Marian Fediuc Croitoru

PROFESSIONAL GOAL

Working in a professional, competitive environment and performing complex engineering activities.

EDUCATION

Master in Metallurgy – "Transilvania" University of Brasov
Bachelor Degree - "Transilvania" University of Brasov, Specialization: Material Science and Engineering

QUALIFICATIONS AND PROFESSIONAL BACKGROUND

Gits Manufacturing – Validation Lead Engineer
January 2019- Present:

- Validation lead for Diesel Engines Actuators, leading the validation strategy responsible with the validation and test documentation, coordinating validation and test activities. Coordinating the risk assessment, FMA, DFMA meetings the mitigation meetings and the tests. Responsible with providing the FMA documents. Calculating DPU. Setting up the test parameters. Tested and troubleshot system level and component level problems in mechanical systems and sub-systems.
- Working from schematics, diagrams, written and verbal descriptions, layouts or plans to perform routine testing and troubleshooting.
- Compiled logbooks and test procedures documentation.
- Coordinating mechanical, electrical, pneumatic & vacuum and process testing.
- Providing the test plan instructions.
- Identified issues, provided corrective actions.
- Generating Quality notifications.
- Working within standard operating procedures and generating statistical analysis using Minitab.
- Providing test reports, results in Excel format with graphs parameter values and providing the test pass/ fail conclusions and recommendations.

Applied Materials – Manufacturing Test Engineer
January 2018- January 2019:

- Followed electro/mechanical schematics and diagrams to assemble, test, troubleshoot, repair and calibrate complex semiconductor equipment and sub-assemblies.
- Performed mechanical and electrical repair task, writing technical reports and repair procedures, performing operating test and fault isolation on systems and equipment, Determining actions to remedy malfunctions.
- Applied Materials Etch Chamber Test Engineer for Sym3 AP and Sym3 Centris Chamber.
- Applied Materials Etch Chamber Test for Sym3 Centris.
- Performing routine to complex electro-mechanical technical functions and activities such as design, test, checkout, fabrication, modification, troubleshooting and assembly of electronics

and electro-mechanical systems, experimental design circuitry, prototype models, specialized test equipment, tools and test fixtures.

- Working from schematics, diagrams, written and verbal descriptions, layouts or plans to perform routine testing and troubleshooting.
- Compile logbooks and test procedures documentation.
- Performing mechanical, electrical, pneumatic & vacuum and process testing on AMAT platforms to Engineering and Manufacturing documentation and specifications.
- Maintained a secure, safe, clean and healthy work environment. Follow operating instructions, used protective equipment when required, and used equipment and materials properly.
- Applying manufacturing and/or engineering processes. Assisting in the correction of problems.
- Generated Quality notifications.

Voltabox – Product Development Engineer
January 2017 – January 2018:

- Design and development of the battery systems and cooling units for mobile and stationary applications
- DFMEA.
- Coordinated cross functional teams meetings, design reviews.
- Assessed the risk, developed the validation plan.
- Prototype parts procurement.
- Prototype build.
- NPI gateway type of product development process.
- Ordered parts for prototype units, prototype build, validation/test for prototypes.
- Worked on Development of the Li-Ion Battery systems for Seattle City Bus and Mining Machines using Catia CAD software (3D design, modeling and drafting).
- Developed the Komatsu Mining Hauler and Komatsu Wheel Loader Battery systems, and thermal management systems.
- Build the prototype Thermal Management system for Mining Hauler, involved in selecting the technology, the 3D design with Catia, procured components from suppliers and build hands on the prototype.
- Performed complex electro-mechanical technical functions and activities such as design, test, checkout, fabrication, modification, troubleshooting and assembly of electronics and electro-mechanical systems, experimental design circuitry, prototype models, specialized test equipment, tools and test fixtures.
- Tested and troubleshot at system level and component level problems in electrical and mechanical systems and sub-systems. Performed new system and NPI installations and field upgrades.
- Worked from schematics, diagrams, written and verbal descriptions, layouts or plans to perform routine testing and troubleshooting.
- Compiled logbooks and test procedures documentation.
- Maintained a secure, safe, clean and healthy work environment. Followed operating instructions, used protective equipment when required, and used equipment and materials properly.
- Defined and applied manufacturing and/or engineering processes. Identified issues, provided corrective actions.

- Worked within standard operating procedures and/or scientific methods.
- Developed as a design engineer Voltabox Lithium-Ion Battery Systems for Mining Industry Machinery.
- Developed the HVAC system required for thermal management.

