
Priprava jeklenih podlag pred nanašanjem barvnih in sorodnih premazov - Površinske hrapave značilnosti peskanih jeklenih podlag - 3. del: Metoda za kalibracijo lestvice standardov površinske hrapavosti ISO in za določanje hrapavosti površine - Mikroskopski postopek (ISO 8503-3:1988)

Preparation of steel substrates before application of paints and related products - Surface roughness characteristics of blast-cleaned steel substrates - Part 3: Method for the calibration of ISO surface profile comparators and for the determination of surface profile - Focusing microscope procedure (ISO 8503-3:1988)

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Vorbereitung von Stahloberflächen vor dem Auftragen von Beschichtungsstoffen - Rauheitskenngrößen von gestrahlten Stahloberflächen - Teil 3: Verfahren zur Kalibrierung von ISO-Rauheitsvergleichsmustern und zur Bestimmung der Rauheit - Mikroskopverfahren (ISO 8503-3:1988)

Préparation des subjectiles d'acier avant application de peintures et de produits assimilés - Caractéristiques de rugosité des subjectiles d'acier décapés - Partie 3: Méthode pour étalonner les échantillons de comparaison viso-tactile ISO et pour caractériser un profil de surface - Utilisation d'un microscope optique (ISO 8503-3:1988)

Ta slovenski standard je istoveten z: EN ISO 8503-3:1995

ICS:

25.220.10	Priprava površine	Surface preparation
87.020	Postopki za nanašanje barvnih premazov	Paint coating processes

SIST EN ISO 8503-3:1997

en

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EUROPEAN STANDARD

EN ISO 8503-3

NORME EUROPÉENNE

EUROPÄISCHE NORM

May 1995

ICS 87.020

Descriptors: paints, varnishes, substrates, steel products, tests, determination, surface condition

English version

**Preparation of steel substrates before application
of paints and related products - Surface roughness
characteristics of blast-cleaned steel substrates -
Part 3: Method for the calibration of ISO surface
profile comparators and for the determination of
surface profile - Focusing microscope procedure
(ISO 8503-3:1988)**

Préparation des subjectiles d'acier avant application de peintures et de produits assimilés - Caractéristiques de rugosité des subjectiles d'acier découpés - Partie 3: Méthode pour étalonner les échantillons de comparaison viso-tactile ISO et pour caractériser un profil de surface - Utilisation d'un microscope optique (ISO 8503-3:1988)

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This European Standard was approved by CEN on 1995-03-14. CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CEN member.

The European Standards exist in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the Central Secretariat has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

CEN

European Committee for Standardization
Comité Européen de Normalisation
Europäisches Komitee für Normung

Central Secretariat: rue de Stassart, 36 B-1050 Brussels

Foreword

The text of the International Standard from ISO/TC 35 "Paints and varnishes" of the International Organization for Standardization (ISO) has been taken over as a European Standard by the Technical Committee CEN/TC 139 "Paints and varnishes".

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by November 1995, and conflicting national standards shall be withdrawn at the latest by November 1995.

According to the CEN/CENELEC Internal Regulations, the following countries are bound to implement this European Standard: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, and the United Kingdom.

Endorsement notice

The text of the International Standard ISO 8503-3:1988 has been approved by CEN as a European Standard without any modification.

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NOTE: Normative references to international publications are listed in annex ZA (normative).

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Annex ZA (normative)
Normative references to international publications
with their relevant European publications

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN</u>	<u>Year</u>
ISO 8503-1	1988	Preparation of steel substrates before application of paints and related products - Surface roughness characteristics of blast-cleaned steel substrates - Part 1: Specifications and definitions for ISO surface profile comparators for the assessment of abrasive blast-cleaned surfaces	EN ISO 8503-1	1995
ISO 8503-2	1988	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	EN ISO 8503-2	1995
ISO 8503-4	1988	Preparation of steel substrates before application of paints and related products - Surface roughness characteristics of blast-cleaned steel substrates - Part 4: Method for the calibration of ISO surface profile comparators and for the determination of surface profile - Stylus instrument procedure	EN ISO 8503-4	1995

