New Orleans Program

American Concrete Institute
1977 Fall Convention
October 16 - 21
Braniff Place Hotel
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* American Concrete Institute
P.O. Box 19150
Detroit, Michigan 48219
FALL CONVENTION PROGRAM  
October 16-21, 1977  
New Orleans, Louisiana

Registration fees cover attendance at all ACI technical and educational committee meetings, general session, and symposia. They do not cover either the educational seminar or the workshop on Tuesday for which there is an extra charge.

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SCHEDULE  

SUNDAY, OCTOBER 16  
8:30 a.m. - 6:00 p.m.  
Administrative committee meetings

MONDAY, OCTOBER 17  
8:30 a.m. - 10:00 p.m.  
Administrative, technical, and educational committee meetings 

TUESDAY, OCTOBER 18  
8:30 a.m. - 10:00 p.m.  
Administrative, technical, and educational committee meetings  
9:00 a.m. - 5:30 p.m.  
Seminar: Aggregates for Concrete (Committee E-701) (registration fees: $40.00 Members; $50.00 NonMembers; $20 Students)  
1:30 p.m. - 5:00 p.m.  
Concrete Technology and Construction (ACI Louisiana Chapter)  
2:00 p.m. - 6:00 p.m.  
Workshop: Wind Forces on Medium-Rise Concrete Buildings (Committee E-702) (registration fees: $20.00 Members; $25.00 NonMembers; $10.00 Students)

WEDNESDAY, OCTOBER 19  
8:30 a.m. - 11:00 a.m.  
General Session  
11:00 a.m. - 12:00 noon  
Standards Presentation  
1:00 p.m. - 5:00 p.m.  
Tennis and Golf Tournaments  
2:00 p.m. - 6:00 p.m.  
Technical and educational committee meetings  
6:45 p.m. - 9:30 p.m.  
Concrete Mixer - Cruise on the Natchez

THURSDAY, OCTOBER 20  
8:30 a.m. - 10:00 p.m.  
Administrative, technical, and educational committee meetings  
9:00 a.m. - 12:00 noon  
Student Activities Program (Educational Activities Committee)  
9:00 a.m. - 12:00 noon  
Research on Plain and Reinforced Concrete (Committee 115)  
9:00 a.m. - 12:00 noon  
Lessons from Structural Performance (Committee 348)  
9:00 a.m. - 12:00 noon  
Cedric Wilson Symposium on Expansive Cement (Committee 223) (1st of 2 sessions)  
2:00 p.m. - 5:00 p.m.  
Cedric Wilson Symposium on Expansive Cement (Committee 223) (2nd of 2 sessions)  
2:00 p.m. - 5:00 p.m.  
Presentation: Certification of Inspectors (Committee 311)  
2:00 p.m. - 5:00 p.m.  
Vibrations of Concrete Structures (Committee 435)  
7:00 p.m. - 10:00 p.m.  
Forum: Evaluating Strength of Structures in Service (Committees 114 and 437)

FRIDAY, OCTOBER 21  
8:30 a.m. - 11:30 a.m.  
Structural Design and Rehabilitation of Pavements (Committee 325)  
8:30 a.m. - 12:30 p.m.  
Technical committee meetings  
9:00 a.m. - 12:00 noon  
Symposium on Slump Loss (Ad Hoc Committee on Slump Loss)  
9:00 a.m. - 12:00 noon  
Practical Control of Cracking in Concrete Structures (Committee 224)
COMMITTEE MEETINGS

Be sure to check the bulletin board for last minute changes or added meetings.

SUNDAY
OCTOBER 16
— Technical Activities Committee Meeting Room 4
    Subgroup
— Technical Activities Committee Meeting Room 5
    Subgroup
— Technical Activities Committee Meeting Room 10
    Subgroup
— Technical Activities Committee Meeting Room 10

MONDAY
OCTOBER 17
— Technical Activities Committee Hall of Americas, North Hall
    Meeting Room 4
— Educational Activities Committee Cabaret Room
    210 Erosion of Concrete in Hydraulic Structures Royal Salon
    211 SUBCOMMITTEE 7, Mass Concrete Mixture
    Proportioning Cabaret Room
— Architectural Concrete Meeting Room 6
— Consolidation of Concrete Presidential Salon
— Subcommittee B, Concrete Quality, Mixing, and Placement Meeting Room 4
— Subcommittee I, Slab Systems Meeting Room 9
— Subcommittee J, Footings Meeting Room 5
— Circular Prestressed Concrete Structures Meeting Room 10
— Foundations for Equipment and Machinery Imperial Salon
— Joints and Connections in Monolithic Concrete Structures Hall of Americas, North Hall
— Limit Design Meeting Room 2
— Models of Concrete Structures Tulane Room
— Coatings for Concrete Terrace Suite 2
— Masonry Structures Terrace Suite 1
— Precast Panels Imperial Salon
— Fiber Reinforced Concrete Tulane Room

10:30 a.m. - 12:30 p.m.
— Technical Activities Committee Hall of Americas, North Hall

— Educational Activities Committee Cabaret Room
— Institute and Industry Advancement Meeting Room 8
— Quality Assurance Systems for Concrete Royal Salon
— Proportioning Concrete Mixes Cabaret Room
— Expansive Cement Concrete Presidential Salon
— Architectural Concrete Meeting Room 6
— Curing Concrete Royal Salon
— Consolidation of Concrete Presidential Salon
— Subcommittee B, Concrete Quality, Mixing, and Placement Meeting Room 4
— Subcommittee I, Slab Systems Meeting Room 9

