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English Version

Heat meters - Recommendations for circulation water in industrial and district heating systems and their operation

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European foreword

This document (CEN/TR 16911:2015) has been prepared by Technical Committee CEN/TC 176 “Heat meters”, the secretariat of which is held by SIS.

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.

Introduction

This document is based on the German Guideline AGFW FW 510 prepared by the German Heat and Power Association (AGFW) that represents the state of the art but does not have a normative status has been reproduced in this Technical Report with the permission of AGFW.

This Technical Report is an informative document that describes a process that may be applied for the operation of district heating facilities and gives recommendations for the water used in such facilities. The water quality described in this Technical Report can be used also during testing of heat meters.

1 Scope

This Technical Report applies to industrial and district heating supply by means of high-temperature water heating facilities (flow temperature $> 100\text{ }^{\circ}\text{C}$). This also applies to high-temperature water heating facilities (flow temperature $\leq 100\text{ }^{\circ}\text{C}$) that are directly connected to district heating networks. In this Technical Report, the aforementioned supply variants will, in the following, be referred to as “district heating facilities”.

This document applies without limitations to new facilities. For existing district heating facilities, the application of this Technical Report is recommended in order to prevent faults due to the chemical composition of the circulation water that would affect the facilities' safe operability and availability.

NOTE Informative notes in the form of guidance and recommendations are identified correspondingly and set in italics for better differentiation.

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 1717, *Protection against pollution of potable water in water installations and general requirements of devices to prevent pollution by backflow*

ISO 11466, *Soil quality — Extraction of trace elements soluble in aqua regia*

3 Terms and definitions

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

3.1 General

3.1.1

district heating

heat (regardless of its origin) which is supplied by means of a transfer medium (mostly hot water or steam) commercially on the basis of a supply agreement and from the delivery of which no collateral duties arise with regard to leasing regulations

3.1.2

hot-/warm-water heating plants

hot-/warm-water generating facility in connection with a district heating network

3.1.3

water treatment

measures taken to remove solid particles, water-soluble substances (salts) and gases from the filling-, supplementary- or circulation water

3.1.4

primary network

district heating network in indirect (e. g. heat exchanger) or direct connection with the heat generator

3.1.5

secondary network

district heating network separated from the primary district heating network by a substation with different system parameters