

ELSA NLANG MONSUY

Mechanical Engineer • Process Optimization & Quality Systems Specialist

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Dynamic Mechanical Engineer with 7+ years of progressive experience in precision manufacturing, quality systems, and process optimization. Proven track record in CAD design, dimensional analysis, and production efficiency enhancement across diverse industrial environments. Expert in implementing quality control protocols and engineering solutions that drive operational excellence and regulatory compliance. Seeking to apply advanced technical expertise and problem-solving capabilities to contribute to critical energy sector operations.

PROFESSIONAL EXPERIENCE

Mechanical Designer

Systel, Sugarland, TX | Jan 2020 - Present

- Develop comprehensive parts specifications and Bills of Materials through Engineering Change Order (ECO) systems, ensuring precise material control for complex mechanical assemblies
- Generate and maintain technical assembly documentation utilizing Autodesk Inventor, supporting manufacturing excellence and quality assurance protocols
- Execute detailed engineering drawings and technical layouts using AutoCAD, Inventor, and SolidWorks to support manufacturing operations and regulatory compliance
- Provide technical expertise and troubleshooting support to manufacturing teams during production assembly, optimizing operational efficiency and product quality
- Collaborate with external manufacturers and vendors to establish component specifications, ensuring supply chain reliability and quality standards

Manufacturing Engineering Intern

Diamond Blocks Services, Malabo, EG | May 2018 - Aug 2018

- Analyzed and interpreted complex engineering drawings and technical blueprints to ensure accurate manufacturing specifications and adherence to design standards
- Executed comprehensive time-motion studies to identify process optimization opportunities and enhance production capacity through systematic workflow analysis
- Performed rigorous validation testing of product sub-systems to verify reliability performance and ensure compliance with engineering specifications
- Delivered integrated technical support across maintenance, production quality, and safety departments to ensure operational excellence and regulatory compliance

QC Inspector

AmTex Machine Products, Houston, TX | Aug 2016 - Apr 2018

- Executed comprehensive quality control inspections to maintain consistent product standards and ensure adherence to customer specifications
- Conducted first article inspections and precision dimensional analysis to verify compliance with engineering tolerances and manufacturing requirements
- Facilitated weekly cross-functional evaluations with material operations and planning teams to optimize resource allocation and workflow efficiency
- Performed systematic specification verification, dimensional analysis, and calibration audits to ensure measurement system accuracy and traceability

KEY ACHIEVEMENTS

- **International Operations:** Successfully completed engineering internship in Equatorial Guinea, demonstrating cross-cultural competency in global energy markets
- **Process Optimization:** Achieved measurable improvements in production capacity (15%) and component reliability (25% failure reduction)
- **Multilingual Capabilities:** Trilingual professional (Spanish, English, French) supporting international operations

TECHNICAL SKILLS

- CAD Software (SolidWorks, AutoCAD, Inventor)
- Failure Analysis & Root Cause Investigation
- Lean Six Sigma & Process Improvement
- Precision Measurement & Testing
- Process Engineering & Optimization
- Quality Assurance & Regulatory Compliance
- International Project Management
- ERP Systems & Documentation

EDUCATION

B.S. Mechanical Engineering

University of Texas at Tyler
Tyler, TX | 2014-2019

- ABET-accredited program
- Senior Design: Manufacturing process optimization (15% efficiency improvement)

CERTIFICATIONS

- Six Sigma Green Belt
- Quality Control Specialist

LANGUAGES

- English (Fluent)
- Spanish (Native)
- French (Conversational)