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NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GB/T 28714-2023

Directive for technique of water metering

取水计量技术导则

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Standardization Administration of the PRC

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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 28714-2012 "Technical Guidelines for Water Intake Measurement". Compared with GB/T 28714-2012, except for structural adjustments and In addition to editorial modifications, the main technical content changes are as follows:

a) "Air-mediated ultrasonic water level meter", "water-mediated ultrasonic water level meter", "electromagnetic interference", "clip-on sensor" and "plug-in type" are deleted. Terms such as "sensor", "pipeline sensor" and "simulation electromagnetic flowmeter sensor" are added, and "water measurement" and "converted water volume" are added. Terminology (see Chapter 3, Chapter 3 of the.2012 edition);

b) Added relevant requirements for water intake measurement range (see Chapter 5);

c) Added relevant requirements for the selection of water metering facilities (appliances) (see Chapter 7);

d) Added installation, commissioning and acceptance requirements (see Chapter 8);

e) Change "Results Summary" to "Management Requirements", and add "Measurement System", "File Management", "Measurement Instrument Verification and Calibration" and "Measurement "Data" and other contents (see Chapter 9, Chapter 7 of the.2012 edition);

f) A sample form of the water metering facility (instrument) ledger and related records has been added (see Appendix A). Please note that some content in this document may be subject to patents. The publisher of this document assumes no responsibility for identifying patents. This document is proposed and administered by the Ministry of Water Resources of the People's Republic of China. This document was drafted by: Hohai University, Zhejiang Water Conservancy and Estuary Research Institute (Zhejiang Ocean Planning and Design Institute), China Metrology Science Research Institute, Nanjing Institute of Water Conservancy and Hydrology Automation, Ministry of Water Resources. The main drafters of this document. Tang Hongwu, Bi Shouhai, Chen Hong, Wang Xinghui, Shi Zhanhong, Yuan Saiyu, and Hu Heming. The previous versions of this document and the documents it replaces are as follows:

---First published as GB/T 28714-2012 in.2012;

---This is the first revision.

Strengthening water intake management is an important part of implementing the control of the total amount and intensity of water resources consumption and strengthening the rigid constraints of water resources. Water meter Quantity is an important content and means of water resources management. It is the implementation of management systems such as water abstraction licenses, water resources tax collection, and water use statistical surveys. The important basis and main basis for water resources management rights. This document is based on the relevant content of GB/T 28714-2012 measurement methods, and adds the selection, installation and adjustment of measurement facilities (appliances). Testing, acceptance, as well as requirements for measurement files, instrument calibration and data management, etc., to adapt to water resources management and water metering supervision need. Technical Guidelines for Water Intake Measurement

1 Scope

GB/T 28714-2023 is the Chinese technical guideline for metering water abstraction. Water in China is allocated by permit and increasingly charged for, and the whole system of quotas, tariffs and the strictest water resources management regime rests on measuring what each user actually takes - which is difficult, because abstraction happens through

pipes of every size, open channels, and wells, in conditions where a meter is inconvenient to install and easy to bypass. The standard sets the basic requirements, the metering scope, the selection of the measurement method for pipeline and for open channel abstraction and the conversion of the measured quantity to volume, the selection of the metering facilities and instruments, their installation, commissioning and acceptance, and the management requirements around the metering system. It replaces GB/T 28714-2012 and took effect on 1 April 2024.

This document stipulates the scope of water intake measurement, selection of measurement methods, selection of measurement facilities (appliances), installation, commissioning and acceptance, as well as measurement management basic requirements. This document applies to the water metering behavior of units or individuals that draw surface water, groundwater or other unconventional water sources, as well as the water metering Quantity supervision.

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 11822 General requirements for the composition of scientific and technological archives

GB/T 24789 General rules for the equipment and management of water measuring instruments for water use units

GB/T 50095 Basic Hydrological Terminology and Symbol Standards

GB/T 50138 Water level observation standard

GB 50179 River flow test specifications SL365 Technical Guidelines for Water Resources and Water Quantity Monitoring SL/T 426 Basic technical conditions for water measurement equipment SL/T 427 Water resources monitoring data transmission protocol SL537 Specifications for flow measurement in hydraulic structures and weirs

JJF1001 General measurement terms and definitions

3 Terms and definitions

The terms and definitions defined in GB/T 50095, JJF1001 and the following apply to this document.

3.1 water metering Activities to install flow measurement equipment in accordance with

relevant laws, regulations and technical standards and obtain accurate and reliable water intake.

3.2 convertedwatervolume The amount of water calculated based on parameters such as electricity consumption and operating data.

4 Basic requirements

4.1 Water-drawing units or individuals should classify and measure hierarchically according to water sources, uses, scales, etc., and be equipped with corresponding water metering equipment. Facilities (appliances) to meet the needs of water intake control, water intake plan management, water resource fee (tax) collection, water conservation management, water use statistical survey, etc. Require.