



Project News

Dos Santos International supplies Sandwich Belt High Angle Conveyor for Floating Grain Terminal

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Marietta (GA), United States –

Dos Santos International has recently installed a Sandwich Belt High Angle Conveyor handling grain on a floating terminal on the Mississippi River. The profile for this system is 18.5 meters of lift at a 50 degree incline. It boasts an impressive belt width of 84 inches and a volumetric rate of 2268 t/h (2950 cu-m/h). This will elevate mostly hard grains like corn and soybeans, but could include some meals.



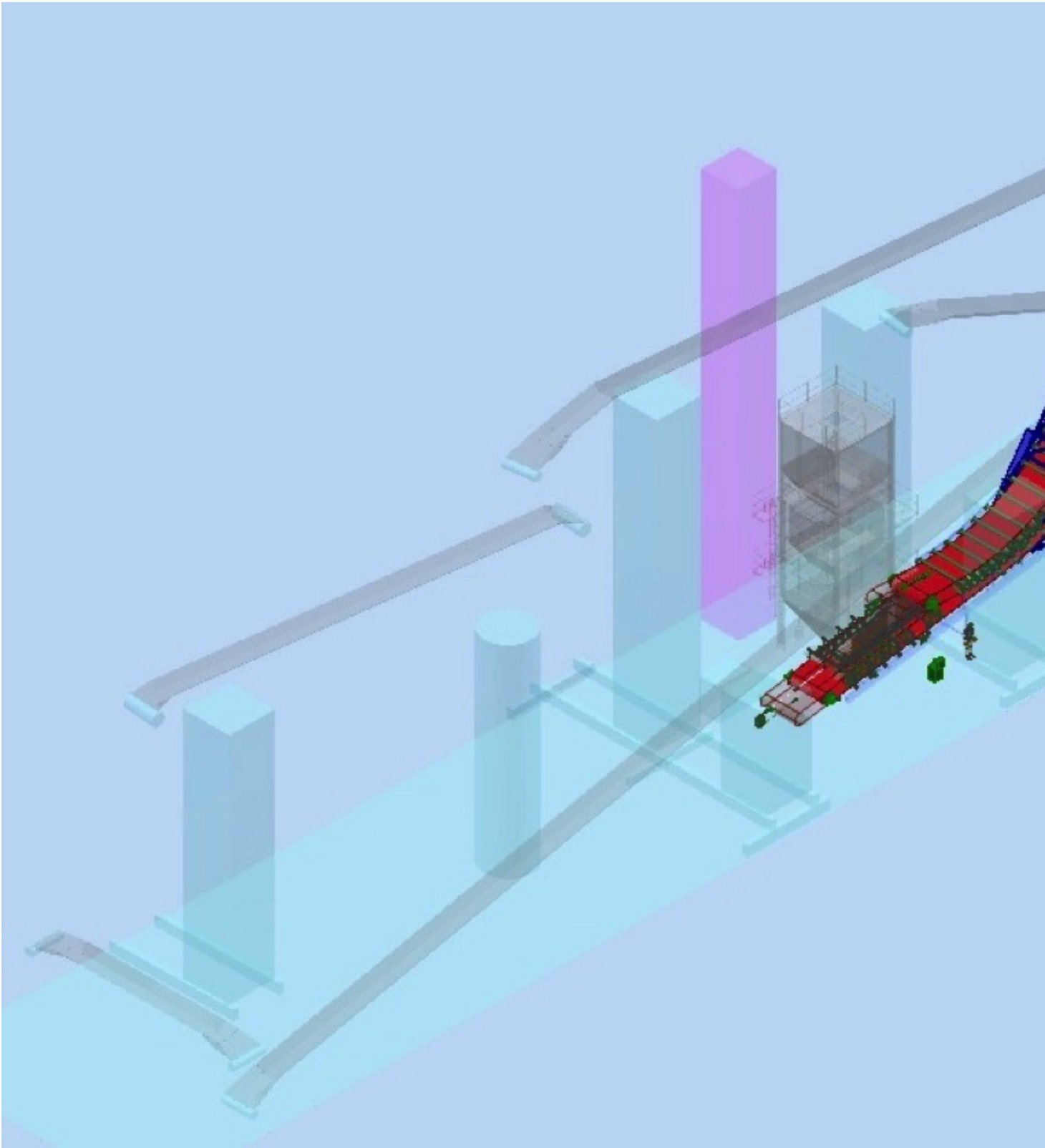
The DSI Sandwich conveyor will elevate grains at a 50° angle at a rate of 2268 t/h (2950 cu-m/h)

