

# NEW SOUTH WALES NEWSLETTER



ENGINEERS  
AUSTRALIA

**RTSA**

Railway Technical Society of Australasia  
NSW Chapter  
Mail: PO Box 6238, Kingston, ACT, 2604

**OCTOBER 2008**

## **NSW CHAPTER MEETING**

**Wednesday 5<sup>th</sup> November**

11.30 for 12.00 in the

**CENTRAL STATION - CONCOURSE MEETING ROOM**

(next to Lost Property, opposite platform 2)

## **NEW GENERATION LOCOMOTIVES**

**(PN 92 class and Derivatives)**

**GRAHAM HAYWOOD**

**Product Development Platforms Manager, United Group Rail**



Graham will take us through the interesting process of designing, building, testing and certifying a new generation locomotive type that has very particular requirements in terms of performance and flexibility of use – on one hand they are required to perform as heavy haulers in coal traffic and at the same time be able to run as race horses on intermodal trains.

Now that the first of these locomotives are out running we can expect some interesting comments on how their trials have been conducted and what these might mean for the business capabilities of these new locomotives

*The usual refreshments will be available prior to the meeting proper.*

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## METROS – FUTURE RAIL FOR SYDNEY

The symposium, to be held on Wed 12<sup>th</sup> November, is booking steadily and is now at the stage that it is 'all go'.

Speakers are confirmed to present on Metros in Paris (Jean-Christophe Hugonnard), Hong Kong (Russell Black), Barcelona (Ramon Malla) and Singapore (Simon Lane) as well as the new suburban railway in Perth (Peter Martinovich).

In addition we have speakers from Bombardier (Guido Vogel) and PB Rail (Mike Jenkins) to discuss what a Metro is and what are its attributes and two local identities (Sue Holiday and Garry Glazebrook) who will together present on land and transport issues facing Sydney as well as participate in a follow up panel session. Our various 'case study' speakers will also combine for a panel session later in the day.

The symposium will be a full day event and will include morning and afternoon tea breaks, lunch and after conference networking drinks

The topic of Metros is a contentious issue in Sydney, not the least because of the political anguish associated with the extraordinarily costly proposal the build one to the north – west growth area as a substitute for the originally 'promised' heavy rail link from Epping. As fortune would have it the state 'mini-budget' in response to flagging state fortunes will be brought down the day before our symposium, so it may be that we will be far more topical than we originally expected.

Although there have been other 'Metro' conferences touted, the one we are putting on has been strongly praised by those in the industry as having the best selection of speakers and topics of any conference on this subject in this country so far. It is indeed rare for a conference of this sort to have such a cross section of relevant overseas and local expertise as we have managed to get for the symposium. A once only opportunity exists for members and others who are interested to get in 'at the front door' on this subject at our landmark event.

The venue has limited accommodation and is filling rapidly. We would urge members to book soon and avoid the disappointment of missing out. Bookings can be made by:-

- **Internet** through the web sites at [www.rtsa.com.au](http://www.rtsa.com.au) or [www.cityrecitalhall.com/](http://www.cityrecitalhall.com/) then following links
- By **phone** on +61(2) 8256 222
- By **faxing** the completed the required details to +61(2) 9233 6652
- By **mail**, forwarding the required details to City Recital Hall Angel Place, GPO Box 3339, Sydney, NSW 2001.
- **In person** at the Angel Place Booking Office, 2 – 12 Angel Place, Sydney (between George and Pitt Streets, just north of Martin Place)

## PROPOSED STORE STUDY TOUR TO ASIA

To keep pace with the ever growing railway industry RTSA has set goals to increase awareness and understanding of new technologies and developments which are widely used and recognised in other states and countries. This allows

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members to appreciate what has been achieved, while advancing their skills for self improvement and local industry benefit. In particular RTSA wants to provide opportunities for younger engineers to broaden their knowledge and experience while enjoying a tour with a difference

One major development that has been proven successful worldwide, the metro rail system, is our focus for a 2009 STORE (Study Tour On Rail Engineering).

The NSW Chapter of RTSA is proposing to run a STORE to Asia looking at Metro developments in that area. Most Metros there are relatively modern, with Hong Kong at around 30 years being the oldest. As such the technologies used and methods of construction and operation are quite current.



The proposal is to start the tour at Singapore (thus allowing the participants to garner the best fare possible from their home location, and also to do their own touring prior to or after the formal STORE tour) and then visit in turn Kuala Lumpur, Beijing, Shanghai and Hong Kong. The tour would be of around 10 days duration and is proposed for early to mid March next year. RTSA has been granted some seed money to allow detailed quotes and itineraries to be drawn up so that a formal launch of this event can be made at the November 12<sup>th</sup> Metro Symposium. The timing of the tour is designed to allow Victorian and Canberra residents to make use of the public holidays that they have at that time of the year.