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**Technical Activities Committee**

- Educational Activities Committee
- International Activities Committee
- Board Committee on Metrication

**Meeting Schedule**

- Subcommittees:
  - 318 Subcommittee A, General Building Code
  - 318 Subcommittee C, Formwork, Embedded Pipes, and Construction Joints
  - 318 Subcommittee E, Analysis and Strength Requirements
  - 318 Subcommittee M, Shells and Folded Plates
  - 332 Residential Concrete Work
  - 344 Circular Prestressed Concrete Structures
  - 351 Foundations for Equipment and Machinery
  - 352 Joints and Connections in Monolithic Concrete Structures
  - 428 Limit Design
  - 444 Models of Concrete Structures
  - 515 Coatings for Concrete
  - 531 Masonry Structures
  - 533 Precast Panels
  - 544 Fiber Reinforced Concrete

- **Time Slots:**
  - 2:00 p.m. - 4:00 p.m.: Hall of Americas, North Hall
  - 2:00 p.m. - 4:00 p.m.: Imperial Salon
  - 4:00 p.m. - 6:00 p.m.: Hall of Americas, North Hall

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**TUESDAY OCTOBER 18**

**Meeting Schedule**

- Subcommittees:
  - 332 Residential Concrete Work
  - 344 Circular Prestressed Concrete Structures
  - 351 Foundations for Equipment and Machinery
  - 408 Bond and Development of Reinforcement
  - 421 Design of Reinforced Concrete Slabs
  - 442 Response of Buildings to Lateral Forces
  - 515 Coatings for Concrete
  - 531 Masonry Structures
  - 543 Concrete Piles
  - 544 Fiber Reinforced Concrete
  - E701 Materials for Concrete Construction

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**Time Slots:**

- 7:30 p.m. - 9:30 p.m.: Meeting Room 7
- 8:30 a.m. - 10:30 a.m.: Meeting Room 3
- 302 Construction of Concrete Floors
- 318 Subcommittee D, Details and Development of Reinforcement
- 318 Subcommittee G, Flexure and Axial Loads
- 318 Subcommittee L, Prestressed Concrete
- 318 Task Group on Prestressed Concrete
- 318 Task Group on Code Simplification
- 318 Task Group on Design of Prestressed Concrete Structures
- 318 Task Group on Performance Code Concept
- 318 Task Group on Plain Concrete
- 318 Task Group on Progressive Collapse
- 340 Strength Design Handbook
- 347 Formwork for Concrete
- 357 Offshore Concrete Structures
- 504 Joint Sealants
- 506 Shotcrete
- E702 Designing Concrete Structures

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**SEMINAR:**

- **Aggregates for Concrete**
  - Sponsored by ACI Committee E701
  - Location: Terrace Suite 1
  - Time: 9:00 a.m. - 5:30 p.m.

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**Convention Committee**

- Chapter Activities Committee
- Convention Committee

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**Location:**

- Hall of Americas, North Hall
- Imperial Salon
- Cabaret Room
- Terrace Suite 2
- Terrance Suite 1
- Tulane Room
- Presidential Salon
### Ad Hoc Committee on Publications
- Policies (Meeting Room 6)
- 212 Admixtures (Royal Salon)
- 311 Inspection of Concrete (Tulane Room)
- 318 Subcommittee F, Serviceability (Meeting Room 5)
- 318 Subcommittee H, Shear and Torsion (Meeting Room 2)
- 318 Subcommittee K, Precast and Composite Concrete (Meeting Room 9)
- 318 Subcommittee N, Earthquake Resistant Design Requirements (Royal Salon)
- 318 Task Group on AISC-AIIS (Meeting Room 3)
- 318 Task Group on Composite Construction (Meeting Room 4)
- 318 Task Group on Performance Code Concept (Presidential Salon)
- 318 Task Group on Plain Concrete (Meeting Room 8)
- 318 Task Group on Progressive Collapse (Meeting Room 7)
- 340 Strength Design Handbook (Presidential Salon)
- 347 Formwork for Concrete (Imperial Salon)
- 367 Offshore Concrete Structures (Meeting Room 10)
- 506 Shotcreting (Imperial Salon)
- 549 Ferroconcrete (Terrace Suite 2)

**1:30 p.m. - 5:00 p.m.**

**CONCRETE TECHNOLOGY AND CONSTRUCTION**

(Sponsored by ACI Louisiana Chapter)

See Page 13

### Planning Committee
- 2:00 p.m. - 4:00 p.m.
- Hall of Americas, North Hall

### Specifications Review Committee
- 118 Use of Computers (Meeting Room 5)
- 201 Durability of Concrete (Tulane Room)
- 207 Mass Concrete (Royal Salon)
- 311 Inspection of Concrete (Tulane Room)
- 318 Standard Building Code (Imperial Salon)
- 355 Anchorage to Concrete (Meeting Room 8)
- 356 Industrialized Concrete Construction (Meeting Room 2)
- 357 Offshore Concrete Structures (Meeting Room 10)
- 358 Concrete Guideways (Meeting Room 7)
- 426 Shear and Diagonal Tension (with Committee 438) (Royal Salon)
- 435 Deflection of Concrete Building Structures (Meeting Room 3)
- 438 Torsion (with Committee 426) (Royal Salon)
- 516 High Pressure Steam Curing (Meeting Room 4)
- 549 Ferroconcrete (Meeting Room 6)

