

ICS 25.220.40
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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 19355.1-2016

Replacing GB/T 19355-2003

**Zinc coatings -- Guidelines and recommendations for the
protection against corrosion of iron and steel in structures --
Part 1: General principles of design and corrosion resistance**

锌覆盖层 钢铁结构防腐蚀的指南和建议 第1部分：设计与防腐蚀的基本原则

(English Translation)

Issued on: February 24, 2016

Implemented on: September 1, 2016

Issued by: Standardization Administration of China

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Foreword

GB/T 19355 "zinc layer covering the steel structure corrosion prevention guidelines and recommendations" is divided into three parts.

- Part 1. Design and basic principles of corrosion;
- Part 2. Hot dip galvanizing;
- Part 3. infiltration of zinc powder.

This section GB/T 19355 Part 1.

This section drafted in accordance with GB/T 1.1-2009 given rules.

This portion instead of GB/T 19355-2003 "corrosion protection of steel structures - Zinc and aluminum coatings - Guidelines" corrosion resistant part of the design, compared with the GB/T 19355-2003, in addition to editorial changes, the major technical changes are as follows .

- The name of the standard was changed to "zinc coating layer steel structure corrosion prevention guidelines and recommendations Part 1. Design and corrosion of the basic principles";
- Original mixed hot dip galvanized, zinc powder infiltration separate chapters, put forward the basic principles of the zinc coating layer design and corrosion.

This section uses redrafted Law Amendment uses ISO 14713-1:2009 "Steel Structure Zinc Coatings corrosion guidelines and recommendations Part 1. General Principles for Design

and corrosion." this part of ISO 14713-1:2009 compared to the main differences are as follows.

--- For ease of use, this part of the normative references and references used in our country has equivalent or modify the international standards of national standards.

This part is proposed by China Machinery Industry Federation.

The portion of the layer Standardization Technical Committee (SAC/TC57) administered by the National Metal and non-metal cover.

This section is drafted. Wuhan Institute of Material Protection, Jiangsu COSCO Shipping Co. accessories, Ma On Shan Ding Tai Rare Earth New Materials Co., Ltd., Tongxiang, Zhejiang Sheng Rail Line Equipment Co., Ltd.

1 Scope

GB/T 19355 in this part of the anti-corrosive zinc coating layer structure is exposed to different environments used by the proposed grade and corrosion resistant design guidelines and recommendations. The initial protection related to.

--- Workable standard process;

---Design requirements;

--- Environment.

This section applies to a zinc coating layer obtained by the following process.

- a) hot-dip galvanizing layer (hot-dip galvanized parts);
- b) hot-dip galvanizing layer (continuous hot-dip galvanized steel);
- c) infiltration of zinc powder layer;
- d) thermal spray coatings;
- e) coating machine;
- f) electro-galvanized layer.

These guidelines and recommendations do not involve galvanized steel corrosion in service maintenance. Guide to this issue can be found in ISO 12944-5 and ISO 12944-8.

Note: all kinds of product-related standards (such as nails, fasteners, ductile iron pipe, etc.), the zinc coating system put forward specific requirements, which exceed the general guidelines in this section of this standard proposed. These requirements for specific products, priority should be given to the general guidelines.

2 Normative references

The following documents for the application of this document is essential. For cited documents with dates, only the dated edition applies to this document. For undated references, the latest edition (including any amendments) applies to this document.

GB/T 9793 thermal spraying of metals and other inorganic coatings - Zinc, aluminum and its alloys (GB/T 9793-2012, ISO 2063:2005, IDT) GB/T 9799 metals and other inorganic coatings treated zinc plating layer on the steel (GB/T 9799-2011, ISO 2081:2008, IDT) GB/T 10123 Corrosion of metals and alloys - Basic terms and definitions (GB/T 10123-2001, eqv ISO 8044:1999) GB/T 12334 Metallic and other inorganic coatings - Definitions and general rules on thickness measurements (GB/T 12334-2001, idt ISO 2064:1996) GB/T 13912 metal layer of steel parts hot-dip galvanized layer covering technical requirements and test methods (GB/T 13912-2002, ISO 1461:1999, MOD) GB/T 19292.1 metals and alloys - Corrosivity of atmospheres - Classification (GB/T 19292.1-2003, ISO 9223:1992, IDT) GB/T 19292.2 guideline values of atmospheric corrosion of metals and alloys - corrosivity categories (GB/T 19292.2-2003, ISO 9224:1992, IDT)