



National Standards Authority of Ireland

IRISH STANDARD

**I.S. EN 657:2005**

ICS 01.040.25

25.220.20

National Standards  
Authority of Ireland  
Glasnevin, Dublin 9  
Ireland

Tel: +353 1 807 3800

Fax: +353 1 807 3838

<http://www.nsai.ie>

## **THERMAL SPRAYING - TERMINOLOGY, CLASSIFICATION**

### **Sales**

<http://www.standards.ie>

*This Irish Standard was  
published under the  
authority of the National  
Standards Authority of  
Ireland and comes into  
effect on:*

*June 3, 2005*

**NO COPYING WITHOUT NSAI  
PERMISSION EXCEPT AS  
PERMITTED BY COPYRIGHT  
LAW**

© NSAI 2005

**Price Code H**

Údarás um Chaighdeáin Náisiúnta na hÉireann



EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM

**EN 657**

March 2005

ICS 01.040.25; 25.220.20

Supersedes EN 657:1994

English version

## Thermal spraying - Terminology, classification

Projection thermique - Terminologie, classification

Thermische Spritzen - Begriffe, Einteilung

This European Standard was approved by CEN on 3 February 2005.

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 Central Secretariat 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 Central Secretariat has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, 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**

| <b>Contents</b>  | <b>Page</b> |
|--|-------------|
| <b>Foreword.....</b>   | <b>3</b>    |
| <b>1     Scope .....</b>   | <b>4</b>    |
| <b>2     Normative references .....</b>  | <b>4</b>    |
| <b>3     Terms and definitions .....</b>   | <b>4</b>    |
| <b>4     Process variations .....</b>  | <b>4</b>    |
| <b>5     Process descriptions .....</b>  | <b>6</b>    |
| <b>6     Thermal spraying — terms .....</b>  | <b>14</b>   |
| <b>Annex A (informative) Master chart of thermal spraying processes – Classification according to the energy carriers.....</b> | <b>20</b>   |
| <b>Bibliography .....</b>  | <b>21</b>   |

## **Foreword**

This document (EN 657:2005) 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 September 2005, and conflicting national standards shall be withdrawn at the latest by September 2005.

This document supersedes EN 657:1994.

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

## EN 657:2005 (E)

### 1 Scope

This document defines processes and general terms for thermal spraying. It classifies thermal spraying processes according to type of spray material, to type of operation and to type of energy carrier.

### 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 ISO 14923, *Thermal spraying — Characterization and testing of thermal sprayed coatings (ISO 14923:2003)*

EN ISO 17836, *Thermal spraying — Determination of the deposition efficiency for thermal spraying (ISO 17836:2004)*

### 3 Terms and definitions

For the purposes of this document, the following term and definition applies.

**3.1**  
**thermal spraying (TS)**  
process in which surfacing materials are heated to the plastic or molten state, inside or outside of the spraying gun/torch, and then propelled on to a prepared surface; the substrate remains unmelted

NOTE To obtain specific properties of the deposit, a subsequent thermal, mechanical or sealing treatment may be used.

### 4 Process variations

#### 4.1 Classification according to the type of spray material

Distinction of the following variations:

- wire spraying;
- rod spraying;
- cord spraying;
- powder spraying;
- molten-bath spraying.

#### 4.2 Classification according to the operation

##### 4.2.1 Manual spraying

All operations typical of the spraying process are manual.

This is a free preview. Purchase the entire publication at the link below:

[Product Page](#)

- 
- Looking for additional Standards? Visit Intertek Inform Infostore
  - Learn about LexConnect, All Jurisdictions, Standards referenced in Australian legislation
-