

### BACKGROUND SUMMARY

Structural and mechanical engineer, responsible for complete management, design and implementation of various materials handling projects. Chief operating officer handling operation of business ranging from basic accounting functions to personnel management and top level financial decisions, as well as various process improvements. Extensive computer skills employed in optimizing company software for advanced analysis and project development.

## PROFESSIONAL BACKGROUND

#### DOS SANTOS INTERNATIONAL

Marietta, GA, 1997 – 1998, 2004- Present (Partner, Co-founder, VP, COO)

Co-founded company on worldwide experience, specializing in materials handling and engineering. Responsible for company operations including personnel matters, financial tracking, and project management. Simultaneously serve as structural and mechanical engineer, executing a wide variety of materials handling projects.

Engineering projects have included:

- Engineering and design of Sandwich-Belt High Angle Conveyor Systems throughout the world, with angles to 90°, lifts to 35m, and rates to 4000 t/h.
- Overland conveyor analyses, and improvement to software methods, utilizing DSI proprietary software, "ExConTec" The Expanded Conveyor Technology



- Complete supply of overland conveyor system, including seven (7) flights, both uphill and downhill, with soft start and stop by VFD. Three (3) units with horizontal curves. Optimized in-house software to analyze conveyor forces.
- Various rigging, reeving and hoisting studies and executions.
- Conveyor system start-ups and inspections.
- Conveyor inspections and repair reports.
- Preparation of budget and firm quotes for projects including:
  - o Sandwich belt high angle conveyors
  - o Long overland conveyors including horizontal and vertical curves
  - o Material handling system upgrades and modifications
  - o Plant, port, and terminal upgrade projects

### Operations functions have included:

- Complete management of bookkeeping, accounting and payroll in early years of company
- Management of outside accountants and payroll services as company grew
- Development of procedures and processes for company operations
  - o Employee manuals
  - o Training/onboarding manuals
  - Project tracking tools

### MIDE TECHNOLOGY CORPORATION

Medford, MA 2001 – 2004, (Aerospace Engineer)

- Developed various approaches to use of smart materials for military and civilian applications.
- Developed communication system for data transmission through sealed containers.
- Researched and tested new methods of fuel injection for jet and diesel engines.
- Developed programmable tester for research of new piezo-actuated device.
- Designed and assembled mechanical test beds and electronic devices.
- Involved in high-tolerance machining work and CAD design for prototyping and actual product manufacturing.

#### MIT OCEAN ENGINEERING TANKS

Cambridge, MA 1999 – 2004 (UROP)

- Made electrical and mechanical improvements to Robo-Pike robotic fish and began mechanical design and development of Robo-Muskie for propulsion research.
- Involved in computer aided design, assembly, testing and purchasing for projects.



## **EDUCATION**

Massachusetts Institute of Technology, Bachelor of Science Aerospace Engineering with Information Technology – 2002

# PROFESSIONAL CERTIFICATIONS

## **ASSOCIATIONS**

President of HOA

### **ACHIEVEMENTS**

- "Adder Snake: Low-Angle to High-Angle with No Transfers" presented at SME Annual Conference and Expo, Feb. 2017, Minneapolis, MN
- Received patent number US9815627B2 in November 2017 for Adder Snake development
- "Proven Performance, Lost Opportunity" in Mining Magazine, September 2008, Vol. 199, No. 3, Mining Communications LTD
- Co-authored "Fast-Starting and Maneuvering Vehicles: Robopike and Robomuskie" sent to International Symposium on Unmanned Untethered Submersible Technology (UUST) Other:
- Designed and built structure and interfaces of ARGOS for the MIT CDIO project
- Developed original web page for Dos Santos International
- Led three major renovation projects to improve living quarters at Phi Delta Theta Fraternity "Proven Performance, Lost Opportunity" in Mining Magazine, September 2008, Vol. 199, No. 3, Mining Communications LTD
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## TECHNICAL SKILLS

- AutoDesk Inventor and AutoCAD
- Microsoft Excel/VBA
- Proficient in Spanish
- Read and write Portuguese and Spanish

