SLOVENSKI STANDARD
SIST ENV 1452-7:2001

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Cevni sistemi iz polimernih materialov za oskrbo z vodo - Nemehļ an polivinilklorid (PVC-U) - 7. del: Navodilo za ugotavljanje skladnosti

Plastics piping systems for water supply - Unplasticized poly(vinyl chloride) (PVC-U) - Part 7: Guidance for the assessment of conformity

Kunststoff-Rohrleitungssysteme für die Wasserversorgung -Weichmacherfreies Polyvinylchlorid (PVC-U) - Teil 7: Empfehlungen für die Beurteilung der Konformität

Systemes de canalisations en plastique pour alimentation en eau - Poly(chlorure de vinyle) non plastifié (PVC-U) - Partie 7: Guide pour l'évaluation de la conformité

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English version

Plastics piping systems for water supply - Unplasticized poly(vinyl chloride) (PVC-U) - Part 7: Guidance for the assessment of conformity

Systèmes de canalisations en plastique pour alimentation en eau - Poly(chlorure de vinyle) non plastifié (PVC-U) - Partie 7: Guide pour l'évaluation de la conformité

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This European Prestandard (ENV) was approved by CEN on 14 November 1999 as a prospective standard for provisional application.

The period of validity of this ENV is limited initially to three years. After two years the members of CEN will be requested to submit their comments, particularly on the question whether the ENV can be converted into a European Standard.

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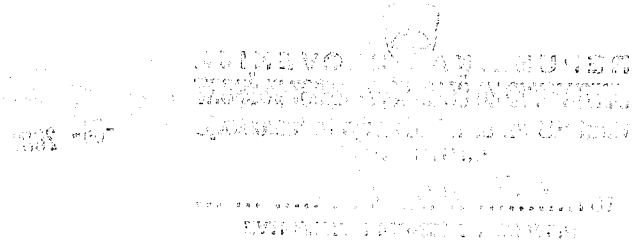

Foreword

This European Prestandard has been prepared by Technical Committee CEN/TC 155 "Plastics piping systems and ducting systems", the secretariat of which is held by NEN. It has been prepared in collaboration with Eureau and in liaison with CEN/TC 164 "Water supply".

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

This prestandard can be used to support elaboration of national third party certification procedures for products conforming to EN 1452, Parts 1 to 5.

This prestandard is a Part of a System Standard for plastics piping systems of a particular material for a specified application. There are a number of such System Standards.

System Standards are based on the results of the work 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.

The System Standards are consistent with general standards on functional requirements and on recommended practice for installation.

EN 1452 consists of the following Parts, under the general title *Plastics piping systems for water supply — Unplasticized poly(vinyl chloride) (PVC-U)*:

- *Part 1: General*
- *Part 2: Pipes*
- *Part 3: Fittings*
- *Part 4: Valves and ancillary equipment*
- *Part 5: Fitness for purpose of the system*
- *Part 6: Guidance for the installation (ENV)*
- *Part 7: Guidance for the assessment of conformity (this prestandard).*

This European Prestandard includes a bibliography.

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

NOTE All listed System Standards have reached the Enquiry stage or are under preparation.

prEN 12201, *Plastics piping systems for water supply — Polyethylene (PE)*

prEN 1796, *Plastics piping systems for water supply with or without pressure — Glass-reinforced thermosetting plastics (GRP) based on polyester resin (UP)*

Introduction

The System Standard, of which this is Part 7, specifies the requirements for a piping system and its components when made from unplasticized poly(vinyl chloride) (PVC-U). The piping system is intended to be used for water supply.

For material and components, requirements and test methods are specified in Parts 1, 2, 3 and 4 of EN 1452. Characteristics for fitness for purpose (mainly for joints) are covered in Part 5. Recommended practice for installation is given in ENV 1452-6.

This Part of EN 1452 covers procedures and recommendations for the assessment of conformity of materials, components, joints and assemblies and is intended to be used by certification bodies, inspection bodies, testing laboratories and manufacturers.

1 Scope

This European Prestandard gives guidance for the assessment of conformity intended to be included in the manufacturer's quality plan as part of the quality system.

