

An Insight into Track Engineering Course

Sydney (venue to be advised)

6 October 2016

Program

Presenters:

Michael Garrett, Civil Engineer, FIEAust, CPEng, RPEQ, Course Director, QUT Rail Masters Infrastructure

Adam Morris, BE (Civil), Dip Proj Mgt, MIEAust, Director, Agonis Group

Martin Murray, BE, PhD, MIEAust, CPEng, RPEQ, Director, KCPM Consulting Pty Ltd

8.00am	Venue opens, tea and coffee available	
8.30am	Registration (check with reception for room allocation)	Presenter
8.45am	Welcome session Introduction of presenters, and overview of Track Engineering including aims and topics to be covered	Michael Garrett
9.00am	Track Structure 1 Overview of track structure types and main components – ballasted and non-ballasted track structures, turnouts and other specialised infrastructure	Martin Murray
9.45am	Track Structure 2 Overview of main components including rail, rail fastenings, sleepers and ballast – their behaviour and failure modes	Martin Murray
10.30am	Morning tea	
10.45am	Track Maintenance 1 Overview of track infrastructure asset management	Adam Morris
11.30am	Track Maintenance 2 Description of the methods used for track maintenance including rerailing, resleepering, tamping, ballast regulation, ballast cleaning, formation repairs and rail grinding	Adam Morris
12.15pm	Lunch	
12.45pm	Track Design Introduction to track structure design – the forces applied to and through ballasted track structure components and the behaviour of components. Provide a basic understanding of design requirements for track alignment, structural clearances and track buckling.	Michael Garrett Adam Morris
1.30pm	Track Inspection The reasons for track inspection and a description of the modes and frequency of track inspection undertaken including track component integrity, formation and drainage and structural clearances	Michael Garrett

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2.15pm	Afternoon tea	
2.30pm	Wheel Rail Interface Importance of the wheel rail interface with regard to vehicle dynamics and forces in track, maintenance and cost issues	Martin Murray
3.15pm	Rail Safety Importance of rail safety, risks and consequences, interaction with train operations and control systems, applicable safety procedures and actions to provide safety for project and maintenance activities, the Regulator and legal requirements	Michael Garrett
4.00pm	Panel and Q&A Opportunity for attendees to ask questions and for general discussion and feedback	All presenters
4.30pm	Course close	

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