SLOVENSKI STANDARD
SIST EN 1636-6:1999

01-julij-1999

Cevni sistemi iz polimernih materialov za odpadno vodo, ki delujejo po težnostnem principu - S steklenimi vlakni okrepljeni duromerni materiali (GRP), ki temeljijo na nenasičeni poliestrski smoli (UP) - 6. del: Postopki za vgradnjo

Plastics piping systems for non-pressure drainage and sewerage - Glass-reinforced thermosetting plastics (GRP) based on polyester resin (UP) - Part 6: Practices for installation

Kunststoff-Rohrleitungssysteme für drucklose Entwässerungs- und Abwasserleitungen - Glasfaserverstärkte duroplastische Kunststoffe (GFK) auf der Basis von ungesättigtem Polyesterharz (UP) - Teil 6: Verfahren zur Verlegung

Systemes de canalisations en plastique pour l'évacuation et l'assainissement sans pression - Plastiques thermodurcissables renforcés de verre (PRV) a base de résine de polyester non saturé (UP) - Partie 6: Pratiques de pose

Ta slovenski standard je istoveten z: **EN 1636-6:1997**

ICS:

23.040.01	Deli cevovodov in cevovodi na splošno	Pipeline components and pipelines in general
93.030	Zunanji sistemi za odpadno vodo	External sewage systems

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EUROPEAN STANDARD **EN 1636-6**

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English version

Plastics piping systems for non-pressure drainage and sewerage - Glass-reinforced thermosetting plastics (GRP) based on unsaturated polyester resin (UP) - Part 6: Practices for installation

Systèmes de canalisations en plastique pour l'évacuation et l'assainissement sans pression - Plastiques thermodurcissables renforcés de verre (PRV) à base de résine de polyester non saturé (UP) - Partie 6: Pratiques de pose

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This European Standard was approved by CEN on 1997-08-16. CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CEN member.

The European Standards exist in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the Central Secretariat has the same status as the official versions.

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CEN

European Committee for Standardization
Comité Européen de Normalisation
Europäisches Komitee für Normung

Central Secretariat: rue de Stassart,36 B-1050 Brussels

Foreword

This European Standard has been prepared by Technical Committee CEN/TC 155 "Plastics piping systems and ducting systems", the Secretariat of which is held by NNI.

This standard is part of a System Standard for plastics piping systems, which is a standard for glass-reinforced polyester plastics piping systems for non-pressure drainage and sewerage.

System Standards are based on the results of the work being undertaken in ISO/TC 138 "Plastics pipes, fittings and valves for the transport of fluids", which is a Technical Committee of the International Organization for Standardization (ISO). They are supported by separate standards on test methods to which references are made throughout the System Standard.

This standard is a guidance document only. It provides a set of guidelines which is related to that given in prEN 1046.

