

Position Description



Position Title	Graduate Metallurgical Engineer
Position No	00063472
Delegation Level	007
Job Designation	Engineering Officer
Organisational Unit	Track and Civil Technical Support SEQ Assets
Work Centre	Brisbane
Position Type	Permanent
Rail Safety Worker	Yes
Medical Fitness Standard	NHS Cat 3 ATTP
Performance Plan Type	Tech Professional Expert
Shiftworker	No
Classification (Range)	PT2 .1 - PT2 .7
Pay Scale Type	ASPT
Reports to Position	Principal Metallurgical Engineer

QUEENSLAND RAIL VALUES:

1 Queensland Rail - We do better together
Treat others with respect - We appreciate everyone's contributions and differences
Empower our people - We have confidence in our people
Act Safely - We work safe, to go home safe
Make a positive difference - We learn from today, to improve tomorrow

Position Purpose

To provide technical engineering support in rail-related technology and maintenance, including rail stress issues, ultrasonic inspection, welding technology (Arc, flash butt, and aluminothermic), and associated track components. Collaborate with senior engineers on technical investigations, quality improvement, and quality assurance assessments of external suppliers of critical track materials, under supervision.

Position Responsibilities

1. Provide technical advice to the Track & Civil team on rail technology, including rail metallurgical issues, rail stress, and welding methods (flash butt, aluminothermic, and arc), under the guidance of senior engineers.
2. Conduct ultrasonic inspections of rail, structures, and components, contributing to non-destructive testing with supervision.
3. Assist in reviewing track maintenance procedures, evaluating track material performance, and supporting the development of manuals and standards.
4. Contribute to reports on rail and track component failure investigations and assist in internal material-related investigations.
5. Perform quality assurance audits and inspections of track material manufacturing to ensure compliance with internal standards and specifications, under supervision.
6. Support the coordination of materials technology expertise within the Track & Civil Engineering team, working closely with senior engineers.
7. Collaborate with civil maintenance teams and welders to ensure adherence to internal standards and procedures for aluminothermic and flash butt welding.

Position Description



8. Monitor and report on safety compliance with rail defects and welding management, identifying trends and emerging risks, with guidance from senior engineers.

Additional Factors

The appointee will be required to :-

- Comply with Queensland Rail's Code of Conduct;
- Observe all legal and safety obligations of the organisation;
- Attend further training as required;
- Travel interstate and intrastate as required;
- Work outside normal working hours;
- Undergo annual performance appraisal;
- Operate in an autonomous manner by exercising initiative and independent judgement under the general direction and guidance given by the Track Engineering Manager.

What is the key selection criteria

1. Sound level of knowledge in track materials, particularly rail microstructure, mechanical properties, and performance of rail steel, as well as welding technology (flash butt, aluminothermic, and arc welding) and wheel/rail interaction.
2. Sound level of knowledge and willingness to learn ultrasonic testing of rails and associated components.
3. Sound level of skill in investigating rail-related defects and solving complex technical problems.
4. Sound level of interpersonal, negotiation, oral and written communication skills.
5. Sound level of skill in maintaining awareness of emerging technologies and industry advancements.
6. Knowledge of and willingness to commit to and work within Queensland Rail's Values and Behaviours.

Pre-employment Checks:

Not Applicable

Pre-employment Qualifications:

What qualifications do I need to hold prior to applying for the position?:

40010687 G_Bach Eng (Metallurgical/Materials/Mech

Health, Safety and Environment Responsibilities

Comply with the overarching document called Health, Safety and Environment Responsibilities MD-11-6843 located in the Safety and Environment Management System.

Personal Protective Equipment needs:

Head and Face protection
Eye Protection
Hearing Protection
High Visibility Clothing
Safety Footwear
Sunscreen SPF 15+
UV Blockout

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Safety Publications

Civil Engineering Publications Safepol 5
QR Weekly Notice
QR SMS - Specifications (Complete Set)
Annual Safety Plan
C.E.O.'s Safety Statement
Alcohol and Drug Policy Card
C.E.O.'s General Safety Rules
Professional Engineers Act
QR SMS Policy (Complete Set)
QR SMS Standards (Complete Set)

Please Note:

Queensland Rail has a random alcohol and other drug testing program.
Testing can occur anywhere, at any time, on any day.