**2:00 p.m. - 6:00 p.m.**

**WORKSHOP: WIND FORCES ON MEDIUM-RISE CONCRETE BUILDINGS**

(Sponsored by ACI Committee E-702) See Page 14

### Standards Presentation
- 1:00 p.m. - 5:00 p.m.
- Tennis and Golf Tournaments See Page 31

**STANDARDS PRESENTATION** See Page 16

### General Session
- 8:30 a.m. - 11:00 a.m.
- Tulane Room

- **October 19**

### Wednesday
- 11:00 a.m. - 12:00 noon
- Imperial Salon

- 1:00 p.m. - 5:00 p.m.
- Meeting Room 4

- 2:00 p.m. - 4:00 p.m.
- Meeting Room 5

- 114 Research and Development (starts 2:30 p.m.)
- 120 History of Concrete
- 209 Subcommittee V (Creep and Shrinkage in Concrete)
- 307 Reinforced Concrete Chimneys
- 318 Standard Building Code
- 325 Concrete Pavements
- 336 Combined Footings and Pier Foundations
- 348 Structural Safety
- 349 Concrete Nuclear Structures
- 423 Prestressed Concrete
- 439 Steel Reinforcement
- 546 Repair of Concrete
- 548 Polymers in Concrete
- E-601 Seminars and Workshops

**4:00 p.m. - 6:00 p.m.**

- 209 Creep and Shrinkage in Concrete (Terrace Suite 2)
- 215 Fatigue of Concrete (Meeting Room 5)
- 304 Measuring, Mixing, Transporting, and Placing Concrete (Meeting Room 4)
- 307 Reinforced Concrete Chimneys (Meeting Room 9)
- 318 Standard Building Code (Imperial Salon)
- 336 Combined Footings and Pier Foundations (Meeting Room 10)
THURSDAY
OCTOBER 20

8:30 a.m. - 10:30 a.m.

221 Aggregates
Meeting Room 5

306 Cold Weather Concreting
Meeting Room 3

349 Concrete Nuclear Structures
Meeting Room 2

360 Design of Slabs on Grade
Meeting Room 7

443 Concrete Bridge Design
Meeting Room 9

503 Adhesives for Concrete
Meeting Room 6

523 Insulating and Cellular Concretes
Hall of Americas, North Hall

547 Refractory Concrete
Meeting Room 4

E-801 Seminars and Workshops
Tulane Room

9:00 a.m. - 12:00 noon

STUDENT ACTIVITIES PROGRAM (Sponsored by ACI Educational Activities Committee)
See Page 16 Presidential Salon

RESEARCH ON PLAIN AND REINFORCED CONCRETE
(Sponsored by ACI Committee 115) See Page 21 Imperial Salon

LESSONS FROM STRUCTURAL PERFORMANCE
(Sponsored by ACI Committee 348) See Page 22 Tulane Room

CEDRIC WILLSON SYMPOSIUM ON EXPANSIVE CEMENT (Sponsored by ACI Committee 223)
(first session) See Page 23 Royal Salon

— Board of Direction
Meeting Room 10

10:30 a.m. - 12:30 p.m.

306 Cold Weather Concreting
Meeting Room 3

NOTES

FRIDAY
OCTOBER 21

8:30 a.m. - 10:30 a.m.

Standards Board
Meeting Room 7

350 Sanitary Engineering Structures
Meeting Room 6

8:30 a.m. - 11:30 a.m.

STRUCTURAL DESIGN AND REHABILITATION OF PAVEMENTS (Sponsored by ACI Committee 325)
See Page 28 Presidential Salon

SYMPOSIUM ON SLUMP LOSS (Sponsored by Ad
Hoc Committee on Slump Loss) See Page 28 Imperial Salon

PRACTICAL CONTROL OF CRACKING IN CONCRETE STRUCTURES (Sponsored by ACI Committee 224) See Page 29 Royal Salon

10:30 a.m. - 12:30 p.m.

350 Sanitary Engineering Structures
Meeting Room 6
Tuesday, October 18
9:00 a.m. - 12:00 noon;
1:30 p.m. - 5:30 p.m.

SEMINAR: AGGREGATES FOR CONCRETE

sponsored by ACI Committee E701
Terrace Suite 1

The important role of aggregates in concrete is often overlooked. If you are a producer, specifier, constructor, or contractor, this seminar has something for you. Come prepared to discuss your aggregate problems with the seminar faculty and other participants.

NOTE: A separate registration fee is charged for this seminar of $40 for ACI Members, $50 for nonMembers, and $20 for students. Lunch is included in this fee and, since enrollment is limited, early registration is advised.

PROGRAM

Moderator: R. W. Kriner, chairman, Committee E-701, and manager of technical services, Lehigh Portland Cement Company, Allentown, Pennsylvania

Basic Characteristics and Tests of Aggregates
Ward R. Malisch, associate professor of civil engineering, University of Missouri-Rolla, Rolla, Missouri
Grading: maximum size, fineness modulus, absorption, standard test methods will be described as well as effects of aggregate characteristics upon concrete.

Specifications for Grading and Quality of Aggregates
Frank P. Nichols, Jr., vice-president, engineering, National Crushed Stone Association, Washington, D. C.
Emphasis will be on the specifications contained in ASTM C33-74 and identifying why the specification is important.

