Size fractions

Carbon fibre CSI screens at MinRes' Mt Marion lithium mine

From carbon fibre to new global capacity additions and significant orders, Paul Moore looks again at developments in screening technology

One of the latest developments in screening technology is the use of carbon fibre, which is being pioneered by iron ore miner & mining services group, Mineral Resources Ltd (MinRes) in Australia.

Its crushing business, **CSI Mining Services**, is well known in the industry for its modular NextGen crusher technology – an alternative to higher-cost fixed plants which also offers reduced environmental impact across crushing construction and operations. MinRes told *IM*: "With capacity ranging from five to 50 million tonnes per annum, CSI's modular crushing solution delivers significantly lower dust and noise emissions, consumes less energy and can be rapidly deployed in remote operations. This year we launched our latest NextGen 3 plant, which has been enhanced to include carbon fibre vibrating screens. The in-house developed innovation replaces traditional steel vibrating screens, bringing a host of cost and productivity benefits."

CSI's carbon fibre manufacturing facility is a world leader in the use of carbon fibre for mining equipment. The team developed a carbon fibre vibrating screen which takes the place of traditional steel vibrating screens and brings a host of cost and productivity benefits. The screen components are lightweight, corrosion resistant and have a significantly higher structural strength than steel. Service life is also three to five times longer than steel screens.

The first carbon fibre screen was completed in the first quarter of this year and successfully installed at Mt Marion, with a series of additional screens for the hard rock lithium mine which is now in production. Carbon fibre screens are applicable in both wet processing and dry screening environments and can be built in less than six weeks at CSI's carbon fibre manufacturing facility south of Perth.

AKW's AKA-Screen

Germany's **AKW Equipment + Process Design** has 60 years of experience in providing technical solutions for wet mechanical treatment challenges. In order to represent the complete treatment processes, be it in lab or full scale, AKW Equipment + Process Design extended some time ago its scope of supply with the addition of the AKA-SCREEN, wet classification screens.

The company told *IM*: "With the lab-scale AKA-SCREEN, the team has the unique opportunity that enables to conduct extensive testing and research on different materials and process parameters. This allows to optimise each single process, improve the efficiency and in the end reduce the costs. Being flexible in customising and tailoring to meet the specific customer requirements is one of the unique selling propositions that AKW Equipment + Process Design is always striving for."

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With the full-scale AKA-SCREEN, AKW Equipment + Process Design is offering a series that is using two unbalanced motors with up to 2G acceleration. This generates a composite-vibration of linear motion of the whole screen frames and additionally mesh vibration. The vibrating parameters can be controlled through frequency conversion. The AKA-SCREEN consists of up to five individual screen decks, available in standard or long version. Screen mats are made of reinforced polyurethane. The screen frame is entirely coated with polyurethane, and integrates a spraying system as well as a repulper (as an option) for optimum screening efficiency.

The company adds: "Be it for ores and minerals, commodity or specialty sands, the AKA-SCREEN series offers a fully automated and low energy system that is robust, performant and highest competitive."

New Haver & Boecker Niagara service centre in Brazil

Indicative of the level of demand in the iron ore mining sector, **Haver & Boecker Niagara** recently opened a new service and support facility in Parauapebas, Brazil. The company welcomed clients, partners, friends, local community and city authorities to the grand opening celebration on May 18, 2023. The 4,000 square-metre facility provides service and support for mining operations throughout the region through cutting-edge diagnostics, equipment refurbishment, parts stocking and more.

"Providing quality service and support is at the heart of what we do. At Haver & Boecker Niagara, we strive to be an extension of an operation's service team," said Clayton Carvalho, Managing Director of Haver & Boecker Niagara's Brazil operation. "We offer an array of service and support options to increase customer savings and equipment longevity. With the addition of the Parauapebas facility, we can more easily provide unmatched service and support onsite for our customers to help maximise their screening performance."

Haver & Boecker Niagara's new facility offers the capacity to manufacture 800 different part numbers and can refurbish 120 vibrating screens and 240 exciters. It features a paint booth, a rainwater collection system, water treatment, water and oil separation, 100% LED lighting with lower energy consumption and a natural lighting structure. Additionally, the new Parauapebas facility features a 50/15-ton overhead crane, a