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Thermomass gets four-hour ASTM E119 rating

Thermomass recently successfully completed the ASTM E119 fire test.

The fire test was conducted on a sandwich wall panel consisting of a 2 in. (50 mm) exterior wythe of concrete, a 2 in. insulation core, and a 5 in. (130 mm) interior wythe of concrete. The interior wythe was loaded to 4000 lb/ft² (6000 kg/m²) gravity load and exposed to fire for four hours, with temperatures reaching 2000 °F (1100 °C).

Darryl Dixon, director of Technical Services at Thermomass, says, “During the four-hour test, the temperature on the exterior wythe of concrete increased by 130 °F [70 °C], which is only 50% of the allowed temperature increase per ASTM E119.”

The successful four-hour mark is the first and only ASTM E119 test on an integrally insulated sandwich wall using an energy-efficient fiber-reinforced polymer wythe connector. Venkatesh Seshappa, director of Engineering at Thermomass, says, “The ASTM E119 test expands on the ICC-ESR on our MC/MS Series connectors, and provides an unprecedented level of testing achievements for the concrete sandwich wall panel industry.”

—Source: Thermomass

Metromont awarded Ga. high school contract

Metromont Corp. was recently awarded a contract for a 388,000 ft² (36,000 m²) high school for Newton County in Georgia. The new high school will use a total-precaster concrete building system and will be the largest school in the area.

This will be a state-of-the-art school for the Newton County Board of Education. The precast concrete walls, floors, and roof system will be produced at Metromont’s Atlanta, Ga., manufacturing facility.

The Newton County School Board elected to use the total-precaster concrete school design for several reasons. First, it has proved to be cost competitive with other delivery systems in other schools built in the Atlanta region. It was determined that the building shell could be closed in more quickly using precast concrete, which would facilitate the tight construction schedule. Studies also showed that a total-precaster concrete school would be less expensive to heat and cool and less expensive to maintain than traditional construction systems.

Cunningham, Forehand, Matthews and Moore Architects is heading up the design team along with the structural engineer of record Pruitt, Eberly and Stone Structural Engineers, both of Atlanta. McKnight Construction Co. Inc. of Augusta, Ga., is the general contractor.

The grade work had been completed at the time of award of the contract, and the school is scheduled to be open for students in August 2013. The new high school is designed for 1800 students.

—Source: Metromont Corp.



Donald Pfeifer, PCI Fellow, died December 4, 2011. He was 75.

As a nationally recognized expert in concrete structures, concrete materials, and the investigation and remediation of concrete-related problems, Pfeifer was a pioneer in the development of solutions for corrosion-related distress in reinforced concrete structures.

Pfeifer's interest in engineering brought him to the University of Illinois at Urbana-Champaign, where he earned a bachelor's degree in civil engineering in 1959 and a master's degree in theoretical and applied mechanics in 1960.

Pfeifer's professional career began at the Portland Cement Association (PCA) in Skokie, Ill. From 1960 to 1970, he carried out a wide range of research investigations there. His major work involved structural lightweight aggregate concretes, precast concrete panels, and architectural concrete, as well as laboratory and field instrumentation studies of state-of-the-art tall reinforced concrete buildings.

After leaving PCA in 1970, Pfeifer served as the director of the Structural Precast division of PCI from 1970 to 1972, with responsibility for technical, marketing, and educational efforts. During this time, he visited more than 80 prestressed concrete plants to discuss production and engineering problems.

In 1972, Pfeifer joined the Westinghouse Prestressed Concrete division. As the manager of strategic engineering for Westinghouse from 1972 to 1976, Pfeifer conducted in-plant studies of production problems associated with precast, prestressed concrete. He performed structural studies that involved fire tests, lateral-load-distribution tests, and prestress losses on American Association of State Highway and Transportation Officials bridge beams. He also developed a pretensioned concrete crosstie that was tested by the Federal Railroad Administration.

Pfeifer joined Wiss, Janney, Elstner Associates Inc. (WJE) in 1976, where he founded and managed a materials group. His consulting activities at WJE involved the investigation and repair of corrosion of reinforcement in concrete structures, concrete mixture designs for nuclear construction and large bridge projects, underwater tremie concreting, architectural concrete, long-term creep and shrinkage studies on concrete, corrosion studies of alternative deicing products for structural steel and reinforced concrete bridge members, facade and laboratory investigations involving glass-fiber-reinforced concrete panels, elastomeric bearing pads, and numerous projects dealing with concrete materials.

