



"Experience in preparing the National Annexes in EU MS - Bulgaria"

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GOVERNMENTAL POLICY - MIP

Regulations and Norms for design and construction Department at the Ministry of Investment Planning is responsible for:

- **full implementation of CPD** in Bulgaria; create legal conditions for applying **Regulation (EU) No 305/2011 (CPR)** laying down harmonised conditions for the marketing of construction products and repealing CPD; management of the creation of the National system of Assessment of construction products; notification to the EK - Notified Bodies and Technical assessment bodies; Product Contact Points for Construction products according to CPR and to Regulation (EC) No 764/2008;



GOVERNMENTAL POLICY - MIP

- **Organization and management** of the elaboration and updating of technical normative regulation to ensure compliance of the construction works with essential/basic requirements for load bearing (mechanical resistance , stability and durability of structures and ground during running and seismic loads) ,fire safety, hygiene, health and the environment, safety and accessibility in use, noise protection, energy efficiency - energy economy and heat retention and sustainable use of natural resources for an economically reasonable working life;
- Direct participation in the activities the Technical Committees at BIS in the area of construction works and products.



GOVERNMENTAL POLICY

- Regulations and Norms for design and construction Department and Bulgarian Standardization Institute (BIS) manage and provide together the national policy of the Bulgarian government for introduction European Standards under the CPD/CPR - Structural Eurocodes, Harmonized ENs and Supporting ENs, including determination of the Nationally Determined Parameters /NDPs/ in respect to specific geographic, climatic and seismic conditions.
- The pre-normative research studies and analysis for NDPs in support of the application of Eurocode 8, including seismic maps is carried out by The National Institute of Geophysics, Geodesy and Geography within the Bulgarian Academy of Sciences (NIGGG-BAS)



GENERAL STRUCTURE OF THE BULGARIAN LEGISLATION

- The legal framework for elaboration of all technical rules and regulations related to design and execution of construction works is as follows:
- Spatial Planning Law (SPL);
- Law on National Standardization;
- Law on Technical Requirements to Products;
- Law on public procurement;
- Law on Chambers of Architects and Engineers in the Investment Design;
- Ordinance on the Essential Requirements and Attestation of Conformity of Construction Products.



GENERAL STRUCTURE OF THE BULGARIAN LEGISLATION

- The technical requirements for construction works and products are set out in Ordinances, Norms and Standards for:
- actions on structures including seismic ones;
- design of all types of structures;
- foundation of all types of structures;
- technical systems and installations;
- design of all types of buildings – residential, public, administrative, industrial.



GENERAL PRINCIPLES

- With art. 169 of the SPL are regulated essential (basic) requirements for construction works in accordance with CPD/CPR;
- According to Art. 169 of the SPA building permit and permit commissioning of building shall be issued only if the basic requirements are satisfied and realized and the products used are assessed in accordance with technical specifications under CPD/CPR;
- Implementation of Art. 169 of the SPA creates obligations for each stage of the life of the building - planning, design, construction, maintenance and operation and demolition - i.e. requirements must be met throughout the life cycle of the building.



GENERAL PRINCIPLES

- According to the Law on the National Standardization the application of the Eurocodes standards is voluntary.
- Since the structural design policy concerns the citizen's health and safety it is obligatory the structural Eurocodes or parts of them to be introduced through National Ordinances.
- Ordinance was approved after an assessment of the impact of the implementation of the Eurocodes and national annexes - NIGGG-BAS



LEGISLATION EUROCODES

- By Ordinance N^o RD-02-20-19 of 29 December 2011 (effective as of January 6, 2012) for design of structure of construction works (buildings and civil engineering works) by way of applying Eurocodes have defined the conditions and procedure for the structural design of construction works or of parts thereof through the application of the Eurocodes. Ordinances issued by the MIP, according the article 169 of SPL (for essential requirements to buildings)



LEGISLATION EUROCODES

- The structural design under BDS EN Eurocodes shall be made in accordance with the requirements of BDS EN of 1990 – 1999, grouped into packages depending on the type of structures (according to the EC Guide L) along with the national annexes and relevant nationally determined parameters that are integral part of the ordinance and introduced by Bulgarian standards of BDS.
- All parameters determined the safety levels and durability requirements according to the characteristics, importance, complexity, and operational risks of construction works according to their categories as specified in Article 137 of the SPL.



