

## **BUSINESS PLAN**

### **CEN/TC 203 CAST IRON PIPES, FITTINGS AND THEIR JOINTS**

#### **EXECUTIVE SUMMARY**

Standards to be delivered by this TC cover pipe products for the construction of public, industrial or private water supply networks, domestic and rainwater evacuation installations within buildings, public rainwater and sewerage networks, and gas distribution networks.

Products covered include pipes, fittings and accessories made of grey and ductile cast iron (including their coatings and joints) which are used to various extents in all European countries for the construction of water supply networks since the middle of the 18<sup>th</sup> century. Their use throughout the world is still increasing (including countries like Japan, Australia, United States, Brazil, China, India, Russia ...) and has been extended to the evacuation of water and sewage.

The present market in Western Europe for public water supply and sewerage networks is estimated to 220 000 km/year, of which approximately 10 % (22 000 km) are constructed with products covered by this TC. Competitive materials/products are pipes and fittings made from steel, plastics, concrete or clay.

Interested parties in the CEN standardization process are product manufacturers (approximately 20 from 8 CEN countries), construction companies (public works), water supply and sewerage companies of all European countries and the end customers (more than 490 million people connected to a water supply network throughout Europe). All the interested parties are known within CEN as the « water cycle sector », for which a rapporteur has been appointed.

## **1 BUSINESS ENVIRONMENT OF CEN/TC 203**

### **1.1 Description of the Business Environment**

The following political, economic, technical, regulatory, legal, societal and/or international dynamics describe the business environment of the industry sector, products, materials, disciplines or practices related to the scope of this CEN/TC, and they may significantly influence how the relevant standards development processes are conducted and the content of the resulting standards.

Political, economical, social, technical, legal and international factors that either directly require some or all of the standardization activities proposed by the CEN/TC, or significantly influence the way these activities are carried out are the following:

- The European Council policy on water quality led to the publication in 1980 of the Directive 80/778/EEC aimed at improving the quality of water delivered to customers throughout Europe; this Directive, which has been revised and published (98/83 of November 3rd, 1998), has undoubtedly an impact on products and networks used for the supply of water.
- In addition, the implemented European Directive 91/271/EEC "Urban Waste water treatment. aims at decreasing tremendously the amount of untreated waters released in the environment; in order to achieve this, treatment plants have to be constructed or extended and a large number of sewerage networks will have to be built or renovated in order to collect used domestic and industrial waters throughout Europe.
- The Regulation (EU) in force No 305/2011 is laying down harmonized conditions for the marketing of construction products and repealing Council Directive 89/106/EEC. The Regulation 305/2011 (CPR) has the objective of removing trade barriers in the field of Construction Products; all products covered by this TC fall in the field of this Regulation and will be covered by mandates.

Europe has long been in the forefront in the development of these products (and of the corresponding manufacturing technologies) and is presently a net exporter of these products on the world market: a significant volume of the European production is sold outside Europe and the needs for new water supply networks is ever increasing with the world population growth and water shortages in many countries.

Also, standardization of these products is taking place within ISO (in ISO/TC 5/SC 2) and an efficient standardization at European level is beneficial for high quality solutions.

### **1.2 Quantitative Indicators of the Business Environment**

The following list of quantitative indicators describes the business environment in order to provide adequate information to support actions of the CEN /TC203. :

The present market in Western Europe for public water supply and sewerage networks is estimated to 220 000 km/year, of which approximately 10 % (22 000 km representing between 1.5 and 2 billion euros) are constructed with products covered by this TC. Competitive materials/products are pipes and fittings made from steel, plastics, concrete or clay.

Interested parties in the CEN standardization process are product manufacturers (approximately 20 from 8 CEN countries), construction companies (public works), water supply and sewerage companies of all European countries and the end customers (more than 490 million people connected to a water supply network throughout Europe).

