

Sergio LoRusso

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Work Experience:

ASQ Certified Reliability Engineer

Saft

Quality Engineer – Electronics

May 2016 – Current

- Responsible for the reliability and quality of Li-ion battery systems. Evaluated and enhanced component and product reliability within battery systems with a focus on electronic hardware.
- Managed product design quality on new products including design for manufacturing, safety integrity level (SIL), accelerated life testing, and validation.
- Conducted Failure Modes and Effects Analysis, DFEMA during design phase of new telecom battery product. Performed multiple PFMEA and control plans for product manufacturing.
- Monitored production line quality and performed data trend analysis, gage R&R studies to validate PCBA testing, Design-of-Experiments (DOE) in Minitab, and process capability analysis. Results of capability analysis identified processes with less than 1 Cpk and improvements were made to increase first pass yield.
- Performed root cause analysis (RCA) and failure analysis investigations into Li-Ion battery systems, including cells and battery management systems. Multiple occasions required travel to customer sites requiring strong interpersonal skills to conduct investigations, resolve failures, and present results.
- Used statistical data to estimate field failures for Li-ion telecom batteries to estimate warranty cost.
- Vendor management of EMS supplier to ensure PCBA quality. Including vendor selection for PCBA manufacturing, with multiple site audits. Created detailed technical reports to support supplier corrective action requests.
- Created zero defect sample plan based on a binomial distribution for defects in each meter of Li-ion cell roll.
- Monitored product performance in the field to identify issues. Identified reliability issue with the selected fuse rating on an internal component of a LI-ion battery system. Setup and performed lab testing and found that the calculated i^2t value was marginal due to the inrush current when system is first powered, and the in-circuit capacitors are charged. Worked with engineering team to size the correct fuse and eliminated the failure in the field.

Carlisle Interconnect Technologies

Process Engineer

January 2015 – May 2016

- Experience in the design and manufacturing of high-performance data cables to meet the needs of aerospace, defense, transportation, industrial and communication industries.
- Setup National Instrument data acquisition hardware on wire manufacturing wrappers and developed LabVIEW programs to gather and analyze data on wire diameter variations.
- Created payoff control system to maintain constant tension on tape during wire wrapping by modifying a Baldor motor controller with a potentiometer and amplifier circuit for feedback.
- Utilized Six Sigma methods that modified manufacturing line components reducing scrap.

United States Navy

Nuclear Engineering – Electrical Division

June 2003 – Current

- Operated and maintained power distribution of a nuclear submarine reactor.
- Led department in repairing submarine systems including motor controllers, atmosphere control, generators, emergency propulsion, ships lighting, and equipment vital to operation.
- Utilized system diagrams, schematics, and technical manuals to troubleshoot and resolve technical issues.
- Developed and executed a maintenance schedule utilizing a staff of 15.

Education:

Bachelors in Electrical Engineering, *University of North Florida*

May 2016

USN Nuclear Power School, *United States Navy*

August 2003 – April 2005

Skills and Additional Information:

- Secret Clearance
- Skills: Minitab, Microsoft Office, VBA, C, C++, LabVIEW, Multisim, Oscilloscopes, Network Analyzers, SolidWorks, JavaScript, HTML, MATLAB, SAP, Texas Instruments Assembly, Programmable Logic Control (PLCs), Xilinx ISE, FPGA, VHDL, CadSoft EAGLE printed circuit board design.