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Interested committees:

Title: Draft BS EN ISO 14918 Thermal spraying — Qualification testing of thermal sprayers.

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Introduction

This draft standard is based on national and international discussions. Your comments on this draft are invited and will assist in the preparation of the consequent standard.

For international standards, comments will be reviewed by the relevant UK national committee before sending the consensus UK vote and comments to the international committee, which will then decide appropriate action. If the international standard is approved, it is usual for the text to be published as a British Standard.

For national standards, comments will be reviewed by the relevant UK national committee and the resulting standards published as a British Standard.

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Please indicate whether you consider the UK should submit a negative (with supporting technical reasons) or positive vote on this draft. Please indicate if you are aware of any reason why this draft standard should not be published as a British Standard.

Submission of Comments

- **Annotated drafts are not acceptable and will be rejected.**
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Template for comments and secretariat observations

Date: xx/xx/20xx	Document: ISO/DIS xxxx
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1	2	(3)	4	5	(6)	7
MB	Clause No./ Subclause No./Annex (e.g. 3.1)	Paragraph/ Figure/Table/Note	Type of comment	Comment (justification for change) by the MB	Proposed change by the MB	Secretariat observations on each comment submitted
	3.1	Definition 1	ed	Definition is ambiguous and needs clarifying.	Amend to read '...so that the mains connector to which no connection...'	
	6.4	Paragraph 2	te	The use of the UV photometer as an alternative cannot be supported as serious problems have been encountered in its use in the UK.	Delete reference to UV photometer.	



DRAFT International Standard

ISO/DIS 14918

Thermal spraying — Qualification testing of thermal sprayers

*Projection thermique — Qualification des agents en projection
thermique*

ICS: 25.220.20

ISO/TC 107

Secretariat: **KATS**

Voting begins on:
2025-12-17

Voting terminates on:
2026-03-11

This document is circulated as received from the committee secretariat.

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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).

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This document was prepared by Technical Committee ISO/TC 107, *Metallic and other inorganic coatings*.

This third edition cancels and replaces the second edition (ISO 14918:2018), which has been technically revised.

The main changes are as follows:

- normative references updated;
- further terms and definitions added;
- document restructured (Adaptation of the text were inconsistencies, regarding theoretical and practical examinations, handling of the extension of the qualification, stipulations for the repeat examination etc.);
- normative [Annex A](#) (*Technical knowledge examination for the qualification of the thermal sprayer (theoretical examination)*, new title) restructured and revised regarding the technical knowledge examination, additional explanations added;
- normative [Annex B](#) (*Practical examination for thermal sprayer qualification - general and specific assessment criteria*, new title) restructured and revised regarding specific assessment conditions, new assessment criteria added;
- normative [Annex C](#) (*Minimum tensile adhesive strength and shear load resistance values*) changed into informative and formally adapted;
- informative [Annex D](#) (*Example of qualification test certificate for thermal sprayer*) formally adapted;
- bibliography added.

Introduction

This document examines the principles of qualification testing of sprayer performance for thermal spraying.

The quality of work involved in thermal spraying depends on the skill, operation of the spray equipment and job knowledge of the thermal sprayer.

The ability of the thermal sprayer to follow verbal and written instructions and the testing of his/her skill and operation of the spray equipment are therefore important factors in ensuring the quality of the thermally sprayed product.

This document is intended to provide the basis for mutual recognition by examining bodies for qualification relating to thermal sprayer's competence in the various fields of application. Tests can be carried out in accordance with this document, unless more severe tests are specified by the relevant application standards in which case these can be applied.

The thermal sprayer's skill and job knowledge continues to be classified as qualified as long as the thermal sprayer works with reasonable continuity on thermal spraying work within the extent of qualification.

Thermal spraying — Qualification testing of thermal sprayers

1 Scope

This document specifies procedural instructions for qualification testing of thermal sprayers. It defines requirements, ranges of qualification, test conditions, acceptance requirements and certification for qualification testing of thermal spray performance.

This document is applicable when the thermal sprayer's qualification is required by this document, the purchaser, by inspection authorities or by other organizations.

The thermal spraying processes referred to in this document include those spraying processes which are designated as manual or mechanized.

The test for mechanised application includes the use of automatically controlled thermal spraying, e.g. robotics, scan units.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 2063-1, *Thermal spraying — Zinc, aluminium and their alloys — Part 1: Design considerations and quality requirements for corrosion protection systems*

ISO 2063-2, *Thermal spraying — Zinc, aluminium and their alloys — Part 2: Execution of corrosion protection systems*

ISO 4624, *Paints and varnishes — Pull-off test for adhesion*

ISO 6508-1, *Metallic materials — Rockwell hardness test — Part 1: Test method*

ISO 14916, *Thermal spraying — Determination of tensile adhesive strength*

ISO 14917, *Thermal spraying — Terminology, classification*

EN 15340, *Thermal spraying — Determination of shear load resistance of thermally sprayed coatings*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 14917 and the following apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at <https://www.electropedia.org/>
- ISO Online browsing platform: available at <https://www.iso.org/obp>

3.1

thermal sprayer

person who performs thermal spraying with a manual or mechanized system

3.2

manual thermal spraying

process in which the spraying gun or torch is manipulated by hand

3.3

mechanized thermal spraying

process in which some aspects are mechanized, i.e. with the gun/torch not manipulated by hand

3.4

automatic thermal spraying

process in which all operations typical of the spraying process are fully mechanized including all handling, e.g. workpiece loading and unloading, and which are integrated in a programmed system

Note 1 to entry: For examination, it is equal to *mechanized thermal spraying* ([3.3](#)).

3.5

examiner

Person competent to conduct and score an examination, where the examination requires professional judgement

[SOURCE: ISO/IEC 17024:2012, 3.10]

3.6

examining body

organization who verifies compliance with the application standard

Note 1 to entry: In certain cases, an external independent examining body can be required

3.7

specific acceptance criteria

document providing in detail the criteria by which a *thermal sprayer* ([3.1](#)) can be tested to be qualified for a particular spraying technique or application area

3.8

test piece

thermal spray workpiece used for the qualification *test* ([3.10](#))

3.9

test specimen

portion cut from the *test piece* ([3.8](#)) in order to perform a specified analytical *test* ([3.10](#))

3.10

test

series of operations which include the making of a thermally sprayed *test piece* ([3.8](#)), subsequent non-destructive and/or destructive testing and reporting of results

3.11

certification process

activities by which a certification body determines that a person fulfils *certification requirements* ([3.13](#)), including application, assessment, decision on certification, recertification and use of *certificates* ([3.12](#)) and logos/marks

[SOURCE: ISO/IEC 17024:2012, 3.1]

3.12

certificate

document issued by a certification body under the provisions of this International Standard, indicating that the named person has fulfilled the *certification requirements* ([3.13](#))

[SOURCE: ISO/IEC 17024:2012, 3.5]