## 2 BENEFITS EXPECTED FROM THE WORK OF CEN/TC 203

### CEN/TC203 work is beneficial at different levels:

- Product standards for water network contribute directly to secure and to reliable the supplying of drinking water to population
- Product standards for sewage networks contribute directly to secure and to limit risk of environment pollution and contamination of water resources
- Both above mentioned category of products standards enable a better management of water resources and its recycling
- Standardization of new technologies improving the service life of the products also contribute to reduce the Total Cost of Ownership (TCO) of the networks
- To define a common framework in a very competitive market by ensuring the interoperability of products
- To support European legislation, in particular Construction Product Regulation (CPR)
- CEN/TC203 takes into account the recommendation and specification of CEN/TC164 "Water supply" and CEN/TC165 "Waste water engineering"

## 3 PARTICIPATION IN CEN/TC 203

All the CEN national members are entitled to nominate delegates to CEN Technical Committees and experts to Working Groups, ensuring a balance of all interested parties. Participation as observers of recognized European or international organizations is also possible under certain conditions. To participate in the activities of CEN/TC 203, please contact the national standards organization in your country.

All general and updated information about CEN/TC203 are available through the following link:

[http://standards.cen.eu/dyn/www/f?p=204:7:0::::FSP\\_ORG\\_ID:6184&cs=14EAE3498DC80B9FFAC3C064CB54A5C57](http://standards.cen.eu/dyn/www/f?p=204:7:0::::FSP_ORG_ID:6184&cs=14EAE3498DC80B9FFAC3C064CB54A5C57)

## 4 OBJECTIVES OF CEN/TC 203 AND STRATEGIES FOR THEIR ACHIEVEMENT

### 4.1 Defined objectives of CEN/TC 203

Based on the considerations above, CEN/TC 203 proposes the following objectives and strategic directions for its future work:

General Considerations on Standards:

- 1- Standards are maintained or written by experts working in a specific work group
- 2- Product standards which are self-supporting are more « user friendly », as 90% of their applications are covered and defined in one single document. This structure is highly appreciated by the users (manufacturers, consulting engineers, contractors and end users, wholesalers...)
- 3- Dedicated standards may be written for specific product applications and performances

### **A - It is made of maintenance for the existing standards**

Please refer to table in Annex B

After publication, product standards established will need to be adjusted to the evolution of pipe casting techniques and users requirements and also adapted to the content of the mandates to be issued under CPR.

When taking care of the dimensions, durability and other characteristics which impact the performance of the product due care will be made to select the appropriate methodology as specified in the above General Consideration on Standards,

## **B - It is made of new standards**

The following new work groups could be created to work on the following list of suggested standards:

- Restraining pipeline systems (general considerations, type test, restraining length)
- Ductile iron pipeline durability (low maintenance, 100 years minimum, PFA)
- House connections for DI pipes (reliability, easiness of installation...)
- New coating and lining material and sanitary aspects

**C - It also requires insuring that national standards that have already been taken care inside the EN standard and conflicting national standard are removed from the collection of valid national standards.**

## **4.2 Identified strategies to achieve the CEN/TC's defined objectives**

Please refer to paragraph 4.1.

New work groups could be created to work on the newly suggested standards.

Liaisons have been created with most TCs and WGs involved in the general aspects of the water cycle; this has been done by one or several experts of CEN/TC 203 attending the meetings of other TCs and WGs and actively working in these structures.

- CEN/TC 164 (Water supply), CEN/TC 164/WG1 "External systems and components", CEN/TC 164/WG3 "Effects of materials in contact with drinking water";

- CEN/TC 165 (Sanitary engineering), CEN/TC 165/WG1 "General requirements for pipes", CEN/TC 165/WG21 "Drainage systems inside buildings" CEN/TC 165/WG22 "Drain and sewer systems outside buildings", CEN/TC 165/WG12 "Structural design of buried pipelines";

- CEN/TC 74 (Flanges and their joints).