Caterpillar – Product Development Lead Engineer
June 2012 – January 2017

- Aftertreatment and dosing cabinets development
- Coordinated DFMEA, Assessed the risk, developed the validation plan.
- NPI gateway type of product development process.
- Coordinated cross functional teams meetings, design reviews.
- Prototype parts procurement.
- Prototype build.
- Ordered parts for prototype units, prototype build, validation/test for prototypes.
- Led the validation and reliability test activities for D9, D11 TTT Bulldozers (track type tractors) and 797 Mining Trucks EPA tier 4 exhaust emission systems, coordinating the risk assessment, the mitigation meetings and the tests. Product Engineering, Marketing,
- planned, coordinated, conducted reliability test and analysis, collaborated with Field Service, and Vendors to support of multiple CAT product reliability tests with prototype units.
- Performed complex electro-mechanical technical functions and activities such as design, test, checkout, fabrication, troubleshooting and assembly of electronics and electro-mechanical systems, experimental design circuitry, prototype models, specialized test equipment, tools and test fixtures.
- Tested and troubleshot system level and component level problems in electrical and mechanical systems and sub-systems. Performed new system and NPI installations and field upgrades.
- Worked from schematics, diagrams, written and verbal descriptions, layouts or plans to perform routine testing and troubleshooting.
- Compiled logbooks and test procedures documentation.
- Performing mechanical, electrical, pneumatic & vacuum and process testing .
- Maintained a secure, safe, clean and healthy work environment. Followed operating instructions, used protective equipment when required, and used equipment and materials properly.
- Identified issues, provided corrective actions.
- Generated Quality notifications.
- Worked within standard operating procedures and/or scientific methods.
- Determined the Process Capability Cpk for manufacturing processes and provided solutions for improving Cpk.
- Aftertreatment Validation Lead for 797 LMT also for D8, D9, D10 TTT – using FMEA tools determined product reliability through validation test, coordinated tests like shake test, field tests, collected test results and interpreted results of the tests, presented the test reports and risk assessment at the NPI program gateways.

Caterpillar - Design Lead Engineer
January 2009 – June 2012

- Machine Transmissions and Torque Converters product development/design and product development.
- DFMEA
- NPI gateway type of product development process.
- Ordered parts for prototype units, prototype build, validation/test for prototypes.
- Led an offshore team of 7 engineers to provide 3D models and drawings for the electromechanical systems.
- Developed as a design engineer (starting from blank paper, project requirements, starting from torque value input) the 555 Skid Steer Loader Torque Converter, implemented lock up clutch for 793,797 Mining Truck, and 980 Wheel Loader.
- Added planetary system for Torque divider to the D9 TTT Torque converter.
- Casting parts design.
- Gear Design and Shaft Design for Planetary transmissions D8TTT.
- Calculated Should Cost for TC components also collaboration with the should cost team.

Biocare Parker – Medical Device Product Development Engineer
February 2007 – January 2009

- Design, procure components for prototype, Prototype Build, coordinate validation activities.
- Coordinated the DFMEA meetings and the risk assessment process, with the risk mitigation activities planning.
- Coordinated cross functional teams meetings, design reviews.
- Medical Device Development- Oxygen Booster, medical tubes and valves, quick couplings.
- NPI gateway type of product development process.
- Prototype parts procurement.
- Prototype build.
- Ordered parts for prototype units, prototype build, validation/test for prototypes.
- Led the validation and reliability test activities.

Cambric - Metallurgical/Casting Engineer
October 2004 – February 2007

- New product design and development experience in electro mechanical devices.
- Designed injection mold and casting parts.
- Created Models and drawings incorporating GD&T required by the technical specs and supplier capability.
- Interacted with the customer team for understanding of the complex electromechanical system to procure customer requirements.
- Led an offshore team to provide 3D models and drawings for the electromechanical systems.
- Manufacturing process engineer for casting parts.

Tractorul UTB Brasov – Cabin and structures Design Engineer
September 1998 – October 2004

- Engineering Manager for UT484 Cabin and Hood development, team of 6 design engineers using ProE.
- Supervised employees involved in a variety of production and design functions such as design, assembly, inspection, and test which is related to the manufacturing and design of the company's equipment and systems (electric, mechanical, electro-mechanical, components, subassemblies, systems and arangements).

- Set up daily team priorities, develops work schedules and assigns tasks. Responsible for developing and executing action plans and utilizing designated operations and design reviews.
- Organized and facilitate work team meetings (examples: design reviews, safety, etc.). Participates in development and tracking of organization performance metrics. Responsible for meeting or improving cycle time performance and other metrics.
- Coordinated efforts of service and/or customer groups to solicit resources tools, supplies, materials or services to meet design and build schedules.
- Responsible for eliminating safety incidents, improving equipment efficiency, and developing leadership capability and morale on a production line.
- Assisted in training and career development; managed the performance management process. Managed the employee selection, hiring, reward and discipline processes.
- Participated in the development of the budget to include forecasting manpower requirements and overhead expenditures.
- Identified process and quality changes designed to improve manufacturing or design department capabilities. Drived Lean, Safety and Quality. Took corrective action.

