

SVENSK STANDARD

SS-EN 17248:2019



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Fjärrvärme- och fjärrkylerörsystem – Terminologi

District heating and district cooling pipe systems – Terms and definitions

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EUROPEAN STANDARD

EN 17248

NORME EUROPÉENNE

EUROPÄISCHE NORM

October 2019

ICS 01.040.23; 23.040.07

English Version

District heating and district cooling pipe systems - Terms and definitions

Canalisations pour le chauffage urbain et réseaux d'eau glacée - Termes et définitions

Fernwärme- und Fernkälterohrsysteme - Begriffe

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

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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.

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SS-EN 17248:2019 (E)

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European foreword

This document (EN 17248:2019) 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.

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of an identical text or by endorsement, at the latest by April 2020, and conflicting national standards shall be withdrawn at the latest by April 2020.

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Introduction

This document compiles a vocabulary of terms, with their definitions, applied in the field of district heating and district cooling pipe systems with factory made system components. Only terms which are particular to the pertinent field in CEN/TC 107 are included.

The other standards from CEN/TC 107 are:

- EN 253, *District heating pipes — Bonded single pipe systems for directly buried hot water networks — Factory made pipe assembly of steel service pipe, polyurethane thermal insulation and a casing of polyethylene;*
- EN 448, *District heating pipes — Bonded single pipe systems for directly 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 thermal insulation and a casing of polyethylene;*
- EN 489-1, *District heating pipes - Bonded single and twin pipe systems for directly buried hot water networks - Part 1: Joint casing assemblies and thermal insulation for hot water networks in accordance with EN 13941-1;*
- EN 13941-1, *District heating pipes - Design and installation of thermal insulated bonded single and twin pipe systems for directly 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 directly buried hot water networks — Part 2: Installation;*
- 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 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 compiles a vocabulary of terms, with their definitions, applied in the field of district heating and district cooling pipe systems with factory made system components. Only terms which are particular to the pertinent field in CEN/TC 107 are included.

2 Normative references

There are no normative references in this document.

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <https://www.iso.org/obp>

3.1

above ground installation

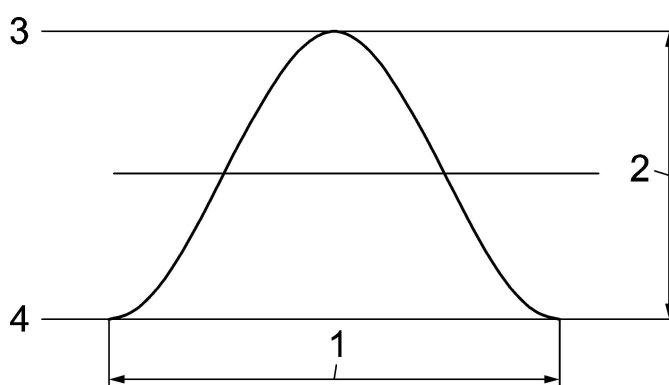
installation method where the pipe is not surrounded by soil

3.2

action cycle

impact comprising of one full action course, ranging from a minimum (maximum) level through an average value to a maximum (minimum) level and back

Note 1 to entry: See Figure 1 for the principle of action cycles.



Key

- 1 one action cycle
- 2 action (or stress or deformation) range
- 3 maximum level of the action, stress or deformation
- 4 minimum level of the action, stress or deformation

Figure 1 — Principle of one action cycle

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3.3

ageing

keeping the service pipe at a defined, elevated temperature for a certain time while also exposing the casing to a defined temperature

3.4

ageing factor

f_a

factor without a dimension which expresses the ageing of the thermal insulation in relation to the expected service life

3.5

anchor

construction used to transfer the forces from the service pipe through the thermal insulation by use of a steel plate to a fixed point

3.6

artificial ageing

keeping the complete pipe assembly at a certain, elevated temperature for a certain time

3.7

assembly of measuring elements

process where a fitter during the assembly of pipe elements connects measuring elements into a measuring section

3.8

batch

specified quantity of material made under the same uniform production conditions in one production run by one manufacturer

3.9

bending angle

α

deviation in direction of the pipe centre lines

Note 1 to entry: For the principle of deviation in direction of the pipe centre lines see Figure 2.

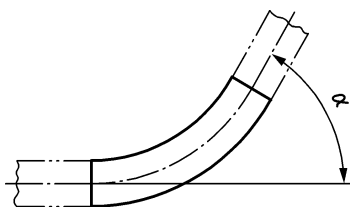


Figure 2 — Principle of deviation in direction of the pipe centre lines

3.10

bonded system

pipe element which is bonded by thermal insulation

**3.11
butt welded bend**

bend manufactured either by hot bending of a steel pipe or by hot forming of steel plates which are subsequently welded together

Note 1 to entry: See Figure 3 for a butt welded bend.

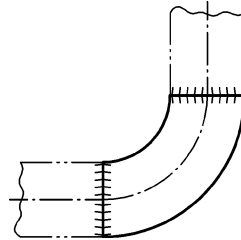


Figure 3 — Butt welded bend

**3.12
casing**

outer layer of polythene (which may contain a diffusion barrier) intended to protect the thermal insulation and service pipe from the effects of ground water, moisture and mechanical damage

**3.13
characteristic value**

value of a stochastic variable which, at a probability of 95 %, will not be exceeded

**3.14
centre line deviation**

deviation between the centre line of the service pipe and the centre line of the casing

**3.15
cold formed bend**

bend manufactured by cold bending of steel pipe

Note 1 to entry: See Figure 4 for a cold formed bend.

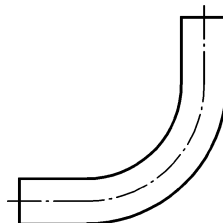


Figure 4 — Cold or hot formed bend

**3.16
cold laying**

method of pipeline laying where the pipes are installed and put into operation without pre-stressing, in which the yield strength of the service pipe material may be exceeded