



Company News

Dos Santos International supplies first DSI Adder Snake for Shiploader

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Marietta (GA), United States -

Dos Santos International has begun the start up of its patented DSI Sandwich belt Adder Snake conveyor for the Yara Sluiskil shiploader upgrade project in the Netherlands. DSI was awarded supply of their Sandwich conveyor by Bedeschi S. p. A., who was awarded the contract for the supply of the ship loader for the plant in January 2017.

DSI Innovation



The DSI Sandwich high angle conveyor will transfer urea and amidas prills at a rate of 600 t/h at a 45° angle.

The initial design concept for the upgrade used a conventional conveyor “stinger” boom out from a tripper, to the tail of a standard DSI high angle conveyor. This had the disadvantage of an additional transfer and extra equipment, so the client readily embraced the idea of extending the high angle conveyor tail to receive the material directly from the dock conveyor tripper. Layout of the new arrangement immediately revealed that sufficient tripper height did not exist to accommodate the tail pulley of the sandwich belt high angle conveyor. The limitation was so severe that the minimum pulley diameter required for the standard sandwich conveyor belt consumed too much of the space. The solution was to employ the DSI Adder Snake design, using a lighter construction belt that can be wrapped around a somewhat smaller tail pulley. To accomplish the high angle lift, the DSI Adder Snake swallows the narrow conventional belt, along with

its material, into the two wider sandwich belts, allowing the material to enter the sandwich belts with minimal disturbance. It does this without the energy loss and additional equipment required for a standard transfer. The concept of the DSI Adder Snake, invented by DSI's vice president, Marc dos Santos, was inspired by a very different application, elevating material from under large storage domes. The use of this technology extends to a wide variety of applications, including marine terminals, stacker/reclaimers, and long overland systems.

Yara Sluiskil

The DSI Sandwich high angle conveyor will transfer urea and amidas prills at a rate of 600 t/h at a 45° angle. The material will be transferred from the tripped dock conveyor and elevated to the ship loader boom conveyor. The sandwich conveyor discharge is centered on the bridge rotation axis of the boom, allowing the boom to rotate freely. DSI Sandwich belt high angle conveyors take on many forms and offer many advantages. Each DSI Sandwich Conveyor uses standard, smooth-surfaced conveyor belts, face-to-face, to gently but firmly contain the product being carried. This not only makes steep angles possible. It also offers a clean, environmentally sound operation because the material remains hugged between the belts. The use of all conventional conveyor parts ensures high availability and low maintenance costs. A DSI Sandwich conveyor is capable of higher conveying speeds and greater capacity than other high angle conveying methods. The availability of wide belts and hardware makes capacities greater than 10,000 t/h easily achieved with a DSI Sandwich conveyor. High angles of 90° are typical, and lifts of 300 m are easily accomplished. Dos Santos International is the world's foremost authority on sandwich belt high angle conveyors, founded and led by the inventor of the system, Joseph Dos Santos. DSI was founded on its extensive worldwide experience in sales, engineering, and construction of bulk materials handling systems and equipment. This has included major contributions that have expanded the range of bulk handling and transport solutions. Most notably, advances in sandwich belt high angle conveyors have led to their worldwide utilization. The expertise of DSI spans a wide range of materials handling systems and equipment including high angle conveyors, high powered, high capacity, high lift slope conveyors and long overland conveyors utilizing the very latest technology and innovations.