

Thermal spraying - Acceptance inspection of thermal spraying equipment - Part 5: Plasma spraying in chambers

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN 1395-5:2018 sisaldab Euroopa standardi EN 1395-5:2018 ingliskeelset teksti.	This Estonian standard EVS-EN 1395-5:2018 consists of the English text of the European standard EN 1395-5:2018.
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English Version

Thermal spraying - Acceptance inspection of thermal spraying equipment - Part 5: Plasma spraying in chambers

Projection thermique - Contrôle d'acceptation du matériel de projection thermique - Partie 5 : Projection au plasma en chambre

Thermisches Spritzen - Abnahmeprüfungen für Anlagen zum thermischen Spritzen - Teil 5: Plasmaspritzen in Kammern

This European Standard was approved by CEN on 9 April 2018.

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European foreword

This document (EN 1395-5:2018) has been prepared by 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of an identical text or by endorsement, at the latest by February 2019, and conflicting national standards shall be withdrawn at the latest by February 2019.

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 1395-5:2007.

In comparison to the previous edition EN 1395-5:2007, the following technical changes have been made:

- a) normative references were updated;
- b) added a clause regarding the determination and the assessment of leakage rate;
- c) added in Annex B an example for calculation of leakage rate

EN 1395 series consists of the following Parts, under the general title *Thermal spraying — Acceptance inspection of thermal spraying equipment*:

- *Part 1: General requirements;*
- *Part 2: Flame spraying including HVOF;*
- *Part 3: Arc spraying;*
- *Part 4: Plasma spraying;*
- *Part 5: Plasma spraying in chambers;*
- *Part 6: Manipulator systems;*
- *Part 7: Powder feed systems.*

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1 Scope

This European Standard specifies requirements for the acceptance inspection of thermal spraying equipment, in this case the pressurized part only for low pressure and controlled atmosphere plasma spraying, used in spray jobs to produce thermally sprayed coatings of reproducible quality.

This part is intended to be used in conjunction with EN 1395-1, which includes general requirements and explanations of procedures.

The plasma spraying system itself is intended to be acceptance inspected according to EN 1395-4.

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.

EN ISO 14917, *Thermal spraying - Terminology, classification (ISO 14917)*

3 Terms and definitions

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

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

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

3.1
final pressure
asymptotically approached value that the pressure reaches in a closed flanged vacuum pump system at usual operating conditions and without further gas inlet

3.2
degassing
gaseous de-sorption which can be accelerated by physical processes, e.g. by evacuation, heating

3.3
vapour de-sorption
spontaneous evaporation as the decreasing pressure depresses the boiling point to the ambient temperature

3.4
gas ballast of a vacuum pump
<vacuum pump> controlled admission of an amount of gas, in general into the compression room of a vacuum pump to avoid or minimise the condensate formation within the vacuum unit

3.5
gas load
total mass flow rate that is applied into the vacuum system

Note 1 to entry: Formula: $p \times V/t$. The unit is mbar l s⁻¹.