



CPD-accredited Workshop, 23 November 2018, 08:00 – 17:00

Strengthening of Structures with Composite Materials (FRP)

University of Cape Town, Dept. of Civil Engineering

Venue

University of Cape Town
Department of Civil Engineering
Upper Campus, Rondebosch
New Engineering Building

Contact

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Presenter

Professor Björn Täljsten (BT), Technical University of Denmark

Background, Content, Purpose and Structure of the Workshop

The workshop briefly discusses the need for rehabilitation and strengthening of concrete structures. The focus is placed mainly on FRP (Fibre Reinforced Polymer) strengthening of concrete structures in flexure and shear. Other strengthening techniques are discussed in view of their applicability for various design cases.

The purpose of the course is to provide participants with a basic understanding on principles and techniques for strengthening of concrete structures using FRP materials. Existing guidelines are presented and discussed. Both theoretical and practical issues are considered.

The workshop consists of a series of lectures and practical demonstrations in the laboratory of the University of Cape Town. In the practical demonstrations, various application techniques for FRP systems are demonstrated. The load-bearing behaviour of FRP-strengthened members will be demonstrated using destructive and non-destructive test methods.

Participant Target Groups

- Structural engineers involved in the strengthening of concrete structures
- Contractors involved in the strengthening of concrete structures
- Students and academics

Programme and Timetable

07:30 - 08:00	Registration
08:00 - 08:30	Introduction to strengthening techniques
08:30 - 09:00	Introduction to structural composites
09:00 - 10:00	Strengthening in flexure
10:00 - 10:30	Teak break
10:30 - 11:30	Strengthening in flexure, continued
11:30 - 12:00	Various FRP systems
12:00 - 13:00	Lunch break
13:00 - 13:45	Strengthening in Shear
13:45 - 14:15	Design examples and case studies
14:30 - 15:00	Laboratory demonstrations and testing
15:00 - 15:30	Tea break
15:30 - 17:00	Laboratory demonstrations, continued



Presenter

Professor Björn Täljsten has worked as project manager for numerous national and international construction and R&D projects. He specialises in areas of concrete structures and concrete repair, use of polymer composites in construction, structural health monitoring and risk management.

Professor Täljsten applied composite strengthening methods to several small and large bridges and developed design models for CFRP strengthening, which was accepted by the Swedish Rail and Road authorities. He developed various composite strengthening systems for bridges, which have been applied in

Denmark and in international projects.

He has been very active in the European funded project “Sustainable Bridges”, acting as manager for work package 6: Repair and strengthening. The project aims to increase the load and the speed on bridges for the European rail network.

In 2005, Björn was appointed full professor at the Technical University of Denmark. He has published more than 150 papers in peer-reviewed journals and at conferences.

Fees* and registration

		FRP workshop only**	Combined package **
		FRP & NDT workshop	
ICRRR delegates	R 2600 / € 260	R 4000 / € 400	
Students	R 1600 / € 160	R 2400 / € 240	
Others	R 3200 / € 320	R 4000 / € 400	

* Fees in ZAR refer to local delegates; fees in Euro refer to international delegates

** Please indicate the appropriate registration category in the above table

Title: First name: Surname:

Institution:

Full postal address:.....

.....

Fax:.....E-mail:.....

Registration covers attendance of all sessions of the workshop, teas and lunch, and one set of printed notes.

Payment may be made in one of the following ways (please tick to indicate method used):

Bank transfer, to be made to:

Account holder: ICRRR

Bank: Standard Bank of South Africa, Rondebosch

Branch Code: 02500911

Account No.: 072969334

SWIFT Address: SBZAZAJJ

Credit card:

Cardholders Name:

Card Type (Visa, Master):

Card Number: *Expiry Date:*

Validation Number (last 3 digits of number on reverse side of card):

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