

## **Thermal spraying - Recommendations for constructional design of components with thermally sprayed coatings**

Thermal spraying - Recommendations for  
constructional design of components with thermally  
sprayed coatings

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 15520:2007 sisaldab Euroopa standardi EN 15520:2007 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 30.10.2007 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 15520:2007 consists of the English text of the European standard EN 15520:2007.</p> <p>This document is endorsed on 30.10.2007 with the notification being published in the official publication of the Estonian national standardisation organisation.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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<p><b>Käsitlusala:</b></p> <p>This European Standard applies for thermal sprayed coatings. It contains basic recommendations for the design of components, which have to be completely or partially coated. The recommendations apply for new manufacturing as well as for repair of worn components. The coating may be of metallic, metal-ceramic, oxide-ceramic materials or polymers.</p>	<p><b>Scope:</b></p> <p>This European Standard applies for thermal sprayed coatings. It contains basic recommendations for the design of components, which have to be completely or partially coated. The recommendations apply for new manufacturing as well as for repair of worn components. The coating may be of metallic, metal-ceramic, oxide-ceramic materials or polymers.</p>
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English Version

## Thermal spraying - Recommendations for constructional design of components with thermally sprayed coatings

Projection thermique - Recommandations sur la conception  
des assemblages d'éléments comportant un revêtement  
déposé par projection thermique

Thermisches Spritzen - Empfehlungen zum konstruktiven  
Gestalten von Bauteilen mit thermisch gespritzten  
Schichten

This European Standard was approved by CEN on 20 July 2007.

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## Foreword

This document (EN 15520:2007) has been prepared by Technical Committee CEN/TC 240 “Thermal spraying and thermally sprayed coatings”, 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 February 2008, and conflicting national standards shall be withdrawn at the latest by February 2008.

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## Introduction

Thermal spraying is applied to improve the surface properties of work pieces in order to increase the wear resistance, the electrical conductivity or the electrical resistance, to achieve corrosion resistance for the pertinent service conditions, to improve sliding behaviour or, to provide heat insulation. Recommendations for thermal spraying are contained in EN 14616.

## 1 Scope

This European Standard applies for thermal sprayed coatings. It contains basic recommendations for the design of components, which have to be completely or partially coated. The recommendations apply for new manufacturing as well as for repair of worn components. The coating may be of metallic, metal-ceramic, oxide-ceramic materials or polymers.

## 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.

EN 14665, *Thermal spraying — Thermally sprayed coatings — Symbolic representation on drawings*

## 3 Applications and specific properties of thermally sprayed coatings

Due to their structure, thermal sprayed coatings possess properties which markedly distinguish them from bulk materials. An appropriate basic structural design and a suitable parent metal have to bear any mechanical loading. Usually, thermal sprayed coatings do not increase the strength of the parent work piece.

Some process related features and specific properties of thermal sprayed coatings are summarised in Table 1.