Upgrading a Baltic flagship

VARA Holding recently upgraded its flagship import terminal in Riga port, Latvia. Daniele Sciuto of Euromecc, the project's contractor, explains the benefits of the new equipment installed in this Baltic port project.

■ *by **Daniele Sciuto**, Euromecc Srl, Italy*

In the industrial sector, trust and reliability are essential for fostering long-term relationships between suppliers and customers. A notable example of this is the recent upgrade project undertaken by Euromecc Srl for VARA Holding, a subsidiary of Heidelberg Materials Northern Europe. Having first collaborated in 2020, Euromecc has once again been selected to enhance the cement terminal in Latvia, further strengthening its contribution to the region's expanding cement industry. This collaboration highlights the growing need for modernised cement storage solutions that improve operational efficiency and sustainability.

Commissioned at the start of March, the silos are now running at full speed

Latvia's expanding cement market

Latvia's cement market has experienced steady growth in recent years, driven by increasing infrastructure projects, urban development, and strategic investments in modern logistics and storage solutions. Despite facing challenges in 2021 when the construction sector contracted by seven per cent – primarily due to a decline in building construction activities, rising construction costs and labour shortages – the market is showing signs of a strong recovery. Forecasts indicate an average annual growth rate of over three per cent between 2025 and 2028, with infrastructure projects playing a significant role in boosting cement demand.

Latvia plays a vital role in the regional cement supply chain, acting as a key supplier to neighbouring countries such as Sweden and Finland. The nation's strategic geographic location and well-developed port infrastructure make it an ideal hub for cement distribution across Northern Europe.

Building on previous improvements

Recognising these trends, VARA Holding has taken proactive steps to upgrade its cement storage capacity, reinforcing its competitive position and ensuring a more efficient supply chain to meet increasing regional demands.

In 2020 Euromecc was awarded a contract to design, manufacture and supply two steel bolted silos, each with a diameter of 7600mm and a storage capacity of 740m^3. Installed at the port of Riga, these silos were designed to be filled via a pneumatic pipeline system served by self-discharging vessels, ensuring smooth and efficient material handling. The installation also incorporated high-efficiency dust filtration units to maintain environmental compliance and improve air quality.

To facilitate cement distribution, the silos were connected to a bulk loading station via screw conveyors. This set-up provided a balance between mechanical efficiency and space optimisation, ensuring quick and effective cement discharge into transport vehicles.

After three years of successful operation, VARA Holding sought to expand its storage infrastructure to accommodate increasing demand and optimise bulk carrier deliveries. One key driver for this upgrade was the shift towards using larger 4000t vessels, which are more readily available in the Baltic Sea and provide enhanced logistical efficiencies.

The upgrade involved the installation of two additional bolted silos, each with a capacity of 1000m^3, a diameter of 9200mm, and a height similar to the existing ones. These new silos were integrated seamlessly into the existing set-up, using the same pneumatic filling pipeline, which was extended to accommodate the expanded storage capacity. By maintaining consistency in design and operation, VARA Holding ensured minimal disruption to ongoing activities while significantly enhancing its storage capabilities.

To improve operational flexibility, each silo was equipped with air balance valves designed to optimise pressure control based on vessel compressor sizes. This feature allows for a more efficient and controlled filling process, reducing the risk of pressure imbalances and improving overall safety.

Euromecc's design minimises the number of horizontal connections so that there is only one intermediate flange, making everything safer and simpler

Simple and reliable, the mechanical transport by screw conveyor enables the overall height of the installation to be kept low

The original set-up of the discharge area consisted of a single bulk loading station served by screw conveyors – a common solution that combines the benefits of mechanical reliability with reduced discharge height requirements. Due to its proven efficiency, the same design was replicated for the new silos, effectively doubling the terminal's loading capacity. With two bulk loading bays now in operation, the system ensures faster turnaround times for road tankers, increasing overall throughput.

Given the terminal's proximity to the wharf and exposure to marine conditions, all silos underwent specialised surface treatment and protective coating. This high-grade anti-corrosion treatment ensures durability and longevity, safeguarding the infrastructure against the harsh Baltic climate.

Environmental and operational benefits

The expansion project not only increases storage and operational efficiency but also contributes to sustainability efforts within the cement industry. By optimising logistics through the use of larger vessels and improving dust filtration measures, the upgraded terminal reduces emissions and minimises environmental impact. The adoption of modular storage solutions also allows for future scalability, ensuring that VARA Holding can adapt to evolving market demands without significant infrastructure overhauls.

Furthermore, the enhanced bulk loading capabilities contribute to energy efficiency by reducing vehicle idle times and improving turnaround speeds, resulting in lower fuel consumption and emissions.

Testament to long-term collaboration

The commissioning of the upgraded cement terminal was achieved in the first week of March, marking another milestone in the ongoing partnership between Euromecc and VARA Holding. This project exemplifies the value of long-term collaboration and the importance of innovation in industrial development, ensuring efficient terminal operations and onshore logistics.

As demand for efficient cement storage and distribution solutions continues to grow, Euromecc remains committed to supporting its customers with cutting-edge technology and customised infrastructure solutions that align with market needs. ■