Pfeifer served as principal investigator on four major corrosion-related studies sponsored by the Federal Highway Administration (FHWA) or the National Cooperative Highway Research Program (NCHRP). These studies resulted in the 1981 NCHRP 244 report, Concrete Sealers for Protection of Bridge Structures; the 1987 FHWA report RD-86/193, Protective Systems for New Prestressed and Substructure Concrete; the 1989 NCHRP 313 report, Corrosion Protection of Prestressing Systems in Concrete Bridges; and the 1998 five-year FHWA study, Corrosion Resistant Reinforcement for Concrete Components.

Pfeifer retired from WJE in 1998.

Pfeifer was a Fellow of the American Concrete Institute (ACI) and a member of the honorary fraternities Chi Epsilon and Sigma Tau. He served on technical committees for PCI and ACI, and he published more than 50 technical papers.

Holcim plant becomes EPA Green Power Partner

The Midlothian, Tex., plant of Holcim (US) Inc. has qualified for a U.S. Environmental Protection Agency (EPA) Green Power Partnership and is now an EPA Green Power Partner.

The EPA Green Power Partnership is available to renewable energy leaders whose green power use meets or exceeds the EPA's green power use requirements. Partner organizations must buy green power in amounts proportional to their annual electricity use.

—Source: Holcim (US) Inc.

JAMES H. GILBERT



James H. Gilbert, PCI Fellow and president from 1965 to 1966, died September 4, 2011. He was 91.

After obtaining a BA from Dartmouth College, Gilbert joined C. W. Blakeslee and Sons Inc., a subsidiary of the Westinghouse heavy construction division, in 1946. Subsequently, he rose to become vice president, president, and chief operating officer of the firm.

In 1958, Gilbert started the Prestressed division at Blakeslee. That same year, he became a member of PCI. Gilbert was named chairman of the Blakeslee board in 1974. He retired from Blakeslee in 1976 and then served as business advisor and special consultant to the Heavy Construction division of Westinghouse Electric Corp. Gilbert

also played an important role in developing Precast Systems Inc. (PSI) and served as the first PSI president.

In addition to serving on the PCI Board of Directors, he was president of the Connecticut Society of Civil Engineers. He was active in developing the PCI Plant Certification Program, and his firm served as a charter certified plant. Gilbert was also chair of the 1974 FIP/PCI Congress Organizing Committee charged with over-all administration of the New York, N.Y., congress under the direction of the PCI Board of Directors. In 1994, Gilbert was named one of PCI's first 25 fellows in recognition of his contributions to the precast/prestressed concrete industry and PCI.

Fabcon celebrates 40th anniversary

Fabcon celebrated 40 years in the precast concrete industry in 2011. Fabcon's first plant began operations in 1971 as a plank manufacturer. Later, the majority of Fabcon's business was multistory systems buildings for apartments and condominiums. Today, Fabcon has a national accounts program focused on big-box retailers, including Home Depot, Lowe's, Menards, and Target.

The patented manufacturing process used in Fabcon's first plant helped lay the foundation for the company's current success. Leveraging rolling-bed technology, the forms move to where the concrete is mixed. This allows Fabcon to house all of its equipment in a small, quality-controlled area, as opposed to a large space required for fixed-bed production. Fabcon still uses this manufacturing process at its facilities in Minnesota, Indiana, Pennsylvania, and Ohio.

With headquarters in Savage, Minn., Fabcon gained two plants—one in Indianapolis, Ind., and the other in Columbus, Ohio—after acquiring the American Precast Co. in 1995. Fabcon expanded to Allentown, Pa., in 2000.

Each day, Fabcon's plants can produce 1.5 mi (2.4 km) of precast concrete panels, or enough to cover one city block. Almost 10% of its employees in Minnesota have worked for Fabcon for more than 20 years. A few of the innovations that Fabcon is known for include its rolling-bed technology, three-dimensional design software that interfaces with a computer-aided manufacturing system to project a laser image of designs directly onto the casting beds, and a segmented screed that enables automated equipment to bypass obstructions in the concrete, such as structural connections or blockouts, that would otherwise need to be hand finished.

—Source: Fabcon



This rendering shows the new Cruise Terminal 6 808-stall parking structure for the Canaveral Port Authority in Florida. The parking structure is one of five new Finfrook design-build projects. Courtesy of Finfrook.

Finfrook awarded five parking structure projects

Finfrook Construction Inc. was recently awarded five new parking structure projects. Design-build services will be provided for three new projects in central Florida: a 617-stall parking structure for Adventist Health System/Sunbelt Healthcare Corp. in Altamonte Springs; a 330-stall parking structure for Osceola Regional Medical Center in Kissimmee; and an 808-stall parking structure serving the new Cruise Terminal 6 for the Canaveral Port Authority.

