

**ACI COMMITTEE 239
ULTRA-HIGH PERFORMANCE CONCRETE
2015 ACI Spring Convention
Kansas City, Missouri, USA
Monday, April 13, 2015 3:30 pm – 5:30 pm**

Room: C-2105

AGENDA

1. Welcome and Introductions
2. Approval of Agenda
3. Approval of October 2014 – Washington DC meeting minutes
4. TAC Report
5. Membership update
6. Committee Priorities / Reports
 - a. Current definition, to be put out for public comment soon, for CT 2015:
Concrete, ultra-high performance – concrete that has a minimum specified compressive strength of 150 MPa (22,000 psi) with specified durability, tensile ductility and toughness requirements; fibers are usually required ~~generally included~~ to achieve specified requirements.
 - b. 239-A Emerging Technologies Report – Micah Hale
 - c. 239-B Report on UHPC (tabled until completion of 239-A ETR)
 - d. 239-C Guide to the Structural Design of UHPC discussion – Vic Perry
 - e. Development of ASTM test methods for UHPC – Vic Perry (see attachment 1)
 - f. Review of Long Range Plan priorities– Jimm Milligan (see attachment 2)
UHPC Applications summary – Katrin Habel
7. Upcoming Sessions – Kay Wille
 - a. Spring 2015 Kansas City, MO: UHPC Innovation in Material and Structural Design, Part 1 and 2: Monday, April 13, 2015, 8:30-10:30am and 11am-1pm, C-2204
 - b. Spring 2015 Kansas City, MO: (Co-sponsored by 363/239) Use of High-Strength Concrete in Tall Buildings, Part 1 and 2: Tuesday, April 14, 2015, 1:30-3:30pm and 4-6pm, C-2204
 - c. Fall 2015: Denver, “UHPC Innovative Applications and Constructional Concepts”, abstracts due to Kay Wille by April 16, 2015 kwille@engr.uconn.edu;
8. Collaborations
 - a. Interactive Symposium on Ultra High Performance Concrete – update – Kay Wille, <http://www.uhpc2015.uconn.edu>
 - b. FHWA Update – Ben Graybeal
 - c. International updates (please contact Tess Ahlborn tess@mtu.edu)
 - d. ACI Committee Liaison Reports: 363 (Hale), 370 (Crane), 345 (Harris), 544 (Wille/Milligan), 549 (Dubey), other
9. New business – (please inform the chair prior to the start of the meeting if you wish to add new business for discussion)
10. Adjourn – next meeting November 2015, Denver, Colorado, USA

