
Cevni sistemi iz polimernih materialov za obnovo podzemnih omrežij za odvodnjavanje in kanalizacijo - Obratovanje brez tlaka (vodi s prosto gladino) – 1. del: Splošno

Plastics piping systems for renovation of underground non-pressure drainage and sewerage networks - Part 1: General

Kunststoff-Rohrleitungssysteme für die Renovierung von erdverlegten drucklosen Entwässerungsnetzen (Freispegelleitungen) - Teil 1: Allgemeines

Systemes de canalisations plastiques pour la rénovation des réseaux d'assainissement enterrés sans pression - Partie 1: Généralités

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93.030	Zunanji sistemi za odpadno vodo	External sewage systems

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Plastics piping systems for renovation of underground non-pressure drainage and sewerage networks - Part 1: General

Rénovation des réseaux d'assainissement gravitaires enterrés par canalisations plastiques - Partie 1: Généralités

Kunststoff-Rohrleitungssysteme für die Renovierung von erdverlegten drucklosen Entwässerungsnetzen (Freispiegelleitungen) - Teil 1: Allgemeines

This European Standard was approved by CEN on 4 November 2002.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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EN 13566-1:2002 (E)

Foreword

This document EN 13566-1:2002 has been prepared by Technical Committee CEN/TC 155 "Plastics piping systems and ducting systems", the secretariat of which is held by NEN.

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of an identical text or by endorsement, at the latest by June 2003, and conflicting national standards shall be withdrawn at the latest by December 2004.

This standard is a Part of a System Standard for plastics piping systems of various materials used for renovation of existing pipelines in a specified application area. System Standards for renovation dealing with the following applications are either available or in preparation:

- **Plastics piping systems for renovation of underground non-pressure drainage and sewerage networks (this application);**
- Plastics piping systems for renovation of underground water supply networks;
- Plastics piping systems for renovation of underground gas supply networks;
- Plastics piping systems for renovation of underground drainage and sewerage networks under pressure;
- Plastics piping systems for renovation of industrial pipelines.

These System Standards are distinguished from those for conventionally installed plastics piping systems by setting requirements for certain characteristics in the as-installed condition, after site processing. This is in addition to specifying requirements for system components as manufactured.

Each of the System Standards comprises a:

- Part 1: General

and all applicable renovation technique family related parts from the following list:

- Part 2: Lining with continuous pipes
- Part 3: Lining with close-fit pipes
- Part 4: Lining with cured-in-place pipes
- Part 5: Lining with discrete pipes
- Part 6: Lining with inserted hoses
- Part 7: Lining with spirally-wound pipes

A consistent structure of clause headings has been adopted for all Parts to facilitate direct comparisons across renovation technique families.

Figure 1 shows the common Part and clause structure and the relationship between EN 13566 and the System Standards for other application areas.

Annex A is informative.

This document includes a bibliography.

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, Malta, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

