



SLOVENSKI STANDARD SIST EN ISO 14922:2021

01-december-2021

Nadomešča:

SIST EN ISO 14922-1:2000

SIST EN ISO 14922-2:2000

SIST EN ISO 14922-3:2000

SIST EN ISO 14922-4:2000

Vročje brizganje - Zahteve za kakovost za proizvajalce vroče brizganih prevlek (ISO 14922:2021)

Thermal spraying - Quality requirements for manufacturers of thermal sprayed coatings (ISO 14922:2021)

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Thermisches Spritzen - Qualitätsanforderungen für Hersteller von thermisch gespritzten Schichten (ISO 14922:2021)

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Projection thermique - Exigences qualité pour les fabricants de revêtement projeté thermiquement (ISO 14922:2021)

Ta slovenski standard je istoveten z: EN ISO 14922:2021

ICS:

25.220.20 Površinska obdelava Surface treatment

SIST EN ISO 14922:2021 en,fr,de

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EUROPEAN STANDARD

EN ISO 14922

NORME EUROPÉENNE

EUROPÄISCHE NORM

October 2021

ICS 25.220.20

Supersedes EN ISO 14922-1:1999, EN ISO 14922-2:1999, EN ISO 14922-3:1999, EN ISO 14922-4:1999

English Version

Thermal spraying - Quality requirements for manufacturers of thermal sprayed coatings (ISO 14922:2021)

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This European Standard was approved by CEN on 31 August 2021.

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This European Standard exists 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 CEN-CENELEC Management Centre has the same status as the official versions.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
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CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

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European foreword

This document (EN ISO 14922:2021) has been prepared by Technical Committee ISO/TC 107 "Metallic and other inorganic coatings" in collaboration with 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of an identical text or by endorsement, at the latest by April 2022, and conflicting national standards shall be withdrawn at the latest by April 2022.

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

This document supersedes EN ISO 14922-1:1999, EN ISO 14922-2:1999, EN ISO 14922-3:1999 and EN ISO 14922-4:1999.

Any feedback and questions on this document should be directed to the users' national standards body/national committee. A complete listing of these bodies can be found on the CEN website.

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, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

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The text of ISO 14922:2021 has been approved by CEN as EN ISO 14922:2021 without any modification.

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INTERNATIONAL
STANDARD

ISO
14922

First edition
2021-09

**Thermal spraying — Quality
requirements for manufacturers of
thermal sprayed coatings**

*Projection thermique — Exigences qualité pour les fabricants de
revêtement projeté thermiquement*

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Reference number
ISO 14922:2021(E)

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Published in Switzerland

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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. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 107, *Metallic and other inorganic coatings*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 240, *Thermal spraying and thermally sprayed coatings*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This first edition of ISO 14922 cancels and replaces ISO 14922-1:1999, ISO 14922-2:1999, ISO 14922-3:1999 and ISO 14922-4:1999, which have been technically revised. The main changes compared with the previous editions are as follows:

- the four parts have been consolidated into one document;
- the requirements for the manufacturer now correspond to those of the parts;
- the weighting of requirements with +++ / ++ / + have been updated and are now requirements;
- the requirements have been separated: the quality assurance requirements former classified in 1, 2, 3 now clear as QRC and QAL C, S, E, the three assessment groups as comprehensive requirements, standard (normal) requirements, elementary requirements titled and presented in direct comparison in three columns in [Annex C](#);
- the dependence on ISO 9001 has been removed;
- decision on QAL C, S, E by customer or manufacturer itself.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

Thermal spraying processes are widely applied for producing industrial products and are mainly applied for preventive protection of surfaces. The application can take place both within the workshop as well as on site. Measures for the maintenance of worn coatings or of surfaces on components are also in the field of use. Thermal spraying can be found in all industries, but especially in the aerospace, stationary gas turbine, automotive, machinery construction, printing and chemical, and oil extraction and refining fluid control industries, as well as for medical purposes and for steel construction in the field of off-shore and on-shore, etc. Usually coatings are applied for anticorrosive and/or anti-wear purposes, high temperature protection and against chemical attack, as well as for aesthetic or electrical reasons.

Thermal spraying belongs to the so-called "special processes", where the quality of the coating cannot be unambiguously determined by testing without damaging the component. For an adequate use of thermal sprayed coatings and in order to avoid quality or cost-intensive problems when manufacturing and during service time, conditions and processes must be controlled. Therefore, a functional quality assurance system is made available for the coating factory, if necessary, in addition to a quality management system (e.g. ISO 9001).

This document provides three different levels of quality requirements (comprehensive level C, standard level S and elementary level E). These requirements can be defined by the customer's design engineering relating to the thermal sprayed coating or to the component.

The main elements of the quality assurance of the entire thermal spraying process for different applications in accordance with quality assurance levels C, S and E are listed in [Annex B](#) or [Annex C](#). They can be used to check the proper function of the quality assurance system when applying a quality audit.

This document specifies requirements, tests and the scope of tests when qualifying the manufacturer. The specific requirements of the qualifying procedure in accordance with the quality assurance level C, S or E can be given by the general requirements of the quality management system of the company or a contract.

This document together with the relevant quality level can be stipulated by the customer/designer in order to require a minimum of quality assurance measures for the manufacturing of his or her component.

The requirements specified in this document can be helpful when a quality assurance system is being established.

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