

Shaftless screw technology increases market share

Screw conveyor manufacturer Spiral Tech, which is part of the PMSA group of companies, says the comprehensive range of heavy-duty industrial shaftless screws is continuing to gain ground in the local market.

Heavy industries in South Africa ranging from construction to mining and water treatment can benefit from the range of advanced shaftless screw conveyor systems.

Spiral Tech GM **Bennie Verster** says the company designs and manufactures the range of Archimedes shaftless screw conveyor systems, which are used for bulk materials handling in several applications in South Africa.

"The shaftless conveyor systems are built from highly durable 350 WA structural steel, which is cold-rolled, for increased strength and tighter tolerances. The product is manufactured using the hardfacing process to increase wear resistance. This manufacturing process enables the Archimedes range to convey hazardous substances, sticky materials, contamination-sensitive products and large abrasive materials," he says.

The Archimedes screws are fully welded and have continuous spirals, with no bearings or shafts, to ensure that the screws can support their own weight while operating at 100% capacity.

"The continuous spiral of the screw paired with the shaftless flight means that the Archimedes flight does not need to be attached to a pipe or a shaft, as it is able to

support its own weight and the weight of the material that it is transporting. This design also makes the screw easy to maintain, as there are no additional parts that need to be serviced or replaced," he continues.

Verster notes that the screws are available in sizes ranging from 100 mm to 650 mm, with operating capacities of between 600 kg/h and 120 t/h, making the product the preferred choice in applications such as boiler houses at coal mines and sewage treatment plants.

"Spiral Tech's range of screws is able to



HIGH-QUALITY PRODUCT

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BULK MATERIALS HANDLING

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handle larger materials such as coal and waste dusts from mines, owing to the fact that the flight is thick and coated with wear-resistant materials to ensure that aggressive materials can be transported with ease," he says.

Spiral Tech manufactured a total of 60 Archimedes shaftless screw conveyor systems last year, with 21 screws recently being delivered to a sewage treatment plant in the Cape Town metropolitan area.

He says that Spiral Tech also specialises

in the manufacture of live bottom systems, which are created by linking a number of screw conveyors together to transport materials such as sludges, wood shavings and greasy and oily materials.

"The Spiral Tech range of live bottom systems is suited to moving materials that are prone to bridging and arching.

"The live bottom systems are manufactured in left-hand and right-hand configurations to ensure increased material flow of large capacities up to 300 m³," he explains.

Spiral Tech also manufactures dewatering presses for the removal of water from solid materials, and grit classifiers for the removal of grit from solubles.

"Spiral Tech sets itself apart from its competitors because, in addition to manufacturing high-quality products at a competitive price, the company strives to ensure that its clients are provided with efficient after-sales service by making regular follow-up calls and visits to its customers, as well as swiftly responding to any technical problems 24/7," he concludes.

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