Lunch

Practical Aspects of Selection and Using Aggregate in Concrete
Richard C. Meininger, assistant director of engineering, National Ready Mixed Concrete Association, Silver Spring, Maryland
Properties of normal weight aggregates as they affect concrete performance will be discussed.

Plant Production Control of Construction Aggregates
John T. Molnar, manager, Materials Control and Research, Standard Slag Company, Youngstown, Ohio
Organization of a quality control program, use of control charts, and use of test data will be discussed.

Meeting Concrete Specifications Using Lightweight Aggregates
Thomas A. Holm, director of engineering, Solite Corporation, West New York, New Jersey

Tuesday, October 18
1:30 p.m. - 5:00 p.m.

CONCRETE TECHNOLOGY AND CONSTRUCTION

sponsored by ACI Louisiana Chapter
Presidential Salon

Session Chairman: James P. Schwartz, Jr., vice-president, Louisiana Chapter, ACI, and Manager, Quality Control Department, Jimco, Inc., Metairie, Louisiana

The History of Concrete in the Drainage System of the City of New Orleans
G. Joseph Sullivan, superintendent, Sewerage and Water Board, City of New Orleans, Louisiana

The Excessive Use of Prestressed Concrete Piling in the Gulf South Area
Donald Payne, Marine Concrete Structures, Metairie, Louisiana

Floor Slab Curing — Critical But Often Neglected
William S. Phelan, The Euclid Chemical Company, Woodbridge, New Jersey

Superplasticizers
Greg Bobowski, technical manager, American Admixtures Corporation, Chicago, Illinois

A Close Look at the Cusum Method of Controlling Concrete Strength
James P. Schwartz, Jr., session chairman
WORKSHOP: WIND FORCES ON MEDIUM-RISE CONCRETE BUILDINGS

sponsored by ACI Committee E-702

Terrace Suite 2

Workshop Chairman: Kenneth H. Murray, assistant dean of engineering, School of Engineering, Old Dominion University, Norfolk, Virginia

Instructors: Edward R. Morphy, partner, Morphy, Makofsky and Masson, New Orleans, Louisiana
Herbert J. Roussel, Jr., president, Roussel Engineering, Inc., Metairie, Louisiana
Saad E. Moustafa, associate professor, University of New Orleans, New Orleans, Louisiana

PLAN
The workshop will be divided into two major parts: Theoretical treatment and application example. The theoretical treatment will cover literature survey, nature of wind, lateral force resisting systems, approximate versus exact analysis and codes. The discussion will be limited to concrete buildings in the range of 8 to 20 stories.

NOTE: A separate registration fee is charged for this workshop of $20 for ACI Members, $25 for nonMembers, and $10 for students. Since enrollment is limited, early registration is advised.
Wednesday, October 19
11:00 a.m. - 12:00 noon

STANDARDS PRESENTATION
Imperial Salon

Session Chairman: Richard C. Mielczak, President, ACI, and vice-president, Research and Development, Master Builders, Cleveland, Ohio

Proposed Revision to ACI Standard 347-68, "Recommended Practice for Concrete Formwork"
Peter D. Courtois, chairman, ACI Committee 347, and vice-president, Corporate Development, Superior Concrete Accessories, Inc., San Diego, California

Proposed Revisions to Section 9.5 of "Code Requirements for Nuclear Safety Related Concrete Structures (ACI 349-76)"
Richard S. Orr, chairman, ACI Committee 349, and chief engineer, Structural Engineering, Offshore Power Systems, Jacksonville, Florida

Thursday, October 20
9:00 a.m. - 12:00 noon

STUDENT ACTIVITIES PROGRAM
sponsored by ACI Educational Activities Committee
Presidential Salon

Session Chairman: Dennis T. Smith, chairman, ACI Educational Activities Committee, and technical services manager, Marquette Cement Manufacturing Company, Nashville, Tennessee

Welcome
Dennis T. Smith, session chairman

The American Concrete Institute in Continuing Education
William J. Wilhelm, chairman, ACI Committee E-702, and chairman, Department of Civil Engineering, West Virginia University, Morgantown, West Virginia

Getting Acquainted with ACI
Clyde E. Kesler, professor of civil engineering, University of Illinois at Urbana-Champaign, Urbana, Illinois

Discussion
Do Concrete Slabs on Grade Require Engineering Design?
Boyd C. Ringo, professor, Department of Civil and Environmental Engineering, University of Cincinnati, Cincinnati, Ohio

Failure Investigations and Innovative Approaches to Repair of Reinforced Concrete Structures
Russell S. Fling, president, R. S. Fling & Partners, Inc., Columbus, Ohio

Discussion
Closing Remarks
Dennis T. Smith, session chairman
Thursday, October 20
9:00 a.m. - 12:00 noon

RESEARCH ON PLAIN AND REINFORCED CONCRETE
(Brief and confidential unpublished reports)
sponsored by ACI Committee 115

Imperial Salon

Session Chairman: Boris Bresler, chairman, ACI Committee 115, and professor, Department of Civil Engineering, University of California, Berkeley, California

Secretary: M. A. Ward, secretary, ACI Committee 115, and professor, Department of Civil Engineering, University of Calgary, Calgary, Alberta

Tension Lap Splices Under Severe Load Reversals
J. D. Aristizabal and A. E. Fiorato, Portland Cement Association, Skokie, Illinois

