TECHNICAL SPECIFICATION

SPÉCIFICATION TECHNIQUE

TECHNISCHE SPEZIFIKATION

CEN ISO/TS 21003-7

July 2008

ICS 23.040.20; 91.140.60

English Version

Multilayer piping systems for hot and cold water installations inside buildings - Part 7: Guidance for the assessment of conformity (ISO/TS 21003-7:2008)

Systèmes de canalisations multicouches pour installations d'eau chaude et froide à l'intérieur des bâtiments - Partie 7: Guide pour l'évaluation de la conformité (ISO/TS 21003-7:2008)

Mehrschichtverbund-Rohrleitungssysteme für die Warm- und Kaltwasserinstallation innerhalb von Gebäuden - Teil 7: Empfehlungen für die Beurteilung der Konformität (ISO/TS 21003-7:2008)

This Technical Specification (CEN/TS) was approved by CEN on 25 June 2008 for provisional application.

The period of validity of this CEN/TS 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 CEN/TS can be converted into a European Standard.

CEN members are required to announce the existence of this CEN/TS in the same way as for an EN and to make the CEN/TS available promptly at national level in an appropriate form. It is permissible to keep conflicting national standards in force (in parallel to the CEN/TS) until the final decision about the possible conversion of the CEN/TS into an EN is reached.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

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

Management Centre: rue de Stassart, 36 B-1050 Brussels

Ref. No. CEN ISO/TS 21003-7:2008: E

Foreword

This document (CEN ISO/TS 21003-7:2008) has been prepared by Technical Committee CEN/TC 155 “Plastics piping systems and ducting systems", the secretariat of which is held by NEN, in collaboration with Technical Committee ISO/TC 138 "Plastics pipes, fittings and valves for the transport of fluids".

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

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

Contents

Page

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

In other circumstances, particularly when there is an urgent market requirement for such documents, a technical committee may decide to publish other types of document:

— an ISO Publicly Available Specification (ISO/PAS) represents an agreement between technical experts in an ISO working group and is accepted for publication if it is approved by more than 50 % of the members of the parent committee casting a vote;

— an ISO Technical Specification (ISO/TS) represents an agreement between the members of a technical committee and is accepted for publication if it is approved by 2/3 of the members of the committee casting a vote.

An ISO/PAS or ISO/TS is reviewed after three years in order to decide whether it will be confirmed for a further three years, revised to become an International Standard, or withdrawn. If the ISO/PAS or ISO/TS is confirmed, it is reviewed again after a further three years, at which time it must either be transformed into an International Standard or be withdrawn.

ISO/TS 21003-7 was prepared by the European Committee for Standardization (CEN) Technical Committee CEN/TC 155, *Plastics piping systems and ducting systems*, in collaboration with Technical Committee ISO/TC 138, *Plastics pipes, fittings and valves for the transport of fluids*, Subcommittee SC 2, *Plastics pipes and fittings for water supplies*.

This Technical Specification can be used to support elaboration of national third-party certification procedures for products conforming to the applicable part(s) of ISO 21003.

It forms part of a system standard for multilayer piping systems of a particular material for a specified application. System standards are supported by separate standards on test methods to which reference is made throughout the system standard. The system standards are consistent with general standards on functional requirements and on recommended practice for installation.

ISO 21003 consists of the following parts, under the general title *Multilayer piping systems for hot and cold water installations inside buildings*:

— *Part 1: General*

— *Part 2: Pipes*

— *Part 3: Fittings*

— *Part 5: Fitness for purpose of the system*

— *Part 7: Guidance for the assessment of conformity* [Technical Specification]

NOTE 1 ISO 21003 does not include a Part 4: *Ancillary equipment*, or a Part 6: *Guidance for installation*.

For ancillary equipment, separate standards can apply.

For guidance on installation, reference is made to separate documents.

NOTE 2 Guidance on installation of plastics piping systems made from various materials intended to be used for hot and cold water installations is given in ENV 12108 [1].

