

Objekttyp: **TableOfContent**

Zeitschrift: **IABSE reports = Rapports AIPC = IVBH Berichte**

Band (Jahr): **62 (1991)**

PDF erstellt am: **23.07.2024**

Nutzungsbedingungen

Die ETH-Bibliothek ist Anbieterin der digitalisierten Zeitschriften. Sie besitzt keine Urheberrechte an den Inhalten der Zeitschriften. Die Rechte liegen in der Regel bei den Herausgebern.

Die auf der Plattform e-periodica veröffentlichten Dokumente stehen für nicht-kommerzielle Zwecke in Lehre und Forschung sowie für die private Nutzung frei zur Verfügung. Einzelne Dateien oder Ausdrucke aus diesem Angebot können zusammen mit diesen Nutzungsbedingungen und den korrekten Herkunftsbezeichnungen weitergegeben werden.

Das Veröffentlichen von Bildern in Print- und Online-Publikationen ist nur mit vorheriger Genehmigung der Rechteinhaber erlaubt. Die systematische Speicherung von Teilen des elektronischen Angebots auf anderen Servern bedarf ebenfalls des schriftlichen Einverständnisses der Rechteinhaber.

Haftungsausschluss

Alle Angaben erfolgen ohne Gewähr für Vollständigkeit oder Richtigkeit. Es wird keine Haftung übernommen für Schäden durch die Verwendung von Informationen aus diesem Online-Angebot oder durch das Fehlen von Informationen. Dies gilt auch für Inhalte Dritter, die über dieses Angebot zugänglich sind.



Table of Contents	●	Table des matières	●	Inhaltsverzeichnis
Preface				2
About the Colloquium				3
Theme 1: Structural Concrete				13
J. E. BREEN				
Why Structural Concrete?				15
A. S. G. BRUGGELING				
An Engineering Model for Structural Concrete				27
Theme 2: Consistent Models for Design, Analysis and Detailing				37
Sub-Theme 2.1: Performance Requirements				
M. WICKE				
Performance Requirements for Structural Concrete				39
M. WICKE				
Cracking and Deformation in Structural Concrete				49
H. TROST				
Creep, Relaxation and Shrinkage of Structural Concrete				59
Time Dependent Effects				
B. BLESSENOHL				
Creep Effects on Structural Concrete				77
H. CORRES PEIRETTI, A. PEREZ CALDENTY				
Time-Dependent Behaviour of Prestressed Concrete Structures				83
M. SZECHINSKI				
Deformations of T-shaped Beams under Sustained Loads				89
S. GRAMBLIČKA				
Long-Term Strains of Compression Elements in Tall Buildings				95
Cracking				
H. W. REINHARDT				
Imposed Deformation and Cracking				101
C. R. BRAAM, J. C. WALRAVEN				
Control of Crack Width in Deep Reinforced Concrete Beams				111
L. VANDEWALLE				
Influence of Temperature on the Cracking in Reinforced Concrete				117
F. BLJUGER				
Cracking Analysis of Concrete Structures				123
D. KRAUS, O. WURZER				
Watertight Concrete Structures				129

Bond and Tension Stiffening Effect

E. GIURIANI, G. PLIZZARI, C. SCHUMM Effects of Residual Strength of Cracked Concrete on Bond	135
G. GÜNTHER, G. MEHLHORN Local Bond between Reinforcing Steel and Concrete	141
G. CREAZZA, R. DI MARCO Tension Stiffening in Reinforced Concrete Elements	147
A. CAUVIN Influence of Tension Stiffening on Behaviour of Structures	153

Fatigue

G. P. WOLLMANN, J. E. BREEN, D. L. YATES Fatigue Strength of Structural Concrete Girders	159
---	-----

Sub-Theme 2.2: Modelling

J. EIBL Constitutive Laws	165
J. SCHLAICH The Need for Consistent and Translucent Models	169
T. P. TASSIOS Modelling Philosophy for Structural Concrete	185
R. KOCH Role of Experiments in a Consistent Dimensioning Concept	195

Consistent Treatment of Prestress

H. TROST Partial Prestressing with and without Bonding in Bridge Decks	205
J. W. FRÉNEY, C. R. BRAAM Simple Design Method for Partially Prestressed Concrete Structures	211
M. JENNEWEIN Some Remarks on the Analytical Treatment of Prestressing	217
S. FAN Partially Prestressed Highway Bridges	223
A. E. NAAMAN Recommendations on Reinforcement in Flexural and Compression Members	229

