



Scope of Work

- FEED Study
 - Value Engineering
 - Geotechnical Analysis
 - Material-Handling Systems Engineering
 - Structural Engineering
 - Mechanical Engineering
 - Electrical Engineering
 - Procurement & Subcontract Management
 - Dome Construction
 - Tunnels Construction
 - Material-Handling Systems Installation
 - Explosion Relief Installation
 - Additional Steel & Concrete Construction
- None Some All



Pellet degradation and dust production is minimized when the filling tube is utilized for loading.



Domes are ideal for portside locations; the footprint is small, and the entire interior can store product, right up to the apex.



The DomeSilo is robust enough to withstand harsh climates and extreme temps.

Storage & Reclaim

- 2 DomeSilos: 48m (157.5ft) wide x 41.8m (137ft) tall
- 75,000 metric tons, total
- Reclaim: 75% live, 1 tunnel/dome

Overview

From the beginning of its project in Quebec City, the challenge for maritime terminal operator and stevedore QSL was selecting a wood-pellet storage solution that checked all the boxes as both a smart financial investment and a good steward of the community.

First, the company required 75,000 metric tons of storage. Steel silos were an option, but a pack of six to eight would be needed to store that tonnage. Since the site is located near a historic district with a park and residential area, something more aesthetically pleasing was in order, and a DomeSilo™ fit the bill.

Second, QSL was concerned about product integrity and wanted “something that wouldn’t attract too much heat from the sun. A concrete system like the dome was ideal to store the pellets. Because we can have no water infiltration whatsoever, domes are ideal for that as well,” QSL director of engineering Eric Lapointe said.

Controlling dust was front of mind. QSL liked the seamless nature of the dome, but the tightness presented its own challenge in managing off-gases and dust inside the domes. After a United Kingdom firm concluded the amount of fuel in a worst-case scenario would require vents 1/3 the surface of the dome, QSL sought an innovative approach. “We said, ‘Let’s try to minimize the amount of fuel so that if there is an explosion, we will need much smaller vents,’” Lapointe said.

That’s when Dome Technology presented the idea of the filling tube. A belt conveyor moves pellets into the top of the domes, where they enter a 10-foot-diameter tube running down the center of each dome. Product rolls through openings incrementally located on the tube and into the pile, resulting in smoother, more even pile and less dust production. When reclaiming the pellets, they are first drawn down from the stacking tube, then from each opening on both sides of the tube. This causes less shear friction of the pellets, minimizing further degradation.

“For nearly four decades we’ve relied on a collaborative approach with companies—they’re in the driver seat, and we help navigate. In every project Dome Technology incorporates innovative technology to maximize storage capacity and system performance with an economical solution,” Bradley Bateman, CEO, Dome Technology.



Read more about this project at link.dometechnology.com/15300

