



Position: Structural/Materials Engineer
Reports To: Design Manager
Status: Exempt

POSITION RESPONSIBILITIES

This individual will provide interdisciplinary engineering support in structural analysis activities, material selection and research, and metallurgical evaluation in the development of highly complex and technical rotorcraft products. Work may encompass a wide range of sophisticated (cross-discipline) engineering problems. The role can involve design and development engineering assignments related to products and systems including the engineering of new products or updates to existing products.

Duties include but are not limited to the following:

- **Structural Engineer:**
 - Developing aerospace fatigue methodology in accordance with FAA AC 27-1B
 - Developing mathematical models of structural behavior using classic hand-calculation and finite element techniques to identify critical part features. Type of analyses include those to determine vibration frequencies, stress, strain, and/or deformation of structure under static, dynamic, and thermal load conditions.
 - Verifying model behavior through test and experimentation
 - Preparing technical engineering reports related to structural strength, fatigue analyses, static and/or fatigue tests
 - Engineering failure analyses relative to metallurgical and/or structural matters
- **Materials/Metallurgical Engineer:**
 - Developing material and processing parameters to achieve desired end-product properties and attributes
 - Providing metallurgical expertise in the development of new products and/or coatings
 - Serving as a supplier liaison to assure material application and/or development activities are completed
 - Developing and overseeing a coupon test program specific to Enstrom materials
 - Supporting the development of appropriate NDE methods (eddy current, ultrasonics, penetrant inspection, etc.)
 - Preparing and/or overseeing technical process specifications related to materials, coatings, and/or part fabrication
- **Engineering Liaison Support:**

Research of structurally related production issues (including purchased items) or field related service issues, as required. Investigate issues, develop solutions, and determine impacts on short-term and long-term production and field support needs. Incorporate changes into designs when needed. Work with vendors on purchased items to resolve similar issues.
- **Mentor:**

Provide support and mentoring to less experienced designers and engineers within the Design Engineering group.

REQUIRED KNOWLEDGE, SKILLS AND ABILITIES

- Minimum of a Bachelor of Science Degree in Aerospace, Mechanical, or Metallurgical Engineering
- Minimum of 5 years of industry experience in a similar role
- An advanced understanding of rotorcraft or aircraft structure
- An advanced understanding of metallic and nonmetallic manufacturing processes and assembly procedures
- Strong foundation in structural analysis methods and techniques. Must have an advanced understanding of strength of materials, classical stress analysis, and ability to develop and document structural tests to assess structural integrity of component parts.
- A basic or advanced understanding of FAA rules, regulations, and certification processes
- Experience with CAD and SolidWorks
- Proficient in Microsoft Office applications
- Self-directed and motivated
- Superior problem solving skills (data-driven and analytical thinking)
- An ability to work with people
- An ability to work multiple projects and multi-task
- FAA Designated Engineering Representative (DER) is desirable, but not required