



DOME TECHNOLOGY

ANNUAL REPORT 2023

Highlights from our diverse scope of work
Published March 2024

Ozinga
Port of Palm Beach, Florida, USA

BEACH

OZINGA DOMESILO NOW OPERATIONAL IN FLORIDA



Construction-materials company Ozinga's 50,000-metric-ton DomeSilo at the Port of Palm Beach, Florida, USA, was fully operational in the summer of 2023. The structure's custom appearance is the result of a cooperative effort between Ozinga, Dome Technology, the Port of Palm Beach, and the City of Riviera Beach and is designed to enhance the

visual landscape of the area and complement the marine environment.

"Dome Technology is grateful for the opportunity to be part of the solution for this unique and challenging project," Dome Technology CEO Bradley Bateman said. "Our team appreciates the chance to work with Ozinga on another exceptional project."

TITAN AMERICA ADDS TWO DOMES TO ITS PORTFOLIO

Dome Technology has completed two projects for TITAN America.

The first is a 67,500-metric-ton DomeSilo in Tampa, Florida, USA. The dome is 142 feet in diameter and 141 feet tall. Although this DomeSilo might not look like your typical dome, the stem walls are topped with a domed roof that provides the robust strength and monolithic integrity companies expect with dome construction.

In Chesapeake, Virginia, USA, Dome Technology built a 67,500-metric-ton DomeSilo for TITAN America. The dome is 142 feet in diameter and 141 feet tall and is engineered to withstand whatever Mother Nature throws at it.

Project summaries and photos will be posted on our website in the summer of 2024.

TITAN America's DomeSilo in Florida, USA, can store 67,500 metric tons, the same as its counterpart in Virginia.





Continental Cement Company's new DomeSilo in Davenport, Iowa, can store 125,000 short tons of cement powder. Cement is reclaimed at 350 stph and pneumatically conveyed to barges on the Mississippi River.

BIGGER AND BETTER, ROUND III

CCC partners with Dome Technology on a third storage project, this time in Iowa, USA

Continental Cement Company, a Summit Materials company, has built another DomeSilo with Dome Technology, this time at its Davenport, Iowa, USA, facility. This DomeSilo marks the third collaboration between the companies.

The DomeSilo can store 125,000 short tons of cement powder, and according to Dome Technology's records, the structure is among the largest-capacity cement storage facilities in the world, said sales manager Lane Roberts.

The dome size is a response to demand that's been building for the past decade. The CCC Davenport facility battled limited cement-storage capacity for many years, resulting in cement being loaded on barges and stored on the river during winter months. But this wasn't a sustainable plan; with cement and barge demurrage costs increasing each year, Summit Materials and Continental Cement commissioned this transformational dome project to invest in larger, more permanent storage.

"CCC's Davenport Plant was able to reduce its demurrage costs for cement storage on the river and eliminate the need to curtail production. This project positions us well to meet customer commitments and ensure adequate supply coming out of the winter months into the busy spring and summer seasons," CCC plant manager Brett

Imsland said.

The Davenport facility produces cement from minerals mined at a nearby quarry. Product is stored on site temporarily, then shipped by barge to customers.

Multiple existing concrete silos are still utilized for cement storage before product moves via airslide into the dome. The DomeSilo is 165 feet in diameter and 171.5 feet tall. An FLS Ful-Floor™ pneumatic reclaim system mobilizes product; the floor is faceted with slopes in four directions, moving cement to a single tunnel that is 18 feet wide and 12 feet tall. Cement is reclaimed at 350 stph and pneumatically conveyed to barges on the Mississippi River.

The area below the DomeSilo was unconfirmed fill, and to ensure a proper foundation, the site was mass excavated to bedrock and backfilled with structural backfill. The new DomeSilo is directly adjacent to the existing concrete silos, and care had to be taken to ensure the existing silo foundations were not underpinned during the mass excavation.

Dome Technology's scope of work also included construction of a mechanical/electrical building and demolition of three bays in an existing building to clear way for the DomeSilo and the new mechanical/electrical building.

The full stacker-tripper unit will help the company better control how product is stored.



FABRICATION KNOW-HOW

Dome Technology builds structural-steel features to support a fertilizer-facility upgrade in Idaho, USA.

In early 2023 one longtime fertilizer-mining company in Idaho chose to transition from truck unload—the model they'd used for decades—to rail unload. Instead of trucking and dumping with smaller conveyors to the stacker, a rail pit was installed; Dome Technology, then, increased the capacity by fabricating a new upgraded trans conveyor and the stacker system.