This prestandard includes:

a) requirements for materials, components, joints and assemblies given in Parts 1 to 5 of EN 1452:1999;

b) requirements for the manufacturer's quality system;

NOTE 1 It is recommended that the quality system conforms to EN ISO 9001 or EN ISO 9002, as applicable.

c) definitions and procedures to be applied if third party certification is involved.

NOTE 2 If third party certification is involved, it is recommended that the certification body is accredited to EN 45011 or EN 45012, as applicable.

In conjunction with Parts 1 to 5 of EN 1452:1999 it is applicable to unplasticized poly(vinyl chloride) (PVC-U) piping systems intended to be used for the following:

a) water mains and services buried in ground;

b) conveyance of water above ground for both outside and inside buildings;

for the supply of water under pressure at approximately 20 °C (cold water) intended for human consumption and for general purposes.

This prestandard is also applicable to PVC-U piping systems for the conveyance of water up to and including 45 °C. For temperatures between 25 °C and 45 °C figure A.1 in annex A of EN 1452-2:1999 applies.

2 Normative references

This European Prestandard 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 prestandard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

EN 1452-1:1999, *Plastics piping systems for water supply — Unplasticized poly(vinyl chloride) (PVC-U) — Part 1: General*

EN 1452-2:1999, *Plastics piping systems for water supply — Unplasticized poly(vinyl chloride) (PVC-U) — Part 2: Pipes*

EN 1452-3:1999, *Plastics piping systems for water supply — Unplasticized poly(vinyl chloride) (PVC-U) — Part 3: Fittings*

EN 1452-4:1999, *Plastics piping systems for water supply — Unplasticized poly(vinyl chloride) (PVC-U) — Part 4: Valves and ancillary equipment*

EN 1452-5:1999, *Plastics piping systems for water supply — Unplasticized poly(vinyl chloride) (PVC-U) — Part 5: Fitness for purpose of the system*

3 Definitions, symbols and abbreviations

For the purposes of this prestandard, the definitions, symbols and abbreviations given in EN 1452-1:1999 apply together with the following:

3.1 Definitions

3.1.1
certification body
impartial body, governmental or non-governmental, possessing the necessary competence and responsibility to carry out certification of conformity according to given rules of procedure and management

3.1.2
inspection body
impartial organization or company, approved by a certification body as possessing the necessary competence to verify and/or to carry out initial type testing, audit testing and inspection of the manufacturer's factory production control in accordance with the relevant European Standard

3.1.3
testing laboratory
aboratory which measures, tests, calibrates or otherwise determines the characteristics of the performance of materials and products

3.1.4
quality system
organisational structure, responsibilities, procedures, processes and resources for implementing quality management (see ISO 8402)

3.1.5
quality plan
document setting out the specific quality practices, resources and sequence of activities relevant to a particular product or range of products

3.1.6
type testing (TT)
testing performed to prove that the material, component, joint or assembly is capable of conforming to the requirements given in the relevant standard

3.1.6.1
preliminary type testing (PTT)
type testing carried out by, or on behalf of, the manufacturer

3.1.6.2
initial type testing (ITT)
type testing carried out by, or on behalf of, a certification body for certification purposes

3.1.7
batch release test (BRT)
test performed by the manufacturer on a batch of components, which has to be satisfactorily completed before the batch can be released

3.1.8
process verification test (PVT)
test performed by the manufacturer on materials, components, joints or assemblies at specific intervals to confirm that the process continues to be capable of producing components conforming to the requirements given in the relevant standard

NOTE Such tests are not required to release batches of components and are carried out as a measure of process control.

