

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

HY/T 0187.5-2021

**Design Specification for Seawater Circulating Cooling System -
Part 5: Circulating Water Field
(English Translation)**

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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" drafted.

This document is part 5 of the Code for Design of Seawater Circulating Cooling Systems. "Code for Design of Seawater Circulating Cooling System" has been published Lower part.

---HY/T 187.1 Code for Design of Seawater Circulating Cooling System Part 1: Technical Requirements for Water Intake;

---HY/T 187.2 Code for Design of Seawater Circulating Cooling System Part 2: Technical Requirements for Drainage;

---HY/T 240.3 Code for Design of Seawater Circulation Cooling System Part 3: Seawater Pretreatment;

---HY/T 187.4 Code for Design of Seawater Circulating Cooling System Part 4: Guidelines for Material Selection and Anticorrosion Design;

---HY/T 0187.5 Code for Design of Seawater Circulating Cooling System Part 5: Circulating Water Field.

Introduction

In recent years, the seawater circulating cooling system can replace a large amount of fresh water, with less water intake and discharge, and less impact on the marine natural environment.

It has gained more and more engineering applications in my country. In order to standardize and guide the design of seawater circulating cooling system, make seawater circulating cooling system the system meets the requirements of safety and reliability, advanced technology, economical rationality, convenient management, energy saving and

environmental protection.

But the system design specification" series of industry standards.

In order to facilitate partition or step-by-step design, HY/T 0187 "Code for Design of Seawater Circulation Cooling System" is intended to consist of 5 parts.

--- Part 1: Technical requirements for water intake. The purpose is to standardize the design of seawater intake structures and the selection of related equipment.

--- Part 2: Technical requirements for drainage. The purpose is to standardize the comprehensive utilization, treatment and discharge design of seawater drainage.

--- Part 3: Seawater pretreatment. The purpose is to standardize the design of original seawater treatment structures and the selection of related equipment.

--- Part 4: Guidelines for material selection and anti-corrosion design. The purpose is to guide the materials and anti-corrosion measures used in the seawater circulating cooling system selection.

--- Part 5: Circulating water field. The purpose is to standardize the layout of the circulating water field and the functional connection of buildings and structures in the field.

Different from the design of general fresh water circulating cooling system, because of the use of seawater, the design work of seawater circulating cooling system becomes more complicated.

Complex and burdensome. In order to facilitate the division and cooperation of designers and avoid the length of the standard, based on relatively independent and interrelated functional distinctions, HY/T 0187 "Code for Design of Seawater Circulating Cooling System" is divided into 5 parts, and cooperates with the current GB/T 23248 "Seawater Circulating Cooling Water".

Processing Design Specifications are used.

Design code for seawater circulating cooling system Part 5: Circulating Water Fields

1 Scope

This document specifies the technical requirements for the design of the circulating water field of the seawater circulating cooling system.

This document is applicable to the design of the circulating water field of the new, reconstructed or expanded seawater circulating cooling system in the electric power and chemical industries, and the design of the circulating water field of the seawater circulating cooling system the design of the circulating water field of the seawater circulating cooling system can be implemented by reference.

2 Normative references

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

GB/T 3091 Welded steel pipes for low pressure fluid transportation GB/T 5696 Prestressed Concrete Pipe GB/T 12763.4 Marine Survey Specifications Part 4: Survey of Marine Chemical Elements GB/T 16166 Sacrificial anode cathodic protection for seawater cooling water system in Binhai power plant GB/T 17005 General Requirements for Impressed Current Cathodic Protection Systems for Coastal Facilities GB 17378.4 Marine Monitoring Specification Part 4: Analysis of Seawater GB/T 19685 Prestressed Concrete Cylinder Pipe GB/T 23248 Design code for seawater circulating cooling water treatment GB/T 33584 (all parts) seawater cooling water quality requirements and analysis and testing methods GB/T 34550 (all parts) Performance evaluation method of seawater cooling water treatment chemicals GB/T 50046 Code for anti-corrosion design of industrial buildings GB/T 50102 Design Specification for Industrial Circulating Water Cooling GB 50265 Design Specification for Pumping Station GB 50489 General plan transportation design specification for chemical enterprises DL/T 933 Cooling tower water spray packing, water eliminator, spray device performance test method DL/T 5032 General drawing transportation design specification for thermal power plants DL/T 5507 Basic data of hydraulic design of thermal power plant and its depth requirements DL/T 5525 Cooling tower core components selection design guidelines HY/T 187.1 Code for Design of Seawater Circulating Cooling System Part 1: Technical Requirements for Water Intake HY/T 187.2 Code for Design of Seawater Circulating Cooling System Part 2: Technical Requirements for Drainage HY/T 189 Technical requirements for carbon steel corrosion and scale inhibitor for seawater cooling water treatment HY/T 191 Determination of iron in seawater cooling water HY/T 240.3 Code for Design of Seawater Circulation Cooling System Part 3: Seawater Pretreatment

3 Terms and Definitions

The terms and definitions defined in HY/T 187.1 and the following terms and definitions apply to this document.