

SUPPORTING FLUID SYSTEMS

## Aerospace

*Project  
Management*



*Mechanical  
Engineering*



# VALVE ANALYSIS FOR REUSABLE LAUNCH VEHICLE

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## APPROACH

- Work as an extension of the client's engineering team
- Analyze valves for fluid systems
- Collect analysis inputs, including loads, environments, and analysis requirements
- Conduct quasistatic, modal, and random vibration analysis to evaluate strength and functionality of the valves
- Provide suggestions for design improvements in areas of negative margin

## RESULTS

- Ensured that final designs met all strength requirements through continual collaboration with the client's design engineers
- Produced detailed stress analysis documentation for each valve using the client's templates, ready for release in their product life cycle management system

## KEY TOOLS & TECHNOLOGIES

- Ansys Workbench
- Microsoft Excel (custom post-processing templates)

**ALTEN TECHNOLOGY**