

Rene Montenegro

Chemical Engineer

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Experience

Puma Energy, Process Engineering Intern

San Juan, Puerto Rico

2019 - 2020

- Performed root cause analysis to identify the failure modes of the fuel level radars on two tanks; implemented a long-term preventive detection plan
- Reduced more than 400 Man-hrs/yr, saved \$15,000/yr and eliminated paper waste by programing and implementing a new system that allows operators to document critical field data electronically and provides real-time data trending;
- Design a P&ID diagram for a new facility of fuel storage tanks at operating sites with chemical and industrial engineers to develop and implement tasks related to fuel transfer.

Bacardi Limited, Distillery Plant, Chemical Engineering Intern

San Juan, Puerto Rico

2019 - 2020

- Design a shell and tube heat exchanger to eliminate unwanted temperature fluctuations and improve the regeneration of activated charcoal in the blending process, demonstrated a 55% augmentation capacity, reducing cycle time of process and to produce a lean manufacturing process;
- Implemented a new system to standardize operation and maintenance schedules to document and assign schedules electronically;
- Created a design of a filtration system for the cooling water system in order to enhance the longevity of all heavy-duty equipment in the distillery plant.

Muebles y Algo Mas, Furniture Manufacturing, Process Technician

San Juan, Puerto Rico

2014 - 2019

- Design manufacturing process to amplify revenue and industry competence ensuring processes comply with safety regulations, quality standards and good manufacturing practices;
- Met with production managers to assess and improve existing process;
- Performed risk assessments and tested new and improved process;
- Triggered a 30% increase in production by improving the manufacturing process to identify cost effective and high impact-low effort solutions.

Education

Polytechnic University of Puerto Rico

August 2015 - May 2020

- B.S. in Chemical Engineering, *Magna Cum Laude*
- Capstone Project: Acetone Production Plant
 - Optimized design process thru implementation of recycle streams, energy integration and proper use of each heavy equipment to obtain maximum production of acetone;
 - Designed P&id, PFD and BFD diagrams and lobbied a production process for 20,000 tons of acetone yearly from Isopropyl Alcohol to maximize and overpass project milestones;
 - Assembled equipment layout, infrastructure and production line to exceed fabrication timing.

Skills

Languages: English and Spanish, spoken and written fluency;

Proficiency in MS Office Suite, Adobe Suite, AutoCAD, Mathcad, and Aspen Plus programs. Knowledge of machinery maintenance, quality control, process scheduling, design of P&ID, field service, detail oriented, GMP, Lean Six Sigma and analysis.