Precast Concrete Façades and the Thermowall System

Precast Concrete Façades and the Thermowall System

Contents

Imprint

5	Preface

7	Prefabricated concrete structures
11 12 13 14	Materials Concrete Reinforcements Insulation
17 18 20 22 24 25	The System: "everything at a glance" Basic parameters for the design Typical details Solid precast kit by Syspro Embedded items Energy-efficient construction
29 30 30 32 34 36 38	Examples of pre-fabricated façades Hydrophobically treated surfaces Duplex house in Zurich Open living cube in Zollberg Standard home in Hörbranz Architects home in Eglisau Residential home at the Mosel river
40 40 42 44	Varnishes and paints Auditorium building in Ulm Student housing in Ulm-Eselsberg Produktion building in Sulgen

48 Industrial surface design

46

- 48 Cemetery chapel in Manching
- 50 Office and production building in Sulzberg

Service centre in Coesfeld

53 54 56 57 58 60 62 63	Structural and finishing work Formwork, reinforcement and accessories Automated production technology Construction process Joints and edges Exposed concrete surface finishes and automated prefabrication Advantage of thermowall construction Conventional production of concrete façades
67 68 72 73 73 74 80	On structural design Load-bearing properties Usability Fire protection Waterproof structures Thermal insulation Sound protection
83 84 86 88 90 92 96 98 100 102 106	Details, cross-sections and views From the cellar to the attic Roof terraces Waterproof structures Commercial buildings Office buildings Zero-energy buildings Balconies Loggias Windows Corners
A/02	Attachment The Syspro® Quality Group

A/04 References

A/06 Ad inserts

Imprint

Syspro-Gruppe Betonbauteile e.V. Hanauer Str. 31 D-63526 Erlensee Internet: www.syspro.de Mail: info@syspro.org

Authors

Gisela Morgenweck-Marfels, Cologne Herbert Kahmer, PhD Civil Engineering, Erlensee

Translation

Nelly Thomas, Langenselbold ir. Xavier van der Wee, Grobbendonk Herbert Kahmer, Erlensee

Print

Olaf Schulze, Deltasign-Hanau GmbH, Hanau Ulrike Börstinghaus, Bräutigam:Medien, Hanau Druckhaus Gera GmbH, Gera

First English-language editon printed in January 2017

Acknowledgements

We would like to thank the following people for their contributions to making this book possible:

Professor Harald Roser, PhD Architectural Engineering, University of Applied Sciences Stuttgart

Katharina Ungefug, B.A., Stuttgart

Professor Julian Kümmel, PhD Civil Engineering, THM - University of Applied Sciences Gießen