TECHNICAL SPECIFICATION

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CEN/TS 14578

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Supersedes CEN/TS 14578:2003

English Version

Plastics piping systems for water supply or drainage and sewerage - Glass-reinforced thermosetting plastics (GRP) based on unsaturated polyester resin (UP) - Recommended practice for installation

Systèmes de canalisations plastiques pour l'adduction d'eau et l'assainissement - Plastiques thermodurcissables renforcés de verre (PRV) à base de résine de polyester non saturé (UP) - Pratique recommandée pour la pose

Kunststoff-Rohrleitungssysteme für die Wasserversorgung und Ableitung von Abwasser - Glasfaserverstärkte duroplastische Kunststoffe (GFK) auf der Basis von ungesättigtem Polyesterharz (UP) - Empfehlungen für die Verlegung

This Technical Specification (CEN/TS) was approved by CEN on 10 September 2013 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.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
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Foreword

This document (CEN/TS 14578:2013) has been prepared by Technical Committee CEN/TC 155 “Plastics piping systems and ducting systems”, the secretariat of which is held by NEN.

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.

This document supersedes CEN/TS 14578:2003.

The following is a list of the major technical changes that have been made since the previous edition:

a) removed reference to ENV 1046 which will be revised to become applicable only to thermoplastic pipes;

b) reference is made to ISO/TS 10465-1 which is specifically addressing installation of GRP piping;

c) revised wording to improve clarity and to reflect revisions to GRP product standards EN 1796 and EN 14364.

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, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Introduction

System Standards EN 1796 and EN 14364 specify 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 pressure and non-pressure water or sewerage applications. A System Standard includes specifications for pipes, fittings and joints and makes reference to supporting standards covering test methods, recommended practices for installation (this Technical Specification) and procedures for assessment of conformity.

Matters such as design procedures, determination of long-term safety factors based on a semi-probabilistic approach, surge allowance and allowable negative pressures for buried GRP pipe applications are covered in CEN/TS 14807 [1].

This supporting Technical Specification, which covers practices for installation, is intended to be used in conjunction with ISO/TS 10465-1 by, amongst others, end-users, authorities, design engineers, testing and certification institutes and manufacturers.

In this Technical Specification, 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”.

1 Scope

This Technical Specification (CEN/TS) specifies recommended practices for the underground installation of piping systems made of glass-reinforced thermosetting plastics based on unsaturated polyester resin (GRP-UP), intended to be used for pressure or non-pressure water or sewerage applications and complying with, as applicable, EN 14364 and/or EN 1796. It is applicable to GRP-UP piping systems of nominal sizes from DN 100 to DN 4000 which are intended to be used for the conveyance of liquids at temperatures up to 50 °C and at pressures of 0,5 bar and greater.

Design procedures, the determination of long-term safety factors based on a semi-probabilistic approach, surge allowance and allowable negative pressures for buried GRP pipe applications are addressed in CEN/TS 14807 [1].

Piping systems conforming to EN 1796 or EN 14364 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. It is recommended to refer to ISO/TR 10986 [4] for guidelines for the installation of above-ground flexible jointed pipes.

NOTE 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

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

EN 805, *Water supply - Requirements for systems and components outside buildings*

EN 1610, *Construction and testing of drains and sewers*

EN 1796:2013, *Plastics piping systems for water supply with or without pressure - Glass-reinforced thermosetting plastics (GRP) based on unsaturated polyester resin (UP)*

EN 14364:2013, *Plastics piping systems for drainage and sewerage with or without pressure - Glass-reinforced thermosetting plastics (GRP) based on unsaturated polyester resin (UP) - Specifications for pipes, fittings and joints*

ISO/TS 10465-1:2007, *Underground installation of flexible glass-reinforced pipes based on unsaturated polyester resin (GRP-UP) - Part 1: Installation procedures*

3 Terms and definitions

For the purposes of this document the terms and definitions given in ISO/TS 10465-1:2007 apply. In addition, see also EN 1796:2013 and EN 14364:2013 for general terms and definitions relating to GRP pipes.