Teraspindade ettevalmistamine enne värvide ja nendega seotud materjalide pealekandmist. Pritspuhastatud teraspinna kareduse iseloomustus. Osa 2: Abrasiiviga pritspuhastatud pinnaprofiilide liigitamise meetod. Komparaatorimeetod (ISO 8503-2:2012)

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 (ISO 8503-2:2012)

EESTI STANDARDIKESKUS
ESTONIAN CENTRE FOR STANDARDISATION

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN ISO 8503-2:2012 sisaldab Euroopa standardi EN ISO 8503-2:2012 ingliskeelset teksti.	This Estonian standard EVS-EN ISO 8503-2:2012 consists of the English text of the European standard EN ISO 8503-2:2012.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 15.02.2012.	Date of Availability of the European standard is 15.02.2012.
Standard on kättesaadav Eesti Standardikeskusest.	The standard is available from the Estonian Centre for Standardisation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile standardiosakond@evs.ee.

ICS 25.220.10

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

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN ISO 8503-2

February 2012

ICS 25.220.10

Supersedes EN ISO 8503-2:1995

English Version

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 (ISO 8503-2:2012)

Préparation des subjectiles d'acier avant application de peintures et de produits assimilés - Caractéristiques de rugosité des subjectiles d'acier décapés - Partie 2: Méthode de classification d'un profil de surface en acier décapée par projection d'abrasif - Utilisation des comparateurs visio-tactiles (ISO 8503-2:2012)

Vorbereitung von Stahloberflächen vor dem Auftragen von Beschichtungsstoffen - Rauheitskenngrößen von gestrahlten Stahloberflächen - Teil 2: Verfahren zur Prüfung der Rauheit von gestrahltem Stahl; Vergleichsmusterverfahren (ISO 8503-2:2012)

This European Standard was approved by CEN on 14 February 2012.

EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

Management Centre: Avenue Marnix 17, B-1000 Brussels

Ref. No. EN ISO 8503-2:2012: E

Foreword

This document (EN ISO 8503-2:2012) has been prepared by Technical Committee ISO/TC 35 “Paints and varnishes” in collaboration with Technical Committee CEN/TC 139 “Paints and varnishes” the secretariat of which is held by DIN.

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 August 2012, and conflicting national standards shall be withdrawn at the latest by August 2012.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN ISO 8503-2:1995.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Endorsement notice

The text of ISO 8503-2:2012 has been approved by CEN as a EN ISO 8503-2:2012 without any modification.

Contents

Page

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 (all parts), ISO 8502 (all parts) and ISO 8503 (all parts) have been prepared to provide methods of assessing these factors, while ISO 8504 (all parts) 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 provisions for the protective coating systems to be applied to the steel surface or for the surface quality provisions 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 provisions are found in other documents such as national standards and codes of practice.

It is 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 is 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.

Irrespective of the procedures and the type of abrasive used for the preparation of steel substrates, the surface after blast-cleaning consists of random irregularities with peaks and valleys that are not easily characterized. Consequently, it was concluded that, because of this random nature, no method is capable of giving a precise value for the profile. Thus, it is intended that the profile be identified as either dimpled (where shot abrasives are used) or angular (where grit abrasives are used) and that it be graded as “fine”, “medium” or “coarse”, each grade being defined by the limits specified in ISO 8503-1. These surface characteristics are considered to give sufficient distinguishing features for most painting requirements.

Particular attention, however, is drawn to the fact that the grades “fine”, “medium” and “coarse” represent different ranges in terms of roughness parameters, dependent upon whether these grades are applied to shot abrasive or grit abrasive blast-cleaned surfaces. In consequence, the effect produced on a given coating by a given grade “fine”, “medium” or “coarse” is determined not only by the specific surface character but also by the specific roughness value $\overline{R_{y5}}$ or $\overline{h_y}$ belonging to that grade. Where surface profile is particularly important, both the grade of the surface profile (“fine”, “medium” or “coarse”) and the type of abrasive which is to be used are to be specified.

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

1 Scope

This part of ISO 8503 describes a visual and tactile method for assessing the grade of the profile which is produced by one of the abrasive blast-cleaning procedures described in ISO 8504-2.

The method uses ISO surface profile comparators for assessing, on site, the roughness of surfaces before the application of paint or other protective treatments.

NOTE Where appropriate, ISO surface profile comparators can be used for assessing the roughness profile of other abrasive blast-cleaned substrates and, in addition, their use is not restricted solely to surfaces that are to be painted.

The method is applicable to steel surfaces which have been blast-cleaned by use of either shot abrasives or grit abrasives, but is only applicable to grades Sa 2½ and Sa 3 of ISO 8501-1 where the entire surface under test shows an overall blast-cleaned appearance.

It is applicable to surfaces which have been cleaned with either metallic or non-metallic abrasives.

2 Normative references

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

ISO 8501-1, *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*

ISO 8503-1:2012, *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*

ISO 8503-3, *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 8503-4, *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*

ISO 8504-2, *Preparation of steel substrates before application of paints and related products — Surface preparation methods — Part 2: Abrasive blast-cleaning*

3 Terms and definitions

For the purposes of this document, the definitions given in ISO 8503-1 apply.