

DEXMAT

PRODUCTION ENGINEER

Position / Job Title:	Production Engineer
Education:	Bachelor's in engineering or similar
Experience:	2-5 years experience
Location:	3333 S HWY 6, Houston, TX 77082
Schedule:	Full time

Company Description: DexMat is a rapidly growing startup that is building the sustainable materials economy of the future. Based on IP from Nobel-winning physicists and chemists at Rice University, DexMat manufactures patented Galvorn materials that outperform dirty commodity metals like steel, aluminum, and copper, and even specialty materials like carbon fiber and Kevlar. At scale, DexMat could have 2-3 gigatons of annual CO₂ impact. We are driving the next industrial revolution by making unsustainable industrial materials obsolete.

Primary Job Functions:

We are seeking a proactive, hands-on engineer to take ownership of key manufacturing and logistical processes for Galvorn Carbon Nanotube (CNT) materials. This position encompasses the entire production lifecycle, from preparing raw materials and optimizing fiber spinning parameters to managing downstream yarn processing and order fulfillment. We are looking for a critical thinker who will not just execute tasks, but actively identify inefficiencies and design solutions to make our processes safer, faster, and more scalable. You will own inventory management, quality control, and production planning. Hands-on experience in a laboratory or production environment is required. All DexMates are expected to leverage AI systems to streamline and multiply impact of all work functions.

Responsibilities:

- Manufacturing & Process Engineering:
 - Prepare feedstock and raw materials for the spinning process.
 - Perform post-spinning cleaning and waste management.
 - Optimize spinning schedules based on current inventory levels and incoming orders.
 - Identify, design, and implement process improvements for spinning operations to increase yield and safety.
 - Continuously monitor and work to improve safety of all operations.
- Downstream Processing and Logistics:
 - Maintain and execute DexMat's quality control processes.
 - Own the entire yarn production process: design products to customer specifications, execute product fabrication, and operate and maintain textile machinery.
 - Work closely with Marketing, Application Specialists, and Engineering teams to tailor products and processes to customer needs.
 - Drive the complete order fulfillment process, ensuring all deliveries are met on schedule.
 - Own inventory management, including designing and improving physical and electronic management systems and organization.
- Research and Development:
 - Participate in strategic research projects aimed at improving process efficiency or improving the properties of Galvorn fibers and films.
 - Collaborate in a cross-functional team including engineering, science, marketing, and sales to deliver product solutions for DexMat's diverse and growing customer base.

Requirements:

- Education: Bachelor's degree in engineering or science field
- Experience: Minimum 2+ years of hands-on experience in a manufacturing, pilot plant, or wet lab environment
- Mechanical Aptitude: Demonstrated ability to install, operate, and maintain industrial equipment (e.g., pressure vessels, pumps, agitators, winders), as well as experience with using hand tools and troubleshooting hardware

- Proficiency in creating clear SOPs, technical specifications, and engineering drawings (CAD experience is a strong plus)
- A track record of identifying inefficiencies and implementing changes that improved safety, quality, or throughput
- Ability to communicate effectively, accept responsibility and handle multiple projects is essential
- Entrepreneurial spirit with a strong sense of agency and ownership
- Humility and curiosity to thrive in a rapidly learning organization

Preferred Qualifications:

- Textile/Polymer Knowledge: Experience with fiber spinning, yarn plying, braiding, or textile machinery
- Data Analysis: Proficiency in using data (Excel, Python, JMP) to track production metrics and validate process improvements
- AI Integration: Familiarity with or high interest in leveraging AI tools (LLMs, ChatGPT, etc.) to automate workflows and documentation
- Safety Certifications: Previous training in HazMat handling, chemical safety, or industrial safety protocols.
- Strong understanding of materials characterization and properties

This is an excellent opportunity for a creative, skilled engineer to join a dynamic and growing company and make a significant impact on the organization's success. If you are a highly motivated self-starter with a passion for process optimization and a drive for continuous improvement, join us in building the sustainable materials economy!

DexMat is an equal opportunity employer and is committed to creating a diverse and inclusive work environment. All qualified applicants will receive consideration for employment without regard to race, color, religion, gender, gender identity or expression, sexual orientation, national origin, genetics, disability, age, or veteran status.