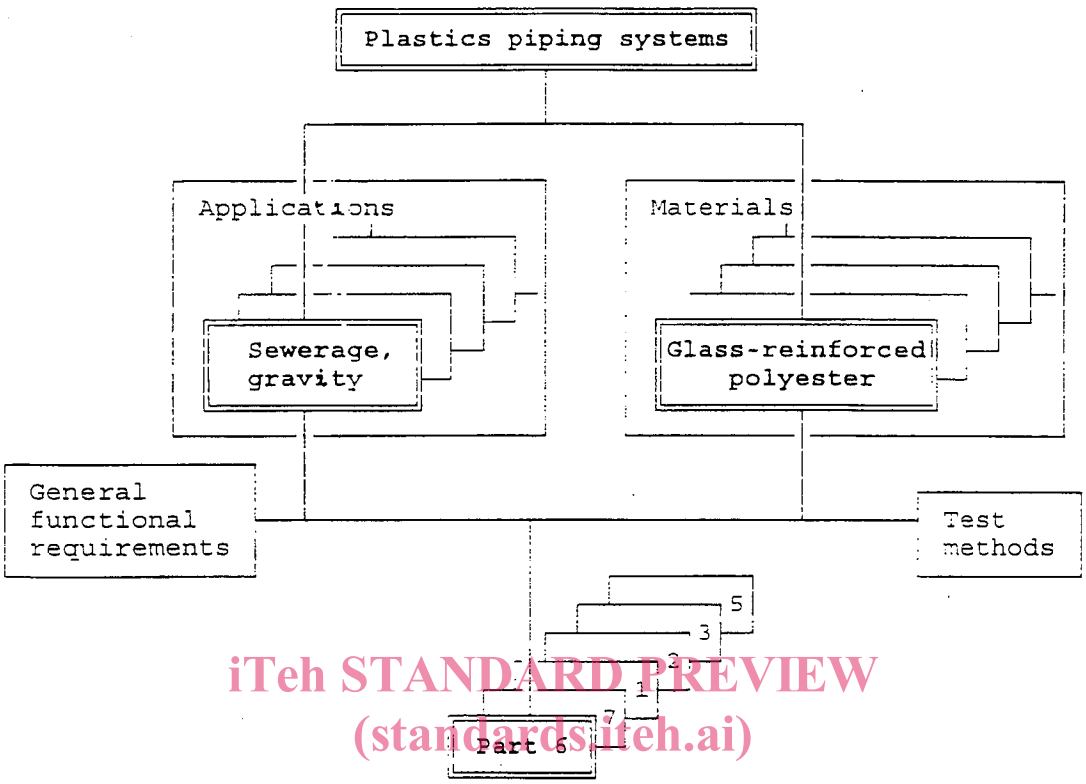
System Standards are consistant with standards on general functional requirement and on practices for installation.

Annex A, which is informative, gives a bibliography.

EN 1636 consists of the following parts, under the general title Plastics piping systems for non-pressure drainage and sewerage - Glass-reinforced thermosetting plastics (GRP) based on unsaturated polyester resin (UP)

- Part 1: General
- Part 2: Pipes with flexible, reduced articulated or rigid joints
- Part 3: Fittings
- Part 5: Fitness for purpose of the joints
- Part 6: Practices for installation (this standard)
- Part 7: Assessment of conformity

The following diagram indicates the place of this standard within the CEN framework of plastics piping systems:



At the date of publication of this standard, System Standards for piping systems of other plastics materials used for the same application are the following:

NOTE: All listed System Standards are under preparation.

EN 1401	*Plastics piping systems for non-pressure underground drainage and sewerage - Unplasticized poly(vinyl chloride) (PVC-U)*
EN 1852	*Plastics piping systems for non-pressure underground drainage and sewerage - Polypropylene (PP)*
EN [155wi009]	*Plastics piping systems for non-pressure underground drainage and sewerage - Structured-wall piping systems of unplasticized poly(vinyl chloride) (PVC-U)*
EN [155wi010]	*Plastics piping systems for non-pressure underground drainage and sewerage - Structured-wall piping systems of polypropylene (PP)*
EN [155wi011]	*Plastics piping systems for non-pressure underground drainage and sewerage - Structured-wall piping systems of polyethylene (PE)*

EN [155wi012] *Plastics piping systems for non-pressure underground drainage and sewerage - Polyethylene (PE)*

EN [155wi015] *Plastics piping systems for agricultural land drainage - Unplasticized poly(vinyl chloride) (PVC)*

EN [155wi136] *Plastics piping systems for drainage and sewerage with or without pressure - Glass-reinforced thermosetting plastics (GRP) based on epoxy resin (EP)*

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 February 1998, and conflicting national standards shall be withdrawn at the latest by February 1998.

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 and the United Kingdom.

Introduction

The System Standard, of which this is Part 6, specifies the properties of a piping system and its components when made from glass-reinforced thermosetting plastics (GRP) based on unsaturated polyester resin (UP) intended to be used for non-pressure drainage and sewerage. The System Standard includes practices for installation and procedures for assessment of conformity.

