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Ductile iron pipes, fittings and accessories - Internal polyurethane lining for pipes and fittings - Requirements and test methods

I.S. EN 15655:2009

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English Version

Ductile iron pipes, fittings and accessories - Internal polyurethane lining for pipes and fittings - Requirements and test methods

Tuyaux, raccords et accessoires en fonte ductile -
Revêtement intérieur en polyuréthane des tuyaux et
raccords - Prescriptions et méthodes d'essais

Rohre, Formstücke und Zubehörteile aus duktilem
Gusseisen - Polyurethan-Auskleidung von Rohren und
Formstücken - Anforderungen und Prüfverfahren

This European Standard was approved by CEN on 22 November 2008.

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Foreword

This document (EN 15655:2009) has been prepared by Technical Committee CEN/TC 203 “Cast iron pipes, fittings and their joints”, the secretariat of which is held by AFNOR.

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of an identical text or by endorsement, at the latest by July 2009, and conflicting national standards shall be withdrawn at the latest by July 2009.

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Introduction

This standard is in conformity with the general requirements already established by CEN/TC 164 in the field of water supply (e.g. potable water) and CEN/TC 165 in the field of waste water.

In respect of potential adverse effects on the quality of water intended for human consumption, caused by the product covered by this standard:

- a) no information is provided as to whether the product may be used without restriction in any of the member states of the EU or EFTA;
- b) it should be noted that, while awaiting the adoption of verifiable European criteria, existing national regulations concerning the use and/or the characteristics of this product remain in force.

1 Scope

This European Standard defines the requirements and test methods applicable to factory applied internal polyurethane high duty corrosion protection of buried ductile iron pipes and fittings conforming to EN 545, EN 598 and EN 969 for use at permanent operating temperatures up to 45 °C.

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 545, *Ductile iron pipes, fittings, accessories and their joints for water pipelines — Requirements and test methods*

EN 598:2007, *Ductile iron pipes, fittings, accessories and their joints for sewerage applications — Requirements and test methods*

EN 969, *Ductile iron pipes, fittings, accessories and their joints for gas pipelines — Requirements and test methods*

EN ISO 4624, *Paints and varnishes — Pull-off test for adhesion (ISO 4624:2002)*

ISO 62:2008, *Plastics — Determination of water absorption*

ISO 527–3:1995, *Plastics — Determination of tensile properties – Part 3: Test conditions for films and sheets*

ISO 868, *Plastics and ebonite — Determination of indentation hardness by means of a durometer (Shore hardness)*

ISO 8501–1:2007, *Representative photographic examples of the change of appearance imparted to steel when blast-cleaned with different abrasives*

ISO 8503–1:1988, *Preparation of steel substrates before application of paints and related products — Surface roughness characteristics of blast-cleaned steel substrates — Part 1: Specifications and definitions for ISO surface profile comparators for the assessment of abrasive blast-cleaned surfaces*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1

ductile iron

cast iron used for pipes, fittings and accessories in which graphite is present substantially in spheroidal form

3.2

adhesion

force per unit area, applied perpendicular to the surface, which is necessary to separate the lining from its substrate

3.3

indirect impact strength

impact energy applied from outside of the pipe with deformation to which a lining can withstand without damage under defined test conditions

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