CHANICAL ENGINEER • DESIGN ENGIN Richland, Washington 99354

Gregory Grabeel

✿ www.greggrabeel.com

Work Experience

PNNL

MECHANICAL ENGINEER 1 / MECHANICAL ENGINEER 2

- Design, assemble, and commission ultra-low radiation background equipment for fundamental physics research and national security projects
- System design for high vacuum, cryogenic temperatures, and ultra-low radiation background experiments
- Developed automated systems for atmospheric sampling, archival storage, and analysis of faint radioactive signatures
- · Adapted a system for collecting samples from dissolution of nuclear fuel rods and purification of the collected samples
- · Collaborated on design, assembly, and commissioning of electroforming systems for development of ultra high purity copper

Amentum

Plant Engineer 1 / Plant Engineer 2

- Supported plant operations during the commissioning of the nuclear waste vitrification plant as a shift engineer
- Supported plant operations in the rapid response group by aiding in emerging and pressing plant issues
- Created the initial design and proposal for the DOE of using a robotic laser ablation system as a means of container decontamination

ANR/LIGO

Contractor

- Assembled and installed in-vacuum baffle systems to reduce noise caused by stray light
- Diagnosed and repaired closed loop chiller system that was having issues with galvanic corrosion and a pump bearing failure
- Created path forward for reducing future corrosion issues using additives, different cooling media, and replacing wetted surfaces with similarly electronegative materials

Caltech/LIGO

TECHNICIAN

- Assembled, installed, and tested in-vacuum seismic isolation equipment and thermal compensation systems
- Assembled, installed, aligned, and tested hydraulic external pre-isolator system
- Designed and tested a Class A (class 100), low humidity long-term equipment storage system utilizing pre-existing nitrogen boil-off
- Assembled, coded, and commissioned a leak check vacuum system to measure very low leak rates of equipment for use in a ultra high vacuum system

SiC Processing

SUPERVISOR / LAB TECH

- As a supervisor, trained a crew while commissioning a silicon carbide reprocessing plant during graveyard shift
- As a lab tech, performed qualitative analysis of product and provided corrective actions for manufacturing process
- Ensured plant waste met city industrial sewage discharge requirements such as pH, temperature, and dissolved solids
- Analyzed incoming product to help determine operating parameters and process analysis for material reprocessing

Skills

Vacuum Systems UHV system design, assembly, and commissioning. Including leak detection, RGA, and pump maintenanceDrafting and FEA SolidWorks drafting and simulation, COMSOL multiphysics simulation, and ANSYS drafting and simulation

Programming Python, Matlab, Arduino, LaTeX

Education

Washington State University

B.S. IN MECHANICAL ENGINEERING

• Elective class in aeronautics and Senior Design project on ASME aeronautics

Richland, Washington

2020 - Present

Richland, Washington

Richland, Washington

2017 - 2018

2018 - 2020

2017 - 2018

Livingston, LA & Richland, WA

2010 - 2016

Portland Oregon

2007 - 2008

Richland, Washington 2012 - 2018