ASTM Tests for UHPC - Priorities for Development								
January 20, 2015 V1.0								
Current ASTM #	ASTM Cmt #	Name of Standard	# of Pages	Description of Standard	Justification	Major Changes	Effort(L-M-H)	Status of Standard
Priority 1:								
C1437	C09.61 Cement -Worability	Standard Test Method for Flow of Ultra-high Performance Concrete	3	Flow test for workability UHPC using a flow table.	Required to Write Specifications for Current Projects	Referenced Standards, removed Dynamic flow, measuring devices, Calculations	L	In ASTM C09.61 Sub-Committee BALLOT
C39	C01.22 Concrete - Strength	Standard Test Method for Compressive Strength of Cylindrical Speimens Made from	8	Compressive strength of end-ground cylinders made of UHPC.	Required to Write Specifications for Current Projects	Referenced Standard, Specimens sizes, Load Rates, End Preparation,	M	In ASTM C01.22 Sub-Committee BALLOT
Priority 2:								
C31	C01.22 Concrete - Strength	Practice for Making and Curing Concrete Test specimens in the <i>Field</i>	6	The preparation of beams and cylinders with fresh concrete.	Method of Casting UHPC specimens differs from Standard	Referenced Standards; # of layers to place, consolidation methodology	M	Not started - is referenced in C39
C192	C01.22 Concrete - Strength	Practice for Making and Curing Concrete Test specimens in the <i>Lab</i>	8	The preparation of beams and cylinders with fresh concrete.	Method of Casting UHPC specimens differs from Standard	referenced Standards; Number of layers to place, consolidation methodology	M	Not started - is referenced in C39
N/A	C01.22 Concrete - Strength	Cylinder end preparation - There is not a current ASTM Standard	-	How to prepare cylinder ends(flatness & //) for compression testing	Cylinder end preparation has significant impact on test results	New Standard	H	Will have to be drafted from scratch
C470	C01.22 Concrete - Strength	Moulds for Forming concrete Test Cylinders Vertically	4	Specifies single and multiple reuse moulds for cylindrical specimens	Due to Cylinder sizes and ultimate strength Mould out-of-roundness is more important	Majority of standard	H	Not started - is referenced in C39
C293	C01.22 Concrete - Strength	Flexural Strength of Concrete(Using Simple Beam in Center-Point Loading)	4	How to conduct a bending test to obtain flexural strength.	Required for determining Tensile Properties for Mix Characterization	Referenced Stds; # of layers to place, consolidation method; Notch, Calculations	H	Not Started
C78	C01.22 Concrete - Strength	Flexural Strength of Concrete (Using Simple Beam in Third-Point Loading)	4	How to conduct a bending test to obtain flexural strength.	Required for field QA/QC	Referenced Stds; # of layers to place, consolidation method; Calculations	M	Not Started
C666	C09.67 - Cement-Resistance to Env	Resistance of concrete to Rapid Freezing and Thawing	6	Resistance of concrete to rapid freezing/thawing inwet environment	Pre-qualifying mixes of UHPC	Referenced Standards; Procedure for curing specimens; # of cycles & completion	M	Not Started
Priority 3:								
C469	C01.22 Concrete - Strength	Static modulus of Elasticity and Poisson's Ratio of Concrete in Compression	4	Test on hardened cylinder to obtain MOR & Poisson's Ratio.	Structural design properties; mix characterization	Referenced standards; specimen size and specimen preparation	L	Not Started
C512	C01.22 Concrete - Strength	Creep of Concrete in Compression	5	Test on a hardened cylinder to obtain creep.	Structural design properties; mix characterization	Referenced standards; specimen size and specimen preparation	L	Not Started
C1768	C01.22 Concrete - Strength	Accelerated Curing of Concrete Cylinders	6	Test for the use of elevated temperatures for early strength.	For early-strengths for precast applications & ABC;	Referenced standards; specimen size and specimen preparation	M	Not Started
C138	C09.60 -Cement- Testing Fresh Conc	Standart Test Method for Density(Unit Weight), Yield & Air Content of Concrete	4	To obtain unit weight and yield of concrete mixes	For mix designs and characterizations	Referenced standards; specimen size and specimen preparation; air content removal	L	Not Started
C944	C09.62 - Cement- Abrasion Testing	Abrasion Resistance of Concrete or Mortar surfaces by Rotating-Cutter Method	4	To Obtain Abrasion results of hardened concrete.	For mix designs and characterizations	Referenced standards; specimen preparation; load on rollers	L	Not Started
C1202	C09.66 - Concrete-Res to Fluid Penetration	Electrical Indication of Concrete's ability to Resist Chloride Ion Pentretation	7	Using Half-cel to determine chloride Ion Pentration of Hardened concrete	For mix designs and characterizations	Referenced standards; duration of testing period	L	Not Started
C1074	C09.64 - Concrete- Non Destructive Testing	Estimating concrete Strength by Maturity Method	9	Estimating concrete strength	ABC Projects	Referenced standards;	L	Not Started
C596	C01.31- Cement- Volume Changes	Std Test Method for Drying Shrinkage of Mortar Containing Hydraulic Cement	3	Estimating the Shrinkage of Mortar Bars	Pre-Qualifying Mixes; Overlays & Cnx	Referenced standards; Material Requirements,	L	Not Started
C1581	C09.68 -Concrete- Volume Changes	Std Test Method for Determining Age at Cracking & Induced Tensile Stress	6	Determining Shrinkage and perpsnity to shrinkage cracking	Pre-Qualifying Mixes; Overlays & Cnx	Referenced Standards; Materials & Mixing; Properties of rFresh Materials;	M	Not Started
N/A	C01. Concrete -	Fiber Content - New Standard	-	Determine the Metallic fibre content in fresh UHPC	Mix Design; Field QA/QC	New Standard	H	Will have to be drafted from scratch
N/A	C01.22 Concrete - Strength	Thermal Treatment - New Standard	-	Method for Thermal Treatment of UHPC Specimens	Standardize Process for Thermal Treatment	New Standard	H	Will have to be drafted from scratch
N/A	C09.67 - Cement-Resistance to Env	Carbonation - New Standard	-	Method for Determining Depth of Carbonation in UHPC Specimens	Pre-qualifying Mixes for durability; Stdize process.	New Standard	H	Will have to be drafted from scratch
C1077	C09.98 - Concrete- Eval of Labs	Agencies Testing Concrete & Concrete Agencies for Use in construction and Criteria for Testing Agency Evaluation.	9	For evaluating a laboratories capability to conduct ASTM Tests.	Ensure Labs Testing UHPC are qualiaified & properly equipped	Referenced Standards; Mandatory Equip; procedures to be included; Accuracy	H	Not Started
Priority 4:(Nice to Have?)								
E329	E36.70 - Concrete-Agencies Performing Construction Inspection & Testing	Agencies Engaged in Construction, Inspection, Testing & special Inspection	10	Defines the minumum standard for agencies doing inspections	Ensure Agencies for Inspections & Testing are qualified	Referenced Standards; Training of personnel; new scetion on UHPC;	H	Not started
Note: Vic Perry is a voting Member of ASTM C01.22 Strength(Concrete) and C09.61 Workability (Cement)								

ACI 239 - Priority List for Long Range Planning presented Oct 27, 2014			
PRIORITY	LONG RANGE PLAN ITEMS	COMMENT	
#1	ACI 239 Definition	TAC - will be out for comment	ACI 239 Group
#2	Structural Design Guide	Possible 6 options-Vic Perry discussion on agenda Fall 2014	Vic Perry
#3	QA / QC Guidelines	Spring 2014-break into 2 categories	Task Group
#4	ASTM Testing	UHPC must be established at ASTM-Vic Perry update Fall agenda	Vic Perry
#5	Emerging Technologies	Separate committee (ACI 239-A) - Update on Fall 2014 agenda	Micah Hale
#6	Construction/Placement Guidelines	Important to establish these guidelines for uniformity in field	Task Group
#7	ACI Committee Liassons	Once liassons are established, will be dropped from long term plan	ACI 239 Group
#8	UHPC Applications & Uses	List started Fall 2013, working document, add to, Katrin is hub	Katrin Habel
#9	State of the Art Report on UHPC	Separate committee (ACI 239-B) - Update on Fall 2014 agenda	John Myers
#10	Student Competition	New - added to list from Reno, working	Perry / Milligan
#11	Certification of Field Technicians	ASTM guidelines must be established first	
#12	Proportion Guidelines/Mix Designs	lower priority - currently commercial designs by producers	
#13	Identify Gaps & Knowledge UHPC	Removing - macro approach to micro approach	Remove after Fall 2014