LEGISLATION EUROCODES

- The ordinance was given a two year transitional period (from the date of enforcement of the Ordinance), in which the structures of buildings and civil engineering works can be designed in accordance with the Eurocodes and with the national legal regulations for the design of types of building constructions.
- Not allow structural design of the building in the Eurocodes be mixed with existing national legislation (regulations, norms and rules) for the design of building structures.



FORTHCOMING IN 2014: draft amendment to ordinance

- From January 6, 2014 the design or the construction engineer (design and construction) of new construction contracts awarded under the terms and conditions of the Public Procurement Act shall be made in the Eurocodes .
- The design of buildings outside the scope of above text is determined year transition period from the date of enforcement of the regulation, in which the structures of buildings can be designed as the national regulations for the design of building structures and in the Eurocodes , without mixing national and Eurocodes systems.



Adoption of the Eurocodes as BDS EN standards in Bulgaria - background

- The Technical Committee BDS/TC 56 “Design of building constructions” was created in 1993 as a mirror committee on CEN/TC 250 and was initiated by the National center of construction (NCC)
- Till the year 2000 the activities of the TC 56 have been executed from NCC but after his closure (because of economical and other reasons) the institution which proceed the work in this area and provided financial support for translation and technical editing of the Eurocodes is the Ministry of Regional Development and Public works



Adoption of the Eurocodes as BDS EN standards in Bulgaria - background

Direct participation in the activities of the BDS/TC 56 concerning the adoption of the European Standards by experts from:

- Technical Rules & Regulations Department - MRDPW
- University of Architecture, Civil Engineering and Geodesy /UACG/
- High School of Building "Luben Karavelov"
- Central Laboratory for Seismic Mechanics & Earthquake Engineering
- Research Institute for Civil Engineering
- Bulgarian Scientific and Technical Union of Civil Engineering
- National Agency "Road Infrastructure"
- Bulgarian Chamber of Engineers in the Investment Design
- Varna Free University
- Independent Experts.



Adoption of the Eurocodes as BDS EN standards in Bulgaria - background

- 2002 – 2006 All 61 Parts of ENVs are published in Bulgarian
- 2002 The first EN 1990“Eurocode – Basis of structural design” is published by CEN
- 2003 BDS EN 1990 is published in Bulgarian
- 2007 The all ENs are published by CEN
- 2013 The all 58 Parts are translated and published in Bulgarian



National Annexes to Eurocodes in Bulgaria - background

- The Eurocodes system consist of 58 Parts and over than 5000 pages
- In National Annexes shall be nationally determined app. 1500 National determined parameters (NDP)
- The development of National Annexes in Bulgaria began in 2007 with financial support of Ministry of Regional Development and Public Works
- The work was provided by Standing Working Groups in BDS/TC 56
- The new climatic Maps, as well as new seismic Map, were developed by Bulgarian Academic of science



National Annexes to Eurocodes in Bulgaria - background

- By 2012 all National Annexes were developed and submitted for public enquiry on BDS website and Ministry website
- The last National Annexes were published in April 2013
- All National Annexes are available free of charge on BDS website www.bds-bg.org and on Ministry website www.mrrb.government.bg
- Following the CEN/TC 250 recommendations, for app. 80% of NDPs are adopted recommended values
- For nearly 80% of the NDPs the recommended values and classes were accepted but only after profound research and comparative calculations were made.



National Annexes to Eurocodes in Bulgaria - background

- For specific national conditions are determined relevant NDPs
- Attention has been paid to the parameters related to the definition of seismic action. Data for the earthquakes from the seismic source in the Vrancha Mountain have been collected and a specific response spectrum has been developed. The territory to which this spectrum will applied is defined on the new Bulgarian seismic map



Relation between Eurocodes and hEN/ supporting standards under CPD

- According the last list of harmonized standards under CPR, published in OJ, they are 437 now (without Amendments)
- All of them are adopted as BDS EN
- App. 65 % of them are translated and published in Bulgarian language
- Many of the supporting standards, containing test methods, are also translated in Bulgarian language, for example for test methods for cement, concrete, steel materials, mortars, masonry units, insulations etc.

