Harmonized European standards for construction in Egypt

Introduction to Eurocodes

Jean-Armand Calgaro
Chairman of CEN/TC250

Organised with the support of the Egyptian Organization for Standardization and Quality
Harmonized European standards for construction in Egypt

Introduction to Eurocodes

- EN 1990
  - Structural safety, serviceability and durability, combinations of actions

- EN 1991
  - Actions on structures

  - Design and detailing

- EN 1997

- EN 1998
  - Geotechnical and Seismic design

Harmonized European standards for construction in Egypt
Introduction to Eurocodes

Development of the present generation of Eurocodes

First Eurocodes 1976
ENVs 1990
ENs 1998

Input from scientific and technical associations

European Commission

CEN

Harmonized European standards for construction in Egypt
Harmonized European standards for construction in Egypt

Introduction to Eurocodes

CEN, COMMISSION-JRC

CEN/TC250

Coordination Group
- Horizontal Group Bridges
- Horizontal Group Fire
- WG1-N250-Liaison CEN/TCs

EN 1990

CAP
Chairman's Advisory Panel(s)

SC1 SC2 SC3 SC4 SC5 SC6 SC7 SC8 SC9

National Mirror Groups of SCs

National Mirror Group of CEN/TC250

UIC

CEN/TCs
EOTA
CEPMC

National Standard Body

BSi
Introduction to Eurocodes

10 Eurocodes – 58 Parts – 5320 pages

EN 1990
109 pages

EN 1995
269 pages

EN 1991
783 pages
EN 1992
469 pages
EN 1993
1470 pages
EN 1994
334 pages

EN 1996
276 pages
EN 1997
371 pages
EN 1998
686 pages
EN 1999
553 pages
Introduction to Eurocodes

Execution, material, product, test Standards
Introduction to Eurocodes

IMPLEMENTATION
OF THE EN EUROCODES

EN 199n-p

Main text
Normative Annexes
Informative Annexes

Choices
Nationally Determined Parameters (NDPs)

Decisions

Transformation into a National Standard (« NS » EN 199n-p)

National Annex (National Standard)

Project specification

Harmonized European standards for construction in Egypt
## Introduction to Eurocodes

### The Eurocodes in 2010 and beyond: the main strands

<table>
<thead>
<tr>
<th>PROMOTION / EDUCATION</th>
<th>MAINTENANCE</th>
<th>HARMONIZATION (NDPs)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Evolution of the Eurocodes:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Preparation of the new generation of Eurocodes</td>
</tr>
<tr>
<td>FURTHER DEVELOPMENT</td>
<td></td>
<td>Preparation of:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- New Eurocode Parts,</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- New Eurocodes ENs</td>
</tr>
</tbody>
</table>

Harmonized European standards for construction in Egypt
FURTHER DEVELOPMENTS OF EUROCODES

• New materials
• New concepts and/or requirements
• New societal needs
Introduction to Eurocodes

WG2: Existing structures

WG3: Glass

WG4: FRP

WG5: Membrane structures

WG6: Robustness
Harmonized European standards for construction in Egypt

Programming Mandate
Withdrawal of conflicting National standards March 2010

Preparation of evolution of existing Eurocodes and of further developments
Start publication

Introduction to Eurocodes

THE FUTURE CONSTRUCTION PRODUCTS REGULATION

ANNEX I

Basic works requirements

Construction works as a whole and in their separate parts must be fit for their intended use.

Subject to normal maintenance, basic works requirements must be satisfied for an economically reasonable working life.
Basic works requirements

1. Mechanical resistance and stability
2. Safety in case of fire
3. Hygiene, health and the environment
4. Safety in use
5. Protection against noise
6. Energy economy and heat retention
7. Sustainable use of natural resources
7. Sustainable use of natural resources

The construction works must be designed, built and demolished in such a way that the use of natural resources is sustainable and ensure the following:

(a) recyclability of the construction works, their materials and parts after demolition;

(b) durability of the construction works;

(c) use of environmentally compatible raw and secondary materials in the construction works.
Our objectives in a few words
Introduction to Eurocodes

• Extension of the use of the Eurocodes to:
  Give better answers to societal needs, in particular safety, security, comfort and sustainability;

• Simplify the dialogue between actors of the construction industry

• Evolution of the existing Eurocodes
  – more performance-based codes
  – even more transparency to reach or to differentiate the desired reliability levels
  – tightened links with research.

• Tools to stimulate innovation

• Towards a « harmonized » European regulatory system
Thank you for your attention