Composites with Inorganic Matrix for Repair of Concrete and Masonry Structures

Held at the ACI Spring 2017 Convention ACI SP 324

Detroit, Michigan, USA 26-30 March 2017

Editors:

Gianmarco de Felice Antonio Nanni Lesley H. Sneed

ISBN: 978-1-5108-7129-8

Printed from e-media with permission by:

Curran Associates, Inc. 57 Morehouse Lane Red Hook, NY 12571



Some format issues inherent in the e-media version may also appear in this print version.

Copyright[©] (2017) by American Concrete Institute All rights reserved.

Printed by Curran Associates, Inc. (2018)

For permission requests, please contact American Concrete Institute at the address below.

American Concrete Institute 38800 Country Club Drive Farmington Hills, MI 48331 USA

Phone: (248) 848-3700 Fax: (248) 848-3701

BKStore@concrete.org

Additional copies of this publication are available from:

Curran Associates, Inc. 57 Morehouse Lane Red Hook, NY 12571 USA Phone: 845-758-0400 Fax: 845-758-2633 Email: curran@proceedings.com Web: www.proceedings.com

TABLE OF CONTENTS

SP-324-1

Determination of Material Properties of TRC Under Cyclic Loads 1 Authors: Karoline Holz, Elisabeth Schütze, Patricia Garibaldi, and Manfred Curbach

SP-324-2

Comparative Assessment of the Tensile Behavior of Steel and Textile Reinforced Mortar Systems 17

Authors: Costantino Menna, Alberto Balsamo, Gennaro Maddaloni, and Andrea Prota

SP-324-3

Experimental Characterization of Glass and Carbon FRCMs for Masonry Retrofitting 31 Authors: Enrico Garbin, Matteo Panizza, and Maria Rosa Valluzzi

SP-324-4

Acceptance Criteria for Concrete and Masonry Strengthening Using Fabric-Reinforced Cementitious Matrix (FRCM) and Steel Reinforced Grout (SRG) Composites 51 Authors: Mahmut Ekenel, Francisco De Caso y Basalo, and Antonio Nanni

SP-324-5

Confinement of Brick Masonry Columns with SRG Jackets 57 Authors: Lesley H. Sneed, Christian Carloni, Giacomo Fraioli, and Giulia Baietti

SP-324-6

Numerical Analysis of RC Beams Strengthened with SRG ⁶⁷ Authors: Massimo Petracca, Guido Camata, Christian Carloni, Annalisa Napoli, Roberto Realfonzo, and Paolo Casadei

SP-324-7

Shear Performance of FRCM Strengthened RC Beams 79 Authors: Luciano Ombres and Salvatore Verre

SP-324-8

Confinement of Concrete Columns with SRG 101 Author: Christian Carloni, Mattia Santandrea, Imohamed Ali Omar Imohamed, and Lesley H. Sneed

SP-324—9

Out-of-Plane Reinforcement of Masonry Walls with Steel Reinforced Grout 113 Author: Stefano De Santis and Gianmarco de Felice

SP-324-10

Experimental Study on the Performance of Textile Reinforced Masonry under Flexural Load 127 Authors: Dorothea Saenger and Michael Raupach

SP-324-11

In Plane Shear Behavior of Calcareous Masonry Panels Strengthened by FRCM 141 Authors: Margherita Stefania Sciolti, Francesco Micelli, Allen Dudine, and Maria Antonietta Aiello

SP-324-12

Analysis and Comparison of EBR Techniques Applied to Masonry Vaults 161 Authors: Elvis Cescatti, Francesca da Porto, and Claudio Modena

SP-324-13

SRG for Strengthening Reinforced Concrete and Masonry Structures: From Laboratory to Field Applications 177 Authors: Paolo Casadei and Paolo Girardello