ICS 23.040.01 PREDBEŽNÁ SLOVENSKÁ TECHNICKÁ NORMA Február 2025

STN P	**Potrubia diaľkového (teplovodného) vykurovania Priemyselne vyrábané ohybné rúrové systémy Klasifikácia, požiadavky a skúšobné metódy pre združené alebo nezdružené systémy s prípojnými potrubiami vystuženými termoplastom**	**STN P CEN/TS 17889** 38 3382

District heating pipes - Factory made flexible pipe systems - Classification, requirements and test methods for bonded or non-bonded system with thermoplastic reinforced service pipes (TRSP)

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. 01/25

Táto predbežná slovenská technická norma je určená na overenie. Prípadné pripomienky pošlite do novembra 2026 Úradu pre normalizáciu, metrológiu a skúšobníctvo Slovenskej republiky.

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English Version

District heating pipes - Factory made flexible pipe systems - Classification, requirements and test methods for bonded or non-bonded system with thermoplastic reinforced service pipes (TRSP)

Canalisation pour le chauffage urbain - Systèmes de conduites flexibles manufacturés - Classification, exigences et méthodes d'essai pour des systèmes bloqués ou non bloqués de tuyaux de service renforcés en thermoplastique (TRSP)

Fernwärmerohre - Werkmäßig gedämmte flexible Rohrsysteme - Klassifikation, Anforderungen und Prüfungen für Verbund- und Nicht-Verbund-Rohrsysteme mit thermoplastischen, verstärkten Mediumrohren (TRSP)

This Technical Specification (CEN/TS) was approved by CEN on 6 October 2024 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.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
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European foreword

This document (CEN/TS 17889:2024) has been prepared by Technical Committee CEN/TC 107 Prefabricated district heating and district cooling pipe systems", the secretariat of which is held by DS.

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Introduction

District heating technology has developed rapidly since its origin and especially in recent times. Today, there are different generations of district heating networks. The technologies of these generations are driven by the different heat sources and operating temperatures used.

CEN/TC 107 provides a set of European Standard series for rigid and flexible piping systems in district heating to suit all generations and requirements of district heating networks in the market.

This document ensures quality for factory made piping systems in district heating.

This document covers flexible, factory made piping systems, with thermoplastic reinforced service pipes, for operation conditions as described in the scope of this document.

1 Scope

This document specifies classification, general requirements and test methods for flexible, factory made, buried district heating pipe systems with thermoplastic reinforced service pipes (TRSP).

The factory made bonded or non-bonded flexible pipe systems covered by this document consist of:

— a thermoplastic reinforced service pipe, which consists of an inner layer made of PE-Xa, a thermoplastic intermediate layer, a reinforcement layer made of para-aramid fibres, an outer thermoplastic layer and a diffusion barrier layer, all with bonded structure;

— a thermal insulation layer;

— a casing made of PE.

Depending on the temperature profile, this document is applicable to a maximum operating temperature of 115 °C and maximum operating design pressure up to 1,6 MPa.

The pipe systems are designed for a service life of at least 30 years.

This document does not apply to cover surveillance systems.

NOTE For higher temperatures or for the transport of other fluids, for example potable water, additional requirements and testing is needed. Such requirements are not specified in this document.

A guideline for testing the pipe assembly is given in Annex D.

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 15632-1, *District heating pipes — Factory made flexible pipe systems — Part 1: Classification, general requirements and test methods*

EN 15632-2, *District heating pipes — Factory made flexible pipe systems — Part 2: Bonded system with plastic service pipes; requirements and test methods*

EN 15632-3, *District heating pipes — Factory made flexible pipe systems — Part 3: Non bonded system with plastic service pipes; requirements and test methods*

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

EN ISO 3126, *Plastics piping systems — Plastics components — Determination of dimensions (ISO 3126)*

EN ISO 1167-1, *Thermoplastics pipes, fittings and assemblies for the conveyance of fluids — Determination of the resistance to internal pressure — Part 1: General method (ISO 1167-1)*

EN ISO 1167-2, *Thermoplastics pipes, fittings and assemblies for the conveyance of fluids — Determination of the resistance to internal pressure — Part 2: Preparation of pipe test pieces (ISO 1167-2)*

EN ISO 9080, *Plastics piping and ducting systems — Determination of the long-term hydrostatic strength of thermoplastics materials in pipe form by extrapolation (ISO 9080)*

EN ISO 15875-2, *Plastics piping systems for hot and cold water installations — Crosslinked polyethylene (PE-X) — Part 2: Pipes (ISO 15875-2)*

EN ISO 19893:2018, *Plastics piping systems — Thermoplastics pipes and fittings for hot and cold water — Test method for the resistance of mounted assemblies to temperature cycling (ISO 19893:2011)*

ISO 527-1:2019, *Plastics — Determination of tensile properties — Part 1: General principles*

ISO 527-2:2012, *Plastics — Determination of tensile properties — Part 2: Test conditions for moulding and extrusion plastics*

ISO 2578, *Plastics — Determination of time-temperature limits after prolonged exposure to heat*

ISO 6259-1:2015, *Thermoplastics pipes — Determination of tensile properties — Part 1: General test method*

ISO 10146, *Crosslinked polyethylene (PE-X) and crosslinked medium density polyethylene (PE-MDX) — Effect of time and temperature on expected strength*

ASTM D7269,[1] *Standard Tests Methods for Tensile Testing of Aramid Yarns*

[1] Issued by: ASTM International on 2020-03-02.