
**Metallic and other inorganic coatings —
Thermal spray coordination — Tasks and
responsibilities**

*Revêtements métalliques et autres revêtements inorganiques —
Coordination en projection thermique — Tâches et responsabilités*

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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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

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.

ISO 12690 was prepared by the European Committee for Standardization (CEN) Technical Committee TC 240, *Thermal spraying and thermally sprayed coatings*, in collaboration with ISO Technical Committee ISO/TC 107, *Metallic and other inorganic coatings* in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

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Introduction

Thermal spraying is a special process which requires qualified personnel for execution of thermal spraying operations on components or parts. This provides confidence in thermal spraying fabrication and allows reliable performance to be achieved in service during operational time. Coordination personnel are able to coordinate all activities related to thermal spraying, and are responsible for planning, executing, supervising and inspecting.

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Metallic and other inorganic coatings — Thermal spray coordination — Tasks and responsibilities

1 Scope

This International Standard specifies the tasks and responsibilities necessary to ensure the quality of a thermal sprayed coating or a coated component, including the coordination of activities related to thermal spraying.

Thermal spraying coordination can be carried out by one or a number of persons within the same company or manufacturing department.

The responsibilities of the spraying coordinator are specified by the manufacturer.

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 6507-1, *Metallic materials — Vickers hardness test — Part 1: Test method*
- ISO 6508-1, *Metallic materials — Rockwell hardness test — Part 1: Test method (scales A, B, C, D, E, F, G, H, K, N, T)*
- ISO 14918, *Thermal spraying — Approval testing of thermal sprayers*
- ISO 14922-1, *Thermal spraying — Quality requirements of thermally sprayed structures — Part 1: Guidance for selection and use*
- ISO 14922-2, *Thermal spraying — Quality requirements of thermally sprayed structures — Part 2: Comprehensive quality requirements*
- ISO 14922-3, *Thermal spraying — Quality requirements of thermally sprayed structures — Part 3: Standard quality requirements*
- ISO 14922-4, *Thermal spraying — Quality requirements of thermally sprayed structures — Part 4: Elementary quality requirements*
- ISO 14923, *Thermal spraying — Characterization and testing of thermally sprayed coatings*
- EN 473, *Non-destructive testing — Qualification and certification of NDT personnel — General principles*
- EN 571-1, *Non-destructive testing — Penetrant testing — Part 1: General principles*
- EN 582, *Thermal spraying — Determination of tensile adhesive strength*
- EN 657:2005, *Thermal spraying — Terminology, classification*

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EN 1395-1, *Thermal spraying — Acceptance inspection for thermal spraying equipment — Part 1: General requirements*

EN 1395-2, *Thermal spraying — Acceptance inspection for thermal spraying equipment — Part 2: Flame spraying including HVOF*

EN 1395-3, *Thermal spraying — Acceptance inspection for thermal spraying equipment — Part 3: Arc spraying*

EN 1395-4, *Thermal spraying — Acceptance inspection for thermal spraying equipment — Part 4: Plasma spraying*

EN 1395-5, *Thermal spraying — Acceptance inspection for thermal spraying equipment — Part 5: Plasma spraying in chambers*

EN 1395-6, *Thermal spraying — Acceptance inspection for thermal spraying equipment — Part 6: Manipulator systems*

EN 1395-7, *Thermal spraying — Acceptance inspection for thermal spraying equipment — Part 7: Powder feed systems*

EN 15311, *Thermal spraying — Components with thermally sprayed coatings — Technical supply conditions*

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

EN 15648, *Thermal spraying — Component related procedure qualification*

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3 Terms and definitions

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For the purposes of this document, the terms and definitions given in EN 657:2005 and the following apply.

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3.1

manufacturing department

thermal spraying workshops or sites under the same technical and quality management

3.2

thermal spraying coordinator

person who has responsibilities in the manufacturing organization for thermal spraying and thermal-spraying-related activities, whose competence and knowledge has been demonstrated by, for example, education, training and/or relevant manufacturing experience

3.3

thermal spraying inspection

inspecting of all activities related to thermal spraying, testing and measuring the thermal sprayed coatings to be manufactured, and thereby influencing components or parts to meet the requirements defined by the contractor's coating specification or by the responsible technical department of the manufacturer

NOTE Thermal spraying inspection is part of spraying coordination.

4 Tasks and responsibilities

4.1 Quality-related activities

Annex B shall be used to allocate quality-related tasks and responsibilities to thermal spraying coordination personnel within the company or manufacturing department practising thermal spraying fabrication. Annex B

may be supplemented for special applications. Not all items will necessarily apply to all manufacturing organizations or quality system or are necessary. Therefore, an application-related selection should be made.

4.2 Definition of tasks and responsibilities

Each single activity in Annex B may be associated with a number of tasks and responsibilities, such as:

- preparation of the spray procedure specification;
- control;
- inspection, checking or witnessing;
- to ensure that international and national laws and regulations concerning protection of the operator's health and the environment are followed, and the safety requirements for thermal spraying equipment according to the EN 15339 series are fulfilled as far as they belong to the duties of the user.

All relevant tasks and responsibilities shall be defined and allocated for all relevant items.

If thermal spraying coordination is carried out by a number of persons, the tasks, responsibilities and activities shall be specified and allocated for each thermal spraying coordinator in the organization.

The manufacturer shall appoint at least one spraying coordinator.

Thermal spraying coordination is the sole responsibility of the manufacturer. The spraying coordination may be subcontracted, however, compliance to this International Standard remains the responsibility of the manufacturer.

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5 Job description

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5.1 General

If a job description for the thermal spraying coordinator is required by the quality management system of the manufacturer, contract or specified application standard, it shall include the tasks and responsibilities of the coordinator.

5.2 Tasks

For identification of the assigned tasks, see 4.2 and Annex B.

5.3 Responsibility

For identification of the assigned responsibility, consider the following:

- position in the manufacturing department and responsibility;
- the extent of authorization to accept by signing on behalf of the manufacturing department, for example, procedure specifications, supervision reports, etc., as needed in order to fulfil their assigned tasks;
- the extent of authorization to carry out the assigned tasks.