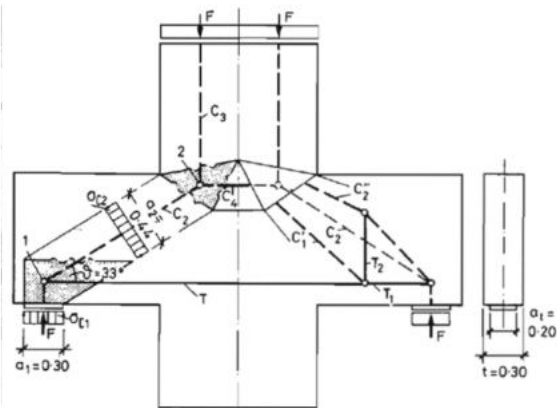
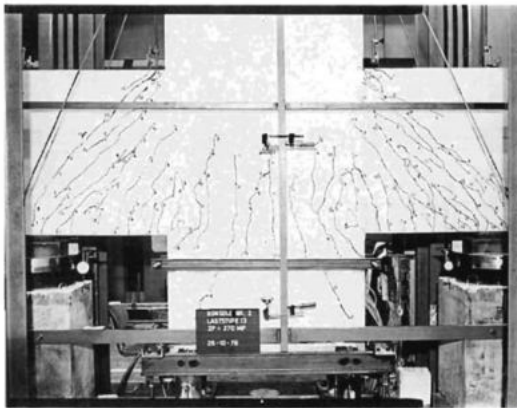


20-22 September 2023
New Delhi, India

**Engineering for
Sustainable Development**

Two-days Workshop on Design of Structural Concrete with “Strut and Tie Method”

Date: 18th - 19th September 2023
Venue: Hotel Vivanta Dwarka, New Delhi



(Source: Schlaich and Schäfer, 1991)

Organised by



The Indian National Group of the IABSE



Overview

Strut and Tie Modelling (STM) is a simple but quite descriptive method for designing reinforced concrete elements where the well-known bending design is inadequate. Jörg Schlaich and Kurt Schäfer systematically developed and extended this method in the 1980s and 1990s on the basis of Ritter's truss analogy. The Strut and Tie Model can be used to safely design so-called discontinuity regions (D-regions) and to determine an efficient reinforcement layout. Typical D-regions for beams are bearings, corbels, dapped beams, openings, frame corners, anchorages and the shear connection of T-Beams between web and flange. In addition, STM can be used successfully for the design of deep beams, bracing walls and foundations. Several standards such as ACI, CSA, and Eurocode (EC2), approve Strut and Tie Models. It is easy to understand the basics and theory of structural design with STM, but practice and experience are necessary for effective application. Therefore, this workshop will cover not only the theoretical aspects, but also provide enough time for individual exercise.

Content/Coverage

- Introduction and basics of STM
- Model finding and modeling
- Design of struts and node checks
- Typical D-regions - simple basic cases
- Conceptual designing with Strut and Tie Models
- Typical D-regions for beams
- Foundations
- Exercise with selected examples

Who may participate?

- Students and research scholars
- Practicing engineers - government and private
- Faculty members of engineering colleges
- Scientists from government and R&D organizations

Workshop Faculty

Prof. Dr.-Ing Arndt Goldack

Faculty of Architecture and Civil
Engineering, University of Wuppertal
Pauluskirchstraße 7
42285 Wuppertal, Germany

Prof. Dr. sc. techn. Mike Schlaich

Fakultät VI
Planning Building and Environment
Technische Universität Berlin, Germany

Workshop Date

18-19 September 2023

Venue

Hotel Vivanta Dwarka, Service Road,
Sector 21, Dwarka, New Delhi.

Workshop Coordinator

Professor Dr Vasant Matsagar

Dogra Chair
Department of Civil Engineering
Indian Institute of Technology (IIT) Delhi
Hauz Khas, New Delhi - 100 016, India

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Things to have

Please have a scientific calculator or scientific Calculator downloaded on mobile. A kit containing Pencil, Eraser, Set-Square, Ruler, Protractor, normal Black, Red & Blue colour pencils and A-4 Size Note Book will be provided to all participants.

Detailed Outline:

DATE	18 th September 2023	19 th September 2023
9:00-9:30	Welcome session	Strut and Tie Models for Conceptual Design of bridge cable connections
9:30-11:00	Fundamentals of Strut and Tie Modelling	Typical D-regions for beams - I
11:00-11:15	Break	
11:15-12:45	Design of Strut and Ties, Nodes checks based on Eurocode 2	Typical D-regions for beams - II
12:45-14:00	Lunch	
14:00-15:30	Basic Strut and Tie Models	Examples and practice exercise-II
15:30-15:45	Break	
15:45-17:15	Examples and practice exercise-I	Examples and practice exercise-III

Note:

Certificate of attendance will be awarded.

Attendees will get 25% discount on purchases of Books of IABSE SED.

Workshop Fees

Pre-Conference Workshop	Foreign Delegates*		BIMSTEC Delegates*	
	Young Engineers & Students	Other Delegates	Young Engineers & Students	Other Delegates
Strut and Tie Method	€ 150	€ 200	₹ 7,000	₹ 8,000

*Plus 18% GST

For Online Workshop Registration, Please click on below link
<https://regcon.in/sp/iabse-congress-2023-workshop-registration/>