

# ACI Committee Document Abstracts

The following ACI documents are, or will soon be, available:

## “Curing Efficiency of Internally Cured Concrete—TechNote (ACI PRC-213.1-24)”

Reported by ACI Committee 213, Lightweight Aggregate and Concrete

Steven Maloof, Chair; Daron R. Brown, Secretary; Kamran Amini, Armen Amirghanian, Michael A. Caldarone, Chris Calvin, Joshua J. Edwards, Royce W. Floyd, Kenneth S. Harmon, Khandaker M. Anwar Hossain, Thomas McCurry, Fred Meyer, Avi A. Mor, Bruce W. Ramme, G. Michael Robinson, Fariborz M. Tehrani, Naga Pavan Vaddey, Payam Vosoughi, and William H. Wolfe, Members; Andrea L. Breen, Reid W. Castrodale, Dean M. Golden, Tor Arne Hammer, Edward S. Kluckowski, Ronald L. Kozikowski Jr., Michael L. Leming, W. Calvin McCall, Jeffrey F. Speck, Alexander M. Vaysburd, Jody Wall, Jason Weiss\*, and Shelley Wright, Consulting Members.

\*Member who authored this TechNote.

The committee would like to thank M. Khanzadeh-Moradillo for his contribution to this TechNote.

**Abstract:** This TechNote describes a process for determining equivalent curing durations for concrete made using conventional external curing and internal curing with pre-wetted fine lightweight aggregates in ordinary portland cement (OPC) and supplementary cementitious material (SCM) systems. The criteria presented offer one approach that can be used to determine the duration of external curing that is equivalent to internal curing. This would allow any benefits of using internally cured concrete on construction time to be quantified.

## “Internal Curing Using Prewetted Fine Lightweight Aggregate—TechNote (ACI PRC-213.2-24)”

Reported by ACI Committee 213, Lightweight Aggregate and Concrete

Steven J. Maloof, Chair; Daron R. Brown, Secretary; Kamran Amini, Armen Amirghanian, Michael A. Caldarone, Chris Calvin, Joshua J. Edwards, Royce W. Floyd, Kenneth S. Harmon, Khandaker M. Anwar Hossain, Thomas McCurry, Fred Meyer, Avi A. Mor, Bruce W. Ramme, G. Michael Robinson, Fariborz M. Tehrani, Naga Pavan Vaddey, Payam Vosoughi, and William H. Wolfe, Members; Andrea L. Breen, Reid W. Castrodale, Dean M. Golden, Tor Arne Hammer, Edward S. Kluckowski, Ronald L. Kozikowski Jr., Michael L. Leming, W. Calvin McCall, Jeffrey F. Speck, Alexander M. Vaysburd, Jody Wall, Jason Weiss, and Shelley Wright, Consulting Members.

**Abstract:** This TechNote describes the application of prewetted fine lightweight aggregate in internal curing. Discussions review conditions that suggest the use of internally cured concrete and the associated benefits concerning economy, sustainability, and resilience.

## “Construction of Concrete Shells Using Inflatable Forms—Report (ACI PRC-334.3-24)”

Reported by Joint ACI-ASCE Committee 334, Concrete Shell Design and Construction

Robert B. Esplin, Chair; Bryan S. Butikofer, Charles S. Hanskat, Takashi Hara, Brent K. Hardy, Michael D. Hunter, Samaan Ladkany, Ryan Partridge, Ryan E. Poole, Theodore J. Smulski, Andrew J. South, Jason P. South, Mark E. Williams, and Chris S. Zweifel, Members; John F. Abel, Arthur J. Boyt Jr., James L. Byrne, Frederick L. Crandall, Charles W. Dolan, Phillip L. Gould, Ajaya Kumar Gupta, Mark Allen Ketchum, Lei Lou, John C. Miller, Thomas E. Nelson Jr., John M. Rotter, William C. Schnobrich, Barry South, Bing-Yuan Ting, and Arnold Wilson, Consulting Members.

**Abstract:** This report provides information on the construction of structural concrete shells using inflated forms. Major facets of the construction process are covered, including foundations, inflation, monitoring, and backup systems. Other aspects, such as the geometric variations of inflated forms, thickness of polyurethane foam, and mixture proportions for shotcrete, are also considered.

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