Craig Skicko

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Experience

Mott MacDonald

2015 - Present

Senior Mechanical Engineer

Key Projects

Regional Rail Revival Melbourne, Australia 2019 - present	**Project Scope** $1.75 billion scope of works to deliver regional rail infrastructure upgrades across the state of Victoria. **Role** Design Coordinator, Design Manager **Key Activities** Management and coordination of the design development of the Bendigo track class upgrade, Bendigo Metro station designs, Gippsland line upgrade and stabling facility upgrades at South Dynon and Albury. Involved in developing the multidisciplinary designs from feasibility to reference design stage, controlling project finances and programme, and engaging various stakeholders throughout all stages of the project lifecycle.
High Capacity Metro Trains Melbourne, Australia 2016 - 2019	**Project Scope** $2.3 billion scope of works to deliver a new fleet of high capacity trains to operate on Melbourne's metro network. **Roles** Package Lead, Senior Mechanical Engineer **Key Activities** • Development of automated tools to track design review and testing progress, and assess against contractual deadlines • Lead Engineer for four rolling stock subsystems, encompassing the vehicle structure, bogies, mechanical interfaces, and special engineering topics including fire, noise, weight management and gauge. Key lead responsibilities include: ▪ Coordinating and conducting reviews of design packages, test procedures and verification reports, including chairing meetings to gather input from various stakeholders and user groups ▪ Planning and conducting audits to critically assess design, manufacture and testing ▪ Production line inspections to assess adherence to standards and manufacturing processes • Critical assessment of management processes and activities, including management plan reviews and external audits, covering a range of topics, including: Quality Management; Stakeholder Engagement; Requirements Management; Configuration Management; Reliability, Availability,

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	Maintainability and Safety (RAMS); Systems Engineering; and Verification. • Requirements management, utilising DOORS v9.6, to assess traceability between requirements and the design to ensure their implementation • Development of processes to control internal activities and interfaces with project stakeholders and ensure adherence to contractual obligations
Bolster Structural Analysis Derby, UK 2016	Structural analysis of a vehicle bolster to ascertain the root cause of an endemic failure within the first 5 years of passenger service. Activities included review of design drawings; 3D modelling of the component; loadcase derivation; finite element modelling and analysis; and assessment of proposed rectification methods. Software utilised for the delivery of the project included Bentley Microstation and ANSYS APDL.
Monobloc Wheel Design & Analysis Derby, UK 2016	Design of a new monobloc wheel including thermal, structural and modal finite element analysis to inform the design optimisation (weight). Following 3D modelling of the wheel, Mechanical load cases were applied as per industry standards, and thermo-mechanical loads were derived from the track geometry, line speeds and braking rates of the vehicle.

Education

University of Strathclyde, MEng Mechanical Engineering

2010 – 2015

Key Subjects	Sustainable Product Design and Manufacturing; Product Design Techniques; Computer Aided Engineering Design; Materials Selection; Finite Element Analysis; Advanced Mechanics and Dynamics; Thermodynamics; Fluid Mechanics; Financial Engineering
Dissertation	**Geometry Engine for Shape optimisation** Scope: Develop a programme to optimise the geometry of a single stage to orbit aircraft, maximising the lift to drag ratio.
Masters Project	**Detailed Design of a Wind Resource Drone** Scope: Design of a fixed wing drone for data acquisition in the wake of a wind turbine

Skills Summary

Software Capabilities

Python; HTML; CSS; Javascript; JQuery; Visual Basic; C; Django; Figma; Bootstrap; Microsoft Excel; Microsoft Word; Bentley Microstation; Pro Engineer; ANSYS APDL; ANSYS Workbench; MatLab; Microsoft Visio; DOORS (classic); SharePoint; Teambinder.

Referees shall be provided upon request

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