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BSI Standards Publication

Thermal spraying — Safety requirements for thermal spraying equipment

Part 6: Spray booth, Handling system, Dust collection, Exhaust system, Filter

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National foreword

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Thermisches Spritzen - Sicherheitsanforderungen für Einrichtungen für das thermische Spritzen - Teil 6: Spritzkabinen, Handhabungssystem, Staubsammlung, Abluftsystem, Filter

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Foreword

This document (CEN/TR 15339-6:2014) 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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1 Scope

This Technical Report specifies safety requirements of machines and equipment for thermal spraying, in this case of spray booths, handling, dust collection, exhaust, and filter systems.

This Technical Report should be used in conjunction with the Technical Report CEN/TR 15339-1 which deals with general aspects for design, manufacture, and/or put into service of machines or equipment and with the responsibility to issue 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.

EN 657, *Thermal spraying - Terminology, classification*

EN 12198-1, *Safety of machinery — Assessment and reduction of risks arising from radiation emitted by machinery — Part 1: General principles*

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

EN ISO 10218-2, *Robots and robotic devices - Safety requirements for industrial robots - Part 2: Robot systems and integration (ISO 10218-2)*

EN ISO 13849-1, *Safety of machinery - Safety-related parts of control systems - Part 1: General principles for design (ISO 13849-1)*

EN ISO 15667, *Acoustics - Guidelines for noise control by enclosures and cabins (ISO 15667)*

EN ISO 60204-1, *Safety of machinery — Electrical equipment of machines — Part 1: General requirements*

EN 60974-10, *Arc welding equipment - Part 10: Electromagnetic compatibility (EMC) requirements*

3 Function of thermal spraying equipment for thermal spraying

3.1 General

The spraying processes are described in EN 657. Thermal spraying creates process related heat, fume, dust, radiation and high levels of noise. Therefore thermal spraying systems are usually installed in firm enclosures. They are designed to protect personnel and environment and to control and minimise the exposure of the operator and others. Dust and fume can be captured and removed safely by a suitable ventilation, exhaust and filter system and the enclosure provides a guard against mechanical, electrical, thermal and noise risks.

3.2 Function and construction of a spray cabin

3.2.1 General requirements

The spray cabin shall be designed that the noise level outside the cabin fulfils the legal requirements. Even if more than one piece of equipment is operated the total noise level in the workshop shall fulfil these requirements.