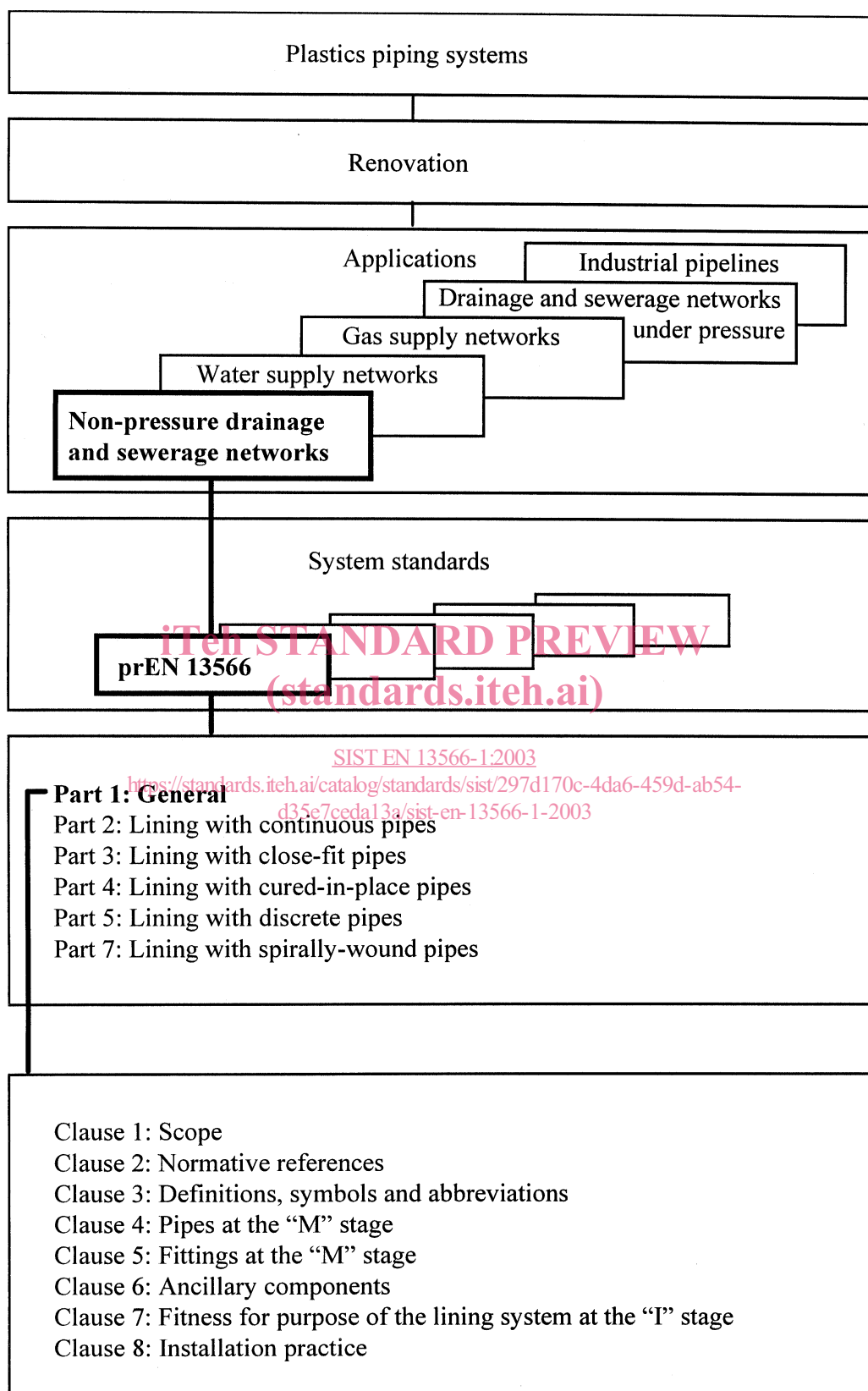


Figure 1 — Format of the renovation system standards

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Introduction

The requirements for any given renovation technique family are covered by *Part 1: General*, applied in conjunction with the relevant other Part. For example, for the requirements relating to *Lining with continuous pipes* it is necessary to refer to both Parts 1 and 2. Complementary information is contained in ISO/TR 11295 [1] and a supporting standard, EN 13689 [2], listed in the bibliography.

Not all technique families are applicable to every area of application, and this is reflected in the Part numbers actually included in each System Standard. For the present standard, EN 13566, the Parts 1, 2, 3, 4, 5 and 7 [3-7] apply.

Recommended schemes for assessment of conformity of the plastics piping system with all relevant requirements are provided by way of informative annexes to each Part.

Attention is also drawn to EN 13380 [8], which has been taken into account during the preparation of this standard.

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1 Scope

This standard specifies the requirements and test methods for plastics piping systems used for renovation of underground non-pressure drainage and sewerage networks which are operated as gravity systems and subject to a maximum surcharge pressure of 0,5 bar. It is applicable to pipes and fittings as manufactured as well as to the installed plastics lining system; it does not cover the existing pipeline or any annular filler.

This Part of EN 13566 deals with the general requirements common to all relevant renovation techniques as defined in 3.1.2.

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 (including amendments).

EN 752-5, *Drain and sewer systems outside buildings — Part 5: Rehabilitation*.

EN 1610:1997, *Construction and testing of drains and sewers*.

3 Terms and definitions, symbols and abbreviations

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3.1 Terms and definitions

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

3.1.1 General

3.1.1.1

pipeline system

interconnecting pipe network for the conveyance of fluids

3.1.1.2

rehabilitation

all measures for restoring or upgrading the performance of an existing pipeline system

3.1.1.3

renovation

work incorporating all or part of the original fabric of the pipeline by means of which its current performance is improved

3.1.1.4

replacement

rehabilitation of an existing pipeline system by the installation of a new pipeline system, without incorporating the original fabric

3.1.1.5

maintenance

keeping an existing pipeline system operational without the installation of additional fabric

3.1.1.6

repair

rectification of local damage

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3.1.1.7**lining pipe**

pipe to be inserted for renovation purposes

3.1.1.8**liner**

lining pipe after installation

3.1.1.9**lining system**

lining pipe and all relevant fittings for insertion into an existing pipeline for the purposes of renovation

3.1.1.10**renovated pipeline system**

the existing pipeline system plus the installed lining system used to renovate it, plus any grout or other annular filling material used

3.1.1.11**characteristic**

property, dimension or other feature of a material or component

3.1.1.12**declared value**

limiting value of a characteristic declared in advance by lining system supplier which becomes the requirement for the purposes of assessment of conformity

3.1.1.13**annular filler**

material for grouting annular space between existing pipeline and lining system

3.1.1.14**grouting**

process of filling voids around the lining system

3.1.1.15**simulated installation**

installation of a lining system into a simulated host pipeline, using representative equipment and processes, to provide samples for testing which are representative of an actual installation

3.1.1.16**simulated host pipeline**

section of pipeline, which is not part of an operational network, but which replicates the environment of an operational network

3.1.1.17**technique family**

group of renovation techniques which are considered to have common characteristics for standardisation purposes

3.1.2 Techniques

The various techniques for renovation of underground non-pressure drainage and sewerage networks, within the scope of pipeline rehabilitation techniques generally, are shown schematically in Figure 2.

