SWANAND WABLE

SUMMARY

Senior Reliability & Hardware Engineer with 6+ years of experience driving product reliability, validation, and supplier quality across medical devices, renewable energy, and high-tech hardware. Proven ability to deliver HALT/ALT, IEC/UL compliance, predictive maintenance, and supplier qualification that improve yield, cut warranty risk, and accelerate time-to-market. Recognized for bridging design, supplier, and operations teams to launch robust, scalable products.

EXPERIENCE

NextEra Energy – Senior PGD Reliability Engineer | Jun 2025 – Present

- Developed and implemented RCM and predictive maintenance programs, increasing asset uptime and cutting reactive work by 25%.
- Built statistical forecasting models to optimize maintenance intervals and extend asset lifecycle.
- Designed a Python-based automated work order system integrating CEWIS/CMMS data for condition-based maintenance of critical assets.
- Standardized lifecycle strategies for gearboxes, bearings, and pitch drives while ensuring compliance with safety and environmental regulations.
- Led RCA investigations and corrective actions that improved equipment reliability and process efficiency.
- Mentored O&M teams on FMEA, FRACAS, diagnostics, embedding a culture of continuous improvement.

ConnectDER – Senior Hardware Validation Engineer | Mar 2025 – May 2025

- Defined and executed functional, environmental, and reliability validation plans (UV, temperature, humidity, rain) for motherboard of meter socket adapters.
- Directed UL414 and ANSI C12 certification processes, coordinating with labs and managing witness testing.
- Designed and documented end-to-end validation strategies that accelerated certification timelines.

Outset Medical Inc. – Senior Reliability Engineer | Aug 2023 – Feb 2025

- Led reliability strategy for critical subsystems in Class II medical devices, defining HALT/ALT protocols that reduced failures by 30% for PCBAs, GUI displays, heaters, filters, and sensors.
- Implemented IEC 60601 testing framework, ensuring compliance and securing on-time regulatory approvals, preventing multi-month launch delays.
- Partnered with cross-functional teams to establish accelerated environmental test models (temperature/humidity/vibration), cutting validation cycles by 20% while maintaining risk coverage.
- Drove supplier reliability audits and qualification, improving yield of critical components by 15% and avoiding ~$200K in potential scrap/rework costs.
- Developed data-driven reliability dashboards (JMP/Python) to trend field performance, enabling proactive design improvements and boosting customer satisfaction scores.
- Partnered with suppliers for DFM reviews and sourcing strategies, improving yield and reducing launch costs.

CONTACT

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EDUCATION

M.S., Industrial Engineering – Northeastern University, Boston, MA | Dec 2020
M.E., Mechanical Design – University of Pune, India | May 2017
B.E., Mechanical Engineering – University of Mumbai, India | May 2015

SKILLS

Technical Tools: Python, MySQL, JMP, Minitab, RBD (Weibull++), SAP, ERP, Maximo, MES, AutoCAD, SolidWorks, Micro-Vu, Keyence Vision Systems, Jira, Smartsheet, Confluence, Agile, Arena, MS Office

Reliability & Quality Expertise: HALT, HASS, ALT, MTBF, Reliability Growth, RCM, Predictive Maintenance, RCA, FMEA (dFMEA/pFMEA), FRACAS, 8D, Fault Tree, DOE/SPC, Gage R&R, IEC 60601, UL, ANSI, IQ/OQ/PQ, AQL, DfR, DfM

Leadership & Core Competencies: NPI & Product Lifecycle Management, Cross-Functional Collaboration, Supplier Qualification/Audits, Project Management (PMP), Stakeholder Engagement, Continuous Improvement, Process Optimization

Certifications: PMP | CLSSGB | Accelerated Life Testing (ALT) | TPM

- Collaborated on product roadmaps with R&D and marketing, ensuring reliability readiness for launches.

Cepheid – Process Engineer | Jul 2021 – Aug 2023

- Managed prototype-to-production transitions, optimizing manufacturability and process yield.
- Led CAPA, pFMEA, and ECOs, ensuring compliance and reliability improvements.
- Introduced Keyence inspection automation, boosting efficiency by 12%.
- Conducted tooling reviews, improving first-shot success and long-term tool performance.
- Developed and executed VMP, IQ, OQ, PQ protocols for packaging and assembly lines.
- Standardized inspection SOPs for ultrasonic and SOLVAC processes, increasing efficiency by 20%.

Insulet Corporation – Manufacturing Engineering Intern | Jan 2020 – Aug 2020

- Supported NPI of automated medical assembly lines, improving production efficiency by 7%.
- Streamlined cleanroom validation, cutting cycle time by 15%.
- Applied RCM principles to enhance preventive maintenance.

Adsun Offshore Diving – Engineering Program Manager | May 2017 – Mar 2018

- Directed end-to-end engineering programs, including resource planning, logistics, and stakeholder alignment.
- Consolidated warehouses, achieving 15% overhead reduction via predictive cost models.
- Mitigated supply chain risks ahead of large-scale projects.

Graphix Technologies – CAD Engineer | Jun 2015 – Jul 2016

- Designed detailed CAD models and tolerance analyses, improving accuracy and reducing rework errors by 15%.
- Applied GD&T practices, boosting durability by 12%.

PROJECTS & LEADERSHIP

Cross-Functional Reliability Program: Directed a multi-team reliability project from design through production launch, aligning R&D, suppliers, and manufacturing. Delivered reliability sign-off ahead of schedule, enabling on-time FDA submission.

Predictive Maintenance Automation: Led a cross-disciplinary team to design a Python-based CMMS workflow that automated work orders from live asset data, saving 1000+ man-hours annually.

Supplier Qualification & Risk Reduction: Partnered with multiple global suppliers to perform audits, implement DfM/FMEA, and enforce reliability gates improving supplier yields by 15% while cutting launch delays.

Validation: Acted as project lead for validation readiness of a new product line, developing protocols (IQ/OQ/PQ) and coordinating lab activities, ensuring 100% compliance with regulatory milestones.