Sea-Water Concrete Study
Leon Nadolski, Peter K. Frobenius, and Denis Chuen Pu, Bechtel, Inc., San Francisco, California

Concrete Reinforced with Typar Spunbonded Fabric
S. Sands, E. I. Du Pont de Nemours & Company, Wilmington, Delaware

Limit Design of Slab-Column Joints to Resist Horizontal Forces in Flat Slab Buildings
Hans Gesund, University of Kentucky, Lexington, Kentucky

Effect of Cement Types on the Accelerated Compressive and Modified Cube Strengths of Concrete
Tarun R. Naik and Anthony E. L. Appiah, University of Wisconsin-Milwaukee, Milwaukee, Wisconsin

A Comparative Evaluation of Concrete Reinforced With Straight Steel Fibers and Collated Fibers With Deformed Ends
V. Ramakrishnan, Terje Brandshaug, W. V. Coyle, and Ernest K. Schrader, South Dakota School of Mines and Technology, Rapid City, South Dakota

Prediction of Fatigue Properties for Ferrocement and Reinforced Concrete Beams

Behavior of Headed Stud Connections for Precast Concrete Panels Under Reversed Cyclic Shear Loading
R. A. Spencer, D. S. Neille, and M. Bischof, University of British Columbia, Vancouver, British Columbia

Optimum Design of Reinforced Concrete Slabs
A. B. I. Khalil and R. E. Loov, University of Calgary, Calgary, Alberta

Observations of Concrete Creep During Regimes of Drying and Wetting
B. R. Gamble and L. J. Parrott, University of Calgary, Calgary, Alberta
Thursday, October 20
9:00 a.m. - 12:00 noon

LESSONS FROM STRUCTURAL PERFORMANCE
sponsored by ACI Committee 348

Tulane Room

Session Co-Chairmen: Robert G. Drysdale, associate professor, Department of Civil Engineering, McMaster University, Hamilton, Ontario and David E. Allen, research officer, Division of Building Research, National Research Council of Canada, Ottawa, Ontario.

Introduction
Robert G. Sexsmith, chairman, ACI Committee 348, and research scientist, Western Forest Products Laboratory, Canadian Forestry Service, Vancouver, British Columbia.

ACI Error Survey
John Fraczek, School of Civil Engineering, Purdue University, West Lafayette, Indiana.

Lessons from European Failures
Roger Hauser, principal, HAWAG Consulting engineers, Bern, Switzerland.

Learning Structures Through Field Observations

Lessons from Structural Performance: Slabs Containing Improperly Placed Reinforcing
Denis Mitchell, assistant professor; Yoon M. Lee, research assistant; and Philip J. Harris, professor, Department of Civil Engineering and Applied Mechanics, McGill University, Montreal, Quebec.

Causes of Deterioration in Concrete Structures

Performance of Reinforced Concrete Buildings in the March 1977 Romanian Earthquake
Vedat Yerlici, professor and dean of engineering, Bogazici University, Istanbul, Turkey.

ASCE Activities on Performance of Structures
Neal FitzSimons, chairman, ASCE Committee on Damaged and Failed Structures, and Wiss, Janney, Eistner and Associates Inc., Kensington, Maryland.

Discussion

Thursday, October 20
9:00 a.m. - 12:00 noon

CEDRIC WILLSON SYMPOSIUM ON EXPANSIVE CEMENT
sponsored by ACI Committee 223

Royal Salon

Session Chairman: William P. Liljestrom, president, Chemically Prestressed Concrete Corporation, Los Angeles, California.

Session I

The Future of Expansive Cement
Bryant Mather, chief, Concrete Laboratory, U. S. Army Engineer Waterways Experiment Station, Vicksburg, Mississippi.

Hydraulic Structures Designed with Shrinkage-Compensating Concrete
Joe V. Williams, Jr., architectural marketing manager, Cement Division, Texas Industries, Arlington, Texas.

Utilization of Shrinkage-Compensating Concrete — A Cold Storage Warehouse Application

Use of Shrinkage-Compensating Cement Concrete in the Dallas Municipal Center
Jack Rosenlund, principal, Rosenlund and Company, Dallas, Texas.

Expansive Cement Concretes in Japan
Masatane Kokubu, professor, Musashi Institute of Technology, Tamazutsumi, Setagaya-ku, Tokyo, Japan; and Shigeo Nagataki, associate professor, Tokyo Institute of Technology, Ookayama, Meguro-ku, Tokyo, Japan.

Performance of Shrinkage Compensating Concretes in Slabs

Effects of Tidal Exposure on Concrete Made with Shrinkage Compensating Cement
G. B. Moore, research manager, Southwestern Portland Cement Company, Victorville, California.