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INTERNATIONAL STANDARD

ISO
8503-3

First edition
1988-02-01



INTERNATIONAL ORGANIZATION FOR STANDARDIZATION
ORGANISATION INTERNATIONALE DE NORMALISATION
МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ

Preparation of steel substrates before application of paints and related products — Surface roughness characteristics of blast-cleaned steel substrates —

Part 3 : **iTeh STANDARD PREVIEW**
Method for the calibration of ISO surface profile
comparators and for the determination of surface profile —
Focusing microscope procedure

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*Préparation des subjectiles d'acier avant application de peintures et de produits assimilés —
Caractéristiques de rugosité des subjectiles d'acier décapés —*

*Partie 3 : Méthode pour étalonner les échantillons de comparaison viso-tactile ISO et pour
caractériser un profil de surface — Utilisation d'un microscope optique*

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work.

Draft International Standards adopted by the technical committees are circulated to the member bodies for approval before their acceptance as International Standards by the ISO Council. They are approved in accordance with ISO procedures requiring at least 75 % approval by the member bodies voting.

International Standard ISO 8503-3 was prepared by Technical Committee ISO/TC 35, *Paints and varnishes*.

Users should note that all International Standards undergo revision from time to time and that any reference made herein to any other International Standard implies its latest edition, unless otherwise stated.

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Preparation of steel substrates before application of paints and related products — Surface roughness characteristics of blast-cleaned steel substrates —

Part 3 :

Method for the calibration of ISO surface profile comparators and for the determination of surface profile — Focusing microscope procedure

0 Introduction

The performance of protective coatings of paint and related products applied to steel is significantly affected by the state of the steel surface immediately prior to painting. The principal factors that are known to influence this performance are

- a) the presence of rust and mill scale;
- b) the presence of surface contaminants, including salts, dust, oils and greases;
- c) the surface profile.

International Standards ISO 8501, ISO 8502 and ISO 8503 have been prepared to provide methods of assessing these factors, while ISO 8504 provides guidance on the preparation methods that are available for cleaning steel substrates, indicating the capabilities of each in attaining specified levels of cleanliness.

These International Standards do not contain recommendations for the protective coating systems to be applied to the steel surface. Neither do they contain recommendations for the surface quality requirements for specific situations even though surface quality can have a direct influence on the choice of protective coating to be applied and on its performance. Such recommendations are found in other documents such as national standards and codes of practice. It will be necessary for the users of these International Standards to ensure that the qualities specified are

- compatible and appropriate both for the environmental conditions to which the steel will be exposed and for the protective coating system to be used;
- within the capability of the cleaning procedure specified.

The four International Standards referred to above deal with the following aspects of preparation of steel substrates :

ISO 8501 — *Visual assessment of surface cleanliness*;

ISO 8502 — *Tests for the assessment of surface cleanliness*;

ISO 8503 — *Surface roughness characteristics of blast-cleaned steel substrates*;

ISO 8504 — *Surface preparation methods*.

Each of these International Standards is in turn divided into separate parts.

The optical microscope is one of the most widely used instruments for measuring surface profile. The method can be used by any laboratory equipped with a good microscope that has a calibrated focusing mechanism meeting the requirements of 5.1. This procedure may also be used to determine the profile of a substrate after abrasive blast-cleaning either directly or from a replica.

This method is based on that developed in the USA by the Steel Structures Painting Council. It entails averaging a series of maximum peak-to-valley measurements obtained by focusing a specified microscope — first on the highest peak and then on the lowest valley in the same field of view, noting the distance of movement of the stage (or objective).

This method has the disadvantage of requiring a series of tedious measurements, but good precision and agreement between laboratories and between operators can be obtained by specifying closely the field of view and depth of field of the microscope. To avoid a widespread divergence in measuring profile within and between laboratories, this method requires a significant number of measurements as well as correct calibration, proper focus movement, standardized depth of field and field diameter of the microscope necessary to measure properly both coarse and fine profiles under a single set of conditions.

ISO 8503-4 describes the procedure using a stylus instrument. ISO 8503-1 specifies the requirements for ISO surface profile comparators and ISO 8503-2 describes their use. The many abrasive blast-cleaning procedures in common use are described in ISO 8504-2.