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BACKGROUND SUMMARY

More than 25 years experience 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, Winfield, AL, July 1997 - Present

President, Founder

Founded company on worldwide experience, specializing in materials handling and engineering.

Projects have included:

- Five (5) Sandwich-Belt High Angle Conveyor Systems in the USA and abroad.
- Overland conveyor projects, new and upgrades, including two-way and reversing conveyors, with “booster” intermediate drives, horizontal curves, utilizing DSI proprietary software, “**ExConTech**” The Expanded Conveyor Technology
- Upgrade of 6063 TPH coal shiploader
- Wire Rope Hoist luffing systems, to 16-part 1-1/8” dia., 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 9,000 TPH coal

EleVeyor Associates, Inc., Bethesda, MD, August 1997 – June 1998

Partner, Manager of EleVeyor SN systems

Continental Conveyor, Winfield, AL, 15 years: May 1982 - July 1997

Group Manager/Engineered Systems, 3 years: May 1994 to June 1997

Manager/Engineered Systems, 7 years: June 1987 to May 1994

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 are the focus of Engineered Systems. Projects have included:

- Eighty five (85) High Angle Conveyor Systems in twelve (12) countries in widely ranging applications with angles to 90°, lifts to 575 ft., 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.

Major Accomplishments: Consolidated and restructured the Engineered Systems Department, beginning in 1987. Built an efficient department on versatile professionals. Raised department from losses and low morale to pride and the highest profit margin at Continental Conveyor.

Manager/Advanced Systems Group, 5 years: May 1982 to June 1987.

Responsibilities included heading up research and development, developing design criteria and standards, conceptual and final design, project management, and sales assistance, related to bulk materials handling systems and equipment.

- Belt on Belt Booster Drive Development to commercialization.
- Multi-Rope Conveyor Development.
- High Angle Conveyor 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.

Major Accomplishments: The High Angle Conveyor - HAC® system became a resounding commercial success and the focus of all Engineered Systems sales and engineering activities.

Dravo Corporation, Pittsburgh, PA., 7 years: May 1975 to May 1982

Design Project Engineer, Mining Systems and Equipment, 3 years

Responsibilities included 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.

Major Accomplishments: Made major advances in sandwich belt high angle conveyor technology and expanded the conventional conveyor technology.

Design Engineer, Materials Handling Equipment, 3 years

Responsible for conceptual and final structural and mechanical design, field inspection and repair reports, and 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 floating, pontoon-mounted, bucket ladder type continuous barge unloader.
- 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 preparation 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

- B.S. Civil Engineering, Cornell University, 1974.
- Master of Engineering (Civil) Cornell University, 1975.
- Graduate studies toward MS in mechanical engineering, University of Pittsburgh, 1982.
- Training in design/application of continuous mining equipment and systems, 1981.
- Management Development courses including technical writing and effective presentation.

PROFESSIONAL AFFILIATIONS

Registered Professional Engineer: New York (#56562), Alabama (#19468), New Mexico (#14585), Pennsylvania (#PE-049370-R)
Society of Mining Engineers

PROFESSIONAL ACHIEVEMENTS

Publications:

- Two (2) major study reports on high angle conveying.
- Numerous technical papers on modern continuous haulage systems and equipment.

Patents:

- "Pressure Device for High Angle Conveyor", U.S. 4561537.
- "Sandwich Belt High Angle Conveyor", U.S. 4609097.

LANGUAGES

Speak Portuguese and Spanish fluently.
Read and write Portuguese and Spanish.
Read French and Italian.