RAIL WELDING

WELDING PROCESSES:
• Flashbutt – Fixed and mobile machines
• Aluminothermic – Railtech/Boutet, Thermit
• Head repair (electric arc)

QUALIFICATION REQUIREMENTS:
• AS 1085.20-2012
• Client specifications

COMMON ISSUES & CONCERNS:
• Failure to meet qualification requirements
• Welding procedures for new rail grades
• Qualification of new welding equipment
• In-service failures

RESEARCH AND INDUSTRY SUPPORT

Activities:
• Development and qualification of flashbutt welding procedures
  • New rail grades
  • New welding equipment
• Qualification of aluminothermic welding procedures
• Development and review of specifications and standards
• Fatigue analysis and testing of welds
• In-track instrumentation and remote monitoring of impact loading at welds
• Residual stress measurements
• Specialised metallurgical analysis of weld defects and failures
• Welder training

THE PERFORMANCE OF PREMIUM RAIL GRADES IN CWR TRACK IS ONLY AS GOOD AS THAT OF THE RAIL WELDS!