Expansion-Shrinkage, Creep, and Elastic Modulus of Shrinkage-Compensating Gap-Graded Concrete
Shu-tien Li, professor emeritus, Orange, California; and V. Ramakrishnan, professor of civil engineering, South Dakota School of Mines and Technology, Rapid City, South Dakota.
CEDRIC WILLSON SYMPOSIUM ON
ON EXPANSIVE CEMENT

sponsored by ACI Committee 223
Royal Salon

Session Chairman: William P. Liljestrom, president, Chemically
Prestressed Concrete Corporation, Los
Angeles, California

Session II
A Look at Type-K Shrinkage-Compensating Cement Production
and Specifications
George C. Hoff, chief, Materials Properties Branch, Engineering
Mechanics Division; and Katharine Mather, chief, Engineering
Sciences Division, Concrete Laboratory, U. S. Army Engineer
Waterways Experiment Station, Vicksburg, Mississippi

Perimeter Restraint Methods for Reducing Required Steel for
Expansive Cement Concrete Slabs
Robert J. Gulyas, Medusa Cement Company, Cleveland, Ohio

Summary Report on Type-K Shrinkage-Compensating Concrete
Bridge Deck Installations in the State of Ohio
David O. Lower, sales engineer, Southwestern Portland Cement
Company, Fairborn, Ohio

A Report of Oil Well Cementing Using Shrinkage-
Compensating Cements
D. G. Calvert, development specialist, Dowell, Division of Dow
Chemical USA, Tulsa, Oklahoma

Portland Cement Versus Expansive Cement in Post-Tensioned
Concrete Structures
Mark W. Hoffman, chief structural engineer, Dalton, Dalton, Little
and Newport, Cleveland, Ohio

A Field Study of Shrinkage-Compensating Cement Concrete
Frank A. Randall, Jr., senior structural engineer, Concrete
Technology Section, Engineering Services Department, Portland
Cement Association, Skokie, Illinois

Crack Control for Spillway Chute at Ririe Dam
R. A. Kaden, chief, Materials Section; and E. K. Schrader, civil
engineer, U. S. Army Engineer District, Walla Walla, Washington

Behavior of Shrinkage-Compensating Concretes Suitable for
Use in Bridge Decks
Robert W. Cusick, civil engineer, Hanson Engineers, Springfield,
Illinois; and Clyde E. Kessler, professor of civil engineering and
theoretical and applied mechanics, University of Illinois, Urbana,
Illinois

CERTIFICATION OF INSPECTORS

sponsored by ACI Committee 311

Session Chairman: Bertold E. Weinberg, chairman, ACI Com-
mittee 311, and project manager, Dormitory
Authority of the State of New York, Els-
mere, New York

The Need for Certification of Inspectors
Robert E. Philpoo, chief, Concrete Branch, Engineering Division,
Office, Chief of Engineers, Washington, D. C.

How Certification is and Is Not Working in One State
Herman G. Protze, president, Materials Technologists, Newton
Highlands, Massachusetts

Certification in the Nuclear Containment Vessel Program
Raymond J. Vurpillat, assistant manager, Reliability and Quality
Assurance Department, United Engineers & Constructors, Inc.,
Philadelphia, Pennsylvania

The Department of Commerce's Consideration of Accredition
of Concrete Testing Laboratories
Norman F. Somes, chief, Laboratory Evaluation Technology Sec-
tion, National Bureau of Standards, Washington, D. C.

What is ACI's Program for Certification
Dennis T. Smith, technical services manager, Marquette Cement
Manufacturing Company, Nashville, Tennessee

Discussion
Summation
Bertold E. Weinberg, session chairman
VIBRATIONS OF CONCRETE STRUCTURES

sponsored by ACI Committee 435

Tulane Room

Session Chairman: Gajanan M. Sabnis, past chairman, ACI Committee 435, and associate professor of civil engineering, Howard University, Washington, D. C.

Introduction
Gajanan M. Sabnis, session chairman

Requirements and Provisions for Dynamic Deflections
Joseph Warwaruk, professor of civil engineering, University of Alberta, Edmonton, Alberta

Deflection Performance Criteria for Concrete Floors
Robert A. Crist, managing director, Publications and Technical Affairs, American Society of Civil Engineers, New York, New York; and James R. Shaver, research structural engineer, National Bureau of Standards, Washington, D. C.

Vibration Criteria for Long Span Floors
David E. Allen, H. Rainer, and G. Pernica, research officers, Division of Building Research, National Research Council of Canada, Ottawa, Ontario

Dynamic Characteristics of Reinforced Concrete Buildings
John A. Blume, president, and K. K. Honda, project engineer, URS/John A. Blume & Associates, San Francisco, California

Dynamic Response of a Composite Metal Deck Floor System
Conrad P. Heims, and D. W. Vannoy, assistant professor, Department of Civil Engineering, University of Maryland, College Park, Maryland

Concrete Structures and Construction Vibrations
Kenneth P. Akins, Jr., project engineer, and Donald E. Dixon, consultant, Law Engineering Testing Company, Atlanta, Georgia

Closure
James R. Libby, chairman, ACI Committee 435, and president, James R. Libby and Associates, San Diego, California

FORUM: Needed Research and Development for Evaluating the Strength of Existing Concrete Structures

sponsored by ACI Committee 114 in cooperation with ACI Committee 437

Presidential Salon

Institute Codes have traditionally emphasized new construction. This emphasis has influenced the development of strength test methods for new structures with the resultant neglect of procedures to determine the strength of existing structures.

Given the current interest in historical preservation and the need to utilize existing buildings, the necessity for a strength evaluation of these structures will continue. However, the engineer summoned to make the evaluation is often faced with a dilemma in how to do it. Currently, he must use either analysis or the load testing method.

If analytical procedures are used, the engineer must make a thorough investigation of the materials, dimensions, and physical condition of the structure. From this information he must determine the strength of the concrete, the strength of the reinforcing steel, and the strength of the entire unit.

Research is needed to develop a means of determining concrete strength directly. The present method relies upon cores which may not be indicative of the concrete in place as instances have been reported where these cores have yielded highly questionable results. A better method for determining the in-place strength is essential.

