



# Joseph A. Dos Santos

PRESIDENT

## BACKGROUND SUMMARY

More than 40 years in sales, estimating, engineering supply and construction of bulk materials handling systems and equipment. Major contributions in engineering and management have expanded the range of bulk handling and transport solutions.

## PROFESSIONAL BACKGROUND

### DOS SANTOS INTERNATIONAL

Marietta, GA, 1997 - Present (President and Founder)

Founded Dos Santos International on worldwide experience, specializing in materials handling and engineering.

Projects have included:

- 29 Sandwich belt high angle conveyor systems in the USA and abroad.
- 21 overland conveyor projects, which have included 53 conveyor flights. These projects have included:
- New systems and upgrades, including: two-way and reversing conveyors, with “booster” intermediate drives, horizontal curves.
- Complex analysis of these has been with the DSI proprietary software, *ExConTec* – The Expanded Conveyor Technology.
- Upgrade of 6063 TPH coal shiploader
- Designed Mobile sizer conveyors for overburden, 12000 t/h



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- Wire rope hoist luffing systems, to 16-part 1-1/8" diameter, including single and double drum (redundant) systems.
- Rigging, reeving and hoisting procedures and designs for power plant maintenance. This has included bracing structures, staging and permanent platforms, associated with change-out of hot reheat piping and bunker and boiler rebuilds.
- High tech transfers, to 9000 TPH coal.

### **EleVeyor ASSOCIATES, INC.**

Bethesda, MD, 1997 - 1998 (Partner/Manager of EleVeyor SN systems)

### **CONTINENTAL CONVEYOR & EQUIPMENT, CO.**

Winfield, AL – 1982 - 1997 (Manager/Engineered Systems)

Total bottom line responsibility for the Engineered Systems Department included management of sales, estimating, engineering and construction personnel and activities. High Angle Conveyors – HAC\_s and related conveyor systems were the focus of Engineered Systems.

Projects included:

- Eight-five High Angle Conveyor systems in 12 countries in widely ranging applications with angles to 90°, lifts to 575 feet, and rates to 4685 TPH. These systems are at mines, ports, coal prep plants, composting facilities, paper mills and self-unloading ships.
- Other conveyor projects included belt trippers to 72" B.W., plant, overland and underground conveyors, discharge boom structures to 108" B.W., heavy duty feeders to 96" B.W. and various engineering and field service projects.

Responsibilities included:

- Heading up research and development.
- Developing design criteria and standards.
- Conceptual and final design.
- Project management.
- Sales assistance related to bulk materials handling systems and equipment.
- Belt on belt booster drives, development to commercialization.
- Multi-Rope conveyor development.
- High Angle Conveyors (HAC), development to commercialization.
- Development of sandwich belt high angle conveyor technology included construction of a large scale high angle conveyor (HAC) test and demonstration unit, extensive testing and development of design criteria.



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Major accomplishments:

- The High Angle Conveyor (HAC) system became a resounding commercial success and the focus of all Engineered Systems sales and engineering activities.
- Consolidated and restructured the Engineered Systems Department, beginning in 1987.
- As Manager of the Advanced Systems Group, built an efficient department with versatile professionals.
- Raised department from losses and low morale, to pride and the company's highest profit margin

## **DRAVO CORPORATION**

Pittsburgh, PA – 1975 – 1982 (Design Project Engineer)

Responsibilities included:

- Mining systems and equipment.
- Project leadership on mine application studies.
- Steep angle conveyor development.
- Design and application of continuous haulage systems and equipment, including belt wagons, trippers, spreaders and cross-pit spreaders.
- Under license of TAKRAF East Germany, design and marketing of continuous mining and haulage systems and equipment. This included six weeks of training in East Germany.
- Mobile Bucket Elevator (MBE) study for U.S. Department of Energy-Engineering study on technical and economic feasibility of mobile bucket elevators for lifting coal from open pit mines. Developed complete continuous haulage systems around the MBE.
- High Angle Conveyor Study for U.S. Bureau of Mines-Engineering study on technical and economic feasibility of high angle conveyors for open pit mines. Developed high angle conveyor concepts and complete continuous haulage systems.
- Made major advances in sandwich belt high angle conveyor technology and expanded the conventional conveyor technology.

Major Accomplishments:

- Made major advances in sandwich belt high angle conveyor technology and expanded the conventional conveyor technology.

### Design Engineer, Materials Handling Equipment

Responsibilities included:

- Conceptual and final structural and mechanical design.
- Field inspection and repair reports.
- Field commissioning of bulk materials handling equipment.
- Conceptual design of bulk materials handling systems and implementation of technical/economic studies.



#### Projects included:

- 3500 TPH coal continuous barge unloader (CBU), East Kentucky Power Corporation.
- Proposal for CVRD, in Brazil, of a stackers and reclaimers for iron ore and pellets.
- 5000 TPH coal CBU for Alabama State Docks Department, Mobile, Alabama. Modified design to minimize digging ladder length for low water-level-change applications.
- Expansion of Electro-Coal Transfer Terminal, near New Orleans, to 20-million TPY.

#### Major Accomplishments:

- Rationalized and optimized design of pivoted arm type CBU's realizing great savings
- Conceived a floating CBU to realize savings and standardization as such a design is independent of water level change.
- Equipment Design Engineer, Steel Mill Equipment, 1 year.
- Responsible for conceptual design and preparations of proposals for steel mill equipment including BOFs, scrap chargers, ladle tilters, electroslag remelters and transfer cars.
- Developed computer program for analysis of a slow moving four bar link mechanism.

## EDUCATION

University of Pittsburgh, Graduate studies for MS in Mechanical Engineering, 1982

Cornell University, Masters of Civil Engineering, 1975

Cornell University, Bachelors of Civil Engineering, 1974

Training in design/application of continuous mining equipment and systems, 1981

Management Development, including technical writing, effective presentation.

## PROFESSIONAL CERTIFICATIONS

#### Registered Professional Engineer

- New York (#56562)
- Alabama (#19468)
- New Mexico (#14585)
- Pennsylvania (#PE-049370-R)
- North Carolina (#029694)
- Utah (7906640-2203)
- Texas (127082)
- Kentucky (32512)
- Nebraska (E-17342)
- Georgia (PE044188)

## ASSOCIATIONS

Society of Mining Engineers (SME)

Conveyor Equipment Manufacturers Association (CEMA)



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## **ACHIEVEMENTS.**

- Two major study reports on high angle conveying
- Numerous technical papers on modern continuous haulage systems and equipment.
- Patent for “Pressure Device for High Angle Conveyor”, U.S. 4561537
- Patent for “Sandwich Belt High Angle Conveyor”, U.S. 4609097

## **TECHNICAL SKILLS**

- AutoCAD
- Microsoft Office, Word, Power Point, Excel, Publisher
- Public speaking
- Technical Writing
- Author
- Inventor
- Speak Portuguese and Spanish fluently
- Read and write Portuguese and Spanish
- Read French and Italian