Structural Problems and Structures

K. SCHÄFER, J. SCHLAICH, M. JENNEWEIN Strut-and-Tie Modelling of Structural Concrete	235
T. KUCHLER Design of the Support Regions of Concrete Box Girders	241
D. WEISCHEDE Practical Experience with Modelling of Structural Concrete Members	247



Sub-Theme 2.3: Analysis

A. SCORDELIS Analysis of Structural Concrete Systems	253
M. MENEGOTTO Concrete Columns	271

Structural Problems and Structures

F. SEIBLE, M. J. N. PRIESTLEY Performance Assessment of Cap-Column Joints Under Seismic Loading	281
S. V. RAMAIAH Finite Element Modelling for Analysis of Highly Skewed Bridges	287
S. P. CHANG, W. J. KIM Behaviour of Prestressed Concrete Bridges Considering Construction Stages	293
L. E. GARCIA, M. A. SOZEN Lateral Load Behaviour of Large Panel Precast Buildings	299
V. CHANDRA, G. SZECSEI Urban Interchanges on Elevated Structures	305

Finite Element Modelling and Computer Aided Design

V. ČERVENKA, R. ELIGEHAUSEN, R. PUKL Computer Models of Concrete Structures	311
F. J. VECCHIO Analyses Based on the Modified Compression Field Theory	321
J. G. ROTS Computational Bond Models: Three Levels of Accuracy	327
J. EIBL Safety Considerations for Nonlinear Analysis	337
G. M. DONIDA, P. G. GAMBAROVA Plane Elements Analysed Via a Simple Microplane Model	343
G. MESCHKE, H. A. MANG Evaluation of the Safety of a Cracked Concrete Cooling Tower	349
M. PERSONA, M. SZECHINSKI Remarks on Failure of a Reinforced Concrete Cooling Tower	355
F. B. DAMJANIC, J. A. FIGUEIRAS, R. H. C. F. POVOAS, M. STANEK Cracking Analysis of a Prestressed Concrete Containment Structure	361
J. MARGOLDOVÁ, R. PUKL, V. ČERVENKA Serviceability Analysis of Reinforced Concrete Slabs	367
A. HARISIS, M. N. FARDIS Computer-Aided Automatic Construction of Strut-and-Tie Models	373
K. J. RÜCKERT Design and Analysis with Strut-and-Tie-Models – Computer-Aided Methods	379
W. SUNDERMANN, P. MUTSCHER Nonlinear Behaviour of Deep Beams	385

Sub-Theme 2.4: Dimensioning and Detailing

J. MacGREGOR Dimensioning and Detailing	391
P. MARTI Dimensioning and Detailing	411
R. PARK Ductility of Structural Concrete	445

B-Regions with Transverse Reinforcement

M.P. COLLINS, F.J. VECCHIO, P. ADEBAR, D. MITCHELL A Consistent Shear Design Model	457
J.A. RAMIREZ Strut-Tie Approach in Higher Strength Concrete Members	463
W. MOOSECKER Design Approaches for Shear Reinforcement in Concrete Beams	469
L. DAVENNE, D. BREYSSE Modelling the Transverse Reinforcement in Reinforced Concrete Structures	475
K.-H. REINECK Modelling of Members with Transverse Reinforcement	481
P. RERICHA Deformation and Bending-Shear-Torque Failure	489

Plate Elements under Combined Actions

H. KUPFER, H. BULICEK Combined Loading Effects in Concrete Box Girders	495
K. YOKOZAWA, J. NIWA Reinforced Concrete Plates under Biaxial Bending Moments	501
J. KOLLEGGER Computer Programme for Consistent Design of Surface Structures	507
P. ADEBAR, M.P. COLLINS A Consistent Shear Design Model for Concrete Offshore Structures	513
T.A. WARLAND, O.T. GUDMESTAD, K. HOVE Offshore Structural Concrete	519

D-Regions and Nodes

J. O. JIRSA, J. E. BREEN, K. BERGMEISTER, D. BARTON, R. ANDERSON, H. BOUADI Experimental Studies of Nodes in Strut-and-Tie Models	525
D. MITCHELL, W. D. COOK Design of Disturbed Regions	533
A. WINDISCH Strut-Crack-and-Tie Model in Structural Concrete	539
O. L. BURDET, D. H. SANDERS, C. L. ROBERTS, J. E. BREEN, G. L. FENVES Models and Tests of Anchorage Zones of Post-Tensioning Tendons	545