The committee is preparing a normative annex as an addendum to cover matters such as system constraints, determination of long-term safety factors based on a semi-probabilistic approach, surge allowance and allowable negative pressures for buried GRP pipe applications. This addendum will be included in the document when available.

In the event of prEN 1046 not receiving the support necessary for its publication, the relevant parts of prEN 1046 will be incorporated as an addendum into this Part of EN 1636, so that the appropriate requirements which were to be implemented as prEN 1046 remain available and applicable to EN 1636.

In this standard, much of the guidance is expressed as requirements, e.g. by use of "shall" or by instructions in the imperative. It is strongly recommended that these be followed whenever applicable.

Other guidance is presented for consideration as a matter of judgement in each case, e.g. by use of "should".

This Part of EN 1636, which covers practices for installation, is intended to be used by, amongst others, end-users, authorities, design engineers, testing and certification institutes and manufacturers.

1 Scope

This Part of EN 1636 specifies practices for installing piping systems made of glass-reinforced thermosetting plastics based on unsaturated polyester resin (GRP-UP), with or without a thermoplastic liner, intended to be used for non-pressure drainage and sewerage. It is applicable to GRP-UP piping systems for the conveyance of surface water or sewage below ground, at temperatures up to 50 °C.

NOTE 1: Piping systems conforming to EN 1636 can also be used for above ground applications provided the influence of the environment and the supports is considered in the design of the pipes and joints.

This standard covers a range of nominal sizes and nominal stiffnesses.

NOTE 2: It is the responsibility of the purchaser or specifier to make the appropriate selections from these aspects, taking into account their particular requirements and any relevant national regulations and installation practices or codes.

2 Normative references

This 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 standard only when incorporated in it by amendment or revision.

For undated references the latest edition of the publication referred to applies.

prEN 1046	Plastics piping and ducting systems - Systems outside building structures for the conveyance of water or sewage - Practices for installation above and below ground
EN 1636-1	Plastics piping systems for non-pressure drainage and sewerage - Glass-reinforced thermosetting plastics (GRP) based on unsaturated polyester resin (UP) - Part 1: General
EN 1636-2	Plastics piping systems for non-pressure drainage and sewerage - Glass-reinforced thermosetting plastics (GRP) based on unsaturated polyester resin (UP) - Part 2: Pipes with flexible, reduced articulation or rigid joints
EN 1636-3	Plastics piping systems for non-pressure drainage and sewerage - Glass-reinforced thermosetting plastics (GRP) based on unsaturated polyester resin (UP) - Part 3: Fittings

EN 1636-5	Plastics piping systems for non-pressure drainage and sewerage - Glass-reinforced thermosetting plastics (GRP) based on unsaturated polyester resin (UP) - Part 5: Fitness f for purpose of the joints

3 Definitions

For the purposes of this standard the definitions given in EN 1636-1 apply.

4 Procedures

4.1 General

Pipes and fittings covered by EN 1636-2 and EN 1636-3 respectively shall be installed in accordance with prEN 1046 taking into account the following information and guidance. In conditions not covered thereby the engineer shall make his own recommendations.

Attention is drawn to the limitations that may apply to negative pressure in service, in particular if the pipe zone backfill material is removed, and to mechanical compaction requirements during installation for pipe stiffness up to and including SN 5000 (see also prEN 1046).

4.2 Special conditions for pipes of nominal stiffness class less than SN 1250

Pipes having an initial specific ring stiffness, S0, less than 1250 N/m2 are not intended for laying directly in the ground. Whenever they are installed in the ground they shall be encased in concrete.

5 Specific information and recommendations

NOTE: prEN 1046 requires the information given in 5.1 to 5.11 to be provided in EN 1636.

5.1 Special transportation requirements

When following the guidance given in prEN 1046 particular care shall be taken to avoid impact damage. Pipes and fittings shall be secured before transporting them to or around the site.

5.2 Maximum site storage heights

The number of layers in a storage stack should not exceed those given in table 1, except in the case of pipes with a nominal stiffness greater than 2500, which may be stacked higher if precautions are taken to ensure that the stack is stable.