Other system standards which, at the date of publication of this part of ISO 21003, had been published for plastics piping systems used for the same application are the following:

ISO 15874, *Plastics piping systems for hot and cold water installations — Polypropylene (PP)* (identical to EN ISO 15874)

ISO 15875, *Plastics piping systems for hot and cold water installations — Crosslinked polyethylene (PE-X)* (identical to EN ISO 15876)

ISO 15876, *Plastics piping systems for hot and cold water installations — Polybutylene (PB)* (identical to EN ISO 15876)

ISO 15877, *Plastics piping systems for hot and cold water installations — Chlorinated poly(vinyl chloride) (PVC-C)* (identical to EN ISO 15877)

ISO 22391, *Plastics piping systems for hot and cold water installations — Polyethylene of raised temperature resistance (PE-RT)*

Introduction

ISO 21003 specifies the requirements for multilayer piping systems. The piping system is intended to be used for hot and cold water installations inside buildings.

In respect of potentially adverse effects on the quality of water intended for human consumption, caused by the products covered by ISO 21003:

— no information is provided as to whether the product may be used without restriction in any of the member states of the EU or EFTA;

— it should be noted that, while awaiting the adoption of verifiable European criteria, existing national regulations concerning the use and/or the characteristics of these products remain in force.

Requirements and test methods for material and components are specified in ISO 21003-2 and ISO 21003-3. Characteristics relating to fitness for purpose (mainly for joints) are covered in ISO 21003-5.

This Technical Specification gives guidance for the assessment of conformity of materials, components, joints and assemblies and it is intended to be used by certification bodies, inspection bodies, testing laboratories and manufacturers.

Multilayer piping systems for hot and cold water installations inside buildings —

Part 7: Guidance for the assessment of conformity

1 Scope

This Technical Specification is applicable, in conjunction with the other parts of ISO 21003 (see Foreword), to multilayer piping systems intended to be used for hot and cold water installations inside buildings for the conveyance of water — whether or not the water is intended for human consumption (domestic systems) or for heating systems — under specified design pressures and temperatures appropriate to the class of application (see Table 1 of ISO 21003-1:2008). It gives guidance for the assessment of conformity, to be included in the manufacturer's quality plan as part of the quality system.

It includes:

— requirements for materials, components, joints and assemblies given in the applicable part(s) of ISO 21003;

— requirements for the manufacturer's quality system (e.g. ISO 9001 [2]);

— definitions and procedures to be used if third-party certification is involved.

NOTE If third-party certification is involved, it is recommended that the certification body be accredited to ISO/IEC Guide 65 [3] or ISO/IEC 17021 [4], as applicable.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 2859-1, *Sampling procedures for inspection by attributes — Part 1: Sampling schemes indexed by acceptance quality limit (AQL) for lot-by-lot inspection*

ISO 3951-1, *Sampling procedures for inspection by variables — Part 1: Specification for single sampling plans indexed by acceptance quality limit (AQL) for lot-by-lot inspection for a single quality characteristic and a single AQL*

ISO 17456:2006, *Plastics piping systems — Multilayer pipes — Determination of long-term strength* (identical to EN ISO 17456:2006)

ISO 21003-1:2008, *Multilayer piping systems for hot and cold water installations inside buildings — Part 1: General* (identical to EN ISO 21003-1:2008)

ISO 21003-2:2008, *Multilayer piping systems for hot and cold water installations inside buildings — Part 2: Pipes* (identical to EN ISO 21003-2:2008)

ISO 21003-3:2008, *Multilayer piping systems for hot and cold water installations inside buildings — Part 3: Fittings* (identical to EN ISO 21003-3:2008)

ISO 21003-5:2008, *Multilayer piping systems for hot and cold water installations inside buildings — Part 5: Fitness for purpose of the system* (identical to EN ISO 21003-5:2008)

ISO 22391-2:—[1)], *Plastics piping systems for hot and cold water installations — Polyethylene of raised temperature resistance (PE-RT) — Part 2: Pipes*

3 Definitions, symbols and abbreviated terms

For the purposes of this Technical Specification, the definitions, symbols and abbreviated terms given in ISO 21003-1:2008 apply, together with the following.

3.1 Definitions

3.1.1
certification body
impartial body, governmental or non-governmental, possessing the necessary competence and authority 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 standard

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

3.1.4
quality system
organizational structure, responsibilities, procedures, processes and resources for implementing quality management

NOTE An example of a quality system is ISO 9001 [2].

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 verify that the material, component, joint or assembly is capable of conforming to the requirements given in the relevant standard

3.1.7
preliminary type testing
PTT
type testing carried out by or on behalf of the manufacturer

1) To be published. (Revision of ISO 22391-2:2007)