K. BERGMEISTER, J. E. BREEN, J. O. JIRSA Dimensioning of the Nodes and Development of Reinforcement	551
S. J. PANTAZOPOULOU, J. F. BONACCI Current Design Methods for Frame Connections	557
G. M. CALVI, E. CANTU', G. MAGENES Evaluation of the Rotation Capacity of «D» Regions	565
I. TERTEA, T. ONET Ductility of Structural Concrete	571
W. ZELLER Conclusions from Tests on Corbels	577
H. S. SVENSSON, S. HOPF, I. KOVACS Dimensioning of the Cable-Stayed Helgeland Bridge	583
Sub-Theme 2.5: Reliance upon Concrete Tensile Strength	
A. HILLERBORG Reliance upon Concrete Tensile Strength	589
G. KÖNIG, H. DUDA Basic Concept for Using Concrete Tensile Strength	605
T. TANABE, Z. WU Strain Softening under Bi-Axial Tension and Compression	623
Members without Transverse Reinforcement	
J. BLAAUWENDRAAD, Q. B. WANG Systematic Fracture Mechanics Study of Shear Failure in Beams under Distributed Load	637
K.-H. REINECK Model for Structural Concrete Members without Transverse Reinforcement	643
M. PLOS, K. GYLLTOFT, K. CEDERWALL Full-Scale Shear Tests on two Bridges	649
F. MORTELMANS, L. VANDEWALLE Stirrups or Fibers	655
A. S. KUTTAB, D. HALDANE Detailing for Shear with the Compressive Force Path Concept	661
M. D. KOTSOVOS Shear in Structural Concrete: a Reappraisal of Current Concepts	667
L. TAERWE, H. LAMBOTTE Shear Strength of Beams at Very Low Temperatures	673
T. UEDA, H. D. E. PUTRO Shear Strength of Beams without Shear Reinforcement	679
J. T. BLADES, L. A. GRILL, N. C. MICKLEBOROUGH Precast Reinforced Concrete Planks as Structural Members	685

M. I. SOLIMAN Design and Detailing of Cellular Concrete Structures	691
M. PAJARI Cracking and Shear Capacity of Prestressed Hollow Core Slabs	697
Punching of Slabs	
A. MUTTONI, J. SCHWARTZ Behaviour of Beams and Punching in Slabs without Shear Reinforcement	703
S. D. B. ALEXANDER, S. H. SIMMONDS Bond Model for Punching Strength of Slab-Column Connections	709
J. R. CAGLEY Design of Slab-Column Frames	715
V. J. G. LUCIO, P. E. REGAN Behaviour of Waffle Flat Slabs under Horizontal Load	719
Direct Use of Concrete Tensile Strength	
H. SHKOUKANI, J. WALRAVEN Sustained Tensile Strength of Concrete	725
R. ELIGEHAUSEN, J. OZBOLT Use of the Tensile Strength in Anchorage to Concrete	731
R. ELIGEHAUSEN, M. KAZIC Numerical Analysis of Anchoring Effects in Structures	737
K. MARUYAMA, K. SHIMIZU, M. MOMOSE Load Carrying Mechanism of Anchor Bolt	743
G. VALENTE Pull-Out Test of Anchor Bolts Embedded in Concrete	749
J. BILČÍK, V. PRIECHODSKÝ Stresses and Strains in a Model Ring under Internal Radial Pressure	755
W. STREIT, J. FEIX, H. KUPFER Transverse Tension Decisive for Compressive Resistance of Concrete Cover	761
J. ALMÁSI Dimensioning of Elements with Built Up Steel Corbel at the End	767
A. WINDISCH Tensile Strength Concrete: Prodigal Son or Primary Source?	773
Joints	
G. CIUHANDU, V. STOIAN Design of Vertical Joints in Precast Reinforced Concrete Shear Walls	779
J. RUTH Influence of Contact Surface Problems on Design Practice	785
A. KUDZYS, V. PAPINIGIS, V. POPOV Reliance on Tensile Strength for Cast-in-Situ Wall-to-Wall Joints	791



Theme 3: Implementation in Codes of Practice	797
R. WALTHER Impact of Codes in Practice	799
T. P. TASSIOS A Conceptual Codification of Codes	807
D. S. PRAKASH RAO Detailing of Reinforced Concrete Structures	819
H.-U. LITZNER New Design Concepts and Codes of Practice	825
Theme 4: Impact on Future Structures	831
C. MENN Consistent Design and New Systems for Concrete Bridges	833
M. VIRLOGEUX Comparison between Cast-in-Situ and Precast Segmental Construction	841
D. VANDEPITTE Impact of Rational Approaches on Design Practice	853
IABSE Reports	863
List of Authors, Colloquium Stuttgart	871