

# Programme

## “Technology and Capacity Creation Advancements in Heavy Haul Railways”

TUESDAY 8 SEPTEMBER 2014		
08h00 - 09h00	Registration	
09h00 - 09h10	Opening	
09h10 - 09h30	Transnet Freight Rail CE: Siyabonga Gama: Role played by Heavy Haul Railway Lines on Transnet Market Demand Strategy	
09h30 - 10h00	Transnet Freight Rail GM: Caesar Mtetwa: Why is it important to Manage Technological Developments in SA Heavy Haul Lines – ‘Case study on using technology to address operational challenges on Coal and Iron Ore Line’	
<b>10h00 - 10h30</b>	<b>Refreshment Break</b>	
<b>10h30 - 12h10</b>	<b>Session 1 – Track (Chairperson: Gert Ludick)</b>	
10h30 - 10h55	Session 1.1	Importance of shape parameters on shear strength properties of railway ballast <i>GM Mvelase</i>
10h55 - 11h20	Session 1.2	A study into the development and growth of Transverse Defects in the Transnet Freight Rail network, South Africa. <i>J Ngoato &amp; LL Msibi</i>
11h20 - 11h45	Session 1.3	Increased network availability and decreased maintenance cost through thermite welding management using Lean Six Sigma methodology on the South African Coal Export Line <i>OQ Phiri &amp; KA Suleman</i>
11h45 - 12h10	Session 1.4	An investigation into the challenges of reducing the number of train authorisation faults on the Iron Ore line - TFR <i>RMCR Roberts &amp; APN Nell</i>
12h10 – 12h35	Session 1.5	Design of a Monitoring System for the Olifants River Viaduct <i>F Busatta &amp; P Moyo</i>
<b>12h35 - 13h45</b>	<b>Lunch</b>	
13h45 – 14h10	Brian Monakali: SA Heavy Haul Update – “Capacity Creation approach in SA Heavy Haul”	
<b>14h10 - 14h50</b>	<b>Session 2 – OHTE (Chairperson: Fana Marutla)</b>	
14h10 - 14h35	Session 2.1	Development and testing of an automatic dropping device fitted on the pantograph secondary suspension <i>A Singh, SE Sibande &amp; WA Coetzee</i>
14h35- 14h50	Session 2.2	A critical analysis of lessons learned on pantograph and overhead equipment interaction failure modes that result in increasing pantograph hook up incidents on the Coal line <i>SE Sibande &amp; LO Borchard</i>
<b>14h50 - 15h20</b>	<b>Refreshment Break</b>	
<b>15h20 - 16h10</b>	<b>Session 3 – Operations (Chairperson: Paul Bester)</b>	
15h20 – 15h45	Session 3.1	Improving general freight corridor capacities through the application of distributed powered trains <i>M Mulder &amp; J Ngwenyama</i>
15h45 - 16h10	Session 3.2	The impact of AC-DC wire distributed powered trains on operational efficiency on the South African Coal Export Line <i>PD Pillay &amp; T Govender</i>
	<b>Gala Dinner – Minister speech to open the dinner</b>	

**WEDNESDAY 9 SEPTEMBER 2014**

<b>09h00 - 10h15</b>	<b>Session 4 – Vehicle Track System (Chairperson: Robert Fröhling)</b>	
09h00 - 09h25	Session 4.1	Mitigating severe side wear on 1:20 tangential turnouts <i>U Spangenberg &amp; RD Fröhling</i>
09h25 - 09h50	Session 4.2	High adhesion locomotives, wear and rolling contact fatigue <i>W Botha &amp; D Fourie</i>
09h50 - 10h15	Session 4.3	The management of track settlement to achieve improved track geometry <i>PJ Gräbe</i>
<b>10h15 - 10h45</b>	<b>Refreshment Break</b>	
<b>10h45 - 12h00</b>	<b>Session 5 - Rolling Stock (Chairperson: Oredus Mattheus)</b>	
10h45 - 11h10	Session 5.1	Ruggedizing the rolling stock condition based maintenance decision making system for the Iron Ore Line <i>G Hettasch &amp; J Solomon</i>
11h10 - 11h35	Session 5.2	Brake block induced wheel tread wear on the Ore Line – A case study <i>G Hettasch, K Van der Merwe &amp; A Visser</i>
11h35 - 12h00	Session 5.3	Integrating condition monitoring of electrical rotating machines into a maintenance philosophy <i>W Doorsamy &amp; P Bester</i>
<b>12h00 - 13h00</b>	<b>Lunch</b>	
<b>13h00 - 13h50</b>	<b>Session 6 – Motive Power, Traction and Energy Efficiency (Chairperson: Hannes Gräbe)</b>	
13h00 - 13h25	Session 6.1	Proposed model of the electromagnetic environment in traction systems to predict the path of return current <i>J Clay and I Hofsjager</i>
13h25 - 13h50	Session 6.2	Literature review on high energy efficiency and high power factor permanent magnet motors for fixed speed locomotive blower motor applications <i>SE Sibande and G Maluleke</i>
<b>13h50 - 15h00</b>	<b>Session 7 – Panel Discussion and Closing Remarks</b>	
13h50 – 14h50	Panel Discussion	
14h50 – 15h00	Closing Remarks	