The floating transfer station was originally designed for carbon products. To convert the unit to a grain transfer station, additional components needed to be added to meet USDA/FGIS requirements on weights and sampling. Real estate is limited on the barge transfer unit, and the best technology was needed to bring

the product from under a newly added weigh-bin on the deck of the barge back to a certified sampling system mounted 55 feet above deck and only 100 feet away. The owner had a choice between a bucket elevator or the DSI Sandwich Belt. The DSI Sandwich Belt high angle conveyor was selected for its ability to elevate the products being handled over the short distance and because of the gentleness of its conveying.

Gentleness of the Sandwich

By the nature of its gentle hugging pressure, the Sandwich Belt conveyor is known to be a gentle system. However, concerns about material degradation had to be addressed at the beginning of the development.

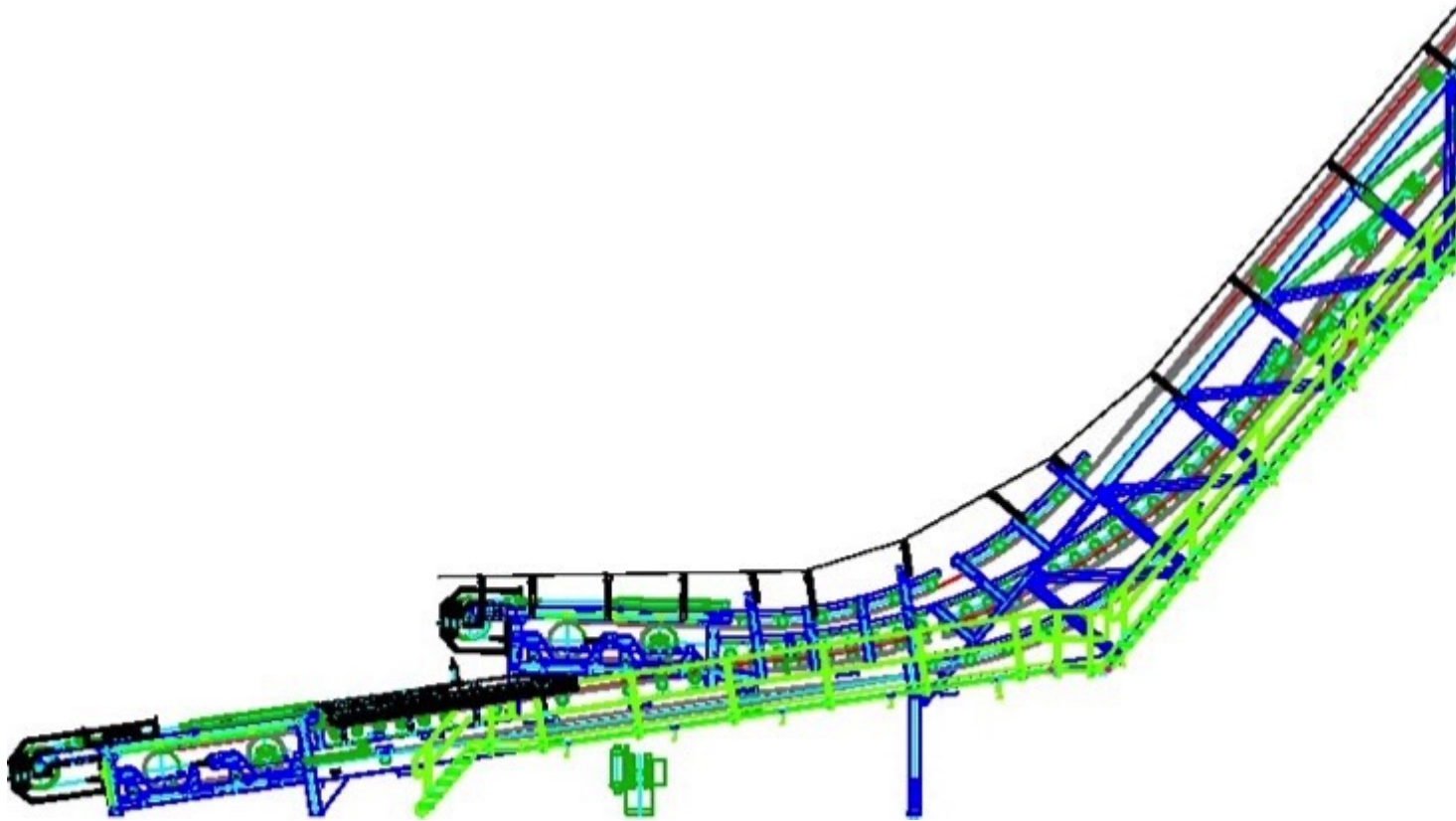


Damage testing was performed on 3 USDA Grade 1 grains. Five one-bushel samples were loaded into oversized burlap sacks from each of a common batch of soybeans, wheat and seed corn. The first bushel of each grain was set aside to serve as the control sample, while the next four bushels were conveyed at 60 degrees, the full length of the 1524mm (60") belt width demonstration unit, two, four, six and eight times respectively for corresponding conveying distances of

45.7 meters, 91.4 meters, 137.2 meters and 182.9 meters. Samples from each bushel sack were then analyzed at a State of Alabama Department of Agriculture laboratory for the various forms of damage and contamination, and at the Alabama State Seed Laboratory Department of Agriculture and Industries for germination potential. The results showed no damage to any of the three grains tested, as a result of conveying in the high angle conveying unit.

