Notes From The Director

I have just returned from an 8-day tour of Ireland where I got to witness the rich and often times difficult history of this beautiful country that blends seamlessly with modern architecture and vibrant society. I was struck by the almost pristine condition of castles, churches, and cathedrals many of which were built some 1500 years ago. Today we design our infrastructure with a mere 75 year service life. Can we do better?

Warmest Regards,

Ronald E. Thornton, P.E.
Project New Wave—Batavia, NY

Submitted by David Wan, P.E. of Oldcastle Precast, Inc.

The Haskell Company provided a turn-key solution to renovate the former Dairy Farmers of America facility in the Genesee Valley Agri-Business Park recently purchased by HP Hood, LLC. Oldcastle Precast of Selkirk, NY designed and manufactured fifty 12” thick carbon-grid insulated precast wall panels with a thermal R value of 25 for this project. The maximum panel size fabricated was 12’ wide x 45’ high and the total wall area was 23,200 square feet.

Rigging and panel lifter locations are meticulously designed to minimize stresses from handling, shipping and erection. A series of roller blocks is used to ensure that lifting forces are evenly distributed.

Temporary pipe braces with anchor blocks are used to support panels and maintain plumbness during erection until all connections are made and the roof and floor are constructed.

The project was awarded to Oldcastle on November 15, 2017 with production commencing in January 2018 and erection starting a month later.

Project Credits:
Owner: HP Hood, LLC
Contractor: The Haskell Company
Precast Manufacturer: Oldcastle Precast, Selkirk, NY

Erection and temporary support of carbon-grid insulated wall panels with anchor blocks
Self-Consolidating Concrete

Concrete is a building material that has been in use for centuries. Ancient Romans built the Pantheon with a hydraulic cement based concrete in 126 AD. What we now know as Portland cement was patented in England by Joseph Aspdin in 1824. Thomas Edison created the Edison Portland Cement Company in Stewartsville, NJ in 1899 and was a pioneer in the processing of Portland cement with some 49 cement patents.

The basic ingredients of concrete which remain today include cement, aggregate and water. Chemical admixtures were introduced in the 1930’s with air-entrainment agents, retarders, accelerators, and water reducers. And, while the basics have not changed over the years, technology has provided continuous improvement in strength, durability, and rheology (workability). One such improvement that is gaining in popularity, particularly in the precast industry is Self-Consolidating Concrete.

“Self-consolidating concrete, also known as self-compacting concrete (SCC), is a highly flowable, non-segregating concrete that spreads into place, fills formwork, and encapsulates even the most congested reinforcement, all without any mechanical vibration” ¹. SCC is achieved with the use of high-range water reducers (superplasticizers) with a viscosity modifier to eliminate unwanted bleeding and segregation. SCC provides several advantages including:

- Superior finish with little to no bug holes, particularly with form liners.
- Reduced labor for finishing and vibrating
- Decreased form maintenance
- Flowability in complex shapes and through congested rebar
- Significantly reduces noise levels within precast facilities

There are several new and modified test methods for measuring the quality of self-compacted concrete. The traditional slump test has been replaced with a slump flow or spread test. There are other standard test methods for flowability and segregation as well as a visual stability index in which a trained inspector can look at a sample for signs of excess bleeding and/or segregation.

Admixtures for SCC are available from PCANY Associate Members including BASF Admixtures and GCP Applied Technologies. Please visit the PCANY Buyer’s Guide or the links below for more information.

¹ [http://www.selfconsolidatingconcrete.org/](http://www.selfconsolidatingconcrete.org/)
² [https://precast.org/2014/01/implementing-scc-part-1/?fs=self-compacting](https://precast.org/2014/01/implementing-scc-part-1/?fs=self-compacting)
ABCD Meeting and Tour of RIT Civil Engineering Research Labs...
are scheduled for Thursday, October 18 at RIT Engineering Technology Hall in Rochester.  (Information)

Lehigh Northeast Cement Company Celebrates 125 Years of Operation

Lehigh Northeast Cement is an associate member of PCANY and producers Types I, II, & III cement at its located in Glens Falls, NY.  (Website)

ASCE Concrete Canoe Competition 2018...
Was hosted by RPI in Troy, NY on April 27 & 28, 2018.  See article in the following link from NY Construction Materials Association Material Matters publication.  (Article)