SLOVENSKI STANDARD
SIST EN ISO 5167-6:2019

01-december-2019

Merjenje pretoka fluida na osnovi tlačne razlike, povzročene z napravo, vstavljeno v polno zapolnjen vod s krožnim prerezom - 6. del: Merilniki klinov (ISO 5167-6:2019)

Measurement of fluid flow by means of pressure differential devices inserted in circular cross-section conduits running full - Part 6: Wedge meters (ISO 5167-6:2019)

Durchflussmessung von Fluiden mit Drosselgeräten in voll durchströmten Leitungen mit Kreisquerschnitt - Teil 6: Keil-Durchflussmesser (ISO 5167-6:2019)

Mesure de débit des fluides au moyen d'appareils déprimogènes insérés dans des conduites en charge de section circulaire - Partie 6: Débitmètres à coin (ISO 5167-6:2019)

Ta slovenski standard je istoveten z: **EN ISO 5167-6:2019**

ICS:

17.120.10 Pretok v zaprtih vodih Flow in closed conduits

SIST EN ISO 5167-6:2019 **en,fr,de**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN ISO 5167-6

October 2019

ICS 17.120.10

English Version

Measurement of fluid flow by means of pressure differential devices inserted in circular cross-section conduits running full - Part 6: Wedge meters (ISO 5167-6:2019)

Mesure de débit des fluides au moyen d'appareils déprimogènes insérés dans des conduites en charge de section circulaire - Partie 6: Débitmètres à coin (ISO 5167-6:2019)

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This European Standard was approved by CEN on 23 September 2019.

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

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

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European foreword

The text of ISO 5167-6:2019 has been prepared by Technical Committee ISO/TC 30 "Measurement of fluid flow in closed conduits" of the International Organization for Standardization (ISO) and has been taken over as EN ISO 5167-6:2019 by CCMC.

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of an identical text or by endorsement, at the latest by April 2020, and conflicting national standards shall be withdrawn at the latest by April 2020.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

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The text of ISO 5167-6:2019 has been approved by CEN as EN ISO 5167-6:2019 without any modification.

INTERNATIONAL STANDARD

ISO 5167-6

First edition
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Measurement of fluid flow by means of pressure differential devices inserted in circular cross-section conduits running full —

Part 6: Wedge meters

Mesure de débit des fluides au moyen d'appareils déprimogènes insérés dans des conduites en charge de section circulaire —

Partie 6: Débitmètres à coin

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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For an explanation on the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see the following URL: www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 30, *Measurement of fluid flow in closed conduits*, Subcommittee SC 2, *Pressure differential devices*.

A list of all the parts in the ISO 5167 series can be found on the ISO website.

Introduction

ISO 5167, divided into six parts, covers the geometry and method of use (installation and operating conditions) of orifice plates, nozzles, Venturi tubes, cone and wedge meters when they are inserted in a conduit running full to determine the flow rate of the fluid flow in the conduit. It also gives necessary information for calculating the flow rate and its associated uncertainty.

ISO 5167 is applicable only to pressure differential devices in which the flow remains subsonic throughout the measuring section and where the fluid can be considered as single-phase, but it is not applicable to the measurement of pulsating flow. Furthermore, each of these devices can only be used within specified limits of pipe size and Reynolds number.

ISO 5167 deals with devices for which direct calibration experiments have been made, sufficient in number, spread and quality to enable coherent systems of application to be based on their results and coefficients to be given with certain predictable limits of uncertainty. However, for wedge meters calibrated in accordance with Clause 7, a wider range of pipe size, β and Reynolds number can be considered.

The devices introduced into the pipe are called 'primary devices'. The term primary device also includes the pressure tappings. All other instruments or devices required for the measurement are known as 'secondary devices'. ISO 5167 covers primary devices; secondary devices[1)] are mentioned only occasionally.

ISO 5167 is divided into the following six parts.

a) Part 1 gives general terms and definitions, symbols, principles and requirements as well as methods of measurement and uncertainty that are to be used in conjunction with Part 2 to Part 6 of ISO 5167.

b) Part 2 specifies requirements for orifice plates, which can be used with corner pressure tappings, D and $D/2$ pressure tappings[2)], and flange pressure tappings.

c) Part 3 specifies requirements for ISA 1932 nozzles[3)], long radius nozzles and Venturi nozzles, which differ in shape and in the position of the pressure tappings.

d) Part 4 specifies requirements for classical Venturi tubes[4)].

e) Part 5 specifies requirements for cone meters, and includes a section on calibration.

f) Part 6 specifies requirements for wedge meters, and includes a section on calibration.

NOTE This document is complementary to ISO 5167-1:2003, ISO 5167-2:2003, ISO 5167-3:2003, ISO 5167-4:2003 and ISO 5167-5:2015.

1) See ISO 2186[1] and also ISO/TR 9464[4].

2) Orifice plates with 'vena contracta' pressure tappings are not considered in ISO 5167.

3) ISA is the abbreviation for the International Federation of the National Standardizing Associations, which was succeeded by ISO in 1946.

4) In the USA the classical Venturi tube is sometimes called the Herschel Venturi tube.