

load is significantly less," says Thooft. In addition to speeding up the process, Superior's design provides operators with more flexibility in positioning the flow of material and ensures a consistent flow rate.

"It's a very versatile machine, allowing us to unload to stockpiles and hoppers or on to trucks," says Watkins. He mentions that one of the best features of the Telestacker Conveyor is the wireless remote control operation, which allows the controller to run the operation from a safe position while always maintaining a clear visual of the operation. "It's a very safe machine, very steady".

Watkins' vision for a fully engineered, quality barge-mounted stacker provided the catalyst for Superior engineers to pursue greater innovation and a better product for material transfer companies. Custom conveying solutions provide an alternative to slow, stationary operations and equip river businesses with flexibility, efficiency and speed.

EASY RAILCAR OPENING

Martin Engineering, meanwhile, has developed a new high-speed, high-torque railcar opener engineered to quickly open and close even the most stubborn gravity discharge gates.

Powered by a 4cm pneumatic impact tool capable of delivering up to 13,558 Nm of torque, the Martin Impacting Railcar Opener (IRCO) features a lifting mechanism that provides nearly 38cm of height adjustment. By repositioning the axles, the tool can be set up to accommodate capstan heights of 18.4cm-56.4cm or 26cm-64cm.

As a result, the capstan extension can be quickly and easily aligned (level and square) with the gate's capstan, allowing the tool to apply maximum torque to the gate and reduce the chance of a misalignment that could cause stripping. Adjustable handle height and pivoting wheels contribute to an ergonomic, versatile design that can speed the unloading of unit trains with improved safety and efficiency.

"Cement terminals, grain handlers, glass manufacturers and other facilities use hopper railcars," observes railcar business development manager Marty Yepsen. "This design can benefit virtually

any location that relies on dependable opening and closing of hopper cars with horizontal gravity discharge gates."

While shaving seconds off the opening/closing time may seem a minor advantage for bulk terminals, if that's multiplied by hundreds of gates per day, the time adds up quickly. "The adjustable capstan height and manoeuvrability of this unit mean operators won't have to struggle to get the alignment just right," Yepsen says. "They can use the foot pedals for quick, easy height changes."

The adjustable handle height also delivers a more ergonomic tool that helps reduce repetitive stress, and the improved operator experience contributes to greater safety and fewer potential injuries. Large, foam-filled tyres provide easy manoeuvrability on any surface, and users will never have to deal with a flat tire. The wheels also pivot with the pull of a lever for lateral movement to accommodate traveling capstans.

The new technology was designed for durability and long life to maximise return on investment. "In some opener designs, failures are caused by the deterioration of the OEM grease over time, with no way to replace the lubricant short of disassembly," says Yepsen. "Our design allows operators to add grease on a regular maintenance schedule to prolong the service life of internal wear parts and ultimately extend rebuild/replacement intervals."

BARGES STAGE A COMEBACK

As the maritime industry seeks to improve efficiency, barge transport is developing steadily as an alternative to road and rail, with the market set to exceed US\$50bn by 2026, according to a new research report.

According to Global Market Insights, "the emergence of new wireless and mobile technologies in maritime industry is driving barge transportation market growth. Several technology companies are introducing new solutions in the maritime industry to enhance the fleet efficiency."

The report suggests that development of barge transportation will be stimulated by the fact it offers a convenient way to transport heavy goods, bulk cargoes and commodities.

"Barge transportation is developing and optimising as it is used as a substitute to the rail and road transport and is more economical, efficient, and environmentally superior, attributing to market size expansion."

Another issue that needs to be addressed is that of emissions from inland waterway barges and the report suggests that barge transport may be further stimulated with the development of electric barge transportation.

According to the report, liquid cargo made up around 38% of the barge transportation market share last year and demand for barge transportation to carry liquid cargo is increasing as a result of oil exploration activity.

"The covered barge transportation segment held more than 35% market revenue share in 2019 owing to its several advantages such as protection of goods from extreme and uncertain weather conditions. It is primarily used for moving dry cargo, such as agricultural products, on account of its high cost-effectiveness.

"Moreover, barge transportation service providers are focusing on building a greater number of covered barges and refitting approximately 1,000 existing covered hopper barges to serve the increasing demand for grain barges, driving the market share."

Another issue driving the development of the barge transportation market will be the trade in metal ore, for which barge transportation offers a cost-efficient method of shipment. This is particularly true of the Latin American market, where barge transportation was worth over \$4bn last year, according to the report. There has also been a surge in support for the development of inland waterways to take pressure off the road network.

"Barge transportation market players are focusing on partnerships, strategic alliances and collaborations, along with enhancing their R&D capabilities to introduce new solutions and provide enhanced customer services. Additionally, market leaders are also laying emphasis on enhancing barge transportation services to strengthen their market position and gain a competitive edge over rivals," the report suggests.