

Wheel-Rail Tribology – Placement of Lubricators on Curves (R3.110)

Background

Each year, railroads incur significant costs for replacing rails due to friction and wear. Controlling the complex wheel/rail interface imposes wide-ranging demands upon the work force and budget. Placement of correct lubricants of required quality at the right point on the rail curve using reliable and effective lubricators has substantial benefits. There are however challenges and concerns relating to the use of lubricants, lubricators and positioning.

Objective

The aim of the project is to collect and analyse data and develop modelling to improve industry practices of wheel – rail friction modification. The project will also seek to contribute to performance based standards considering cost and risks for lubrication decisions and the placement of lubricators on curves.

Outcomes

The research will provide a knowledge base that will be collated into a Practice Manual. Software packages will be implemented in-house by industry participants. Commercial releases of the software may also be developed.

Benefits

Cost benefits are expected to result in reduced rail and wheel wear and in reduced energy costs. Estimated benefits to rail industries in Australia could be \$5 million per year.

Project timeframe

1 September 2008 to 31 December 2011