



Senior Mechanical Engineer

DefendTex is an Australian owned Defence company with a strong focus on innovation, research and technology development. DefendTex services military and law enforcement communities around the world. At DefendTex, we value integrity, innovation, professionalism and passion. Our vision is to be a world leader in defence innovation.

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 a mechanical systems that complement rocketry and explosives applications and testing.

The successful applicant will be required to lead the design of the products including any support or testing systems, perform 3D CAD modelling of vehicles and integration system sub-components, assemblies and tooling as well as providing detailed manufacturing drawings. The successful applicant will act as a Project Leader for the Energetics sub-group and be an integral member of a small 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.

These designs 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 hands-on involvement in the small-scale prototype production, assembly and handling of novel weapon systems.

Initially the role will be working on the development of rocketry-based weapon systems, however, there will also be opportunities to contribute to other technologies under development at DefendTex.

About this role:

- Technical lead for a multidisciplinary team.
- Design and optimisation of mechanical components, systems and tooling for military weapons and munitions.
- 3D CAD modelling of components and assemblies to be used in weapon systems and testing of energetic materials
- Preparation of manufacturing drawings including tolerancing and dimensioning to Australian Standards
- Conduct critical design reviews and product optimisation
- Development of test plans
- Carrying out ballistic testing campaigns including field testing
- Failure analysis
- Prototyping and assembly of systems and support apparatus for testing campaigns
- Applied research in the field of explosive ordnance systems
- Liaise with external suppliers of sub-components and raw materials

About you:

Essential:

- Bachelor of Engineering (Mechanical) or equivalent
- 3D CAD modelling expertise (SolidWorks preferred)
- Experience preparing manufacturing drawings to AS 1100
- Good 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
- Knowledge of various manufacturing processes e.g., manual and CNC machining, injection moulding, casting, 3D printing, fabrication

- Sound understanding of Design for Manufacture and Assembly principles
- Sound knowledge of mechanical systems design
- Experience as with multidisciplinary team and providing technical direction
- Not be a prohibited person under Section 3 of the Firearms Act 1996 (Victoria)

Desirable:

- Experience in an R&D role
- Ammunition reloading experience
- Knowledge of rocket propulsion systems and explosive ordnance platforms
- Knowledge and experience with additive manufacturing
- Strives in a fast paced, dynamic work environment
- Basic understanding of electronic systems

A dynamic, agile and enthusiastic applicant who operates well in a multidisciplinary team environment will suit this role.

As a Defence security clearance is required for this role, applicants must be Australian citizens and eligible to obtain and maintain a Baseline clearance. To learn more about clearances please visit – <http://www.defence.gov.au/AGSVA>

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 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 send your CV and Cover Letter to our Head of People and Culture, Lauren McCleery at lauren.mccleery@defendtex.com