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Meters for irrigation water

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Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for Standardization Work Part 1. Structure and Drafting Rules of Standardization Documents"

Drafting.

The translation method used in this document is equivalent to ISO 16399.2014 "Irrigation Water Meters".

The Chinese documents that have consistent correspondence with the normatively cited international documents in this document are as follows.

---GB/T 778.1-2018 Cold drinking water meters and hot water meters Part 1. Measurement requirements and technical requirements (ISO 4064-1.

2014, IDT)

---GB/T 778.2-2018 Drinking cold water meter and hot water meter Part 2. Test method (ISO 4064-2.2014, IDT)

---GB/T 1800.2-2020 Product Geometric Technical Specification (GPS) Linear Dimension Tolerance ISO Code System Part 2.

Standard tolerance zone code and limit deviation table of holes and shafts (ISO 286-2.2010, MOD)

---GB/T 7307-2001 55° unsealed pipe thread (eqv ISO 228-1.1994)

---GB/T 18688-2012 Test method for pressure loss of irrigation valve of agricultural irrigation equipment (ISO 9644.2008, IDT)

---GB/T 27418-2017 Measurement Uncertainty Evaluation and Expression (ISO /IEC Guide 98-3.2008, MOD)

This document has made the following editorial changes.

---Corrected the typographical error of the original international standard. Change the "ISO

4064-1.2005 5.8.3" mentioned in 5.6.3 to "ISO 4064-1.

6.5.1 in.2005".

This document was proposed by China Machinery Industry Federation.

This document is under the jurisdiction of the National Agricultural Machinery Standardization Technical Committee (SAC/TC201).

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Company, China Academy of Agricultural Mechanization Sciences, Fluid Machinery Engineering Technology Research Center of Jiangsu University, China Agricultural University, Xintian Technology Co., Ltd.

Co., Ltd., National Agricultural Machinery Quality Supervision and Inspection Center, Tai'an Easy Meter Co., Ltd., Taishan Intelligent Manufacturing Industry Research Institute, Agriculture and Rural Areas

The Ministry of Agricultural Machinery Test and Appraisal Station, and the Agricultural Mechanization Technology Development and Extension Station of the Ministry of Agriculture and Rural Affairs.

1 Scope

This document specifies the technical requirements and verification procedures for irrigation water meters (hereinafter referred to as water meters). This document does not consider the water quality used by the water meter.

Nor does it consider design techniques used to measure the actual volume of hot or cold water flowing through a closed, full pipe. This document applies to

Water meter indicating device.

This document applies to water meters based on electricity or electronic principles, and also to those with electronic devices for measuring the actual volume flow of cold water.

Water meter based on mechanical principles. This document proposes measurement requirements for electronic auxiliary devices attached to measurement control. Auxiliary devices in this document

Is optional. However, some auxiliary devices related to water meter applications are stipulated in national or international regulations.

2 Normative references

The contents of the following documents constitute the indispensable clauses of this

document through normative references in the text. Among them, dated quotations

Only the version corresponding to that date is applicable to this document; for undated reference documents, the latest version (including all amendments) is applicable to

This document.

ISO 228-1 Non-threaded sealing connection pipe thread Part 1.Dimensions, tolerances and markings (Pipethreads where pressure-

tightjointsarenotmadeonthethreads-Part 1.Dimensions, tolerancesanddesignation)

ISO 286-2 Geometrical Product Specification (GPS) ISO Linear Dimensional Tolerance Code System Part 2.Standards for Holes and Shafts

Tolerance grade and limit deviation table [Geometricalproductspecifications(GPS)-ISO codesystemfortoleranceson

linearsizes-Part 2.Tables of standard tolerance classes and limit deviations for holes and shafts]

ISO 4064-1.2005 Measurement of water flow in closed full pipelines. Drinking cold water meters and hot water meters. Part 1.Specification (Meas-

urementofwaterflowinfullychargedclosedconduits-Metersfor coldpotablewaterandhotwater-

Part 1.Specifications)

ISO 4064-2.2005 Measurement of water flow in closed full pipelines. Drinking cold water meters and hot water meters Part 2.Installation requirements

(Measurementofwaterflowinfullychargedclosedconduits-Metersfor coldpotablewaterandhot

water-Part 2.Installationrequirements)

ISO 9644 Test Method for Pressure Loss of Irrigation Valves of Agricultural Irrigation Equipment (Agricultural Irrigation Equipment-

Pressurelossesinirrigationvalves-Testmethod)

ISO /IEC Guide 98-3 Measurement Uncertainty Part 3.Expression of Measurement Uncertainty (GUM1995) [Uncertainty

ofmeasurement-Part 3.Guidetotheexpressionofuncertaintyinmeasurement(GUM.1995)]

3 Terms and definitions

The following terms and definitions apply to this document.

3.1

Watermeter

A device used to continuously measure, store and display the volume of water flowing through the measuring sensor under measuring conditions.

Note. The water meter includes at least a measuring sensor, a calculator (including an adjustment or correction device, if it exists), and an indicating device. The three devices can be placed in different external devices.

Inside the shell.

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