

# Aircraft Structural Design Engineer

## OPPORTUNITY

Ainira Industries is currently seeking applicants for Aerospace Structural Design Engineer for its growing Space and Defence division – a highly knowledgeable and confident senior engineer with a keen eye for design and a style that fosters innovation, collaboration, and accountability.

## JOB DESCRIPTION

Reporting to the Engineering Manager Space and Defence, the Aerospace Structural Design Engineer within the young and passionate Aerospace team at Ainira will be responsible for the Structural CAE numerical modelling and simulation, and CAD concepts, models, drawings, improvements, and testing of prototypes.

You will bring to the table a deep understanding of aerospace manufacturing technology and the passion to develop high quality products in an agile and fast paced environment. As required by the current programs, you will be thinking commercially, operating collectively, and driving execution by optimising and enabling talent within the group and across Company's e-Mobility, Sustainable Energy, and Infrastructure divisions.

Known in the industry for rapidly developing cost-effective solutions from the ground up, Ainira Industries believes in giving highly skilled engineers ownership of complex space and aerospace systems from start to finish, which offers them the satisfaction of moving from the simulation and design to hands-on working, building, testing and, ultimately, flying their creations.

Besides world-first innovation, the novel Aircraft Engine currently in development at Ainira Space and Defence is all about safety, speed, and efficiency. Complex indeed, however, there are minor challenges for us, as the project is similar to other innovative solutions to ambitious aerospace problem we had provided for the likes of DARPA and other technically and security clearance demanding customers.

## RESPONSIBILITIES

- Identify, establish, and operate technology assets that accelerate product development in support of the Company's long-term innovation and commercialisation strategy for Space/Aerospace and Defence
- Reviews and evaluates product quality, cost effectiveness, and manufacturing performance to standards and takes action as necessary to correct variances
- Work collaboratively with the Defence Innovation Manager, and engineering design and test teams to mature delegation of architecture and engineering decisions
- Perform, validate, and document structural analyses of intake and exhaust structures, including finite element modelling verification and validation, material selection, performance trade-off studies and mass/COG optimisation
- Undertake dynamic simulations (modal, random vibration), transient, conduct peer reviews of analyses, and post-process and interpret static and dynamic ground test and flight data
- Maintaining awareness of the competitive aerospace and defence sector, market landscape, expansion opportunities, and industry developments

- Provide technical leadership and resources with engineering and manufacturing expertise to peers in order to coach and uplift the capabilities (development, operations) of each product engineering team
- Prepare and arrange reports, budgets and forecasts and presenting them to governing bodies

### **SKILLS and ABILITIES**

- BSc/MSc in Aerospace, Electrical, Mechanical, Manufacturing Engineering or equivalent is required
- 5 years-plus successfully designing, analysing, delivering, and integrating complex aerospace structures incorporating opto-electromechanical and electronic parts
- FEA, SolidWorks Simulation Pro or Premium, SolidWorks FLOW simulation or equivalent, such as Creo, Catia, ANSYS Multiphysics, MSC Nastran, and Optistruct/Hyperworks
- Familiarity with Aerospace/Space/Defence industry standards, such as MIL-STD-1540, CSFC-STD-7000, ECSS-E-HB-32, NASA-STD-5001
- Working knowledge of best practices in design, structural analysis, vibroacoustic modelling/analysis, and testing of composites (laminated design, joint design, materials characterisation, environmental effects)
- Demonstrated track record of developing and launching successful, innovative products; has a thorough understanding of a variety of manufacturing processes and how they affect design decisions
- Proven expertise in accurate prediction of component life and structural margins, including ductile metal fracture, composite materials failure, fatigue fracture, and linear and non-linear buckling (shell buckling)
- Familiarity with manufacturing processes, including conventional machining, additive manufacturing, and composites (prepreg autoclave and OOA)
- Experience with static and dynamic structural test methods (strain gauges, accelerometers, shaker table testing) and experimental modal analysis
- Ability to collaborate in a team environment, and comfortable driving multiple initiatives at a rapid pace
- Capable of working with multiple cross-functional teams in all project activities for multiple concurrent projects necessary for the successful commercial launch of new products
- Proven high degree of initiative, creative problem solving, attention to detail, and calm under fire
- Outstanding communications skills a must, and desirable product development management skills
- Excellent computer and MS Office skills to report in a variety of formats

### **COMPENSATION**

The Company offers a competitive compensation and benefits package.

### **APPLY**

Click "Apply" below or use form in the Contact section – quote the reference number HR-SDA-0003. Only the shortlisted candidates will be contacted. Thank you for your interest.

Recruitment agencies, please note that no agency candidates will be accepted.