DefendTex Pty Ltd
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Senior Mechanical Engineer – Weapons and Armour

As winner of the 2024 and 2023 Defence Innovator of the Year and finalist for Space Business of the Year, our values of integrity, innovation, professionalism and passion are at the for front of everything we do. Our vision is to be a world leader in defence innovation through developing and delivering innovative defence technologies to military and law enforcement communities around the world.

DefendTex are seeking an experienced Senior Mechanical Engineer to join an expanding team working on the development of cutting-edge Defence technologies. Specifically, the role will be focused on design and development of mechanical systems in novel weapon, munition and armour technologies.

The successful applicant will be required to lead the design of the products including any support or test systems, perform 3D CAD modelling of products and integration of other sub-systems, assemblies and tooling as well as providing detailed manufacturing drawings. The successful applicant will act as a Team Lead withing the Ballistics group at DefendTex and be an integral member of a multidisciplinary team of engineers and be able to work collaboratively alongside a highly-skilled workshop team.

The successful applicant will evolve and conceptualise new and existing designs of several prototype platforms based on empirical test data and projected campaigns to further develop the system's performance. They will also provide insight into materials and manufacturing improvements where appropriate.

Some of these products will require the integration of electronic systems, as well as the use of a variety of lightweight high-performance materials. The successful applicant will be required to develop testing schedules and project plans and assist in running live fire test campaigns in support of project milestones. The role will also require design and hands-on prototyping, assembly and testing of novel weapon, ammunition and armour systems.

Roles and Responsibilities:

- Technical lead for a multidisciplinary team.
- Leading and contributing to the design and optimisation of mechanical components, assemblies and tooling for military weapons, munition and armour products
- 3D CAD modelling of components and assemblies to be used in weapon systems
- Preparation of manufacturing drawings including tolerancing and dimensioning to Australian Standards
- Conduct critical design reviews and product optimisation through an iterative design process
- Development of test plans
- Preparation of project plans
- Carrying out ballistic testing campaigns including field testing
- Statistical analysis of test data
- Failure analysis
- Prototyping and assembly of weapons and ammunition for testing campaigns
- Applied research in the field of weapons and armour systems
- Liaise with external suppliers of sub-components and raw materials

Requirements:

Essential:

- Bachelor of Engineering (Mechanical)
- 3D CAD modelling expertise (SolidWorks preferred)
- Experience preparing manufacturing drawings to AS 1100
- Strong understanding of engineering materials: specifically, lightweight alloys, steels, polymers and composites
- Experience with FEA tools and simulation
- Hands-on, practical approach to engineering problem solving
- Strong understanding of various manufacturing processes e.g. manual and CNC machining, injection moulding, casting, 3D printing, fabrication and composite processing
- Strong understanding of Design for Manufacture and Assembly principles

- Sound knowledge of mechanical design principles
- Sound understanding of weapon systems and gun propulsion
- Experience in an R&D role
- Prior experience as a project leader / Team Lead
- Experience working within a multidisciplinary team and providing technical direction
- Australian Citizenship
- Must pass the Australian Government BASELINE security check
- Not be a prohibited person under Section 3 of the Firearms Act 1996 (Victoria)

Desirable:

- Ammunition reloading experience
- Knowledge of interior and terminal ballistics
- Understanding of electronic systems
- Hands-on experience with composite processing
- Previous use of Product Data Management (PDM) tools and Enterprise Resource Planning (ERP) software
- RPEng / CPEng
- Strives in a fast paced, dynamic work environment

Team work is critical to us so you must be a team player, able to work in a mixed discipline environment ensuring your designs integrate and function first time, every time.

Why us?:

- Competitive remuneration
- Exciting projects and industry leading innovations
- Professional learning and development opportunities
- Working in a dynamic team environment with talented engineers to develop innovative, novel applications for defence
- Opportunity to work collaboratively with external research organisations and institutions

We are committed to ensuring diversity, inclusion and equality are embedded throughout our organisation for the benefit of our customers and our employees. We strive for a positive and engaging workplace where mental health and wellbeing are supported. We welcome applicants from all diverse backgrounds, including Veteran, Aboriginal and Torres Strait Islander people.

If you are looking for a unique and exciting opportunity, we look forward to your application.

Interested?

If this sounds like you, are you're interested in applying for this exciting role, please apply to careers@defendtex.com and include your CV and cover letter.