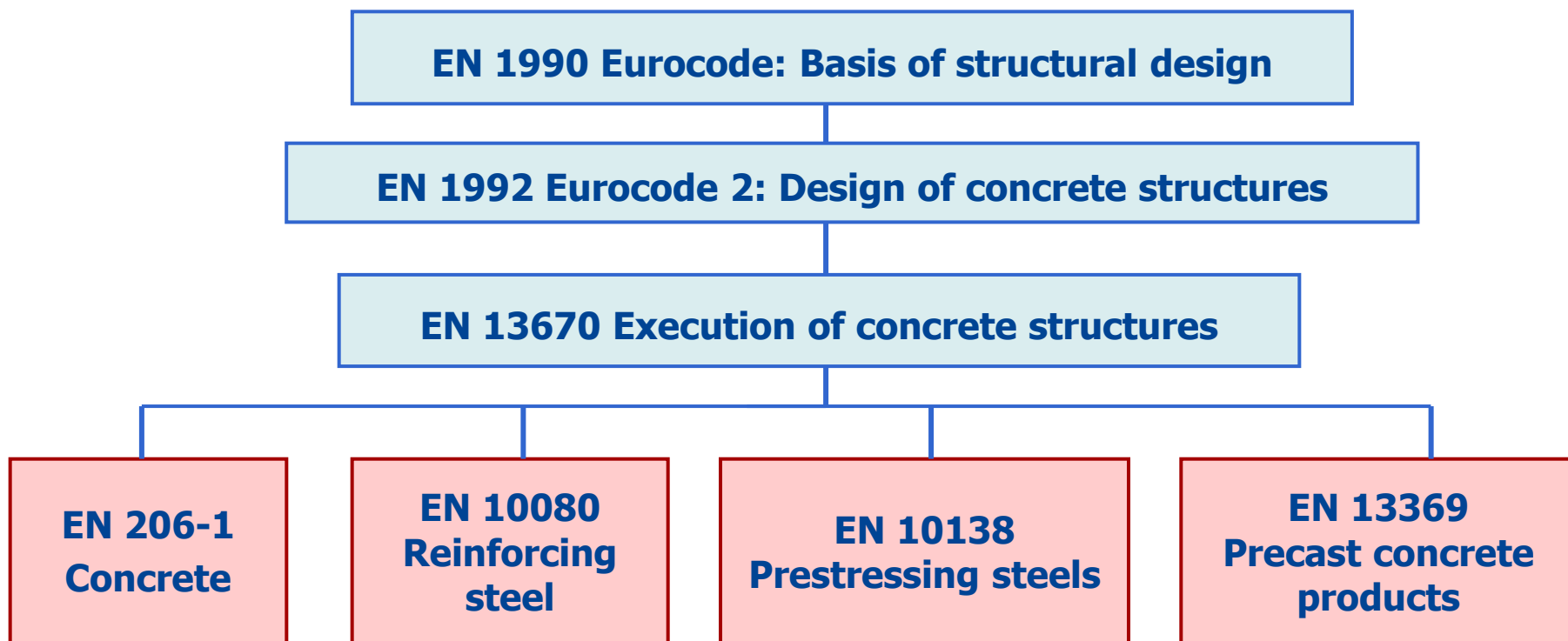


Relation between Eurocodes and hEN/ supporting standards under CPD

- In Bulgaria the system for conformity assessment of construction products is fully implemented. The production and the market of construction products is good regulated
- Placed on the market construction products are certified according harmonized specifications – hENs or ETAs
- They have CE marking with declaration of performance in relation to the essential characteristics of the construction product in accordance with the relevant harmonized technical specifications
- This information is compatible with Eurocodes



Example for relationship of Eurocodes and ENs under CPR



THANK YOU FOR THE ATTENTION

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