Giovanni Ek-Puc

Senior Propulsion Technician · Aerospace Propulsion, Test & Manufacturing · Systems Builder

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Seven years hands-on in aerospace propulsion and test: orbital tube welding on Merlin engine lines at SpaceX and spacecraft propulsion at Millennium, high-pressure proof and helium leak testing, oxygen-system cleaning, TVAC, and HAZMAT chemistry under AS9100, NADCAP, and ISO 9001. Fast build-test iteration at small companies; I improve the system I work in and build the software the floor runs on.

CORE SKILLS

Propulsion, Test & Manufacturing: Orbital tube welding, 2+ yrs (316L, Inconel, Ti, Monel); rocket engine & spacecraft propulsion assembly; high-pressure proof & helium leak testing; oxygen-system cleanliness (IEST-STD-CC1246); test setups: valves, regulators, pressure gauges, thermocouples, Keysight DAQ; TVAC; structural bonding & composites; CNC; SolidWorks CAM

Quality & Methods: AS9100, NADCAP, ISO 9001, EPA/DOT, NCR/CAPA, RCCA, post-test inspection & teardown documentation, traveler & COC; 5 Whys & fishbone, Lean Six Sigma, Theory of Constraints, standard work, KPI tracking

Software & Data: React, TypeScript, PostgreSQL, FastAPI, Vercel, ERP/MES architecture, dashboards, Jira, Confluence, Teamcenter (PLM), Microsoft Office / Excel, agentic coding

Certifications & Equipment: HAZMAT (DOT 49 CFR); forklift, aerial lift & overhead crane; valid CA driver's license; ESP32 / microcontrollers, soldering, power supplies & board-level repair

EXPERIENCE

Millennium Space Systems — Senior Propulsion Technician Aug 2026 – Present

El Segundo, CA · Spacecraft propulsion & integration

- Orbital tube welding of propulsion tube subassemblies and final propulsion tank closeouts; structural bonding on spacecraft assemblies.
- Install, route, terminate, stake, and wrap thermistors, heaters, and thermocouples per drawings and AI&T procedures.
- Inspect propulsion assemblies to drawing and spec; work with design and manufacturing engineering on methods, tooling, and quality.
- Cross-train new hires; operate overhead cranes, forklifts, aerial lifts, and flight-vehicle GSE.

Element Materials Technology — Precision Cleaning & TVAC Technician Aug 2024 – Aug 2026

Los Angeles (LAX), CA · AS9100 / NADCAP / EPA / DOT

- Precision-cleaned spacecraft COPVs, oxygen lines, harnesses, and nozzles to IEST-STD-CC1246 verified by particle-count testing.
- Operated the acid spray etch system from its control panel, driving the actuators that etched second-stage rocket engine nozzles; ran the HAZMAT acid baths (HF, nitric, sulfuric, caustic) and rebuilt the chemistry with cross-dilution calculators and KPI tracking.
- Pressure and helium mass-spec leak testing of flight propulsion hardware, including test setups and results documentation.
- Ran TVAC end to end (setup, thermal profiles, DAQ monitoring) on Hall-effect thrusters, solar panels, and space vehicles.
- Designed and built the inventory system the facility runs on: 10 acid baths, 25+ chemicals, lab-test spend, ~10 users.
- Led the RCCA for a major aerospace prime's corrective action; closed out 60+ safety findings in my first quarter.

Thinkom — Mechanical Assembler Apr 2024 – Aug 2025

Hawthorne, CA · VICTS phased-array antennas · AS9100 · full-time, concurrent with Element

- Assembled and tested VICTS phased arrays, including most harnesses and RSSI boards; torque fastening, RTV bonding, electrical test.
- Found a run-in / break-in effect in the tribology literature and worked with engineering to test it on the array bearings.

Elevated Materials — Composite Technician May 2023 – Apr 2024

Gardena, CA · Aerospace carbon-fiber recycling

- Sorted aerospace prepreg scrap, hand-laid and hydraulic-pressed forged-carbon blocks, and machined finished parts on a 3-axis mill.
- UV-inspected scrap to find resin-rich, carbon-poor zones and made that the block rejection criteria, improving prepreg yield.
- Worked directly with the CEO and CTO on continuous improvement; rolled out Confluence as the knowledge base, pushed Odoo ERP.

SketchandEtch — Lead Technician (Employee #1) Jul 2022 – Feb 2023

Los Angeles, CA · E-commerce manufacturing startup

- Stood up the shop floor, material flow, and order-to-fulfillment process from an empty space; owned raw and finished-goods inventory.
- Scaled to 200+ orders a month across in-house and third-party fulfillment; led hiring and onboarding with the GM, training 20+ people.

SpaceX — Orbital Tube Welder, Propulsion Aug 2019 – Oct 2021

Hawthorne, CA · Falcon 9 propulsion production, critical path

- Orbital-welded Merlin fuel and LOX lines (1/4"–3") on both Falcon 9 stages, mostly second-stage critical-path welds under 100% X-ray.
- Built Octaweb, MVac, first-stage, interstage, raceway, and early Raptor parts; held 96–98% first-pass yield over two years.
- Ran C-shift with minimal supervision and dispositioned nonconformances directly with engineering to keep the line moving.

SELECTED PROJECTS

Inventory Management System (shipped, used daily): React + TypeScript on Vercel serverless with PostgreSQL. One source of truth for baths, chemicals, and lab-test spend; the data backbone behind the acid-bath optimization and lower operating expense.

EDUCATION

Compton College — Welding Technology, 2018–2026: TIG & stick toward CWI, AWS D1.1 prep; CIM I–II; Engineering & Design I–II.

Hawthorne High School of Engineering & Manufacturing — SolidWorks/CAM, CNC, additive manufacturing, precision measurement.