3.1.9
audit test (AT)
test performed by, or on behalf of, a certification body to confirm that the material, component, joint or assembly continues to conform to the requirements given in the System Standard and to provide information to assess the effectiveness of the quality system

3.1.10
indirect test (IT)
test performed by the manufacturer different from that specified for that particular characteristic, having verified its correlation with the specified test

3.1.11
witness testing (WT)
testing accepted by a certification body for initial type testing and/or audit testing, which is carried out by, or on behalf of, the manufacturer and supervised by a representative of the certification body, qualified in testing

3.1.12
material batch or compound batch
clearly identifiable quantity of a particular material or compound

3.1.13
production batch
clearly identifiable collection of units, manufactured consecutively or continuously under the same conditions, using material or compound conforming to the same specification

3.1.14
lot
clearly identifiable sub-division of a batch for inspection purposes

3.1.15
sample
one or more units of product drawn from a batch or lot, selected at random without regard to quality

NOTE The number of units of product in the sample is the sample size.

3.1.16
acceptable quality level (AQL)
when a continuous series of lots or batches is considered, the quality level which for the purpose of sampling inspection is the limit of a satisfactory process average (see ISO 2859-1 and ISO 3951)

NOTE The designation of an AQL does not imply that a manufacturer has the right knowingly to supply any non-conforming unit of product.

3.1.17
inspection level
relationship between the lot or batch size and the sample size (see ISO 2859-1)

3.1.18
group
collection of similar components from which samples are selected for testing purposes.

3.1.19
single component
single part as a final product or a part of an assembled final product

3.1.20
assembled component
assembled final product using two or more single parts

3.1.21
assembly
test piece consisting of various components

3.1.22
sampling plan
specific plan which indicates the number of units of components or assemblies to be inspected

3.2 Abbreviations

NOTE 1 For reasons of avoiding misunderstanding the following abbreviations are kept the same in each of the languages. For the same reason the terms are given in the three languages.

NOTE 2 In the French language the abbreviation for "acceptable quality level" (AQL) is NQA, however for the purposes of this European Standard for all three languages the same abbreviation (AQL) is used.

AQL E: acceptable quality level
F: niveau de qualité acceptable
D: annehmbare Qualitätsgrenzlage

AT E: audit test
F: essai d'audit
D: Überwachungsprüfung

BRT E: batch release test
F: essai de libération de campagne de fabrication
D: Freigabeprüfung einer Charge

IT E: indirect test
F: essai indirect
D: indirekte Prüfung

ITT E: initial type testing
F: essais de type initiaux
D: Erst-Typprüfung

PTT E: preliminary type testing
F: essais de type préliminaires
D: vorausgehende Typprüfung

PVT E: process verification test
F: essai de vérification du procédé de fabrication
D: Prozeßüberprüfung

TT E: type test
F: essai de type
D: Typprüfung

WT E: witness testing
F: essais témoins
D: Prüfung unter Aufsicht

4 Requirements

4.1 General

4.1.1 Materials, components, joints and assemblies shall conform to the requirements given in Parts 1 to 5 of EN 1452:1999 as applicable.

4.1.2 Components and/or assemblies shall be produced by the manufacturer under a quality system which includes a quality plan.

4.2 Testing and inspection

4.2.1 Grouping

For the purposes of this prestandard the following groups shall apply for TT, PTT, ITT, PVT and AT.

4.2.1.1 Pressure group

Three pressure groups, each comprising a group of one or more current nominal pressures, shall be designated as given in table 1.

Table 1 — Pressure groups

Pressure group	Range of nominal pressures, PN
1	6; 7,5; 8
2	10; 12,5
3	16, 20, 25

4.2.1.2 Size group

Four size groups, each comprising a group of current nominal diameters, d_n, shall be designated as given in table 2.

Table 2 — Size groups

Size group	Range of nominal diameters d_n
1	12, 16, 20, 25, 32, 40, 50, 63
2	75, 90, 110, 125, 140, 160, 180, 220, 225
3	250, 280, 315, 355, 400, 450, 500, 560, 630
4	710, 800, 900, 1000

4.2.1.3 Single component group

Six single component groups, each comprising a group of components of similar design, shall be designated as given in table 3.

Table 3 — Single component groups

Single component group	Single components
1	11° to 90° bends
2	45° and 90° elbows and tees
3	Reducers, couplers, end caps
4	Unions, flange adaptors, adaptor pieces and/or their parts
5	Valves and/or their parts
6	Ancillaries and/or their parts