In addition, complete design-build services will be provided to Alta Congress LLC for a 587-stall parking structure project in Del Ray Beach, Fla., and to Metropolitan Life Insurance Co. for a 1452-stall expansion to an existing Finfrook parking structure in Tampa, Fla. Construction costs for the five parking structures are expected to total nearly \$30 million. Design work is under way on each project, with all projects scheduled to begin construction in 2012. Finfrook has begun hiring to fill positions that will be created by these five new projects.

—Source: Finfrook

Nitterhouse adds Paczewski to sales team



Allan Paczewski

Nitterhouse Concrete Products Inc. recently added Allan P. Paczewski as regional sales representative in Virginia and Washington, D.C.

In his new position, Paczewski is responsible for providing services to new and existing clients within Virginia and Washington. His services include personal consultation with developers, designers, and other construction professionals in the design of precast/prestressed concrete structures, as well as direction and recommendations in the application of precast/prestressed concrete products.

—Source: Nitterhouse Concrete Products Inc.

First CarbonCast application used in Canada

International Precast Solutions LLC of River Rouge, Mich., a member of The Prestressed Group and AltusGroup, produced and erected the first CarbonCast Enclosure System in Canada at the new Cineplex Galaxy. CarbonCast High Performance Insulated Wall Panels were used in the project.

International Precast Solutions is licensed to produce CarbonCast High Performance Insulated Wall Panels, CarbonCast Insulated Architectural Cladding, and CarbonCast Architectural Cladding after becoming the 14th producing member of AltusGroup in August 2011. It is one of 30 manufacturing facilities nationwide that share more than 400 specification-oriented sales, marketing, and engineering professionals operating PCI-certified plants.

—Sources: AltusGroup and International Precast Solutions

Stresscon begins precast concrete installation at National Renewable Energy Laboratory

Stresscon recently began installation of precast concrete on the Energy Systems Integration Facility (ESIF) at the National Renewable Energy Laboratory (NREL) in Golden, Colo., with JE Dunn Construction. The ESIF is a 182,500 ft² (16,950 m²) facility that includes a 55,055 ft² (5100 m²) footprint high-bay structure located on the U.S. Department of Energy's NREL campus.

The building is situated on the hillside of a topographically challenging site. This project features 901 precast/prestressed concrete components, including 290 double-tee floor and roof elements and 204 insulated wall panels. The insulated wall panels are a structural gray or acid-etched finish and are 9 in., 14 in., or 16 in. (230 mm, 360 mm, or 400 mm) thick. The wall panels are a Thermomass system using polyisocyanurate as the primary insulation material. The exterior of the structure features a complex system of horizontal reveals in the precast concrete walls.

The projected erection duration is about 52 days with two (and sometimes three) cranes working inside and around the perimeter of the structure with about 600 loads delivering the precast/prestressed concrete components to the jobsite.

—Source: EnCon Design LLC



Gary Gunter



Blaine Withers

Heldenfels names new division VPs

Heldenfels Enterprises Inc. has named Gary Gunter vice president and general manager of its Highway and Bridge division. Gunter joined Heldenfels in September 2010.

Blaine Withers, formerly vice president of Operations has been named vice president and general manager of the Marine and Industrial division overseeing the Heldenfels plant in Corpus Christi, Tex.

Gil Heldenfels continues serving as vice president and general manager of the Building Systems division, which designs, manufactures, and erects commercial structures and sports facilities from both plants.

—Source: Heldenfels Enterprises Inc.

CreteX's Haeder receives ASTM committee award

Corey L. Haeder, chief engineer at CreteX Concrete Products West Inc. in Rapid City, S.D., has received the Merlin G. "IB" Spangler Award from ASTM International Committee C13 on Concrete Pipe for his outstanding technical contributions to the committee.

A member of ASTM International since 2003, Haeder also serves on Committees C09 on Concrete and Concrete Aggregates and C27 on Precast Concrete Products.

Haeder joined CreteX Concrete Products West Inc. in 1997 as an office engineer and assumed his current role in 2003. Haeder specializes in buried precast concrete drainage structures and bridges and was involved in a project that received the Montana Contractors' Association Concrete Excellence Award for Technical Merit in 2010.

—Source: ASTM International

Bentley invests in developer of software to manage codes and standards for projects

Bentley Systems Inc. has inaugurated a strategic relationship with The Engineering Essentials Co. (TEEC) by investing in a minority equity position and by placing a Bentley representative on its board.

Based in Philadelphia, Pa., TEEC is developing SpecWave, software to help architectural, engineering, and construction organizations intelligently manage their engineering specifications and related codes and standards. The principals of TEEC are Leon Gorbaty, CEO, and Adam Klatzkin, CTO.

—Source: Bentley Systems Inc. 

Compiled by K. Michelle Burgess (mburgess@pci.org)