Workshop on the use of the Eurocodes in the Mediterranean Countries 26-27 November 2006 - Varese JRC - NATO

Opportunities for scientific and technical cooperation in structural concrete

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fib **OBJECTIVES**

Develop at the international level the study of scientific and practical matters in order to advance the technical, economic, aesthetic and environmental performance of concrete construction

This scope is achieved by:

 Stimulation of research and synthesis of finding from research and practice

- Translation of research findings and experience into design and construction practice
- Dissemination of the results by way of pubblications, international congresses and symposia
- Production of reccomandations for design and construction of concrete structures
- Information to the members on the latest developments through regular pubblications (Bulletins, Journal, Model Codes)

Main Code relates pubblications

International Raccomandations (pubblished in 15 languages)

1970: CEB-FIP International Raccomandations (R.C. And P.C.)

1964: CEB

1985: CEB

1978: CEB-FIP Model Code 1978 (strong influence on ENV 1992)

> Model Code for Seismic Design of Concrete Strctures

1993: CEB-FIP Model Code 1990 (strong influence on EN 1992)

The same people involved in *fib* and CEN-TC 250

Joost Walraven Chairman of P.T. for EN 1992-1-1 Giuseppe Mancini Chairman of P.T. for EN 1992-2 Andrew Beeby Chairman of P.T. for EN1992-3

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and many others







Future developments

Commissions 2 (safety) S.A.G. 5 (new Model Code)

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SC0 (Basis of design)

CEN-TC 250

Safety format for actual safety evaluation of existing structures

 γ_m calibration

Random fields JCSS: Probabilistic Assessment of Existing Structures

Probabilistic Assessment of Existing Structures

A publication of The Joint Committee on Structural Safety (JCSS)

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Edited by D. Diamantidis

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Future developments

Commission 4 (Modelling of structural behaviour and design)

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SC2 (Concrete structures)

CEN-TC 250

- Influence of aggregate type (limestone) and min value of D_{max} on the resisting mechanisms controlled by tensile strength and by interlock
- Web crushing strength for very thin webs and inclined stirrups
- Shear design and size effect in bridges
- Sticking factor combined with other mechanisms in shear friction strength evaluation
- Additional design rules for external tendons (deviators)
- New resisting models in presence of corroded reinforcement (bond reduction)







- Shear behaviour of concrete slabs subject to out of the plane shear and biaxial tension, combined with bending
- Developing of composite externally prestressed structures (bridges)







Future developments fib CEN-TC 250 Commission 7

- Compatibility of models used for seismic and non-seismic design (shear)
- Safety format for N.L. analysis (safety evaluation of existing bridges in seismic areas)
- Reliability of capacity design for medium-large bridges

(Seismic design)







