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

GB/T 30790.4-2014

**Paints and varnishes -- Corrosion protection of steel structures
by protective paint systems -- Part 4: Types of surface and
surface preparation
(English Translation)**

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Foreword

GB/T 30790, Paints and varnishes - Corrosion protection of steel structures by protective paint systems, comprises 8 parts.

- Part 1. General introduction;
- Part 2. Classification of environments;
- Part 3. Design considerations;
- Part 4. Types of surface and surface preparation;
- Part 5. Protective paint systems;
- Part 6. Laboratory performance test methods;
- Part 7. Execution and supervision of paint work;
- Part 8. Development of specification for new work and maintenance.

This Part is Part 4 of GB/T 30790.

This Part was drafted in accordance with the rules given in GB/T 1.1-2009.

This Part was redrafted by adopting ISO 12944-4:1998, Paints and varnishes - Corrosion protection of steel structures by protective paint systems - Part 4. Types of surface and surface preparation.

This Part has technical differences from ISO 12944-4:1998. The clauses concerning

these differences are marked with vertical single lines (|) in the page margins. Annex D gives the list of corresponding technical differences and their reasons.

This Part was proposed by China Petroleum and Chemical Industry Federation.

This Part shall be under the jurisdiction of National Technical Committee 5 on Paints and Pigments of Standardization Administration of China (SAC/TC 5).

The drafting organizations of this Part. CNOOC Changzhou Paint and Chemicals Research Institute, Zhejiang Feijing Paint Co., Ltd., Yejian New Material Co., Ltd., Shandong Puntium Paint Co., Ltd., Hempel (China) Co., Ltd., COSCO Kansai Paint and Chemicals Co., Ltd., Shenzhen Grandland Decoration Group Co., Ltd., Beijing Hongshi Paint Co., Ltd., Anhui Linghu Paint Co., Ltd., Beijing BIAM New Materials and Technological Engineering Co., Ltd.

1 Scope

This Part of GB/T 30790 deals with the following types of surfaces of steel structures consisting of carbon or low-alloy steel, and their preparation.

- uncoated surfaces;
- surfaces thermally sprayed with zinc, aluminium or their alloys;
- hot-dip-galvanized surfaces;
- zinc-electroplated surfaces;
- sherardized surfaces;
- surfaces painted with prefabrication primer;
- other painted surfaces.

This Part defines a number of surface preparation grades but does not specify any requirements for the condition of the substrate prior to surface preparation.

Highly polished surfaces and work-hardened surfaces are not covered by this Part.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition dated applies to this document. For undated references, the latest edition of the referenced documents (including all

amendments) applies to this document.

GB/T 8923.1, Preparation of steel substrates before application of paints and related products - Visual assessment of surface cleanliness - Part 1. Rust grades and preparation grades of uncoated steel substrates and of steel substrates after overall removal of previous coatings (GB/T 8923.1-2011, ISO 8501-1.2007, IDT)

GB/T 8923.2, Preparation of steel substrates before application of paints and related products - Visual assessment of surface cleanliness - Part 2. Preparation grades of previously coated steel substrates after localized removal of previous coatings (GB/T 8923.2-2008, ISO 8501-2.1994, IDT)

GB/T 9286, Paints and varnishes - Cross cut test for films (GB/T 9286-1998, eqv ISO 2409.1992)

GB/T 9793, Thermal spraying - Metallic and other inorganic coatings - Zinc, aluminium and their alloys (GB/T 9793-2012, ISO 2063.2005, IDT)

GB/T 13288.1, Preparation of steel substrates before application of paints and related products - Surface roughness characteristics of blast-cleaned substrates - Part 1. Specification and definitions for ISO surface profile comparators for the assessment of abrasive blast-cleaned surfaces (GB/T 13288.1-2008, ISO 8503-1.1988, IDT)

GB/T 13288.2, Preparation of steel substrates before application of paints and related products - Surface roughness characteristics of blast-cleaned steel substrates - Part 2. Method for the grading of surface profile of abrasive blast-cleaned steel - Comparator procedure (GB/T 13288.2-2011, ISO 8503-2.1988, IDT)

GB/T 13912, Metallic coatings - Hot-dip-galvanized coatings on fabricated iron (GB/T 13912-2002, ISO 1461.1999, MOD)

GB/T 17850.1, Preparation of steel substrates before application of paints and related products - Specifications for non-metallic blast-cleaning abrasives - General introduction and classification (GB/T 17850.1-2002, ISO 11126-1.1993,

MOD)

GB/T 17850.3, Preparation of steel substrates before application of paints and related products - Specifications for non-metallic blast-cleaning abrasives -

Copper refinery slag (GB/T 17850.3-1999, eqv ISO 11126-3.1993)

GB/T 17850.6, Preparation of steel substrates before application of paints and related products - Specifications for non-metallic blast-cleaning abrasives - Part

6 Iron furnace slag (GB/T 17850.6-2011, ISO 11126-6.1993, IDT)

GB/T 18570.2, Preparation of steel substrates before application of paints and related products - Tests for the assessment of surface cleanliness - Part 2.

Laboratory determination of chloride on cleaned surfaces (GB/T 18570.2-2009, ISO 8502-2.2005, IDT)

GB/T 18570.3, Preparation of steel substrates before application of paints and related products - Test for the assessment of surface cleanliness - Part 3.

Assessment of dust on steel surface prepared for painting (pressure-sensitive tape method) (GB/T 18570.3-2005, ISO 8502-3.1992, IDT)

GB/T 18570.4, Preparation of steel substrates before application of paints and related products - Tests for the assessment of surface cleanliness - Guidance on the estimation of the probability of condensation prior to paint application (GB/T 18570.4-2001, eqv ISO 8502-4.1993)

GB/T 18838.1, Preparation of steel substrates before application of paints and related products - Specifications for metallic blast - Cleaning abrasives - Part 1.

General introduction and classification (GB/T 18838.1-2002, ISO 11124-1.1993, MOD)

GB/T 18838.3, Preparation of steel substrates before application of paints and related products - Specifications for metallic blast-cleaning abrasives - Part 3.

High-carbon cast steel shot and grit (GB/T 18838.3-2008, ISO 11124-3.1993, IDT)

GB/T 18838.4, Preparation of steel substrates before application of paints and related products - Specifications for metallic blast-cleaning abrasives - Part 4.