SUPPORTING GROUND SUPPORT EQUIPMENT (GSE)

Aerospace

Project Management

Mechanical Engineering

STRUCTURAL ANALYSIS FOR REUSABLE LAUNCH VEHICLE

APPROACH

- Worked as an extension of the client's engineering team, analyzing structures for launch vehicle GSE
- Collect analysis inputs, including loads, environments, and analysis requirements
- Conduct quasi-static, modal, thermal, and random vibration analysis to evaluate strength and functionality
- Provide suggestions for design improvements in areas of negative margin
- Provide weight reduction suggestions for mobile launch platform
- Provide configuration management support for releasing designs related to our analysis

RESULTS

- Produced detailed stress analysis documentation for each launch platform subsystem, submitting the final analysis in the client's format for release in their system
- Provided completed designs, worked with manufacturers to enable DFX, and incorporated changes that promote manufacturing efficiency

KEY TECHNOLOGIES

- ANSYS Workbench
- Creo
- Mathcad
- MS Excel (custom post-processing templates)

ALTEN TECHNOLOGY