

HJ

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Technical specifications for automatic monitoring of surface water (Trial)

地表水自动监测技术规范（试行）

(English Translation)

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Foreword

This standard is formulated for the purpose of implementing the Environmental Protection Law of the People's Republic of China and the Law of the People's Republic of China on the Prevention and Control of Water Pollution, protecting the environment, safeguarding human health, strengthening environmental management, standardizing the automatic water quality monitoring system.

This standard specifies the technical requirements for the construction, acceptance, operation and management of the automatic water quality monitoring system.

Appendix A of this standard is a normative appendix; Appendix B and Appendix C are informative appendices.

This standard is the first release.

This standard was formulated under the organization of the Environmental Monitoring Department and the Science & Technology Standards Department of the Ministry of Environmental Protection.

Drafting organizations of this standard. China Environmental Monitoring Center, Jiangsu Environmental Monitoring Center, Liaoning Provincial Environmental

Monitoring Experimental Center, Henan Environmental Monitoring Center, Wuxi Environmental Monitoring Center Station.

This standard was approved by the Ministry of Environmental Protection on December 28, 2017.

This standard shall be implemented from April 1, 2018.

For this standard, the Ministry of Environmental Protection is responsible for its interpretation.

Technical specifications for automatic monitoring of surface water (Trial)

1 Scope of application

This standard specifies the technical requirements for the construction, acceptance, operation and management of the automatic water quality monitoring system (except seawater).

This standard applies to the automatic water quality monitoring system which is constructed by the environmental protection department.

2 Normative references

The contents of this standard refer to the terms in the following documents. For undated references, the valid version applies to this standard.

GB 3838 Environmental quality standards for surface water

HJ/T 96 The technical requirement for water quality automatic analyzer of PH

HJ/T 97 The technical requirement for water quality automatic analyzer of electroconductivity

HJ/T 98 The technical requirement for water quality automatic analyzer of turbidity

HJ/T 99 The technical requirement for water quality automatic analyzer of dissolved oxygen

HJ/T 100 The technical requirement for water quality automatic analyzer of

permanganate index

HJ/T 101 The technical requirement for water quality automatic analyzer of ammonia

HJ/T 102 The technical requirement for water quality automatic analyzer of total nitrogen

HJ/T 103 The technical requirement for water quality automatic analyzer of total phosphorous

HJ/T 104 The technical requirement for water quality automatic analyzer of total organic carbon

3 Terms and definitions

The following terms and definitions apply to this standard.

3.1

Automatic water quality monitoring

The entire process of automatic collection, processing, analysis and data transmission of surface water samples.

3.2

Automatic water quality monitoring station

Refers to the on-site part of the automatic water quality monitoring, generally consisting of all or some of units such as station or house, water collection and distribution, control, detection, data transmission, etc., abbreviated as water station.

3.3

Automatic water quality monitoring center

A system for remote monitoring, data transmission statistics and application of water stations, abbreviated as data platform.

3.4

Automatic water quality monitoring system

An automatic monitoring system consisting of a water station and a data

platform.

3.5

Conventional five parameters

Five conventional items in the monitoring of surface water quality. water temperature, pH, dissolved oxygen, conductivity and turbidity.

4 Construction of automatic water quality monitoring

system

4.1 General requirements

The construction of automatic water quality monitoring system mainly includes. the construction of selection of site, construction of station building, water station units and data platform. Among them, the instrument's performance indicators shall meet the requirements of Appendix A.2, the construction of system refers to the requirements of Appendix B.

4.2 Selection of site

The principles for site selection include feasibility of station construction, representation of water quality, long-term monitoring, system safety and operational economy.

In order to ensure the long-term stable operation of the automatic water quality monitoring system, the selected site shall have good traffic, electricity, clean water, communication, distance of water collection point, water collection head, feasibility of water collection in dry season, operation and maintenance safety, and other basic conditions for the construction of station building.

The monitoring results of the selected sites can represent the water quality status and changing trends of the monitored water bodies. The river monitoring section is generally selected in a straight river section where the water quality is uniformly distributed and the flow rate is relatively stable, more than 1 km away from the upstream estuary or sewage outlet. In principle, it is consistent