Special Issue from the International Heavy Haul Association Conference 2013

Contents

Editorial

Special Issue from the International Heavy Haul Association Conference 2013 569
R Lundén, P-O Larsson-Kräik, R Fröhling and M Roney

Original Articles

Track deflection and stiffness measurements from a track recording car 570
EG Berggren, A Nissen and BS Paulsson

Investigation of the mechanics of rail seat deterioration and methods to improve the abrasion resistance of concrete sleeper rail seats 581
RG Kernes, AA Shurpali, JR Edwards, MS Dersch, DA Lange and CPL Barkan

Finite element modeling and validation of the fastening systems and concrete sleepers used in North America 590
Z Chen, M Shin, S Wei, B Andrawes and DA Kuchma

Comparison of the fatigue and impact fracture behaviour of five different steel grades used in the frog of a turnout 603
S Eck, H Oßberger, U Oßberger, S Marsoner and R Ebner

Geometrical degradation of railway turnouts: A case study from a Swedish heavy haul railroad 611
IA khouy, P-O Larsson-Kräik, A Nissen, J Lundberg and U Kumar

Effect of head wear and lateral forces on underhead radius crack propagation 620
SA Ranjha, P Mutton and A Kapoor

Research methodology for evaluation of top-of-rail friction management in Australian heavy haul networks 631
M Spiryagin, M Sajjad, D Nielsen, YQ Sun, D Raman and G Chattopadhyay

Dutch research results on wheel/rail interface management: 2001–2013 and beyond 642
A Zoeteman, R Dollevoet and Z Li

Wheel damage on the Swedish iron ore line investigated via multibody simulation 652
SH Nia, P-A Jönsson and S Stichel
Identifying the root causes of damage on the wheels of heavy haul locomotives and its mitigation  
A Ekberg, E Kabo, K Karttunen, B Lindqvist, R Lundén, T Nordmark, J Olovsson, O Salomonsson and T Vernerson  
663

Management of wheel/rail interface to prevent rail rollover derailments  
H Wu and B Kerchof  
673

Sustainable heavy haul traction energy: A review of systemic issues  
D van der Meulen and F Möller  
687

Reliability and measurement accuracy of a condition monitoring system in an extreme climate: A case study of automatic laser scanning of wheel profiles  
M Asplund, P Gustafsson, T Nordmark, M Rantatalo, M Palo, SM Famurewa and K Wandt  
695

Condition monitoring at the wheel/rail interface for decision-making support  
M Palo, D Galar, T Nordmark, M Asplund and D Larsson  
705