ICS 23.040.60 SLOVENSKÁ TECHNICKÁ NORMA Apríl 2020

STN	**Potrubia diaľkového (teplovodného) vykurovania Združené jednoduché a združené dvojrúrové potrubné systémy pre predizolované bezkanálové rozvody teplej vody Časť 1: Zostavy spojok a tepelná izolácia teplovodných sietí v súlade s EN 13941-1**	**STN EN 489-1** 38 3374

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

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 03/20

Obsahuje: EN 489-1:2019

Oznámením tejto normy sa ruší
STN EN 489 (38 3374) zo septembra 2009

130405

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 489-1

October 2019

ICS 23.040.07; 23.040.60 Supersedes EN 489:2009

English Version

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

Tuyaux de chauffage urbain - Systèmes bloqués de tuyaux monotubes et bitubes pour les réseaux d'eau chaude enterrés - Assemblage des joints de tube de protection pour les réseaux d'eau chaude conformes à l'EN 13941-1

Fernwärmerohre - Einzel- und Doppelrohr-Verbundsysteme für erdverlegte Heißwasser-Fernwärmenetze - Teil 1: Mantelrohrverbindungen und Wärmedämmung für Heißwasser-Fernwärmenetze nach EN 13941-1

This European Standard was approved by CEN on 12 August 2019.

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

Ref. No. EN 489-1:2019 E

Contents

Page

European foreword

This document (EN 489-1:2019) has been prepared by Technical Committee CEN/TC 107 “District heating and cooling”, 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 April 2020, and conflicting national standards shall be withdrawn at the latest by April 2020.

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.

This document supersedes EN 489:2009.

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

The first edition of EN 489 was approved in 1994 and updated in 2003 and 2009. The main areas of this revision are the following:

— Terms and definitions has been moved to EN 13941-1;

— Ageing resistance test for PUR foam has been removed;

— requirements to plugs have been added;

— requirements and test methods for PUR foam properties are back in EN 253;

— requirements for marking of joints have been added;

— preparation of test specimen, under supervision of the test institute, has been added;

— it is valid for twin-pipe systems as well;

— Annex C was moved to EN 13941-2;

— concerning the soil stress test - the possibility of either overfill with 1 m sand or use of a rigid plate was removed and is replaced by a total load of a rigid plate plus 0,3 m of sand to a total of 18 kN/m^2;

— larger pipe diameters may be tested in soil stress test.

This specification is part of the series of standards for bonded systems using polyurethane foam thermal insulation applied to bond to a steel service pipe and a polyethylene casing.

For information on the minimum expected thermal life with operation at various temperatures with respect to PUR foam performance see EN 253.

Other standards from TC 107 are:

— EN 253, *District heating pipes — Bonded single pipe systems for buried hot water networks — Factory made pipe assembly of a steel service pipe, polyurethane foam thermal insulation and a casing of polyethylene*;

— EN 448, *District heating pipes — Bonded pipe systems for buried hot water networks — Factory made fitting assemblies of steel service pipes, polyurethane thermal insulation and a casing of polyethylene*;

— EN 488, *District heating pipes — Bonded single pipe systems for directly buried hot water networks — Factory made steel valve assembly for steel service pipes, polyurethane foam thermal insulation and a casing of polyethylene*;

— EN 13941-1, *District heating pipes — Design and installation of thermal insulated bonded single and twin pipe systems for buried hot water networks — Part 1: Design*

— EN 13941-2, *District heating pipes — Design and installation of thermal insulated bonded single and twin pipe systems for buried hot water networks — Part 2: Installation*

— EN 17248, *District heating and district cooling pipe systems - Terms and definitions*

— EN 14419, *District heating pipes — Bonded single and twin pipe systems for directly buried hot water networks — Surveillance systems*.

— EN 15632 (all parts), *District heating pipes - Pre-insulated flexible pipe systems*

— EN 15698-1, *District heating pipes — Bonded twin pipe systems for directly buried hot water networks — Part 1: Factory made twin pipe assembly of steel service pipes, polyurethane foam thermal insulation and one casing of polyethylene*

— EN 15698-2, *District heating pipes — Bonded twin pipe systems for directly buried hot water networks — Part 2: Factory made fitting and valve assemblies of steel service pipes, polyurethane thermal insulation and one casing of polyethylene*

1 Scope

This document specifies requirements and test methods for joints between adjacent factory made pipe, and/or fitting and/or valve assemblies for buried hot water networks in accordance with EN 13941-1.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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.

EN 253:2019, *District heating pipes — Bonded single pipe systems for buried hot water networks — Factory made pipe assembly of a steel service pipe, polyurethane foam thermal insulation and a casing of polyethylene*

EN 12814-1, *Testing of welded joints of thermoplastics semi-finished products — Part 1: Bend test*

EN 13941-2, *District heating pipes — Design and installation of thermal insulated bonded single and twin pipe systems for directly buried hot water networks — Part 2: Installation*

EN 17248, *District heating and district cooling pipe systems — Terms and definitions*

EN 14419, *District heating pipes — Bonded single and twin pipe systems for directly buried hot water networks — Surveillance systems*

ISO 16770, *Plastics — Determination of environmental stress cracking (ESC) of polyethylene — Full-notch creep test (FNCT)*[1]

[1] Under preparation. Stage at the time of publication: ISO/DIS 16770