

Agenda of ACI 363 – High-Strength Concrete

Sunday, April 17, 2016

Room: C-102 E (Wisconsin Center)

2:30 PM to 5:00 PM

ACI 2016 Spring Convention – Milwaukee, WI

Presiding: Micah Hale

1.0 Welcome and Introduction

2.0 Review and approval of the minutes from Denver, CO

3.0 Review and approval of agenda

4.0 Committee membership

4.1 27 Voting members, 4 consulting members, and 24 associate members

5.0 Chair TAC Report

5.1 Michael Brown

6.0 ACI 363 Report on Lightweight HSC Document Status - Subcommittee Chair Mauricio Lopez

6.1 Balloted Chapters 2, 5, and 6

6.1.1 Chapter 2, Selection of Materials

6.1.2 Chapter 5, Properties of High Strength, Lightweight Concrete

6.1.3 Chapter 6, Structural Design Considerations

6.2 Current Chapters

6.2.1 Chapter 3, Mix Proportioning of High Strength Lightweight Concrete

6.2.1.1 Royce Floyd, Clint Chapman, Mauricio Lopez

6.2.2 Chapter 4, Batching and Mixing of High Strength Lightweight Concrete

6.2.2.1 Tom McCurry, Ken Harmon, Mauricio Lopez

7.0 Possible Special Publication on High Strength, Lightweight Concrete

7.1 Update the information in ACI SP 136, *Structural Lightweight Aggregate Concrete Performance* (1992)

7.2 Table of Contents are attached

8.0 ACI 211.4R-08: *Guide for Selecting Proportions for High-Strength Concrete Using Portland Cement and Other Cementitious Materials*

8.1 Recommended the existing document to be kept for 2 more years

8.2 Committee revisions needed by 2018

8.3 Table of Contents are attached

9.0 Open Committee Presentations

9.1 Robert Sinn, *Update on the Kingdom Tower*

10.0 Technical Sessions

10.1 *HSC, It is not just for Tall Buildings*, Fall 2016, Philadelphia, PA, Revolutionary Concrete (1 – 2 hour session). Speakers and presentation titles are below.

10.1.1 Brett Holland and Matthew Sherman, Simpson Gumpertz & Heger, Inc, *High Strength Lightweight Concrete Bridges: Benefits, Challenges, and Future Applications*

10.1.2 Geert De Schutter, Ghent University, *High Performance Fiber Reinforced Concrete: From Lab to Living Room*

11.0 Future Sessions

11.1 Probable topics and potential speakers:

11.1.1 Production and placing high strength concrete

11.1.2 Testing of high strength concrete

11.1.3 In-situ testing of high strength concrete

11.1.4 Material properties and performance

11.1.5 Benefits of using high strength concrete

11.1.6 Placing and Curing High Strength Concrete or High Strength, Lightweight Concrete

12.0 Other Business

12.1 Conferences and Symposia

12.2 HSC projects

13.0 New Business

14.0 Next Meeting – Sunday, October 23, 2016 at 2:30 (Philadelphia)

15.0 Adjournment

Table of Contents of SP 136

1. High Strength Lightweight Aggregate Concrete for Arctic Applications-Part1, by G.C. Hoff
2. High Strength Lightweight Aggregate Concrete for Arctic Applications-Part 2, by G.C. Hoff
3. High Strength Lightweight Aggregate Concrete for Arctic Applications-Part 3, by G.C. Hoff
4. The Advantages of Using Lightweight Concrete in a Medium Rise Building and Adjoining Post-Tensioned Parking Garage, by R. Trumble and L. Santiago
5. Lightweight Concrete Bridges for California Highway System, by J.E. Roberts
6. Lightweight Microsilica (Silica Fume) Concrete in the USA, by M.D. Luther
7. Durability of Lightweight Concrete and It's Connections with the Composition of Concrete, Design and Construction Methods, by A.M. Vaysburd
8. High Ductility, High Strength Lightweight Aggregate Concrete, by D.E. Berner
9. Influence of Compressive Stress on the Permeability of Concrete, by T.W. Bremner, T.A. Holm, and J.M. McInerney
10. Flexural Behavior Including Ductility of High Strength Lightweight Concrete Members under Reversed Cyclic Loading, by S.K. Ghosh,D.P. Narielwala, S.W. Shin, and J. Moreno
11. Pore Structure and Carbonation of Lightweight Concrete after 10 Years Exposure, by R.N. Swamy and E.D. Jiang
12. Fatigue Strength and Endurance Limit of Lightweight Concrete, by V. Ramakrishnan, T.W. Bremner, and V.M. Malhotra

Table of Contents for 211.4R-08

- 1.0 Chapter 1—Introduction and scope
 - 1.1 Introduction
 - 1.2 Scope
- 2.0 Chapter 2—Notation and definitions
 - 2.1 Notation
 - 2.2 Definitions
- 3.0 Chapter 3—Performance requirements
 - 3.1 Test age
 - 3.2 Required average compressive strength for f'_{cr}
 - 3.3 Other requirements
- 4.0 Chapter 4—Concrete materials
 - 4.1 Introduction
 - 4.2 Portland cement
 - 4.3 Fly ash
 - 4.4 Silica fume
 - 4.5 Slag cement
 - 4.6 Combinations of other cementitious materials
 - 4.7 Mixing water
 - 4.8 Coarse aggregate
 - 4.9 Fine aggregate
 - 4.10 Chemical admixtures
- 5.0 Chapter 5—High-strength concrete mixture properties
 - 5.1 Introduction
 - 5.2 Water-cementitious material ratio
 - 5.3 Workability
- 6.0 Chapter 6—High-strength concrete mixture proportioning using fly ash
 - 6.1 Fundamental relationship
 - 6.2 Concrete mixture proportioning
 - 6.3 Sample calculations
- 7.0 Chapter 7—High-strength concrete mixture proportioning using silica fume
 - 7.1 Fundamental relationships
 - 7.2 Concrete mixture proportioning
 - 7.3 Sample calculations
- 8.0 Chapter 8—High-strength concrete mixture proportioning using slag ash
 - 8.1 Fundamental relationships
 - 8.2 Concrete mixture proportioning
 - 8.3 Sample calculations
- 9.0 Chapter 9—References
 - 9.1 Referenced standards and reports
 - 9.2 Cited references