



SUMMARY

Mechanical Engineer with 15+ years of experience in aerospace and industrial design. Proven track record leading cross-functional teams, managing supplier relationships, and delivering cost-effective, manufacturable solutions for satellite systems, rugged aerospace hardware, and industrial equipment.

WORK EXPERIENCE

Senior Principal Mechanical Engineer | Northrop Grumman | February 2020 – Present

- Lead mechanical design and integration of satellite instruments, ensuring performance, manufacturability, and compliance with AS9100 standards.
- Generate detailed engineering drawings, assembly instructions, and GD&T specifications for complex aerospace hardware.
- Collaborate with procurement and suppliers to optimize part selection, balancing performance requirements with cost and lead time.
- Partner closely with manufacturing, machine shop, and metrology teams to validate feasibility and resolve design challenges.
- Present designs at customer reviews and interface with partner facilities to ensure program milestones and technical requirements are met.
- Experienced in material selection and machining processes for aluminum, stainless steel, titanium, and advanced aerospace alloys.
- Designed and developed test equipment and ground support hardware to support satellite integration and verification activities.

Senior Mechanical Engineer, Electromechanical Design | Leach International Corp. | January 2014 – February 2020

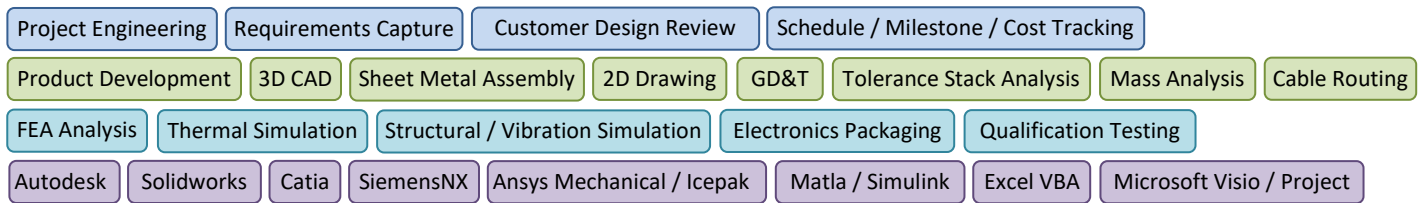
- Interfaced with customer to ensure unambiguous interpretation of design requirements, resulting in detailed compliance matrices that guide efficient development of design deliverables.
- Developed engineering and master schedules that accommodate customer milestone, deliverable, and due date requirements; collaborate with internal stakeholders to optimize forecasts, ensure that plans are feasible, and accurately identify potential sources of risk.
- Designed rugged, lightweight, sheet metal and machined assemblies that are optimized for manufacturability, customer operation, and servicing; implement intuitive and creative solutions while meeting or exceeding customer requirements (e.g. captive / self-locking hardware, spacing for tool clearance / access, silk-screened labels, keyed / visual cues [poka-yoke]).
- Spearheaded the expansion of the company's thermal and structural finite element analysis capabilities; proposed and implemented infrastructure improvements that resulted in cost reduction and timeline efficiencies of future projects valued at over \$100k per project.
- Performed structural, fatigue, and thermal analyses to validate or improve proposed designs in order to reduce risk of prototype cycling; guide and train colleagues on standard work for model de-featuring, boundary condition implementation, and meshing techniques.
- Generated engineering drawings for part / assembly manufacture that are validated via tolerance stack analysis (worst-case / RSS stack analysis). Drawings incorporate applicable material, finishing, and packaging standards (ASTM, AMS, EN, MIL) and are prepared in accordance with ASME Y14.5 standards.
- Created qualification test plans and approve test protocols that are compliant with customer requirements and/or applicable industry standards (MIL, DO-160, ABD / GRESS). Electrical and environmental testing includes but is not limited to conductive and radiated susceptibility, rupture, vibration, temperature, and humidity.
- Presented all aspects of design projects to customers at critical design reviews; ensure customer satisfaction by transparently addressing questions/concerns; negotiate modifications to requirements and milestones as needed.

Mechanical Engineer, Product Design | Ajax Boiler | July 2008 – December 2013

- Designed all aspects of HVAC water and steam boilers in accordance with ASME requirements and AQMD standards (local regulatory body). Designs included heat exchangers and low nitrogen oxide combustion systems used in high-rise, industrial, and medical applications; performed on-site installation and maintenance.
- Designed and configured safety control systems (e.g., air / water flow, water level, flame sensors) to ensure safe operation of equipment and prevent catastrophic failures.

- Prepared code-compliant engineering calculations that were successfully audited by inspection authority.

SKILLS



EDUCATION

PMP | Aerospace Project Management Professional Certificate | California Institute of Technology | 2021

M.S. | Mechanical Engineering, emphasis on Control Systems | California State University, Long Beach | Dec 2015

B.S. | Mechanical Engineering, Aerospace Engineering (Dual) | University of California, Irvine | Jun 2008