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IRISH STANDARD

**I.S. EN 15282:2007**

ICS 25.220.50  
23.020.10  
13.060.01

**VITREOUS AND PORCELAIN ENAMELS -  
DESIGN OF BOLTED STEEL TANKS FOR THE  
STORAGE OR TREATMENT OF WATER OR  
MUNICIPAL OR INDUSTRIAL EFFLUENTS  
AND SLUDGES**

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EUROPEAN STANDARD

**EN 15282**

NORME EUROPÉENNE

EUROPÄISCHE NORM

March 2007

ICS 25.220.50; 23.020.10; 13.060.01

English Version

## Vitreous and porcelain enamels - Design of bolted steel tanks for the storage or treatment of water or municipal or industrial effluents and sludges

Emaux vitrifiés - Conception de réservoirs en acier, boulonnés et revêtus d'émail vitrifié pour le stockage ou le traitement des eaux ou des effluents d'eaux usées principales

Emails und Emailierungen - Gestaltung von verschraubten Stahlbehältern für die Speicherung oder Behandlung von Wasser oder kommunalen und industriellen Abwässern und Abwasserschlämme

This European Standard was approved by CEN on 3 February 2007.

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.



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## **Foreword**

This document (EN 15282:2007) 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 September 2007, and conflicting national standards shall be withdrawn at the latest by September 2007.

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.

## EN 15282:2007 (E)

### 1 Scope

This European Standard establishes the requirement for the design and use of vitreous enamel coated bolted cylindrical steel tanks for the storage or treatment of water or municipal or industrial effluents and sludges.

This European Standard applies to the design of the tank and any associated roof and gives guidance on the requirements for the design of the foundation.

This European Standard applies where:

- a) the tank is cylindrical and symmetrical on plan and is mounted on a load-bearing base substantially at or above ground level;
- b) the multiple of the tank diameter in meters and the wall height in meters has a value within the range 5 to 500;
- c) the tank diameter does not exceed 100 m, and the total wall height does not exceed 50 m;
- d) the stored material has the characteristics of a liquid exerting negligible friction force in the tank wall; the stored material may be undergoing treatment as part of a municipal or industrial effluent treatment process;
- e) the internal pressure above the liquid does not exceed 50 kPa and the internal partial vacuum above the liquid does not exceed 10 kPa;
- f) the walls of the tank are vertical;
- g) the floor of the tank is substantially flat at its intersection with the wall; the floor of the tank may have a rise or fall built in to allow complete emptying of the tank contents. The slope should not exceed 1:100;
- h) there is negligible inertial and impact load due to tank filling;
- i) the minimum thickness of the tank shell is 1,5 mm;
- j) the material used for the manufacture of the steel sheets is carbon steel; (tanks constructed of sheets made from aluminium or stainless steel are outside the scope of this European Standard),
- k) the temperature of the tank wall during operation is within the range - 50 °C to + 100 °C under all operating conditions.

This European Standard also gives details of procedures to be followed during site installation and for inspection and maintenance of the installed tank.

It does not apply to chemical reaction vessels.

It does not apply to tanks fitted with floating roofs.

It does not cover resistance to fire.

### 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 101, *Ceramic tiles — Determination of scratch hardness of surface according to Mohs*

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