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**INDUSTRY STANDARD OF THE  
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**Specification for automated water quality monitoring in coastal  
area**

近岸海域水质自动监测技术规范

**(English Translation)**

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## Foreword

In order to implement the Environmental Protection Law of the People's Republic of China, the Law of the People's Republic of China on Environmental Protection, Regulations of the People's Republic of China on the Administration of the Prevention and Control of Marine Environmental Pollution by Terrestrial Pollutants, "the People's Republic of China on Coastal Engineering Construction project pollution damage marine environmental management regulations "and" coastal waters environmental functional area management approach "to control the marine environment Pollution, improve the quality of marine ecological environment, regulate China's coastal waters automatic monitoring work, the development of this standard.

This standard specifies the technical requirements for the system construction, acceptance and operation of automatic monitoring of water quality in coastal waters, including Construction and operation, automatic monitoring system calibration and maintenance, automatic monitoring system operation quality control and quality assurance and data Collection frequency, effectiveness, reporting and reporting.

Appendix A, Appendix B and Appendix C of this standard are normative and Appendix D is an informative appendix.

This standard is the first release.

This standard is organized by the Ministry of Environmental Protection Science and Technology Standards Division.

The main drafting unit of this standard. China Environmental Monitoring Station, Xiamen City Environmental Monitoring Center Station, Guangxi Autonomous Region Ocean Ring Environmental Monitoring Center Station, Qingdao Environmental Monitoring Center Station.

The Environmental Protection Department of this standard was approved on December 23, 2014.

This standard is implemented on January 1, 2015.

This standard is explained by the Ministry of Environmental Protection.

Technical specification for automatic monitoring of water quality in coastal waters

## **1 Scope of application**

This standard stipulates the relevant contents of automatic monitoring of water quality in coastal waters, including the automatic monitoring system of water quality in coastal waters Construction and acceptance, calibration and maintenance, operation and quality control and quality assurance, as well as monitoring data collection frequency, effectiveness, Reporting and reporting.

## **2 Normative reference documents**

This standard refers to the following documents or the terms thereof. For undated references, the latest edition of this document applies standard.

GB 3097 seawater quality standards Specification for ocean monitoring GB/T 12763 Marine survey specification Technical specification for environmental monitoring of coastal waters Technical specification for layout of environmental monitoring points in HJ 730 coastal waters Technical Guidelines for Standard Revision of Environmental Monitoring and Analysis Methods Technical Guidelines for Environmental Monitoring Quality Management HY/T 143 Small marine environment monitoring buoy

## **3 Terms and definitions**

The following terms and definitions apply to this standard.

### **3.1 Automated methods for seawater quality monitoring in coastal area**

In the monitoring point using continuous automatic monitoring equipment on the coastal waters of water quality continuous monitoring and analysis process.

3.2 Manual monitoring of water quality in coastal waters Manual methods for seawater quality monitoring in coastal area in the monitoring point with a sampling device to collect a certain volume of seawater samples, the collected samples in the field or laboratory with chemical Analysis method or analytical method of the process of processing and testing.

### **3.3 Automatic monitoring of instrument performance audit**

The automatic monitoring instruments for precision and accuracy of the inspection process such as indicators.

Early - season work and requirements for automatic monitoring of water quality in coastal waters

### **4.1 Automatic monitoring of pre-work content**

The preliminary work on the automatic monitoring of water quality in coastal waters includes the construction of automatic monitoring system construction, acceptance and operation.

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### **4.2 Automatic monitoring system construction**

Coastal area automatic monitoring system construction package monitoring station layout, monitoring sub-station, central control room, system support 2 laboratory and quality control laboratory construction. Among them, the construction of automatic monitoring equipment technical indicators should be consistent with Appendix A to System construction in accordance with the requirements of Annex B; sub-station site layout method to carry out the purpose of automatic monitoring, in the "near shore Sea area environmental monitoring point layout technical specifications "HJ 730 requirements of the layout of the monitoring points selected.

### **4.3 Automatic monitoring system acceptance**

Automatic monitoring system construction is completed, the system should be acceptance, before entering the normal operation. Automatic monitoring system Acceptance requirements are required in accordance with Annex C.

#### **4.4 Automatic monitoring system operation system establishment**

Automatic monitoring system During the construction and acceptance period, the monitoring organization responsible for the operation of the system shall be operated according to the automatic monitoring system Characteristics, the establishment of technical files, the development of the corresponding operation and management methods, and before the acceptance, according to the actual situation to improve.

Automatic monitoring system technical files should include the project and approval documents, sub-station layout of the feasibility study report and proof conclusions, Tender documents, procurement contracts (including technical indicators, training and service requirements, etc.), acceptance records and related materials, maintenance and Calibration and other operating records, maintenance records.

Automatic monitoring system operation management approach should include staffing and responsibilities, control room and laboratory management requirements, daily workers for content and requirements, equipment maintenance and calibration regulations, maintenance management regulations, quality assurance and quality control requirements, data valid Sexual audit and reporting requirements.

Technical Requirements for Automatic Monitoring System of Water Quality in Coastal Waters

#### **5.1 System operation overall technical requirements**

Automatic monitoring system operation includes regular monitoring of sub-station maintenance, calibration, quality assurance and quality control (see 6), Central control room and laboratory daily management and records. Maintenance and calibration at the same time, and regular, calibration and maintenance week Period through the experiment to determine; calibration in line with quality assurance and quality control requirements; system daily management in line with coastal waters automatic monitoring the characteristics and requirements; records should reflect the whole process of operation.

##### **5.2.1 Monitoring the maintenance of sub stations**

Monitor the maintenance and calibration of the sub-station at the same time. In determining that the equipment is not working properly due to natural or contaminating factors, the equipment should be maintained immediately. Clean the inspection equipment before calibration, adjust the equipment automatically after each calibration and maintenance the test time is positive time. The following should also be done.

A) check the sub-station on the connection line, equipment is damaged, including. sub-station body of the sealed room is leaked, Weather equipment, antennas, solar panels and beacon lights are running normally;