Job Profile:

Engineer - Materials & Process

We are a diverse team of collaborators, doers, and problem-solvers who are relentlessly committed to a culture of safety. This position will directly impact the history of space exploration and will require your commitment and detailed attention towards safe and repeatable space flight. Join us in lowering the cost of access to space and enabling Blue Origin’s vision of millions of people living and working in space to benefit Earth.

As part of a hardworking team of diverse engineers you will be responsible for materials and process engineering tasks related to the design and manufacturing of the New Glenn launch vehicle system. The team is hiring Materials and Process Engineer at levels 1, 2 and 3 which vary in professional experience and skills. Candidates experience and qualifications will establish level. Primary day-to-day focus will be developing, optimizing, and characterizing friction stir welding (FSW) process in aluminum structures. These tasks include material characterization, supporting design for production, material selection, and quality control.

We are looking for someone to apply their technical expertise, leadership skills, and commitment to quality to positively impact safe human spaceflight. Passion for our mission and vision is required!

Responsibilities:

- Support production welding of full scale, cryogenic tanks. Lead or contribute to development/optimization of FSW processes to meet specification requirements. Troubleshoot weld tool equipment as required.
- Contribute to weld process/qualification documentation, internal/external readiness reviews, etc.
- Work closely with tank production teams to ensure that floor support is provided in a timely manner and weld qualification deliverables are met in accordance with the overall launch schedule
- Work hand in hand with quality assurance/engineering for rapid disposition and documentation of non-conformances for tank structure defects
- Perform metallographic and mechanical testing of welds and weld samples, and evaluation of materials characterization data or NDT results; Evaluate weld defects and recommend improvement plans or repair procedures
- Travel as needed for reviews, training, and other tank production support activities
- Define and write material test plans for design value generation, execute sourcing of testing, and evaluate test data to develop statistics-based design values

Qualifications:
• B.S. degree or higher in materials engineering, welding engineering, mechanical engineering or related field
• 0-6+ years of experience (relevant M.S. or Ph.D. is a plus) in the field of metallurgy, with knowledge of the interplay between composition, process, microstructure & properties in aerospace metallic materials
• 0-6+ years of experience with definition & qualification of welding processes (fusion and/or solid state)
• Experience developing and executing plans for material characterization, such as mechanical testing, environmental testing, and material compatibility analysis
• Ability to earn trust, maintain positive and professional relationships, and contribute to a culture of inclusion
• Must be a U.S. citizen or national, U.S. permanent resident (current Green Card holder), or lawfully admitted into the U.S. as a refugee or granted asylum

Desired:

• Familiarity in friction stir welding of aluminum and/or aluminum-lithium alloys for aerospace applications is a huge plus!
• Past experience in the aerospace industry, including materials & processes
• Proven experience with sourcing, analyzing, manufacturing, and testing of aerospace grade materials such as aluminums and/or stainless steels
• Ability to develop engineering requirements and work instruction documents

ITAR Requirements

To conform to U.S. Government commercial space technology export regulations, including the International Traffic in Arms Regulations (ITAR), 8 U.S.C. § 1324b(a)(3), applicants for employment at Blue Origin must be a U.S. citizen or national, lawfully admitted for permanent residence into the U.S. (i.e. current green card holder), or lawfully admitted as a refugee or granted asylum under 8 U.S.C. § 1157-1158. Learn more about the ITAR here.

Equal Employment Opportunity

Blue Origin is proud to be an Equal Opportunity/Affirmative Action Employer and is committed to attracting, retaining, and developing a highly qualified, diverse, and dedicated work force. Blue Origin hires and promotes people on the basis of their qualifications, performance, and abilities. We support the establishment and maintenance of a workplace that fosters trust, equality, and teamwork, in which all employees recognize and appreciate the diversity of individual team members. We provide all qualified applicants for employment and employees with equal opportunities for hire, promotion, and other terms and conditions of employment, regardless of their race, color, religion, gender, sexual orientation, gender identity, national origin/ethnicity, age, physical or mental disability, genetic factors, military/veteran status, or any other status or characteristic protected by federal, state, and/or local law. Blue Origin will consider for employment qualified applicants with criminal histories in a manner consistent with applicable federal, state, and local laws. For more information on “EEO Is the Law,” please see here and here.

Affirmative Action and Disability Accommodation

Applicants can send resumes to Nate Vicker: nmcvicker@blueorigin.com