INTEGRIS
ENGINEERING

Analysis Department Capabilities

Structural Systems Analysis

- Linear & Non-linear Finite Element Analysis (FEA)
- Classical Hand Calculations (Closed Form)
- Multi-Body Dynamics (MBD)
- Aerodynamic Design/Computational Fluid Dynamics (CFD)
- Gear & Bearing Analysis
- Fatigue and Damage Tolerance Analysis
- Vibrations Analysis
- Static/Dynamic Loads Development
- Structural repairs (MRO)
- Familiarity with AISC standards
- Familiarity with FAA certifications (STC)

Manufacturing Analysis

- Manufacturing Process Simulation
  - Mold Flow & Solidification
  - Forming Simulation & Machine Setup
  - Welding Distortion, Hot Cracking & Residual Stress Predictions
  - Forging Analysis
  - Heat Treat Analysis

Material and Chemical Analysis

- Chemical Process Analysis
- Hyperelastic material analysis

Electrical Systems Analysis

- Mechatronics
- Electromagnetic System Analysis & Optimization
- RF Analysis
- Electrical Circuit Analysis
- Electronics Cooling Analysis
- EMI Analysis
- Antenna Analysis
- Control System Simulation
- Power Systems Analysis

Tools

- MSC-NASTRAN, Patran, SimXpert, Marc, ADAMS, Actran, Simufact
- ANSYS Workbench, Ansoft, ACT, CFD, Maxwell 3D, HFSS, LS Dyna, Q3D Extractor, SI Wave, Simplorer
- Abaqus
- StressCheck
- SolidWorks Simulation, SolidWorks Motion, Pro Mechanica, Pro/Mechanism
- Fluent, STAR-CCM+
- MASTA, KISSsoft
- Fe-safe, nCode, AFGROW
- MATLAB, AMESim, Simscape, EASY5

You're not in it alone.

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