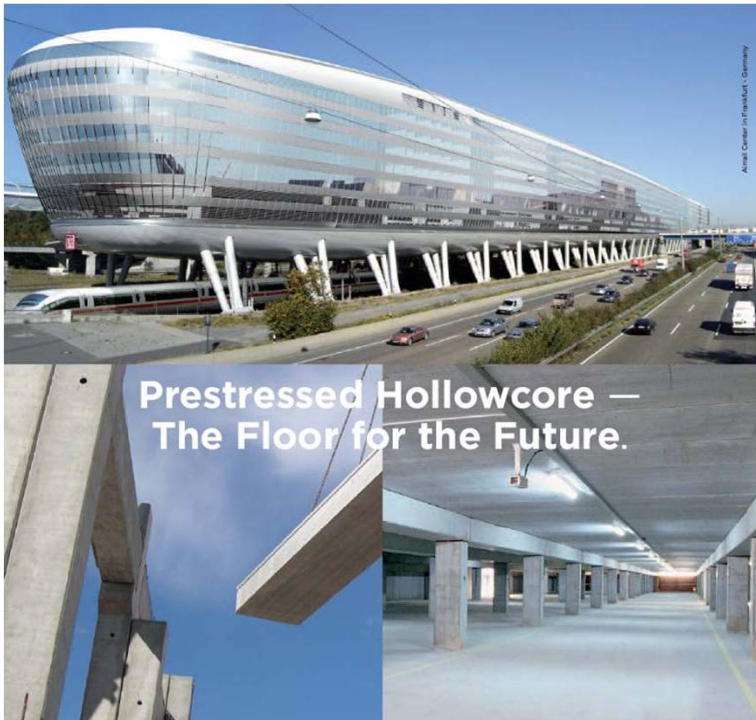




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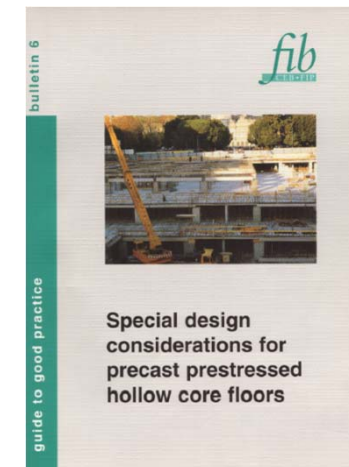
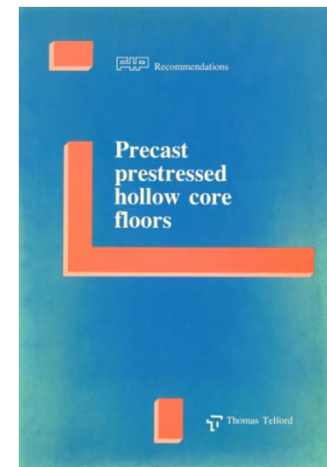
fib-recommendations
Precast prestressed hollow core floors
Commission 6 – TG 6.1



Stef MAAS
IPHA Technical Seminar
October 26th – 27th 2011
Aachen (GE)

History

-
- 1988 - Precast prestressed hollow core floors (Thomas Telford),
- 2000 - Special design recommendations for precast prestressed hollow core floors
- 201x – Main work item of TG 6.1



Members of the taskgroup

- 17 members;
- 7 present at Technical Seminar in Aachen;
- IPHA is well represented.

Andrzej	Cholewicki	Poland
Arnold	Van Acker	Belgium
Arto	Suikka	Finland
Barry C.	Crisp	Australia
Bruno	Della Bella	Italy
Gösta	Lindström	Sweden
Íria Lícia Oliva	Doniak	Brasil
Kim S.	Elliott	U.K.
Marcelo	Ferreira	Brasil
Matthieu	Scalliet	France
Olli	Korander	Finland
Philippe	Mary	France
Ronald	Klein-Holte	Netherlands
Spyros	Tsoukantas	Greece
Stef	Maas	Belgium
Sthaladipti	Saha	India
Wit	Derkowski	Poland

Chapters

Version september 2011

7 Chapters

- 1 General
- 2 Description of hollow core units and floor systems
- 3 Design of the cross-section
- 4 Design of hollow core floors
- 5 Building physics
- 6 Design considerations in connection with manufacture
- 7 Other design considerations



Chapter 2

Description of hollow core units and floor systems

2.1 Product description

2.2 Methods of manufacture

Chapter 3

Design of the cross-section

- 3.1 General design principles
- 3.2 Flexural capacity
- 3.3 Shear capacity
- 3.4 Shear and bending interaction
- 3.5 Torsion
- 3.6 Shear and torsion interaction
- 3.7 Punching
- 3.8 Camber design and deflection
- 3.9 Projecting strands

Chapter 4

Design of hollow core floors

- 4.1 Tie systems
- 4.2 Diaphragm action
- 4.3 Transversal load distribution
- 4.4 Structural topping and composite action
- 4.5 Slim floor construction
- 4.6 Cantilever design
- 4.7 Unintended restraining effects and negative moments
- 4.8 Horizontal actions
- 4.9 Dynamic actions (vibrations and natural frequency)
- 4.10 Fire resistance
- 4.11 Connections
- 4.12 Openings and block-outs

Chapter 5

Building physics

- 5.1 Thermal properties
- 5.2 Thermal active floors
- 5.3 Acoustic properties

Chapter 6

Design considerations in connection with manufacture

- 6.1 Dimensional tolerances
- 6.2 Slippage of prestressing tendons
- 6.3 Crack control
- 6.4 Surface characteristics
- 6.5 Drainage holes
- 6.6 Test methods

Chapter 7

Other considerations (production-erection)

- 7.1 During casting
- 7.2 Immediately after casting
- 7.3 Sawing of slabs
- 7.4 Lifting of slabs
- 7.5 Storage

Thank you

- For your attention

Special thanks to the members of the T.G. , especially to Arnold Van ACKER.