Approval for this bulletin

Subject to priorities defined by the Technical Council and the Presidium, the results of the *fib*'s work in commissions and task groups are published in a continuously numbered series of technical publications called *bulletins*. The following categories are used:

Category:

Technical report
State-of-the-art report
Manual / Guide to good practice / Recommendation
Model code

Approval by:

Task group and chairpersons of the commission Commission Technical Council General Assembly

Any publication not having met the above requirements will be clearly identified as a preliminary draft.

fib bulletin 111 was approved as a state-of-the-art-report by the Commission 3 in November 2020.

The *fib* Task Group 3.2 - "Modeling of structural performance of existing concrete structures" includes the following members:

Convener: Dario Coronelli. Co-Convener: Kamyab Zandi.

Members: Andrade Carmen, Belletti Beatrice, Casprini Elena, Castagnone Adriano, Chrysostomou Christis, de Boer Ane, Del Zoppo Marta, di Carlo Fabio, Di Nunzio Giuseppe, Dieteren Gerrie, Dunkelberg Daniel, Franceschini Lorenzo, Hendriks Max, Ju Hyunjin, Kansara Kunal, Kashani Mohammad Mehdi, Kuchma Daniel, Lantsoght Eva, Lavorato Davide, Markovic Ivan, Martínez Sierra Isabel, Matthews Stuart, Meda Alberto, Mirzaei Zanyar, Nakamura Hikaru, Nuti Camillo, Prieto Miguel, Ravasini Simone, Rinaldi Zila, Strauss Alfred, Tondolo Francesco, Ueda Tamon, Vardai Attila, Vecchi Francesca, Walraven, Joost, Yang, Yuguang, Zwicky Daia.

Former members: Bigaj van Vliet Agnieszka, Cervenka Jan, Hendy Chris.

Cover images: Viaducts Prince Claus Square The Hague, The Netherlands (built 1957).

© Fédération internationale du béton (fib) 2024.

Although the International Federation for Structural Concrete / Fédération internationale du béton (*fib*) does its best to ensure that all the information presented in this publication is accurate, no liability or responsibility of any kind, including liability for negligence, is accepted in this respect by the organisation, its members, employees or agents.

All rights reserved. No part of this publication may be reproduced, modified, translated, stored in a retrieval system or transmitted in any form or by any means – electronically, mechanically, through photocopying, recording or otherwise – without prior written permission from the *fib*.

ISSN 1562-3610 ISBN 978-2-88394-178-6 https://doi.org/10.35789/fib.BULL.0111 Layout by Corinne Bottollier (fib). Printed by P+K Solutions GmbH & Co. KG

Acknowledgements

This state-of-the-art-report was drafted by the *fib* Task Group 3.2 - "Modeling of structural performance of existing concrete structures".

Authors:

Joost Walraven (Editor)

Delft University of Technology, The Netherlands - University of Shenzhen, China

Dario Coronelli (Convener)

Politecnico di Milano, Italy

Kamyab Zandi (Technical Secretary)

Chalmers University of Technology, Canada

Carmen Andrade

Instituto Eduardo Torroja, Spain

Ane de Boer

Mot Infrastructures, The Netherlands

Gerrie Dieteren

TNO Delft, The Netherlands

Mehdi Kashani

University of Southampton, UK

Eva Lantsoght

Universidad San Francisco de Quito, Ecuador

Camillo Nuti

University Roma Tre, Italy

Zila Rinaldi

University of Roma Tor Vergata, Italy

Yuguang Yang

Delft University of Technology, The Netherlands

Beatrice Belletti

University of Parma, Italy

Marta del Zoppo

University of Naples Federico II, Italy

Max Hendriks

TU Delft, TU Trondheim, The Netherlands and

Norway

Davide Lavorato

University Roma Tre, Italy

Alberto Meda

University of Roma Tor Vergata, Italy

Miguel Prieto

RISE Göteborg, Sweden

Francesco Tondolo

Politecnico di Torino, Italy

Daia Zwicky

University of Applied Sciences and Arts of Western Switzerland

Contact details of Task Group members can be found in the members only section of the *fib* website, www.*fib*-international.org.

DOI by chapter

Chapters	Authors	DOI
1	Walraven.	https://doi.org/10.35789/fib.BULL.0111.Ch01
2	Walraven.	https://doi.org/10.35789/fib.BULL.0111.Ch02
3	Walraven.	https://doi.org/10.35789/fib.BULL.0111.Ch03
4	Walraven.	https://doi.org/10.35789/fib.BULL.0111.Ch04
5	Andrade, Coronelli, Dieteren, Lavorato, Meda, Nuti, Walraven, Zandi, Zwicky.	https://doi.org/10.35789/fib.BULL.0111.Ch05
6	Coronelli, Prieto, Tondolo, Walraven, Zandi.	https://doi.org/10.35789/fib.BULL.0111.Ch06
7	Andrade, Belletti, Coronelli, de Boer, del Zoppo, Hendriks, Kashani, Lantsoght, Prieto, Rinaldi, Walraven, Yang, Zandi, Zwicky.	https://doi.org/10.35789/fib.BULL.0111.Ch07