RESEARCH ENGINEER

DEPARTMENT/UNIT: Mechanical and Aerospace Engineering
FACULTY/DIVISION: Faculty of Engineering
CLASSIFICATION: HEW Level 6
DESIGNATED CAMPUS OR LOCATION: Clayton campus

ORGANISATIONAL CONTEXT

At Monash, work feels different. There’s a sense of belonging, from contributing to something groundbreaking – a place where great things happen. You know you’re part of something special and purposeful because, like Monash, your ambitions drive you to make change.

We have a clear purpose to deliver groundbreaking intensive research; a world-class education; a global ecosystem of enterprise – and we activate these to address some of the challenges of the age, Climate Change, Thriving Communities and Geopolitical Security.

We welcome and value difference and diversity. When you come to work, you can be yourself, be a change-maker and develop your career in exciting ways with curious, energetic, inspiring and committed people and teams driven to make an impact – just like you.

We champion an inclusive workplace culture for our staff regardless of ethnicity or cultural background. We have also worked to improve gender equality for more than 30 years. Join the pursuit of our purpose to build a better future for ourselves and our communities – #ChangeIt with us.

The Faculty of Engineering is the #1 Engineering School in Australia*, renowned worldwide for the quality and calibre of our teaching, research and graduates. We offer a comprehensive selection of undergraduate, graduate, postgraduate and higher degree by research programs in a wide range of engineering disciplines. Our research activities provide a platform for establishing a thriving educational enterprise and our staff are committed to creating a dynamic learning environment. The research activities range from fundamental studies to research with a strong applications orientation. To learn more about the Faculty of Engineering, please visit our website.

The Department of Mechanical and Aerospace Engineering forms part of the #1 Engineering Faculty in Australia*. We educate the next generation of leaders in the profession of mechanical engineering, generate new knowledge and insight into the processes that govern our discipline, and provide service to the community, our profession and industry. We are the largest department
within the Faculty in terms of student numbers, offering a range of undergraduate, Masters and PhD programs. Research is a vital part of the Department’s activities and we are renowned for our expertise and world-class facilities. We strive to provide a welcoming and open culture that is inclusive of students and staff of diverse genders, sexes, sexualities, religions and cultures, and people with disabilities. We welcome applications from individuals representing these diverse groups. In accordance with Monash University’s commitment to Athena Swan principles, we particularly encourage applications from females. Monash University supports staff with young children and caregiving responsibilities through a range of programs, policies and resources (www.monash.edu/gender-equity/parents). To learn more about our Department and the work we do, please visit our website.

The Maintenance Technology Institute (MTI) is a joint initiative between BHP Billiton and Monash University (One of the world’s top 50 universities*) aimed at providing comprehensive mining industry focused research and development to achieve optimum plant and equipment across Australia and overseas. We have a highly integrated, multidisciplinary team of technical specialist with a proven track record and we draw on support and capabilities from an extensive network of industry and academic alliances. To learn more about the MTI and the work we do, please visit our website.

**POSITION PURPOSE**

The Research Engineer will be responsible for undertaking consulting, and utilise their engineering expertise to support the team undertaking applied research on heavy engineering equipment. The equipment involved includes field equipment, mobile equipment and processing plants. Some of the equipment commonly dealt with are: draglines, shovels, drills, large mining trucks, excavators, stackers, stacker reclaimers, ship loaders.

This position is responsible for performing a range of research related activities in support and delivery of outcomes associated with the research program.

**Reporting Line:** The position reports to nominated Team Leader within the Maintenance Technology Institute (MTI) under general direction

**Supervisory Responsibilities:** Not applicable

**Financial Delegation:** Not applicable

**Budgetary Responsibilities:** Not applicable

**KEY RESPONSIBILITIES**

1. Support the planning and scheduling field work to suit site requirements and MTI resource availability
2. Undertake data analysis and interpretation, including detailed stress analysis from field measurements, to derive necessary conclusions and reporting under the direction of senior engineers
3. Work with Remote Services team to maintain data integrity on our fleet of large mining equipment monitoring systems
4. Build and advance client relationships ensuring that exceptional product and service quality is maintained
5. Prepare presentations and written reports to clients, as well as preparing project reports for customers and maintaining project records for quality assurance purposes
6. Conduct field work as required
7. Undertake simulation of structural, mechanical or electrical sub systems of equipment as relevant using either commercial software or general methods of analysis

8. Actively participate in and support continuous improvement activities relating to data collection, analysis, reporting and presentation, practices/protocols, quality assurance standards and customer service excellence

9. Maintain close and clear communication with site staff regarding field work, including in relation to planning and scheduling of work, implementation, housekeeping, removal of equipment and closure

10. Ensure all relevant statutory regulations, site safety requirements and Monash safety requirements are followed while undertaking field work, including monitoring MTI or site equipment are well looked after against damage and misuse

11. Ensure safety and wellbeing of MTI and any other contract or site staff involved in field work, including during travelling for field work

12. Other duties as directed from time to time

KEY SELECTION CRITERIA

Education/Qualifications

1. The appointee will have:
   - A degree in mechanical or mechatronics or structural engineering with subsequent relevant experience or equivalent qualifications or research experience; or
   - an equivalent combination of relevant experience and/or education/training.

Knowledge and Skills

2. Demonstrate technical and analytical proficiency in structural or mechanical engineering with experience in the field

3. Excellent oral and written communication skills, including strong presentation and report writing skills with proven ability to effectively analyse information and produce clear, succinct reports and documents which requires interaction with others

4. Proven ability to liaise with customers to identify project needs and deliver project outcomes professionally

5. Proven ability to solve highly complex problems, including through the application/use of sophisticated analytical and diagnostic skills, discretion, initiative, innovation and specialised expertise

6. Understanding of relevant Australian & International Standards

7. Well-developed organisational and time management skills, including the ability to plan and organise work, and a commitment to meet priorities and deadlines

8. Ability to work as an effective member of a team and provide effective supervision and on the job training to team members

9. Sound computer literacy, including the ability to learn new software packages, and a basic understanding of network communication

10. Excellent interpersonal and communication skills, including the ability to liaise with senior management, stakeholders, clients and public audiences, and communicate complex issues in a clear, succinct manner

11. Flexibility to undertake travel, field work, and emergency or urgent work to fulfil customer needs
OTHER JOB RELATED INFORMATION

- Appointment to the position will be subject to the satisfactory completion of medical assessment(s) in accordance with various mining and statutory legislations
- All personnel during site visits will be subjected to random alcohol and drug screening
- Safety inductions and training will be mandatory in accordance with relevant site requirements
- Travel to other campuses of the University may be required
- Travel to remote sites, both interstate and overseas, on short notice will be required
- Shift work, overtime and out of hours work may be required (including evenings, weekends and public holidays), for the successful delivery of projects
- There may be a requirement to work additional hours from time to time
- There may be peak periods of work during which taking of leave may be restricted

GOVERNANCE

Monash University expects staff to appropriately balance risk and reward in a manner that is sustainable to its long-term future, contribute to a culture of honesty and integrity, and provide an environment that is safe, secure and inclusive. Ensure you are aware of and adhere to University policies relevant to the duties undertaken and the values of the University. This is a standard which the University sees as the benchmark for all of its activities in Australia and internationally.