

**Termopihustamine.  
Termopihustusseadmete vastavuse  
kontrollimine tehnilistele tingimustele**

Thermal spraying - Acceptance inspection of thermal spraying equipment - Part 4: Plasma spraying

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 1395-4:2007 sisaldab Euroopa standardi EN 1395-4:2007 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 28.02.2007 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 1395-4:2007 consists of the English text of the European standard EN 1395-4:2007.</p> <p>This document is endorsed on 28.02.2007 with the notification being published in the official publication of the Estonian national standardisation organisation.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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<p><b>Käsitlusala:</b></p> <p>See Euroopa standard määrab kindlaks tehnilistele tingimustele vastavuse nõuded termopihustusseadmete korral, kaasa arvatud plasma-, kaar- ja leekpihustusseadmed, mida kasutatakse heakvaliteediliste katete pealekandmiseks.</p>	<p><b>Scope:</b></p> <p>This European Standard specifies requirements for the acceptance inspection of thermal spraying equipment, in this case plasma spraying, used in spray jobs to produce thermally sprayed coatings of reproducible quality. This part should be used in conjunction with EN 1395-1, which includes general requirements and explanations of procedures.</p>
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**Võtmesõnad:** elektrikaared, füüsika, katsed, kvaliteedi kontrollimine, leegid, metallkatted, plasma, termopihustamine, töökojad, varustus, vastuvõetavus

## English Version

## Thermal spraying - Acceptance inspection of thermal spraying equipment - Part 4: Plasma spraying

Projection thermique - Contrôle d'acceptation du matériel  
de projection thermique - Partie 4: Projection plasma

Thermisches Spritzen - Abnahmeprüfungen für Anlagen  
zum thermischen Spritzen - Teil 4: Plasmaspritzen

This European Standard was approved by CEN on 23 December 2006.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN Management Centre or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.



EUROPEAN COMMITTEE FOR STANDARDIZATION  
COMITÉ EUROPÉEN DE NORMALISATION  
EUROPÄISCHES KOMITEE FÜR NORMUNG

Management Centre: rue de Stassart, 36 B-1050 Brussels

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## Foreword

This document (EN 1395-4:2007) 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 July 2007, and conflicting national standards shall be withdrawn at the latest by July 2007.

This document together with EN 1395-1, 1395-2, 1395-3, 1395-5, 1395-6 and 1395-7 supersedes EN 1395:1996.

EN 1395 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.*

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

## 1 Scope

This European Standard specifies requirements for the acceptance inspection of thermal spraying equipment, in this case plasma spraying, used in spray jobs to produce thermally sprayed coatings of reproducible quality.

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

## 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.

EN 657:2005, *Thermal spraying — Terminology, classification*

EN 1274:2004, *Thermal spraying — Powders — Composition, technical supply conditions*

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

## 3 Terms and definitions

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

**3.1 high voltage ignition device**  
unit that generates a high voltage (kV) and low current (mA) between the electrodes of the plasma spraying torch in order to ignite the arc

## 4 Principles of acceptance inspection

### 4.1 General

The following clauses reveal state of the art technology in thermal spray equipment and the minimum requirements concerning a stable parameter setting and maintenance according to the classes given in Annex A.

### 4.2 High-voltage ignition device

Other components and functions of the spraying equipment and other machines and/or equipment operated near by to the spraying equipment shall not be affected by operation of the high-voltage ignition device.

### 4.3 Plasma gases

The plasma spraying equipment shall be designed and installed in such a manner, that safe operation with plasma gases specified by the user will be achieved.

### 4.4 Plasma spray nozzle

Processing of the spraying powder shall be possible without producing any disturbing deposits on and/or in the nozzle. Nozzles with different shapes and powder ports (internal or external) may be used for special applications.