LEWIS TRAVIS AYCOCK

Senior Mechanical Design Engineer

4310 Hubbard Street Unit 207 • Emeryville, CA 94608
TravisLAycock@gmail.com • (707) 688-8678

PROFESSIONAL SUMMARY

Senior Mechanical Design Engineer with deep experience taking custom industrial and manufacturing solutions from concept through release: 3D models, detailed drawings, tooling/fixtures, work instructions, and on-site implementation. Strong background across wastewater treatment systems, enclosures, process equipment, aerospace/precision machining, and high-repeat production environments.

Known for creating designs that are:

• Manufacturable (fixtures, CNC readiness, assembly flow)
• Safe and compliant (OSHA, ISO 9001, GD&T / ASME Y14.5)
• Repeatable (standardized documentation, PDM/ERP control)

Drives cross-team alignment between design engineering, operations, quality, and the customer so what gets built in the shop matches what was promised on paper.

CORE COMPETENCIES

CAD & Documentation
SolidWorks (Expert), AutoCAD, Inventor, SolidWorks PDM, detailed manufacturing drawings, GD&T, ASME Y14.5

Manufacturing & Tooling
Fixture and jig design, CNC machining practices (Haas, Mazak), process routing, assembly tooling, first-article validation

Production / Operations Support
Navision ERP, cost tracking, change control, corrective action / nonconformance reporting, installation support, work instructions

Quality / Compliance / Safety
OSHA-compliant layouts and guarding, ISO 9001 mindset, risk mitigation, reliability in the field

Cross-Functional Execution
On-site customer requirements capture, design reviews with production, install and service readiness, documentation for repeat builds

PROFESSIONAL EXPERIENCE

Senior Mechanical Design Engineer
Specialty Treatment Solutions (division of Aerzen USA) — Benicia, CA Jun 2022 – Present

• Own mechanical design for wastewater treatment systems from concept through installation, partnering with process engineering and field teams to meet performance, safety, and regulatory requirements.

• Produce full SolidWorks models and production-ready drawings that drive fabrication, fit-up, and install accuracy.

• Develop OSHA-compliant layouts and equipment interfaces; resolve clearance, accessibility, and serviceability issues before anything hits the floor.

• Standardize engineering documentation (change forms, noncompliance reports, costing packages) to tighten traceability and reduce rework.

• Implement CAD and ERP workflow standards (SolidWorks + Navision) so engineering, manufacturing, and project management operate off the same released data.

• Act as primary technical contact in the field: confirm real-world constraints, capture as-built conditions, and prevent install surprises.

Impact:
Improved internal consistency between design intent and final install by formalizing release packages and standard work, helping cut iteration during fabrication and installation prep.

Mechanical Design Engineer / Technical Sales Engineer

Phoenix Mecano — Chino Hills, CA Apr 2018 – Jun 2022

• Designed custom enclosures, guarding, and aluminum extrusion assemblies in SolidWorks, balancing structural integrity, manufacturability, and operator safety.

• Captured onsite customer requirements, translated them into manufacturable concepts, and supported those concepts through quoting and production release.

• Drove engineering documentation and PDM-controlled revisions so what shipped matched the approved design and cost model.

• Helped roll out Microsoft Navision + Microsoft 365 workflows across engineering and operations to standardize quoting data, BOM accuracy, and revision control.

• Participated in design and safety reviews with production teams to reduce assembly effort and improve ergonomics.

Impact:
Increased first-pass acceptance of custom assemblies by aligning customer requirements, shop capabilities, and documentation early in the design cycle instead of after build start.

Production Engineer / Design Engineer

MNT Machine Inc. — Madison, AL 2013 – 2018

• Designed jigs, fixtures, and tooling to increase throughput and repeatability in CNC machining and assembly.

• Authored detailed blueprints and work instructions for machinists, installers, and assembly techs — not just 'what to make,' but 'how to make it consistently.'

• Performed first-article inspection and quality validation on new builds; drove corrective adjustments to improve reliability in the field.

• Tuned assembly flow and shop layout to reduce wasted motion and downtime and improve technician safety and uptime.

• Delivered turnkey mechanical solutions for aerospace, biotech/genetics equipment, automotive, and defense-adjacent customers.

Impact:
Helped shorten setup and assembly time on repeat builds by designing purpose-built tooling and documenting best-known methods for operators.

Senior Store Manager

GNC Jan 2011 – May 2013

• Led day-to-day operations for five locations (staffing, training, inventory, revenue performance).

• Built standardized training and performance playbooks that increased consistency across stores.

Manual Machinist / CNC Machinist

MNT Machine Inc. — Madison, AL Aug 2006 – Jan 2011

• Set up and ran Haas mills and Mazak lathes to produce tight-tolerance parts.

• Programmed CNC operations, inspected parts in-process, and supported quick-turn jobs without sacrificing quality.

• Closed the loop between design intent and manufacturability by feeding back limitations, tooling realities, and tolerance risks to engineering.

CERTIFICATIONS & TRAINING

• SolidWorks Expert Certification

• Extensive GD&T / ASME Y14.5 application in production environments

• ISO 9001 training

• Lean / 5S / 6S manufacturing practices

• Continuous improvement / standard work documentation (3S / 5S)

LEWIS TRAVIS AYCOCK | Senior Mechanical Design Engineer

VALUE I BRING

- Not just CAD — designs are released with fixtures, tooling, and instructions that production can actually run.
- Prevents install surprises by doing on-site capture and solving constraints before metal gets cut.
- Standardizes release packages, revision control, and documentation so downstream teams aren't guessing.
- Hands-on background in machining, assembly, and quality means designs are manufacturable and inspectable, not theoretical.