



DSI PIPE CONVEYOR TECHNOLOGY

BACKGROUND

J.A. Dos Santos, throughout his career, and Dos Santos International LLC, since its founding in 1997, has developed the conveying technologies that were considered innovative at the time and ultimately became industry standards. This has included joint and cooperative developments with other notable innovators of the industry. Much more is accomplished when we develop what needs developing and not when we re-develop “me-too” technologies. Some of these technologies include:

1. Sandwich Belt High Angle Conveyors
2. Long Conventional Overland Conveyors with complex profiles including:
 - a. Horizontal and compound curves
 - b. Booster (intermediate) drives of various types:
 - i. Belt on belt type
 - ii. Rubber tire pinch type
 - iii. Tripper type
 - c. Two way conveying (conveying materials on both belt strands in opposite directions)
3. Enclosed conveyors including:
 - a. Pipe Conveyors
 - b. The Square Belt / Square Conveyor
4. Cable Belt/Multi Rope Belt Conveyors
5. **DSI ExConTec** complete conveyor analysis program

The **DSI ExConTec** unifies all of the above technologies because it breaks down all of the power and tension equations into their basic parts allowing the correct compilation for each conveying system. Appendix-A provides the background writings and installations lists that support the Dos Santos record including cooperative developments.



PIPE CONVEYORS BY TEAM DOS SANTOS INTERNATIONAL & LOEFFLER ENGINEERING

Like many past innovations Pipe Conveyors are now a mature technology that is well understood with its equipment well standardized. The belt's pipe forming and load support characteristics are well understood and tabulated by the belt manufacturers. Hex idlers and mounting plenums are standard products of the idler manufacturers. Pursuant to the CEMA (Conveyor Equipment Manufacturers Association) guidelines the **DSI ExConTec** is ideally suited for the complex power and tension analysis of the pipe conveyor belt line. It breaks down the components of the travel resistances into their very basic parts and reconstitutes them into aggregate resistances that reflect the increased number of bearings and seals, the imprint and shearing resistances that add the pipe forming (crowding) roll loads to the radial loads around the profile and horizontal curves and to the gravitational loads.

Following our policy of cooperation with notable innovators and, our long standing relationship, we have teamed up with Loeffler Engineering of Lago Vista, Texas, USA, in offering the engineering and supply of Pipe Conveyor overland conveying systems. Loeffler Engineering contributes to the team unparalleled experience and expertise in the Pipe Conveyor technology, dating back to its early development.

Armed with a deep understanding of the conveyor technology, unparalleled in-house analytical tools and the support of the belting and equipment manufacturers the Dos Santos International and Loeffler Engineering Team has offered and continues to offer both high-tech engineering and consulting services and the engineering and supply of the most complex pipe conveyors to the industry.