It is with this confidence that several Sandwich Belt high angle conveyors have been successfully installed, including on self unloading ships and ship loaders.

Sandwich Belt High Angle Conveyors



DSI Sandwich Conveyor for Cooper Consolidated, New Orleans, LA USA.

DSI Sandwich Belt high angle conveyors take on many forms and offer many advantages. Each DSI Sandwich conveyor uses two 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 spillage free, environmentally sound operation because the material remains secured between the belts.

A DSI Sandwich conveyor is capable of higher conveying speeds and greater capacities than other high angle conveying methods. With the availability of wider belts and accompanying hardware, capacities greater than 10,000 t/h can be easily achieved with a DSI Sandwich conveyor. High angles of 90° are typical, and lifts of 300m are easily accomplished.

Material	Grains
- Density	0.77 t/cu-m (48 PCF)
- Size	101.6 mm (4") minus
Conveying Rate	2268 t/h (2500 STPH)
Conveying Angle	50 degrees
Belt Width	2133 mm (84")
Belt Speed	4.57 m/s (900 FPM)
Lift	18.5 m (60.6')
Length	36.5 m (119.9')
Drives	
- Inner Belt	112 kW (150 HP)
- Outer Belt	149 kW (200 HP)

The use of all conventional conveyor parts ensures high availability and low maintenance costs, as well as interchangeability of components and fast delivery of replacement parts.

About Dos Santos International

Dos Santos International is the world's foremost authority on Sandwich Belt high angle conveyors. The company was founded and is currently led by the inventor of the system, Joseph Dos Santos. DSI is known for 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.