BUSINESS PLAN

CEN/TC 288
Execution of special geotechnical works

EXECUTIVE SUMMARY

1 BUSINESS ENVIRONMENT OF THE CEN/TC

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 288, and they may significantly influence how the relevant standards development processes are conducted and the content of the resulting standards.

CEN/TC 288 is responsible for standardization in the field of special geotechnical works of procedure and control methods and for the required material properties for execution only.

Executions of special geotechnical works represent an important market in Europe and world-wide.

The need of common normative references rose from the beginning of the 1990s to improve co-operation and harmonization between all parties involved and to ensure their correct application for the safety and the lasting quality of the foundations of Building and civil Engineering works. So the European Special Foundation Contractors by the EFFC (European Federation of Foundation Contractors) requested CEN to create a Technical Committee in order to draft standards for this item. Then additional technics and technologies were included in the scope of the technical committee in order to reflect all in ground construction techniques.
The other parties involved are laboratories, administration, technical construct bodies, design offices and universities.

CEN/TC 288 works in accordance with the evolution of design standards such as Eurocodes and testing standards from the field.

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 /TC 288.

The publication of the European Directive 92/64/04 on the Public Procurement Directive opened the European market to the contractors for foundations and geotechnical works. In this new context, contractor and stakeholders needed to have some European Standards in order to harmonize the various stages of the art existing in the European countries.

The standards produced by CEN/TC 288 are related to standard on testing, material and design in the field of Building and Civil Engineering works.

2 BENEFITS EXPECTED FROM THE WORK OF THE CEN/TC 288

Executions of special geotechnical works represent an important market in Europe and world-wide. Working with a unique European standard allows to ensure correct application for the safety and the lasting quality of Building and Civil Engineering works. Additionally, it will allow countries with little experience in this field to adopt robust standards elaborated from a diversity of experience.
There are currently 13 published standards on various techniques (see Annex A).

New technologies are considered while revising standards.
Also, CEN/TC 288 is constantly evolving with its market and new techniques are considered for standardization.

3 PARTICIPATION IN THE CEN/TC

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 this CEN/TC 288, please contact the national standards organization in your country.

CEN's National Members are the National Standardization Bodies (NSBs) of the 27 European Union countries, the Republic of North Macedonia, Serbia and Turkey plus three countries of the European Free Trade Association (Iceland, Norway and Switzerland) and the United Kingdom. For CEN/TC 288, there are 28 members registered as committee members.

4 OBJECTIVES OF THE CEN/TC AND STRATEGIES FOR THEIR ACHIEVEMENT

4.1 Defined objectives of the CEN/TC 288

CEN/TC 288 has achieved 13 standards (see **Annex A** for more details) and will revise the published standards based on the return of experience on these standards, technology evolution and also based on design standard and standards which could include constituents and/or materials which are used in our field.
CEN/TC 288 standards benefit from a common structure determined since the creation of the TC, and fit to provide clear guidance.
CEN/TC 288 may at any time develop a new standard on a technique of special geotechnical works for which the need for European standardization is recognized by the TC. Any new draft standard has to fall within the scope of CEN/TC 288.

4.2 Identified strategies to achieve the CEN/TC.s defined objectives.

CEN/TC 288 has approved a working program for the standardization of the execution special geotechnical works and created working groups to prepare the drafts, with a Convenor and a Secretary.
The structure of CEN/TC 288 is made of 13 standards which have been under use and some of them have already been revised.
The current Eurocodes, moreover Eurocode 7, are under review. To be in line with those new design standard, CEN/TC 288 has currently launched the revision of multiple standards.

A new standard is currently in preparation, dealing with “artificial ground freezing”. Artificial ground freezing is a construction technique normally used under specific circumstances, where other techniques are not possible or too risky. A working group has been created to undertake the role of drafting. No European standard is existing on this topic.

In order to be aware of development of standards in our field, liaisons with other TCs have been created between CEN/TC 288 and the TC or SC hereunder. Moreover, liaison officers have been nominated for each liaison.

- CEN/TC 104 Concrete and related products
- CEN/TC 189 Geosynthetics
- CEN/TC 250/SC 7 Eurocode 7 - Geotechnical design
- CEN/TC 350 Sustainability of construction works
- CEN/TC 451 Water wells and borehole heat exchangers

Noting that work on Geotechnical Investigation and Testing is actually on ISO lead and produce harmonized standard. CEN/TC 288 follow closely the work of ISO/TC182 and CEN/TC341.

About these three latest liaisons, three dedicated TG (task group) have been created:
- TG dedicated on sustainability (**see 4.3**).
- TG dedicated on Eurocodes 7. In this TG, members follow the work done in the CEN/TC 250/SC 7 Eurocode 7 - Geotechnical design. Indeed, CEN/TC 288 is particularly interested in the project prEN 1997-3 “Eurocode 7: Geotechnical design — Part 3: Geotechnical structures” drafted in CEN/TC 20/SC 7/WG 3.
- TG dedicated on the revision of annex D of EN 206 (EN 206 – Part 3) together with TC 104.

Finally, in order to maintain a common structure between all CEN/TC 288 standard and the new version of Eurocode 7, TC 288 have created an ad-hoc group on harmonization of CEN/TC 288 standards. This group is looking to bring clarity and harmonization with all TC 288 standards, and with approaches and wording from Eurocodes.

4.3 Environmental aspects

Special geotechnical works have strong link with environmental aspect as well as sustainable development. European cooperation is needed to give proper answer for more sustainable and environment friendly development. In our field this covers extending the limits of acceptable material for in-situ construction, decreasing the production of CO_2 and other greenhouse gas, decreasing the consumption of water and fossil energy.

EFFC has created a Sustainability Charter that sets out what this means for companies operating in the foundations industry.
Such cooperation would benefit from the existence of a common description of practice which is provided by European reference standards.
For the field of special geotechnical works, EFFC has collaborated with the Deep Foundations Institute to create the Geotechnical Carbon Calculator tool which allows the carbon footprint for foundation works to be determined. In 2019, the liaison between CEN/TC 288 and CEN/TC 350 Sustainability of construction works was created and members of the TG dedicated on this item met. The objective of the TG is to define “Sustainable Development”, to investigate whether CEN/TC 288 as a standards group should be dealing with this at all and to suggest how this item might be integrated into the CEN/TC 288 standards.

Futhermore, when relevant, CEN/TC 288 Working Groups consider adding a chapter/annex/other on sustainability in the revised standards.

5 FACTORS AFFECTING COMPLETION AND IMPLEMENTATION OF THE CEN/TC 288 WORK PROGRAMME

Development of CEN/TC 288 is closely related to the construction activity in Europe as well as the financial stability of the companies in the field. CEN/TC 288 is supported by EFFC which is supported by countries federation in the field.

Annex A
List of published standards

Reference	Title Execution of special geotechnical works
EN 1536:2010+A1:2015 (*)	Bored piles
EN 1537:2013	Ground Anchor
EN 1538:2010+A1:2015 (*)	Diaphragm walls
EN 12063:2024	Sheet-pile walls, combined pile walls, high modulus walls
EN 12699:2015 (*)	Displacement piles
EN 12715:2020	Grouting
EN 12716:2018	Jet Grouting
EN 14199:2015 (*)	Micropiles
EN 14475:2006+AC:2006	Reinforced fill
EN 14490:2010	Soil nailing
EN 14679:2005+AC:2006 (*)	Deep mixing
EN 14731:2005 (*)	Ground treatment by deep vibration
EN 15237:2007	Vertical drainage

(*) Standard currently under review