Tractorul UTB Brasov
September 1993 – September 1998

- Casting Components Production Engineer, manufacturing process engineer.

IT & C OPERATION SKILLS

Microsoft Office (Word, Excel, Power Point) ProE, Creo2, CatiaV5, Inventor, NX11/12, Teamcenter, 3Dmodeling, Drafting, Assembly, GD&T, Tolerance stack-up analysis, Electronics Layout and Electrical cable Routing, FEA.

Experience

- Led product development projects for R&D and NPI as engineering lead.
- Led team of 7 engineers for Torque converter development.
- Led cross organizational teams for Validation activities.
- Managed team of 6 engineers for Hood And Cabin design for AG tractor development.
- Developed & implemented new complex products, assessing the risk (PFMEA) and coordinating risk mitigation activities (corrective actions).
- Sampled procurement and verification
- Long experience in designing covers, frames and structures of electro mechanical systems
- Worked on plastics, sheet metal, frames and structures
- Experienced in designing plastic injection parts, sheet metal, machining, extrusion, casting.
- Involved in quality control of the drawing and 3D files also in the quality control of the prototype parts. Applied Design to manufacturing – DFM methods.
- Collaboration with the component parts supplier. Supplier management.
- Wide experience with the tolerance stack-up , GD&T, Six sigma, 8D, Lean Manufacturing.
- Worked on big assemblies, Part & assembly design reviews.
- Expert level at product design and Design Control methods.
- Expert level at Tolerance stack up calculation.
- Experience with SAP and Oracle Enterprise ERP systems.

- Experience in an ISO 9001 environment.

Strong communication, problem-solving and interpersonal interaction skills, with ability to promote solutions to a customer team.

- Strong written and presentation skills (led client meetings with senior personnel; deep dive in the technical detail of the product).
- Led and motivate multi-disciplinary project teams.
- Very good experience and skills on building a strong relationship within customer organizations through quality work.
- Ability to manage multiple projects as one cohesive client program; creating efficiencies and reducing costs for both client and the organization.
- Ability to work effectively with partners to deliver an overall solution to the customer.
- Ability to apply concepts in strategy, marketing.
- Experience with process definition and the ability to define solutions that will generate efficient work flow and build top quality products.

- 6 years of experience in Drive train design.
- Managed a team of 6 production engineers, applied the Lean 6 Sigma.
- 6 years of experience with Creo, 7 years of experience with Teamcenter.
- Proficiency in Microsoft Office applications.
- Introducing innovation to the new and current products.
- Set the quality control strategies.
- Executed the sourcing for prototypes and development strategy that focused on electro mechanical parts like Battery Systems, Thermal Management Systems, A/C units, the dosing cabinet for the catalyst converter system, electrical and mechanical parts for the torque converter.
- 16 years of experience in mechanical design and mechanical-electrical systems development.
- Deep expertise in Lean Processes/ production efficiency.
- Determined project cost estimates and justification.
- Experience with process definition and the ability to define solutions that will generate efficient work flow and build top quality products.
- Experience in Auto-vehicle industry and AG and mining heavy machines, Manufacturing and Design.
- Project management & change management skills, experience working in a PMO framework.

Responsibilities and Accomplishments

- **Developed as a design engineer (starting from blank paper, project requirements, starting from torque value input) the 555 Skid Steer Loader Torque Converter, implemented lock up clutch for 793,797 Mining Truck, and 980 Wheel Loader. Added planetary system for Torque divider to the D9 TTT Torque converter.**
- **Developed, implemented and maintained methods and processes in the fabrication of parts or complex system.**
- **Expertise in sheet metal forming, plastics injection molding, machining parts design, die casting.**

- **Set the SOE (sequence of events) for TC assembly**.
- **Advanced user of Six Sigma method to resolve quality issues.**
- **Estimated manufacturing costs, determined time standards, and made recommendations for tooling and process requirements.**
- **Provided technical documentation and advice to aid sales and customers.**
- **Collaborating with the Performance Test providers for the exhaust gasses with the impact on the environmental pollution and being compliant with the EPA regulatory requirements.**
- **Led NPI validation tests like performance, durability tests serviceability and installation. Shake test fixture design.**
- **New product manufacturing process improvement, manufacturing process implementation, leading PFMEA and defined the Process Flow.**
- **Designed and built Torque converters and planetary transmissions.**
- **Strong experience in Lean Six-Sigma enterprise methodology.**
- **Good understanding of the Toyota Way culture.**
- **Strong understanding of semiconductor manufacturing equipment business and associated manufacturing practices, Logistics process and Supply Chain challenges.**
- **Experience with large lean / continuous improvement deployment across multiple value streams.**
- **Expertise on applying Kaizen to improve manufacturability and product quality.**
- **10+ years of experience in Manufacturing / Supply Chain / Sourcing (supplier development, supplier quality**
