



National Standards Authority of Ireland

IRISH STANDARD

**I.S. EN 15159-1:2006**

ICS 25.220.50

71.120.10

**VITREOUS AND PORCELAIN ENAMELS -  
GLASS LINED APPARATUS FOR PROCESS  
PLANTS - PART 1: QUALITY REQUIREMENTS  
FOR APPARATUS, COMPONENTS,  
APPLIANCES AND ACCESSORIES**

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EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM

**EN 15159-1**

July 2006

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English Version

**Vitreous and porcelain enamels - Glass lined apparatus for  
process plants - Part 1: Quality requirements for apparatus,  
components, appliances and accessories**

Emaux vitrifiés - Appareils émaillés pour les installations  
industrielles - Partie 1: Conditions techniques de livraison

Emails und Emaillierungen - Emaillierte Apparate für  
verfahrenstechnische Anlagen - Teil 1:  
Qualitätsanforderungen für Apparate, Apparateteile,  
Einbau- und Zubehörteile

This European Standard was approved by CEN on 12 June 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 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, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.



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## Foreword

This document (EN 15159-1:2006) has been prepared by Technical Committee CEN/TC 262 “Metallic and other inorganic coatings”, the secretariat of which is held by BSI.

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of an identical text or by endorsement, at the latest by January 2007, and conflicting national standards shall be withdrawn at the latest by January 2007.

EN 15159 is comprised of the following parts under the general heading *Vitreous and porcelain enamels — Glass-lined apparatus for process plants*

Part 1: *Quality requirements for apparatus, components, appliances and accessories*

Part 2: *Designation and specification of resistance to chemical attack and thermal shock*

Part 3: *Thermal shock resistance*

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, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

## EN 15159-1:2006 (E)

### 1 Scope

This European Standard specifies the quality requirements for apparatus, components, appliances and accessories of vitreous glass-lined steel (including semi-crystallized enamel coatings) and steel cast used for process plants. It specifies the quality requirements and the tests to be carried out by the manufacturer as well as the necessary actions for repairing defects.

This European Standard is also applicable to glass-lined pumps, pump components and fittings.

This European standard is not applicable to glass-lined flanged steel pipes and flanged steel fittings.

NOTE 1 Provisions for glass-lined flanged steel pipes and flanged steel fittings are given in DIN 2876 [1].

The test methods specified cover checking the enamel, dimensional accuracy and performance of apparatus and components.

This European Standard applies to new apparatus and components as well as used ones that have to be re-enamelled.

This European Standard does not contain requirements regarding the chemical and physical properties of vitreous and porcelain enamels.

NOTE 2 Examples of test reports are given in Annex A.

### 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 14430, *Vitreous and porcelain enamels — High voltage test*

EN 15159-2, *Vitreous and porcelain enamels — Glass-lined apparatus for process plants — Part 2: Designation and specification of resistance to chemical attack and thermal shock*

EN 15159-3, *Vitreous and porcelain enamels — Glass-lined apparatus for process plants — Part 3: Thermal shock resistance*

EN ISO 780, *Packaging — Pictorial marking for handling of goods (ISO 780:1997)*

EN ISO 2178, *Non-magnetic coatings on magnetic substrates — Measurement of coating thickness — Magnetic method (ISO 2178:1982)*

### 3 Requirements

#### 3.1 General

If the requirements given in this European Standard are to be applied to glass-lined apparatus and components, this shall be stated as follows when ordering:

- Prepared in accordance with EN 15159-1.
- Requirements differing from those stated in this European Standard may be agreed upon between the parties at the time of ordering.

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