Biography Of Bryan Hackleman

Bryan Hackleman is a Mechanical Engineer with a focus on the semiconductor industry, currently employed at Advanced Energy in Fort Collins, Colorado. The company is well-regarded for designing and manufacturing products essential to various sectors, including semiconductors, flat panel displays, data storage, telecommunications networks, solar cells, medical devices, and architectural glass, with a strong emphasis on plasma thin-film technologies.

Bryan's strengths lie in his analytical abilities, particularly in research, evaluation, problem-solving, and troubleshooting. He also excels in project planning, management, documentation, and technical writing. He is proficient in ASME Y14.5 GD&T and is skilled in several CAD programs, including PTC Creo, SOLIDWORKS, ANSYS, and Fluent. In addition, he is adept in using Excel, Matlab, and Minitab for data analysis, finite element analysis, and computational fluid dynamics. His knowledge of Design-For-Manufacture (DFM) and Design-For-Manufacturing-Assembly (DFMA) principles is extensive.

Bryan's Responsibilities at Advanced Energy

At Advanced Energy, Bryan is responsible for designing equipment used in semiconductor manufacturing. He utilizes SolidWorks to develop derivative RF generators based on existing products customized to meet specific customer needs. His duties include designing sheet-metal enclosures, stamped and extruded heatsinks, and cable assemblies. Additionally, he ensures the proper packaging of electronic circuitry in protective enclosures and assists in troubleshooting, testing, and debugging prototype power supply units.

Beyond his design work, Bryan plays a crucial role in supporting and maintaining the company's existing RF generator lines. This includes qualifying new components for mechanical and electrical performance, particularly when existing components become obsolete or scarce. He also conducts thermal analysis on components to ensure that the products maintain their high-reliability standards.

Bryan's expertise is also valuable in resolving mechanical component issues during production. He addresses DFM concerns and modifies assembly operations in build instructions to enhance assembly ease. He works closely with suppliers to resolve problems related to out-of-tolerance parts, recommending rework or ensuring that parts meet the required specifications.

Earlier in his career at Advanced Energy, Bryan served as an Assembler. In this role, he independently followed electrical schematics, diagrams, written and verbal instructions, layouts, and defined plans. He was responsible for assembling and testing both electrical and mechanical components while maintaining a clean, organized, and safe laboratory environment.

Obtaining His Mechanical Engineering Degrees While Also Working

Bryan Hackleman earned both his Bachelor of Science and Master of Science degrees in Mechanical Engineering from Colorado State University (CSU). His thesis focused on the regeneration of oxidation catalysts through chemical washing. This research resulted in a co-authored paper titled "Evaluation of Chemical Washing of a Degraded Natural Gas Engine Oxidation Catalyst," which was presented at the 2018 Gas Machinery Conference in Kansas City, Missouri.

While pursuing his degrees at CSU, Bryan gained practical experience that significantly shaped his career. He worked as a Research Assistant at the CSU Hydraulics Laboratory for two years, where he was responsible for maintaining various types of equipment, including bobcat skid loaders, internal combustion engines, electric motors, pumps, winches, valves, and pipe systems. He also prepared soil erosion experiments on a giant hydraulic flume and fabricated scale models for testing the performance of river diversion structures, spillways, dams, and outlet works. Additionally, he assisted graduate engineering students in conducting experiments and collecting data using various surveying equipment and point gauges.

Following his time at CSU, Bryan worked as a Research Engineer at Pipeline Research Council International for two years. In this role, he conducted research on the degradation of oxidation catalysts on large-bore natural gas engines. He evaluated the effectiveness of chemical washing treatments in restoring performance and meeting emission standards. He designed, planned, and conducted experiments in both laboratory and field settings, utilizing various spectroscopy equipment to collect and analyze large data sets. He meticulously documented all work and prepared deliverables for presentation to a technical committee.

An Artist

As a Mechanical Engineer, Bryan is skilled in the technical aspects of his work and excels in communication, both written and verbal. He enjoys collaborating with others and can bring ideas to life through innovation, design, development, and testing to meet customer needs. He is curious, imaginative, and creative, always looking for ways to improve processes and increase efficiency. He approaches his work with a willingness to explore new methods while maintaining a strong analytical mindset.

Bryan's creativity extends beyond engineering into his passion for art. He is an aspiring artist who enjoys painting and drawing, with a particular focus on oil paintings and landscapes. He hopes to eventually turn this hobby into a side career by selling his artwork.

In addition to his artistic pursuits, Bryan enjoys outdoor activities such as fly fishing and hiking, taking full advantage of Colorado's natural beauty. His love for the outdoors is deeply rooted in his Colorado upbringing, as he is a fourth-generation resident of Fort Collins on his father's side.

Bryan Hackleman also enjoys reading, learning, and exploring new ideas that inspire him in both his professional work and personal life.