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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 40076-2021

**Agricultural irrigation equipment - Filters - Verification of
filtration grade**

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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 18471.2015 "Agricultural Irrigation Equipment Filter Filter Grade Verification".

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

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

This document has made the following editorial changes.

--- Use "MPa" conversion instead of "bar".

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).

Drafting organizations of this document. Huawei Water Saving Technology Group Co., Ltd., Chinese Academy of Agricultural Mechanization Sciences, Jiangsu University Fluid Machinery

Mechanical Engineering Technology Research Center, Tai'an Easy Meter Co., Ltd., National Agricultural Machinery Quality Supervision and Inspection Center, Tai'an City River and Lake Management Protection Service

Service center.

1 Scope

This document specifies the test method for the verification of the filter rating of filters used

in agricultural irrigation systems.

This document is suitable for verifying the filter grade of a particular filter declared by the filter manufacturer.

This test method uses a clogged flow meter (CCM) device to compare the filter grade of the tested filter with the filter grade of the test filter screen.

Row comparison.

Note. This test method can also be used for filter manufacturers to determine the filter grade.

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

Pressure losses in irrigation valves-Test method)

3 Terms and definitions

The following terms and definitions apply to this document.

3.1

Filtration grade

The value declared by the manufacturer. This value represents the size of the water passage in the filter, and is related to the filter's ability to block particles.

Note. The filter grade is expressed in micrometers (μm).

3.2

Clogging flowmeter clogging capacity meter; CCM

A device used to measure the time required for a constant flow rate to flow through a standard filter screen to reach a specified pressure loss.

3.3

Aperture width

The distance between two adjacent parallel wires on a plain weave square mesh wire screen.

3.4

Meshcount

The number of mesh holes per unit length in the woven wire mesh or metal screen.

[Source. ISO 9045.1990, 3.2.8]

3.5

Flowrate

The volume of water flowing through the device per unit time.

3.6

Pressureloss

The pressure difference between two specified points in a system or part of a system due to water flow.