In utilizing the second strength test of existing concrete, the structure must be subjected to a total load less than that expected to cause actual failure. Indications are that load testing can be so detrimental to a building that this method has been removed from some European codes. More research needs to be done on the effects of this procedure to determine just what the chances are of aggravating failure when it is used. Feasibility is also a problem since walls and columns are very difficult to evaluate by load testing.

Some research is going on at the present time to determine and establish criteria for evaluating existing structures. We need to determine just what is being done and what organizations are involved. Most of it appears to be centered around analyzing the effects of earthquakes; however, we do not have the entire picture.

The Forum would provide a way to collect information on programs now underway and would undoubtedly stimulate further research. ACI Committees 114 and 437 invite comments from those in cooperative research and development pertaining to the subject and urge them to attend this Forum.
Friday, October 21
8:30 a.m. - 11:30 a.m.

STRUCTURAL DESIGN AND REHABILITATION OF PAVEMENTS

sponsored by ACI Committee 325

Session Chairman: Thomas J. Pasko, Jr., chairman, ACI Committee 325, and highway research engineer, Paving and Structural Materials Group, Federal Highway Administration, Washington, D. C.

New Developments with Structural Concrete Overlays
Karl H. Renner, chief engineer, Associated Reinforcing Bar Producers, Chicago, Illinois

Iowa's Thin Bonded Overlays
Marilyn J. Knutson, Iowa Concrete Paving Association, West Des Moines, Iowa

Design of Load Transfer Systems for Portland Cement Concrete Pavements
Amir M. Tabatabaie, graduate research assistant of civil engineering, Taibot Laboratory, University of Illinois, Urbana, Illinois

Factors in Blow-Ups Under Overlays
Charles F. Scholer, associate professor, Department of Civil Engineering, Purdue University, West Lafayette, Indiana

Polymer Concrete Patching Materials
Jack J. Fontana, chemist, Department of Applied Science, Brookhaven National Laboratory, Upton, New York

Joint Sealing/Resealing in Portland Cement Concrete Pavements
Pierce R. Smith, Hunt Process Corporation, Santa Fe Springs, California

Friday, October 21
9:00 a.m. - 12:00 noon

SYMPOSIUM ON SLUMP LOSS

sponsored by ACI Ad Hoc Committee on Slump Loss

Session Chairman: A. T. Hersey, chairman, Ad Hoc Committee on Slump Loss, and manager, E. L. Conwell Company, Coplay, Pennsylvania

Introduction
A. T. Hersey, session chairman

Slump Loss
Lewis H. Tuthill, concrete engineering consultant, Sacramento, California

Friday, October 21
9:00 a.m. - 12:00 noon

PRACTICAL CONTROL OF CRACKING IN CONCRETE STRUCTURES

sponsored by ACI Committee 224

Session Chairman: Bernard L. Meyers, chairman, ACI Committee 224, and civil engineering specialist, Bechtel Power Corporation, Gaithersburg, Maryland

Control of Cracking in Concrete Structures: An Overview
Bernard L. Meyers, session chairman

Causes and Control of Cracking in Plain Concrete
Roy W. Carlson, consulting engineer, Berkeley, California; Donald L. Houghton, Geology, Soils and Materials Branch, North Pacific Division, U. S. Army Corps of Engineers, Portland, Oregon; and Milos Polivka, professor of civil engineering, University of California, Berkeley, California

Influence of Reinforcement Style on the Width of Flexural Cracks in Beams Subjected to Sustained and Repeated Loads
Thavaj Bhuvarsorakul, structural engineer, Benham, Blair and Affiliates Inc., Oklahoma City, Oklahoma; Hussam M. F. Ghanem, graduate student; and John P. Lloyd, associate professor, School of Civil Engineering, Oklahoma State University, Stillwater, Oklahoma

Reinforced Concrete Corners Subjected to Negative Moments
G. R. McLeod, graduate student; and Robert L. Yuan, associate professor, Department of Civil Engineering, University of Texas at Arlington, Arlington, Texas
Crack Control of Ferrocement and Its Comparison with Reinforced Concrete
S. P. Shah, professor of civil engineering; and A. E. Naaman, assistant professor of structural design, Department of Materials Engineering, University of Illinois at Chicago Circle, Chicago, Illinois

Crack Resistant Concrete for Corrosion Protection

Cracking Behavior of Prestressed Concrete Beams
Edward G. Navy, professor of civil engineering, and Jim Y. J. Chiang, graduate student, Department of Civil and Environmental Engineering, Rutgers University, Piscataway, New Jersey; and P. T. Huang, senior structural engineer, Gibbs and Hill Consulting Engineers, New York, New York

Practical Control of Early Thermal Cracking in Reinforced Concrete Walls
C. D. Turton, senior advisory engineer, Cement and Concrete Association, Manchester, England

Crack Control in Concrete Structures — The Designers and Contractors Responsibility
Julius G. Potyondy, associate professor of civil engineering, Nova Scotia Technical College, Halifax, Nova Scotia

Concrete Crack Control and Quality Assurance
Edwardo Santos Basilio, consulting civil engineer, Rio de Janeiro, Brazil; and Bernard L. Meyers, civil engineering specialist, Bechtel Power Corporation, Gaithersburg, Maryland

TENNIS OR GOLF, ANYONE?

A feature of this year's fall convention is a friendly golf and tennis competition on Wednesday afternoon, where you can test your physical skills in a relaxing, fun-type atmosphere.

