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PEOPLE'S REPUBLIC OF CHINA

GB/T 19794-2023

Replacing GB/T 19794-2012

Agricultural irrigation equipment - Volumetric valves - General requirements and test methods

农业灌溉设备 定量阀 技术要求和试验方法

(English Translation)

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Foreword

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

This document replaces GB/T 19794-2012 "Technical Requirements and Test Methods for Dosing Valve of Agricultural Irrigation Equipment" and is consistent with Compared with GB/T 19794-2012, in addition to structural adjustments and editorial changes, the main technical changes are as follows:

a) Changed scope (see Chapter 1, Chapter 1 of the 2012 edition)

b) Some terms and definitions have been changed (see 3.1, 3.9, 3.13, 3.1, 3.9, 3.13 of the 2012 version);

c) Changed the general requirements for metering valves (see 6.1, 6.1 of the 2012 edition);

d) Changed the requirements for interface threads (see 6.2, 2012 version of 6.2);

e) The test method for non-sequential metering valves has been changed (see 7.5.1.1, 2012 version of 7.5.1.1);

f) The test procedure for pressure loss has been changed (see 7.7.2, 2012 version of 7.7.2).

This document is equivalent to ISO 7714:2018 "Technical Requirements and Test Methods for Dosing Valve of Agricultural Irrigation Equipment".

1 Scope

This document specifies the technical requirements and test methods for metering valves capable of automatically delivering a preset amount of water.

This document applies to metering valves driven only by pressurized water flow in the pipeline without any other external energy source.

Note: The metering valve is usually required to operate normally under various flow rates and

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temperatures in the range of 5°C to 50°C using irrigation water of different qualities.

2 Normative reference documents

The contents of the following documents constitute essential provisions of this document through normative references in the text. Among them, the dated quotations For undated referenced documents, only the version corresponding to that date applies to this document; for undated referenced documents, the latest version (including all amendments) applies to this document.

GB/T 40115-2021 Irrigation water meter (ISO 16399:2014, IDT)

Note: GB/T 7306.1-2000 55° sealed pipe threads Part 1: Cylindrical internal threads and conical external threads (eqvISO 7-1.1994)

GB/T 7306.2-2000 55° sealed pipe threads Part 2: Conical internal threads and conical external threads (eqvISO 7-1.1994)

Note: GB/T 18688-2012 Pressure loss test method for irrigation valves of agricultural irrigation equipment (ISO 9644:2008, IDT)

3 Terms and definitions

The following terms and definitions apply to this document.

3.1 Quantitative valve volumetric valve

An irrigation valve that can automatically deliver a preset amount of water within a flow range by measuring the amount of water flowing through the valve.

3.2 Dosing valve

A dosing valve (3.1) capable of sequential operation in an irrigation system.

3.2.1

In a parallel dosing valve irrigation system, there is a sequential dosing valve (3.2) with one inlet and one outlet. When the valve is in the preset open position

It is turned on with the help of hydraulic signal and will automatically close after reaching the preset water volume, and can transmit the hydraulic signal to the next quantitative valve in the system to make it run.

3.2.2

In a parallel dosing valve irrigation system, there is a sequential dosing valve (3.2) with one inlet and one outlet. When the valve is in the preset open position

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