



BSI Standards Publication

District cooling pipes — Factory made flexible pipe systems

Part 3: Non bonded system with plastic service pipes; requirements and test methods

National foreword

This British Standard is the UK implementation of EN 17414-3:2020.

The UK participation in its preparation was entrusted to Technical Committee RHE/9, Insulated underground pipelines.

A list of organizations represented on this committee can be obtained on request to its committee manager.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

© The British Standards Institution 2020
Published by BSI Standards Limited 2020

ISBN 978 0 539 04617 5

ICS 23.040.99

Compliance with a British Standard cannot confer immunity from legal obligations.

This British Standard was published under the authority of the Standards Policy and Strategy Committee on 31 August 2020.

Amendments/corrigenda issued since publication

Date	Text affected
------	---------------

English Version

**District cooling pipes - Factory made flexible pipe systems
- Part 3: Non bonded system with plastic service pipes;
requirements and test methods**

Réseaux d'eau glacée - Systèmes de tuyaux flexibles
manufacturés - Partie 3 : Système non bloqué avec tube
de service en plastique - prescriptions et méthodes
d'essai

Fernkälterohre - Werkmäßig gefertigte flexible
Rohrsysteme - Teil 3: Nicht-Verbundrohrsysteme mit
Mediumrohren aus Kunststoff - Anforderungen und
Prüfungen

This European Standard was approved by CEN on 22 June 2020.

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 CEN-CENELEC Management Centre or to any CEN member.

This European Standard exists 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 CEN-CENELEC Management Centre has the same status as the official versions.

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



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

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

Contents

Page

European foreword	3
Introduction	4
1 Scope.....	5
2 Normative references.....	5
3 Terms and definitions	7
4 Classification.....	7
4.1 Operating temperatures and service life	7
4.2 Design pressures.....	7
5 Requirements.....	8
5.1 General requirements.....	8
5.2 Service pipes, fittings and their connections	8
5.3 Sealing in linear direction of pipe assemblies.....	8
5.4 Water vapour permeation of pipe assemblies	8
6 Test procedures.....	8
Annex A (informative) Application of Miner's Rule.....	10
Annex B (informative) Guidelines for testing.....	13
Annex C (informative) Waste treatment and recycling.....	15
Bibliography	16

European foreword

This document (EN 17414-3:2020) has been prepared by Technical Committee CEN/TC 107 “Prefabricated district heating and district cooling pipe system”, the secretariat of which is held by DS.

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 January 2021, and conflicting national standards shall be withdrawn at the latest by January 2021.

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

According to the CEN-CENELEC Internal Regulations, the national standards organisations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Introduction

Factory made flexible non bonded pipe systems with plastic service pipes for directly buried district cooling networks are of common technical usage. In order to ensure quality including product-related service life, to ensure safety in use, economical energy usage and to facilitate comparability in the market, CEN/TC 107 decided to set up standards for these products.

This document is one of a series of standards which form several parts of EN 17414, *District cooling pipes – Factory made flexible pipe systems*:

- *Part 1: Classification, general requirements and test methods;*
- *Part 2: Bonded system with plastic service pipes - requirements and test methods;*
- *Part 3: Non bonded system with plastic service pipes - requirements and test methods (this document).*

The other standards from CEN/TC 107 covering this subject are:

- EN 17415-1, *District cooling pipes – Bonded single pipe systems for directly buried cold water networks – Part 1: Factory made pipe assembly of steel or plastic service pipe, polyurethane thermal insulation and a casing of polyethylene;*
- EN 17415-2, *District cooling pipes – Bonded single pipe systems for directly buried cold water networks Part 2: Factory made fitting assemblies of steel or plastic service pipe, polyurethane thermal insulation and a casing of polyethylene¹;*
- EN 17415-3, *District cooling pipes – Bonded single pipe systems for directly buried cold water networks Part 3: Factory made steel valve assembly for steel or plastic service pipe, polyurethane thermal insulation and a casing of polyethylene¹;*
- EN ZZZZZ-1, *District cooling pipes – Design and installation of thermal insulated bonded single and twin pipe systems for directly buried cold water networks – Part 1: Design¹;*
- EN ZZZZZ-2, *District cooling pipes – Design and installation of thermal insulated bonded single and twin pipe systems for directly buried cold water networks – Part 2: Installation¹;*
- EN 489-1, *District heating pipes – Bonded single and twin pipe systems for buried hot water networks – Part 1: Joint casing assemblies and thermal insulation for hot water networks in accordance with EN 13941-1;*
- EN 14419, *District heating pipes – Bonded single and twin pipe systems for directly buried hot water networks – Surveillance systems.*

Waste management and recycling of materials is dealt with in Annex C.

¹ Under preparation.