A strong link is established with ISO Standardization through ISO/TC 5 SC2 Committee.

Further common projects should be developed based on Vienna Agreements. Defining a common framework in a very competitive market by ensuring the interoperability of products

## **4.3 Environmental aspects**

TR16470 "environmental aspects" has been drafted by WG10. It applies to all water and sewerage applications of ductile iron pipe systems and provides a structure on how to identify and consider environmental aspects and potential environmental impacts of ductile iron pipe systems throughout their life cycle.

## **5 FACTORS AFFECTING COMPLETION AND IMPLEMENTATION OF CEN/TC 203 WORK PROGRAMME**

All work items have been decided after thorough discussion within CEN/TC 203 and an objective evaluation of possible technical difficulties and available resources. Target dates

have been set in such a way as to provide enough time to reach the high level of consensus necessary and typical of the standardization process.

CEN/TC 203 does not foresee any major risk arising from its environment in the near future. But:

- The update of harmonized standards EN 598 and EN 877 is under process, with an updated answer to Mandate 131. Following the move from CPD to CPR, this work is longer and more difficult than initially anticipated. Working groups should take care about target dates while drafting standards.
- There is however still uncertainty on the content of the mandate M136 to be amended and finalized under CPR (to cover the EAS, European Acceptance Scheme for products in contact with drinking water); this will affect TC 203 as to the amount of work necessary to comply with this mandate and to the time for completion (especially the need for test methods established outside CEN/TC 203, e.g. by CEN/TC 164).
- CEN/TC 203 is in charge of the standardization of cast iron pipes, fittings, accessories and their joints for water supply, drainage and sewerage, gas supply and other applications. It does not include valves, pumps and malleable iron parts. CEN/TC 203 has settled working groups (see hereafter) for specific subjects.

**Technical Committee CEN/TC 203 – Cast iron pipes, fittings and their joints**

Chairman : Mr Pascal ALEXANDRE (France)

Secretary : Mrs Joanna Laurent (AFNOR)

Standardization of cast iron pipes, fittings, accessories and their joints for water supply, drainage and sewerage, gas supply and other application. Valves, pumps and malleable iron parts are excluded.

**WG 1**

**Water pipelines under pressure**

*Convenor: Philippe BIDU*

email : [philippe.bidu@saint-gobain.com](mailto:philippe.bidu@saint-gobain.com)

**WG 3**

**Iron pipelines for evacuation of water from buildings**

*Convenor: Renaud SUBRA*

email : [renaud.subra@saint-gobain.com](mailto:renaud.subra@saint-gobain.com)

**WG 7**

**Influence of non-metallic materials used in iron pipelines on water quality**

*Convenor: Jürgen RAMMELSBURG*

email : [rammelsberg@arcor.de](mailto:rammelsberg@arcor.de)

**WG 8**

**Coatings for pipes, fittings and accessories**

*Convenor: Jürgen RAMMELSBURG*

email : [rammelsberg@arcor.de](mailto:rammelsberg@arcor.de)

**WG 9**

**Revision of EN 545, EN 598 and EN 969**

*Convenor: Arnaud TREGUER*

email : [arnaud.treguer@saint-gobain.com](mailto:arnaud.treguer@saint-gobain.com)

**WG 10**

**Environmental aspects**

*Convenor: Arnaud TREGUER*

email : [arnaud.treguer@saint-gobain.com](mailto:arnaud.treguer@saint-gobain.com)

**WG 11**

**Water distribution**

*Convenor: Arnaud TREGUER*

email : [arnaud.treguer@saint-gobain.com](mailto:arnaud.treguer@saint-gobain.com)

