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

GB/T 18570.11-2009

**Preparation of steel substrates before application of paints and related products
-- Tests for the assessment of surface cleanliness -- Part 11: Field method for the
turbidimetric determination of water-soluble sulfate**

(English Translation)

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Table of Contents

Foreword
1 Scope
2 Normative references
4 Reagents
4.1 Water
4.2 Precipitant [Ba (NO ₃) ₂ or BaCl ₂]
4.3 Coagulant
5 Instruments
5.1 Turbidimeter

Foreword

GB/T 18570 "steel substrates before application of paints and assessment of surface cleanliness" is divided into the following sections.

- Part 1. Field test (Technical Report) soluble iron corrosion products;
- Part 2. cleaned Laboratory determination of chloride on the surface;
- Part 3. dust on steel surfaces for painting Assessment (pressure-sensitive tape method);
- Part 4. before application of paints and Guidance for assessing the probability of condensation;
- Part 5. chloride coated steel surface before coating measurement (ion detection tube method);
- Part 6. Extraction of soluble contaminants Bresle sampling method;
- Part 7. Field of oil and lipid assay;
- Part 8. Determination of the moisture field refraction;
- Part 9. water-soluble salt conductivity assay site;
- Part 10. Determination of water soluble chloride-site titration method;
- Part 11. Water-soluble sulfate scene nephelometry;
- Part 12. Water-soluble iron ion site titration assay.

This section GB/T 18570 Part 11.

This part identical with ISO 8502-11:2006 "steel substrates before application of paints and section 11 of the assessment of surface cleanliness -Score. water soluble sulphates site nephelometry "(in English).

This section is equivalent translation ISO 8502-11:2006.

For ease of use, this section made the following editorial changes.

--- "This International Standard" be replaced by "this section";

"," --- With a decimal point instead of a comma as the decimal point, "";

--- With a comma "," instead of a comma as described, "";

--- Delete international standard directory, preface and introduction.

This part is proposed by the China State Shipbuilding Corporation.

This part of the National Standardization Technical Committee before painting and metal surface treatment and painting processes Technical Committee paint pigment (SAC/TC5/SC6) centralized.

This section drafted by. China Shipbuilding Technology and Economy Research Institute, China Shipbuilding Industry Corporation Institute eleventh.

1 Scope

GB/T 18570 provisions of this part of the surface concentration of the surface treatment of steel surface before and after the water-soluble sulfates site assessment method.

This part is suitable for assessing surface impurities.

2 Normative references

The following documents contain provisions which, through reference GB/T 18570 in this section constitute provisions of this section. For dated reference documents Member, all subsequent amendments (not including errata content) or revisions do not apply to this section, however, encouraged to reach under this section Parties to research agreement to use the latest versions of these documents. For undated reference documents, the latest versions apply to this section.

ISO 3696. 1987) laboratory water analysis specifications and test methods ISO 8502-6.20062) before application of paints and surface-treated steel test assessment of surface cleanliness - Part 6. soluble impurities Sampling Bresle method

1) GB/T 6682-2008 to modify the use of ISO 3696. 1987.

2) GB/T 18570.6-2005 is identical with ISO 8502-6:1995.

Principle 3

In ISO 3696. 1987 Class 3 purity of water as a solvent provided, using the Bresle method (see ISO 8502-6:2006) Pipette steel table Surface water soluble sulphates and other salts.

Barium nitrate or barium chloride as precipitating agent, coagulant and join in sulfate solution Pipette, form a colloidal solution of barium sulfate.

Depending on the sulfate content, the different absorbance can be measured pipette solution sulfate concentrations. Then, according to the simple formula that is it can be calculated from the measured surface concentration of sulfates.

4.1 Water

The water used for the test shall comply with ISO 3696. 1987 in Class 3 purity requirements.

4.2 Precipitant [Ba (NO₃)₂ or BaCl₂]

Precipitating agents used in the test by turbidity meter (5.1) the manufacturer's specifications.

4.3 Coagulant

Coagulant used for the test by turbidity meter (5.1) the manufacturer's specifications.

5.1 Turbidimeter

Colloidal solution absorbance measurement instruments. The instrument should be calibrated to the scale or number on it to display at least a colloidal solution SO₄²⁻ concentration range is 0mg/L ~ 80mg/L.