A number of golf trophies will be presented for the best scores including low net handicap, low net peoria, and low gross.

A tennis tournament is also on the agenda. You'll be serving a few up in a "Scrambles Doubles" for men and women alike.

If you wish to participate in either the golf or tennis, you may sign up at the ACI Registration Desk. Fees are $12 for tennis, $30 for golf and include the following:

Tennis — City Park
Six rubico courts have been reserved between the hours of 12:00 noon and 5:00 p.m. Transportation will leave the Grand Hotel at 11:30 a.m. and return at 5:30 p.m.

Golf — Lakewood Country Club
Transportation will leave the Grand Hotel at 11:30 a.m. and return at 5:30 p.m. The greens fee is $15 and cart rentals are $5 per person or $10 per cart. These fees are included in your ticket cost.

A cash snack bar will be set up at the ninth hole.
FAMILY MEMBERS' PROGRAM

Hospitality: Meeting Room 1
Morning coffee and light refreshments will be provided in the hospitality room starting Monday morning at 9:00 a.m.

MONDAY
9:00 a.m.
Registration
9:30 a.m. - 10:30 a.m.
"All This is Louisiana" in the Grand Hotel
A sample of everything uniquely New Orleanian: a little history, a touch of fashion, some music, and a spot of nostalgia, spiced with charm. It is an audience participation show, highlighted by a Mini-Auction and climax by a Mini-Mardi Gras.
10:30 a.m. - 12:30 p.m.
French Quarter Walking Tour
Transportation to the French Quarter, a visit to the Beauregard-Keyes Home and refreshments of café au lait and beignets at Cafe du Monde. After the tour, you are free to explore as you will.
6:45 p.m.
Treasures of Tutankhamun
Transportation to the Museum of Art to view the magnificent treasures of King Tut. Return transportation will be provided. Tickets are limited. You may also attend on your own, making arrangements direct with the Museum.

TUESDAY
9:00 a.m. - 11:00 a.m.
Art Exhibit and Demonstration . . . by some of the artists from New Orleans' Jackson Square Art Colony.
12:00 noon - 5:30 p.m.
City, Garden District, and Longue Vue Gardens Tour
With luncheon at the Commander's Palace. Visit the University Section and then the Garden District. You will see an ante-bellum mansion and an above-ground cemetery. Longue Vue is an estate whose gardens encompass the magnificence of Spain's Alhambra, the perfection of formal English terraces, and the tranquility of a pastoral wood.

WEDNESDAY
9:00 a.m. - 10:30 a.m.
"Rap" Session: A chance to find out everything you have ever wanted to know about ACI. This session will be moderated by Past President Russell S. Fling and is designed to let you let us know what's on your mind about the Institute and its functions. Come and air your views and your questions!
12:00 noon - 5:00 p.m.
Tennis Tournament — City Park
Buses will leave at 11:30 a.m. and return at 5:30 p.m. Six courts have been reserved and tickets are limited. Get yours early at the ACI Registration Desk.
Golf Tournament — Lakewood Country Club
Buses will leave at 11:30 a.m. and return at 5:30 p.m. Tickets are limited so get yours early at the ACI Registration Desk.

NOTE: Further information is located on page 31 of this program on both the tennis and golf tournaments.

THURSDAY
9:00 a.m. - 2:00 p.m.
River Road Plantation Tour
Tour includes visits to three fully-restored ante-bellum plantations: Houmas House, Tezcuco, and l'Hermitage. Lunch will be served in l'Hermitage.

FRIDAY
9:00 a.m.
Coffee and Danish

ACI FUTURE CONVENTIONS

1978 Annual Convention
April 9-14
Royal York Hotel
Toronto, Ontario, Canada

1978 Fall Convention
October 29 - November 3
Hyatt Regency Hotel
Houston, Texas

1979 Annual Convention
April 1-6
Marc Plaza Hotel
Milwaukee, Wisconsin

1979 Fall Convention
October 28 - November 2
The Capital Hilton Hotel
Washington, D. C.
ACI EDUCATIONAL SEMINARS

SCHEDULE FOR FALL, 1977

November 1-2
Concrete Inspection — One Route to Quality
Arlington, Virginia

November 8-9
Concrete Quality Control — Specifications, Inspection and Testing
Lawrence, Kansas

November 10-11
1977 ACI FORMWORK CONFERENCE — Quality-Safety-Economy
Troy, Michigan

November 15-16
Designing and Constructing with High Strength Concrete
Pittsburgh, Pennsylvania

December 2-3
Efficiency and Economy — Place Concrete with Pumps
Atlanta, Georgia

December 8-9
Precast-Prestressed Concrete Structures
Monterrey, Mexico
NEW ORLEANS
CONVENTION COMMITTEE

General Chairman
William B. Haensel, Jr.
Technical Inspection & Control Corporation

Secretary-Treasurer
and
Publicity Chairman
Sylvia Nickerson
Louisiana Chapter

Program Chairman
James P. Schwartz
Jimco, Inc.

Membership-Social Activities Chairman
Herbert J. Cooke
Nickerson and Associates

The officers, staff, and members of ACI would like to thank the Local Committee, the Hostesses, the Louisiana Chapter, and the staff of New Orleans Hospitality, Inc., for their part in the 1977 Fall Convention.
Don’t miss next year’s Annual Convention in Toronto
APRIL 9 - 14, 1978