## Annex A

### WORK PROGRAMME OF CEN/TC 203

#### Active work items

WI Number	Reference	Title
00203055	prEN 598 rev	Ductile iron pipes, fittings, accessories and their joints for sewerage applications - Requirements and test methods
00203049	prEN 15655	Ductile iron pipes, fittings and accessories - Internal polyurethane lining for pipes and fittings - Requirements and test methods
00203050	prEN 14525 rev	Ductile iron wide tolerance couplings and flange adaptors for use with pipes of different materials: ductile iron, Grey iron, Steel, PVC-U, PE, Fibre-cement
00203054		Ductile iron pipes, fittings and accessories — Thermoplastic acid modified polyolefin linings and coatings (TMPO) of pipe systems — Requirements and test methods
00203053	prEN 877 rev	Cast iron pipes and fittings, their joints and accessories for the evacuation of water from buildings - Requirements, test methods and quality assurance

## Annex B

### RATIFIED STANDARDS ISSUED BY CEN/TC 203

16 European standards/technical reports drafted by CEN/TC 203 were ratified

Standard reference	Title	Directive (Citation in OJEU*)	Sales Points
<a href="#">CEN/TR 15545:2006</a>	Guide to the use of EN 545	-	
<a href="#">CEN/TR 16017:2010</a>	Guide to the use of EN 598	-	
<a href="#">CEN/TR 16470:2013</a>	Environmental aspects of ductile iron pipe systems for water and sewerage applications	-	
<a href="#">EN 12842:2012</a>	Ductile iron fittings for PVC-U or PE piping systems - Requirements and test methods	-	
<a href="#">EN 14525:2004</a>	Ductile iron wide tolerance couplings and flange adaptors for use with pipes of different materials: ductile iron, Grey iron, Steel, PVC-U PE, Fibre-cement	-	
<a href="#">EN 14628:2005</a>	Ductile iron pipes, fittings and accessories - External polyethylene coating for pipes - Requirements and test methods	-	
<a href="#">EN 14901:2006</a>	Ductile iron pipes, fittings and accessories - Epoxy coating (heavy duty) of ductile iron fittings and accessories - Requirements and test methods	-	
<a href="#">EN 15189:2006</a>	Ductile iron pipes, fittings and accessories - External polyurethane coating for pipes - Requirements and test methods	-	



Standard reference	Title	Directive (Citation in OJEU*)	Sales Points
EN 15542:2008	Ductile iron pipes, fittings and accessories - External cement mortar coating for pipes - Requirements and test methods	-	
EN 15655:2009	Ductile iron pipes, fittings and accessories - Internal polyurethane lining for pipes and fittings - Requirements and test methods	-	
EN 545:2010	Ductile iron pipes, fittings, accessories and their joints for water pipelines - Requirements and test methods	-	
EN 598:2007+A1:2009	Ductile iron pipes, fittings, accessories and their joints for sewerage applications - Requirements and test methods	93/38/EEC (No) 89/106/EEC (C 309, 2009-12-18)	
EN 877:1999	Cast iron pipes and fittings, their joints and accessories for the evacuation of water from buildings - Requirements, test methods and quality assurance	93/38/EEC (No) 89/106/EEC (C 290, 2007-12-04)	
EN 877:1999/A1:2006	Cast iron pipes and fittings, their joints and accessories for the evacuation of water from buildings - Requirements, test methods and quality assurance	93/38/EEC (No) 89/106/EEC (C 290, 2007-12-04)	
EN 877:1999/A1:2006/AC:2008	Cast iron pipes and fittings, their joints and accessories for the evacuation of water from buildings	93/38/EEC (No) 89/106/EEC (C 321, 2008-12-16)	

**CEN/TC 203 Business Plan****Date: 2017-03-31****Page: 10**

Standard reference	Title	Directive (Citation in OJEU*)	Sales Points
	- Requirements, test methods and quality assurance		
EN 969:2009	Ductile iron pipes, fittings, accessories and their joints for gas pipelines - Requirements and test methods	89/106/EEC (C 152, 2009-07- 04)	

**Date and place of next plenary meeting of CEN/TC 203:**15<sup>th</sup> March 2018

PARIS

France