NOTE For definitions of standardized renovation techniques shown in Figure 2 but outside the scope of this standard see EN 13689 [2].

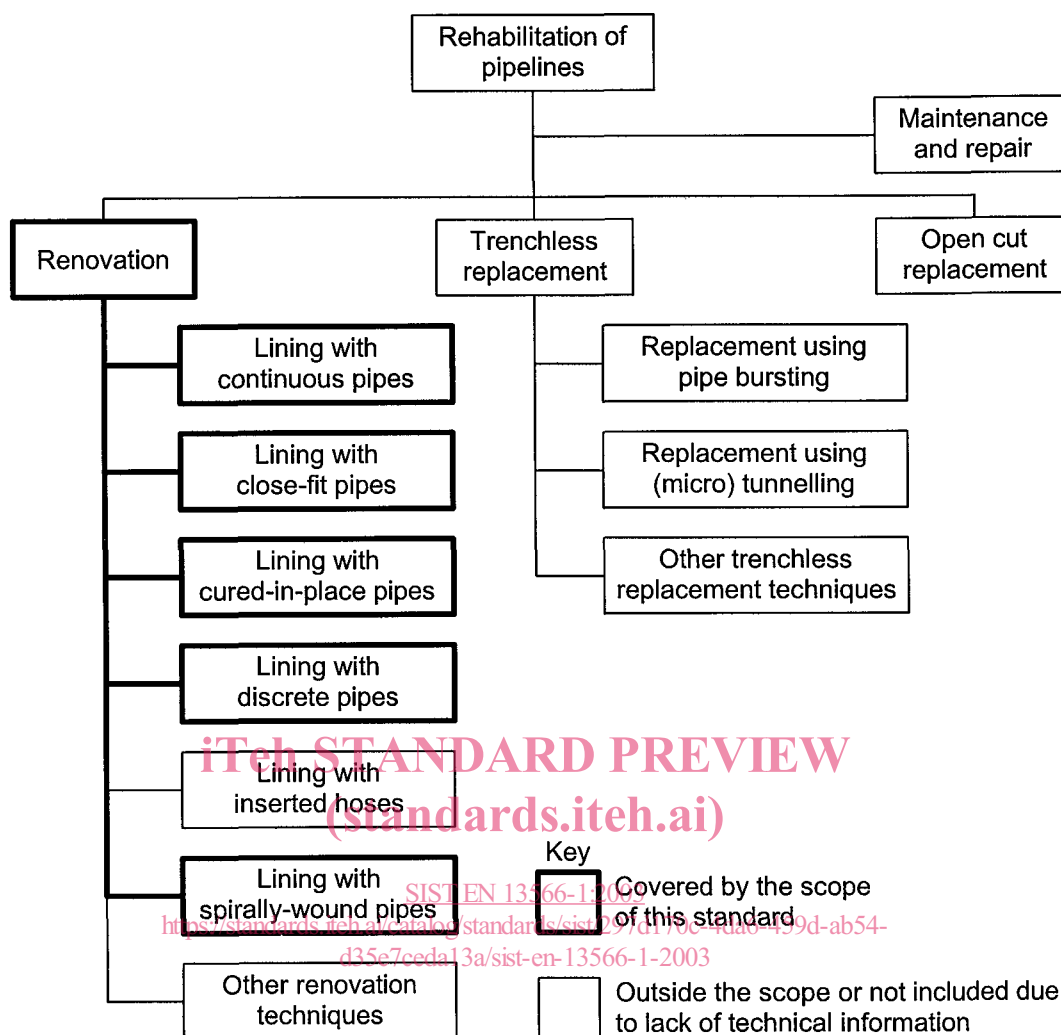


Figure 2 — Technique families for renovation of underground non-pressure drainage and sewerage networks using plastics pipes, within the scope of pipeline rehabilitation techniques

The technique families within the scope of this standard are defined as follows:

3.1.2.1

lining with continuous pipes

lining with pipe made continuous for the length of the section to be renovated prior to insertion, and which has not been shaped to give it a cross-sectional diameter smaller than its final diameter after installation

3.1.2.2

lining with close-fit pipes

lining with a continuous pipe for which the cross-section is reduced to facilitate installation and reverted after installation to provide a close fit to the existing pipe

NOTE For the reduction in cross-section there are two options:

- reduction in the pipe manufacturing plant; the pipe is usually supplied coiled on a reel from which it is directly inserted;
- reduction on site; the pipe is usually fed through the reduction equipment and simultaneously inserted in one continuous string.

3.1.2.3

lining with cured-in-place pipes

lining with a flexible tube impregnated with a thermosetting resin which produces a pipe after resin cure