

MARKET FOR SMALL WASTEWATER TREATMENT PLANTS – THE ROLE OF NOTIFIED BODIES IN EUROPE –

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Abstract

To ensure the quality of decentralised wastewater treatment over the whole life of a plant, standardised requirements are needed for the control of design criteria (sizing and load), the quality control of the material, the test of hydraulic and treatment efficiency, the test of water tightness and the test of structural behaviour. For this reason several standards especially in Europe and America were developed to create requirements for good products. In Europe Notified Bodies are in charge to test small wastewater treatment plants according to EN 12566.

Introduction

Free movement of goods is one of the main goals of the European market. Without European requirements a lot more of restrictions would exist because of different national technical and economical regulations. A legal frame for products on the European market and Europe-wide accepted product certification play a key role on the way of free movement. All products covered by an European Directive have to be CE marked. CE is the abbreviation for 'Communauté Européenne' - European community. The CE mark shall display the compliance of a product with the significant guidelines of the European Union (EU). The basic concern of the CE marking is the indication of the compliance of fundamental safety requirements. The CE mark is a lawful labelling and serves as a 'merchandise pass' for the market surveillance authority.

The role of Notified Bodies in Europe

General requirements for construction products are defined in the Construction Product Directive (CPD) (Directive 89/106/EEC). Technical and other detailed requirements are worked out in harmonised standards or other technical specifications. For the CE marking of e.g. a wastewater treatment plant not only the CPD must be respected, but all relevant EU guidelines for the product like the Low Voltage Directive (Directive 2006/95/EC), Electromagnetic Compatibility Directive (Directive 2004/108/EC), Machine Directive (Directive 2006/42/EC).

Where the harmonised technical specifications require a manufacturer to involve a third party before CE marking then that third party has to be a Notified Body. Notified Bodies are notified to the Commission by their Member State as competent to undertake the tasks expected of them. Notified Bodies are Europe-wide accepted testing, inspection or certification bodies. For the testing of small wastewater treatment plants according to EN 12566 Part 1 (CEN, 2003), Part 3 (CEN, 2009) and/or Part 4 (CEN, 2007) exist currently 35 Notified Bodies in Europe (state: 4. November 2010).

All Notified Bodies who work under the CPD are organised in the GNB-CPD (Group of Notified Bodies under the Construction Products Directive). The GNB-CPD is the official Europe-wide organisation for Notified Bodies and those who are seeking notification. The GNB-CPD is recognised and supported by the Commission and the Member States. Main objective of the GNB-CPD is to help ensure Notified Bodies work in an equivalent manner across Europe according to the CPD, harmonised technical specifications and approved guidance. The GNB-CPD provides a platform for co-ordination and co-operation, where Notified Bodies could exchange experiences and work together. European organisations, European construction stakeholder groups, representatives of the Commission and other European institutions support the work of the GNB-CPD. The GNB-CPD is active in:

- scrutinising harmonised technical specifications
- providing feedback to the writers of the technical specifications
- liaising with Europe-wide construction product manufacturing associations and the writers of the technical specifications
- providing feedback to the Commission and the Standing Committee for Construction (SCC)
- listing tasks and ways of working in the form of position papers

The structure for the GNB-CPD comprises a governing Advisory Group and 23 Sector Groups (SG) responsible to the Advisory Group. In addition, Working Groups (WG) may be formed to address particular technical specifications/issues. Sector Group 12 (SG12) is responsible for pipes, tanks and related engineering products, this includes wastewater products. September 2008 a Working Group (WG2 'Small wastewater treatment plants') under the Sector group 12 was founded (SG12/WG2). The members of the SG12WG2 work on the harmonised standard EN 12566-3. Experiences and problems

resulting of the practical use of the harmonised standard are main topics. The members discuss about several requirements and try to create an equivalent manner for testing. The SG12/WG2 work on a position paper to give positions upon the problems arising by using the standard. The Working Group stays in direct contact to the responsible European Normalisation Organisation TC165/WG41. Once a position paper have been approved by Advisory Group of the GNB, or GNB officials designated to approve them, then Notified Bodies have to work in accordance to this approved GNB guidance. (www.gnb-cpd.eu)

In America exists a similar system for testing small wastewater treatment plants. Standards of the NSF (National Sanitation Foundation) like ANSI 40 or 245 (NSF, 2007, 2009) comprise requirements for the certification of the functional capability of these products.

Market of small wastewater treatment plants

Europe is one of the biggest market for small wastewater treatment plants. The following figure shows the potential for the single Member States in Europe.

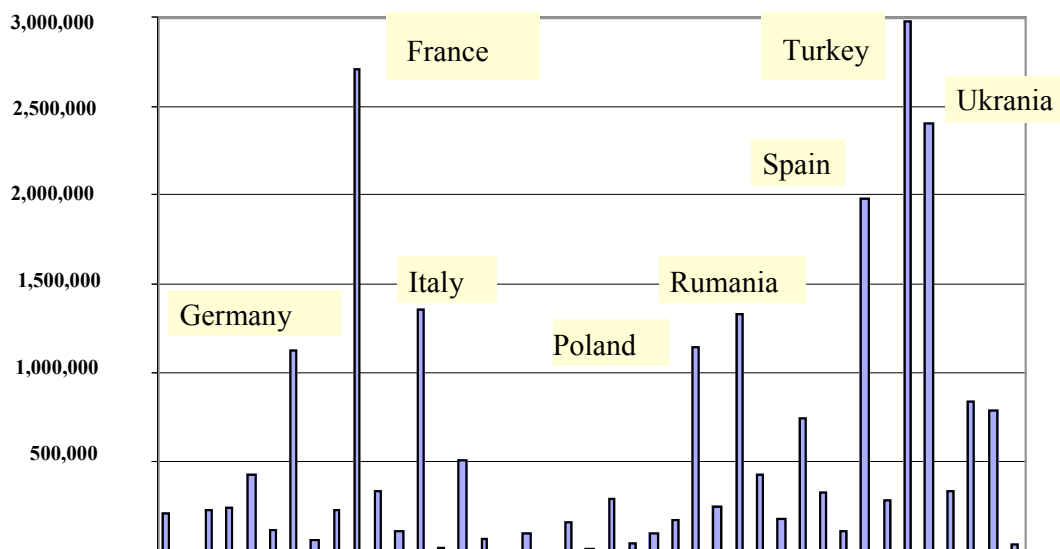


Figure 1. Estimated number of small wastewater treatment plants (up to 50 PT) in Europe in 2015

Against the background of this big market it is consequential to create and realise similar standards for these products in Europe and other countries. This is important for the manufacturers, the engineers, the users and the surveillance institutions.

Conclusions

Decentralised wastewater treatment is the most developing market in the field of sanitary engineering. With decentralised systems there will be a safe discharge of wastewater in rural areas. Especially to close the loop from discharge to water reuse, it is necessary to have plants close to the customers' sites. Many different systems of individual wastewater treatment plants (with more or less technical equipment) are on the market all over the world. There are septic tanks but also membrane reactor systems available. Standards like the the EN 12566 in Europe and the NSF/ANSI in America help to create good products.

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