# Tyonek logo-stackedTyonek SERVICES Group, Inc

### Job Description Form

| Division/Department | | **Engineering** | | | |
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| Location | | **MAD** | | | |
| Job Title | | **Mechanical Engineer III, Aircraft Integration** | | | |
| Reports to | |  | | Title | **Engineering Manager or Director of Engineering** |
| Level/Grade  (if applicable) | | **N/A** | Type of position:  Full-time  Part-time  Contractor  Intern / Temporary | Hours       / week  Salary  Exempt  Hourly  Nonexempt | |
| General Description | | | | | |
| * Operate as a member of a diverse team of engineers on multiple concurrent projects to develop detailed mechanical designs for the integration of aircraft avionics and mission systems into rotary and fixed wing aircraft for US DoD, foreign military and commercial customers. Research, plan and design aircraft mechanical upgrades. This position is accountable for internal and external engineering requirements as stated herein. This position may be the technical lead for projects during the design and test phases. | | | | | |
| Duties | | | | | |
| * A wide degree of creativity and latitude is expected. * Develop CAD technical data packages to include 3D models, 2D drawings using CAD software. * Develop design solutions to complex mechanical issues in the field of rotary wing and fixed wing aircraft with considerations for weight, thermal, vibration, corrosion and airworthiness. * Perform classical and Finite Element Analysis. * Perform and write specifications, engineering analysis and reports as required to obtain airworthiness certification. * Coordinate with manufacturing engineering to identify manufacturing efficiencies early in the design cycle. * Support manufacturing engineering during the manufacturing phase. * Develop and present formal and informal design reviews. * Effectively communicate with Airworthiness Authorities. * Develop installation instructions. * Provide engineering support during prototype, validation and verification of aircraft modifications. * Review completed installations to ensure conformance to design. * Support component level qualification testing. * Performs other duties as assigned. * May report to an executive or a manager. | | | | | |
| education/Experience requirements | | | | | |
| * Bachelor's Degree in Mechanical Engineering (or closely related field) with at least 8 years related experience is required. * Knowledge of Mechanical engineering principals. * Experience in aircraft structures design to include sheet metal, machined and composite parts and assemblies. * Understanding of aircraft structures, load paths and designing for crash loads. * Working knowledge of material selections using the Metallic Material Properties Development and Standardization (MMPDS) Handbook (formally MIL-HDBK-5) and Composite Materials Handbook (MIL-HDBK-17). * Working knowledge and understanding of military and commercial aerospace practices, processes, specifications and standards. * Knowledge of MIL-STD-31000, American Society of Mechanical Engineers (ASME) standards and associated drawing and geometric dimensioning and tolerancing requirements. * Skilled in SolidWorks, AutoCAD, CATIA and/or Creo CAD software; with a high degree of experience in SolidWorks preferred. * Ability to write and review airworthiness documents, plans and test procedures. * General understanding of manufacturability of sheet metal, machined and composite parts and assemblies. * Knowledge of classical and Finite Element Analysis Methods. * Working knowledge of aircraft corrosion prevention methods, techniques and treatments. * Working knowledgeable of DoD aircraft technical manuals. * Knowledgeable of DoD and/or FAA airworthiness certification processes and requirements. * Ability to operate in a fast-paced multi-tasking customer service-oriented environment with a high degree of efficient and effective performance. * Must be able to obtain and maintain a Government Security Clearance. * We maintain a drug-free workplace and perform post offer, pre-employment substance abuse testing. | | | | | |
| Physical requirements | | | | | |
| To perform this job successfully, an individual must be able to perform each essential duty satisfactorily. The requirements listed are representative of the knowledge, skills, and/or abilities required. Reasonable accommodations may be made to enable individuals with disabilities to perform essential job functions.  * Must be able to walk and stand on level and/or inclined surfaces for certain periods throughout the day * Must be able to climb stairs, ramps, ladders, and work stands, working at heights with fall protection devices. * Must be able to crouch, crawl, grasp or handle objects, use finger dexterity, bend elbow/knee and reach above/below shoulders. * May be required to lift up to 25 pounds and carry for short distances. * Must be able to distinguish color and judge three-dimensional depth. * Normally works in an office setting with controlled temperature. | | | | | |
| EQUAL OPPORTUNITY EMPLOYER / VEVRAA /ADA | | | | | |
| * TNC and its subsidiaries fall under ANCSA and are entitled under Federal Law to extend hiring preferences to its shareholders. ANCSA provides TNC the authority to give shareholder preference in hiring. TNC reaffirms its belief in equal employment opportunity for all employees and applicants for employment. Tyonek is an Equal Opportunity Employer and a VEVRAA Federal Contractor who affords equal employment opportunity to protected veterans and people with disabilities: Tyonek Native Corporation provides all employees and job applicants’ equal employment opportunities in hiring and promotion without discrimination because of age, sex, sexual orientation, genetic information, gender identity, marital status, race, religion, color, veteran status, physical or mental disability, national origin, or any other reason prohibited by law. | | | | | |
| Reviewed by |  | | | Title |  |
| Approved by |  | | | Title |  |