Taylor Kunke

https://linkedin.com/in/tkunke/

Email : tkunke@gmail.com
Mobile : (541) 760-1364

Experience

- **NuScale Power** — Corvallis, Oregon
  Mechanical Engineer II/III — *July 2020 - Present*
  - Led comprehensive, preliminary design review of the NuScale Power Module which incorporated multi-disciplinary assessment of design readiness and missing scope identification
  - Redesigned the decay heat removal condenser to mitigate fabricability, inspection, and analysis/qualfication concerns.
  - Prepared ASME BPVC Section III design specification for decay heat removal condenser and assisted with review of the NuScale Pipe Rupture Hazards Analysis report.
  - Spearheaded engineering involvement with NX CAD modeling to invoke ownership of designs. Organized training and developed NXCustom configuration to interface with PLM integration tool.
  - Collaborated with multi-disciplinary subject matter experts to develop BOM-centric configuration control strategy focused on efficiency, ease-of-use, and productivity
  - Performed ASME Section III piping analysis for Class 3 piping systems. Iterated design drawings and external inputs to the calculations to demonstrate design acceptability per code rules.
  - Supported the licensing organization with incorporation of equipment specifications and design details into NuScale SDA, which resulted in an on-time and on-budget submittal to the Nuclear Regulatory Commission.

- **Space Exploration Technologies** — Hawthorne, California
  Test Automation Engineer I/II — *August 2017 - July 2020*
  - Responsible for the design, integration, and validation of multi-disciplinary component testing hardware for flight-like acceptance, development, and qualification testing programs.
  - Designed and constructed high flow, thermally conditioned pressurized helium test facility for state-of-the-art rocket stage vent valves, enabling cost savings of over $500,000 annually.
  - Collaborated with external suppliers to procure high quality COTS solutions to ground support equipment.
  - Investigated Dragon 2 in-flight abort static fire anomaly, leading a team of technicians towards the rapid diagnosis of system-related design flaw which guided efforts in system redesign.
  - Analytically and experimentally evaluated heat transfer performance in heating and cooling applications, utilizing liquid nitrogen and thermal oil heat transfer fluids.
  - Supported ground hardware teams with analysis and design of systems to meet strict flight requirements for testing while ensuring development programs could advance at the required pace.
  - Designed and commissioned a fully-automated, 20 ksi pressure system to safely and efficiently test Raptor and Starship flight hardware with goal of Starship orbital flights in 2020.

- **Georgia Institute of Technology - Sustainable Thermal Systems Lab** — Atlanta, Georgia
  Graduate Research Assistant — *August 2015 - July 2017*
  - Designed an air-coupled condenser wind tunnel test facility to study the impacts of dynamically unstable oscillating reeds on air-side heat transfer performance.
  - Procured air-coupled condenser representative test section and generated testing procedures to evaluate heat transfer enhancement and pressure drop penalty associated with novel reed design.
  - Created a bespoke heat transfer/pressure drop analysis code to assess overall power plant efficiency improvement. Incorporated empirical data from test facility into the code for the purposes of economic and environmental implications.

Education

Georgia Institute of Technology — Atlanta, Georgia
Master of Science in Mechanical Engineering; GPA: 3.71 — *August 2015 – July 2017*

Gonzaga University — Spokane, Washington
Bachelor of Science in Mechanical Engineering; GPA: 3.93 — *August 2011 – May 2015*

Core Competencies

- **Mechanical Design**: NX, SolidWorks, DesignModeler, SpaceClaim
- **Mechanical Analysis**: ANSYS Workbench/Mechanical, AutoPIPE, EES
- **Programming**: NXOpen, git, APDL, Python, Matlab, MathCAD, LabView
- **Code Experience**: ASME BPVC (2017), ASME Y14.5 (2018), USAF TO 00-25-223