

CHRISTOPHER HAYDEN PALMER

Mr. Palmer joined ETA International in 2018 after graduating from the University of Texas at Austin with a B.S. in Mechanical Engineering. He has 3+ years of experience in mechanical design, fabrication, and testing. He is proficient in SolidWorks®, Autodesk Nastran® FEA, VisualAnalysis®, and OrcaFlex®.

EDUCATION

BS Mechanical Engineering University of Texas at Austin, 2018

EMPLOYMENT HISTORY

2018-Present: ETA International Inc., Mechanical Engineer

AFFILIATIONS

American Society of Mechanical Engineers
Texas Exes – San Antonio Chapter
Alpha Sigma Phi Fraternity

TYPICAL PROJECT EXPERIENCE

Mr. Palmer's project experience includes the following categories.

Oil & Marine Hoses

Design and setup of

- Data Acquisition systems
- Pressure and Temperature control systems

Experience with on-site testing

- Hydrostatic Pressure Cycling Test
- Vacuum Test
- Burst Test (2,000+ psi)

Developed process document for hose string deployment and assembly in the event of an oil spill.

VisualAnalysis® Structural Design

Floating Dock Structure with Lifting Frame

- Built model containing 1,300+ members.
- Analyzed several load cases and performed detailed calculations on certain members.
- Optimized member selection for weight and structural integrity.

OrcaFlex® Analysis

OrcaFlex® analyses of floating hose systems

- Setup of ship and hose models, environmental conditions, and RAO's.
- Resolved issues with static systems to ensure a realistic, accurate result.
- Exported simulation results to Excel® workbook for easy interpretation of data.

Custom Test Fixtures

Experience with modeling and simulation software

- SolidWorks®
- Nastran® FEA

Designed mechanical parts for use in testing setups.

- Conducted FEA analysis of mechanical parts.
- Developed drawings used in fabrication of parts.
- Performed bolted joint analysis to determine potential failure modes.
- Worked with machine shops during fabrication process to reduce costs and improve part quality.

Slot Cell Flow Test Equipment

- Designed parts based on FEA and hand calculation results derived from client needs.
- Large acrylic windows designed to operate at 100 psi.
- Developed master assembly with over 1,850 parts.
- Maintained large Part/Assembly drawing package through several prototype revisions and 3+ years of testing.

Structural Table

- Designed to support 10,000 lb test fixture.
- Capable of tilting test fixture 0-30° from horizontal.