of EN 1124-2:1999 or Table 5 of EN 1124-3:1999 shall be satisfied.