



BSI Standards Publication

Thermal spraying — Safety requirements for thermal spraying equipment

Part 5: Powder and wire feed units

National foreword

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A list of organizations represented on this committee can be obtained on request to its secretary.

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Thermal spraying - Safety requirements for thermal spraying equipment - Part 5: Powder and wire feed units

Projection thermique - Exigences de sécurité relatives au matériel de projection thermique - Partie 5: Dispositifs d'alimentation en poudre et en fil

Thermisches Spritzen - Sicherheitsanforderungen für Einrichtungen für das thermische Spritzen - Teil 5: Pulver- und Drahtfördereinheiten

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Foreword

This document (CEN/TR 15339-5:2014) has been prepared by Technical Committee CEN/TC 240 "Thermal spraying and thermally sprayed coatings", the secretariat of which is held by DIN.

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CEN/TR 15339, *Thermal spraying - Safety requirements for thermal spraying equipment* is composed of the following parts:

- *Part 1: General requirements*
- *Part 2: Gas control units* (published as a European Standard)
- *Part 3: Torches for thermal spraying and their connection and supply units*
- *Part 4: Gas and liquid fuel supply*
- *Part 5: Powder and wire feed units*
- *Part 6: Spray booth, Handling system, Dust collection, Exhaust system, Filter*

1 Scope

This Technical Report specifies safety requirements of equipment for thermal spraying, in this case of powder and wire feed units.

This part of CEN/TR 15339 should be used in conjunction with CEN/TR 15339-1, which deals with general aspects of designing, manufacturing, and/or putting in service of machines or equipment and with the responsibility for issuing the CE Conformity Declaration.

2 Normative references

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

CEN/TR 15339-1, *Thermal spraying — Safety requirements for thermal spraying equipment — Part 1: General requirements*

EN 657, *Thermal spraying — Terminology, classification*

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

3 Function of the powder and wire feed units

3.1 General

Thermal spray processes are described and schematically represented in EN 657.

The feed unit shall enable a uniform processing of the spraying material and shall be suitable for operation with the spraying equipment to be intended for spray application.

3.2 Features of the powder feed unit

The powder feed unit can be of type:

- stand-alone; or
- integrated in the torch system;

and its operation mode can be:

- independent; or
- in automatic/remote mode controlled by the spray control system.

The powder feed rate shall be adjustable. The actual values shall be constant and reproducible in relation to the set values; this requires an adequate flow rate and a constant pressure of the carrier gas.

The powder feed unit shall be able to operate inside or outside of a spray booth, subject to practical limits on the length of powder feed hose from the feeder to the torch.

The acceptance inspection of the powder feed unit is specified in EN 1395-7.