"The additional capacity of the new rail unloading was way beyond what the existing conveyors for the facility could accommodate," Dome Technology sales manager Heath Harrison said. "We built replacement conveyors that could increase the rate to handle the rail receiving as opposed to the original truck transfer the mine had depended on."

Product stacking in this new configuration was also a major consideration. The mining company utilizes an outside pile, allowing their plant to stockpile product when operations pause for the winter. The previous configuration featured a hammerhead stacker that moved back and forth.

Dome Technology's scope of work also included upgrading the stacker equipment, including everything from

the rail pit to the stacker. These improvements will allow the company to control how product is stored, building up the pile where necessary and boosting operational flexibility. The new version tilts and spans the entire front side of the storage.

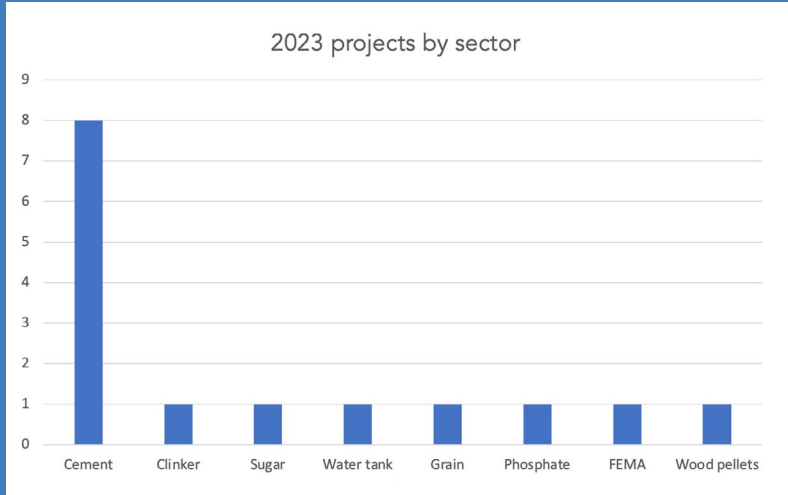
Additionally, a sampler was installed for pulling and testing material, and a front-end loader hopper feed allows entry for cleanup. Trucks and front-end loaders have full access to the facility for reclaim.

The company now has a state-of-the-art staging area that complements anticipated business growth and provides a year-round buffer. "What this allows the mine to do is stockpile material to get them through the winter," Harrison said.

Dome Technology collaborates frequently with bulk-handling expert Bruks-Siwertell. For this project, Bruks-Siwertell completed the design

work, then handed over plans to Dome Technology for fabrication and installation. Additionally, Dome Technology provided assembly and erection of the boom tower and fabricated steel components like ladders, staircases, decking, and handrails.

"We do build domes, but this is a great example of how we are a turnkey facility provider and can supply storage, conveyance, and fabrication," Dome Technology sales manager Heath Harrison said.



PROJECTS AT A GLANCE

Last year Dome Technology worked on 15 construction projects in a wide variety of industries with cement being most dominant—see the breakdown in the graph at left.

Details about completed work are published on our website. Look for new posts every Monday at dome-technology.com/company/articles.

COMPANY HOLDS LEADERSHIP CONFERENCE IN BOTSWANA

In early January 2024, the Dome Technology leadership team experienced a once-in-a-lifetime trip to the Okavango Delta in Botswana, part of the company's annual leadership-conference program.

The conference focus was *Extreme Ownership: How U.S. Navy SEALs Lead and Win* by Jocko Willink and Leif Babin. Based on the 12 chapters in the books, the leadership team divided into groups to teach the entire team the principles and their application during the previous year. The team will continue applying the concepts found in the book through 2024.

Of course, there were the wonders of nature to take in too—mostly in the form of up-close-and-personal encounters with African wildlife on the five-day mobile camping safari.

Each year the purpose and mission statement of the leadership conferences are the same:

1. Elevate company leaders and key employees beyond their current capabilities.
2. Build team unity, increase transparent and honest communication, and strengthen trust.



Dome Technology CEO Bradley Bateman, foreground, with members of the company's leadership team during the trip to Botswana.

3. Build relationships through exclusive, unique experiences.

4. Attract and retain key people.

Previous conferences have been held in Iquitos, Peru, and Reykjavik, Iceland, and are part of developing a culture of excellence at Dome Technology. "This is a repeat effort to hone our leadership efforts," said CEO Bradley Bateman.