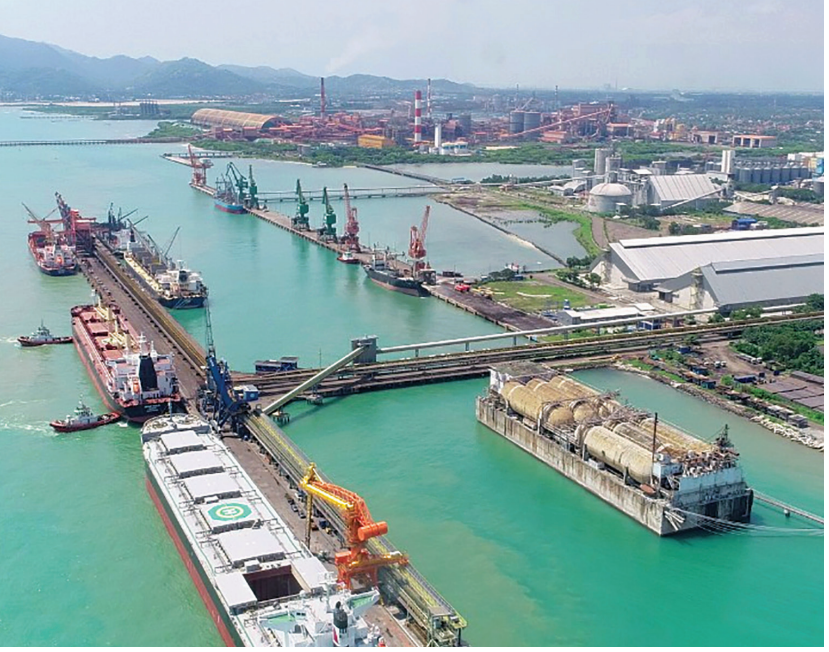

Bühler supplied a Portalink continuous mechanical grain ship unloader for Krakatau Bandar Samudera in Indonesia.

The drive-over hopper is a special application of KE's equipment and can simultaneously receive from two separate tracks. It is suspended on a dedicated steel rope system to quickly move the shiploader in position.

KE said the mechanical, electrical and hydraulic technologies had to be designed to integrate with the Bedeschi machine as well as meet Cargill's standards of safety and performance.

"Collaboration was key to mitigating this risk with the design effort spread between Italy and Australia and components being sourced from a global supply chain," said Jason Kilic, managing director at KE.

The machine was designed, manufactured, fully assembled and tested at the KE facility in Australia before being broken down for transport to the port.

With the system, coarser impurities or foreign objects are removed from the product stream by two Cimbria drum separators. Rejects are brought to a big bag located on the ground that is easily removable for disposal. The traveling system is engineered to provide a comprehensive solution to the low strength of the existing quay and to maximize the ship loading efficiency.

Fourteen twin wheel boogies, all steering, provides maneuverability and allows the shiploader to translate in any direction as well as pivoting the machine around its rotation center.

When the machine is not in use, it will be moved to a dedicated parking area designed to tie down the machine during storms and provide for maintenance and cleaning.

Delivering the ship loader fully assembled and pretested can be more expensive compared to site erection, Bedeschi said, but it minimizes the downtime at the quay for erection and lessens the commissioning period. It is also more efficient in situations where the quay is frequently unavailable.

The project was completed during the COVID-19 pandemic and control measures, adding to the challenges.

A full project review process was conducted, resulting in a detailed reorganization of all phases, from those that were yet to be completed to the final step of commissioning in Australia.

Despite Italy, China and Australia being in full lockdown, the project was able to progress in an effective and efficient way due to collaboration among all the parties. With travel restrictions, help was needed to unload, deliver, integrate and commission the ship loader.

After a competitive bidding process, KE was selected to get the system running against a tight timeframe that spanned the Christmas and New Year holiday period. Thanks to its service team, Bedeschi engineers were present during the most crucial phases of the project, both in China and Australia.

"Cargill had grain on standby and a ship booked to be loaded so we had to have the machine ready for operation with enough time to achieve approval from the Australian Quarantine and Inspection Service," Jason Kilic said. "It was tight, and we made it thanks to the dedication of the KE crew, tremendous support from Bedeschi and the team from Cargill being part of the process every step."

Continuous unloader added in Indonesia

Krakatau Bandar Samudera recently completed a port terminal in Cilegon, Banten, Indonesia, that is integrated with a new bulk storage and distribution center. The center, which took 12 months to complete, includes flat storage and a truck distribution solution.

For the center, Bühler supplied a continuous mechanical grain ship unloader Portalink 1300-29RK with a capacity of 1,300 tph and the ability to load vessels up to 90,000 dwt.

The terminal handles wheat, maize, soybeans and soybean meal.

This is the first continuous ship unloader in Indonesia and offers a fully enclosed solution to eliminate spillage and excess dust emission during the unloading of vessels. The Portalink is capable of unloading at high capacity with a unique design to reach far into the vessel hatches, including areas beyond the vessel hatch access areas.

The Portalink was manufactured and partially assembled at Bühler factories and delivered to the customer ready to install. Full installation was completed in two weeks.

Due to the COVID-19 travel restrictions, commissioning and training was done by a local Bühler customer service team with remote support from Bühler experts in Europe and China. WG

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Photo courtesy of Bühler