Contact has been made with various organisations and operators in the cities we are planning to visit, and so far the response has been very encouraging. While the tour is primarily intended as a technical tour (and therefore may be tax deductible in some circumstances) there will be a couple of side trips to interesting local sights as a break from just railways. Some inter-city rail travel will be included where possible, providing we can do so within the general time table for the tour. There are a couple of 'legs' that look promising in this respect.

More details will be forthcoming in November, but in the mean time it might be a good idea to start saving for what promises to be a fascinating tour



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## **CORE2008**

Those who were fortunate enough to get to Perth for the CORE2008 conference will almost certainly tell you what an exhilarating event it was. The delegate numbers were up by around 40% from the last (and up till then record) conference in Melbourne, the venue was excellent and the various tours and inspections were something quite out of the ordinary. All in all it was a grand event, and I am sure a great time was had by all.

A number of people have contributed snapshots of their some of their experiences and these are reproduced below. Universally the writers were positive about the event and agreed that it sets a new bench mark for the Wellington CORE2010 in two years time. Given the variety and range of extra-curricular activities available in NZ it might be anticipated that Wellington will garner even bigger numbers of delegates and partners.

### **PHILIP LAIRD: Personal highlights of CORE2008**

The development and performance of Perth's urban rail system as outlined by WA PTA CEO Reece Waldock, and, project leader Peter Martinovich.

Overseas keynote speaker Andrew McCusker from the Hong Kong MTR on how urban rail operations can be profitable despite strong competition and a sustained recession along the need for long term planning as far out as 40 years.

An outline of SCT's East-West success and procurement of new AC traction locomotives, that give a 10 per cent increase in payload for each train. Plus their encouragement to the ARTC not only to maintain the East-West track and hold a high market share but to improve the asset and further grow market share.

How shared road-rail corridors work not only in Perth but also have been developed for the Darra-Springfield corridor in South East Queensland.

The panel session ably led by Simon Lane, with polling of those present. In response to one question, no fewer than 25 per cent of those present considered that the rail industry could be doing more to promote itself to government and the wider community.

Plus, the bonus of two technical tours, one on the new Perth to Mandurah line and the other to BHP Billiton Iron Ore rail operations in the Pilbara - both world class.

### **MALCOLM CLUETT: Study Trips – Perth Area.**

#### **Perth Public Transport and Engineering**

Your correspondent travelled in this tour, which visited the:-

- New Nowergup Railcar Depot (servicing the "B" series rolling stock on the Clarkson and Mandurah lines)
- Transperth Train Control Centre, East Perth
- Main Roads Western Australia – Road Traffic Operations Centre, East Perth
- Gemco Rail Pty Ltd facilities, Forrestfield.

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Our tour commenced with a train ride on the Northern Suburbs railway, which has been progressively extended to Clarkson, the current terminus. The stations have impressive architecture and are maintained to a fine standard, with living plants on the platforms. Bus feeder routes and interchanges were a feature of the stations. An unusual feature is that most of the railway runs in the median area of a freeway – common in the USA but unknown in the Eastern States. Further extensions of the Northern Suburbs line are planned, and the Nowergup depot will become an island surrounded by the running lines. This constraint means that the plan of the depot is long and skinny. The depot is run by *EDI Rail-Bombardier* and there is a demarcation point where the TransPerth crews hand over the trains to the depot staff. There is an amenities building for Transperth staff.

One was struck by the cleanliness and light levels prevailing inside this near-new depot. The various roads have elevated galleries and sunken floors to facilitate access to the trains' components. There is a jacking system that can raise an entire 3-car train. Specialist cranes are available for replacement of roof-mounted items. We also had a visit to the Wheel Lathe (which was in operation) and the cleaning shed. Here a team were cleaning the roof of an EMU train. It was interesting for us from the Eastern States to see unfamiliar hardware, such as outboard disc brakes and high-voltage components (such as transformers). On occasions all of the B series trainsets are in traffic.

The whole operation was impressive, and the enthusiastic staff were very informative. From there we travelled by bus to the East Perth HQ of the Public Transport Authority. Here we enjoyed a lunch while groups were taken into the control room of the Perth rail network. Guides explained the various rostering issues, and the scope of the area which is controlled from that room. It is quite a change from the myriad of signal boxes, which were in operation during the writer's last visit in the 1980s. Impressive as the operation is, we were told that a major upgrade and modernisation of the control systems will occur shortly. (One problem is that the mining companies are poaching staff from Transperth – a result of the booming economy in WA.)

After this it was only a short trip to the Main Roads WA Traffic Operations Centre, which was also interesting, and similar to the RTA operation in Sydney but on a smaller scale. It is used for live crosses by the various media outlets, including TV. There are links with Sydney's pioneering SCATS traffic-light control scheme.

Nearby is the Claisebrook railcar depot which looks after the earlier "A series" rollingstock for the Midland, Armadale and Fremantle group of lines.

Finally, we were taken to Forrestfield where the Gemco Rail company is engaged in overhauling items of railway rolling stock, particularly wheelsets and bearings. There was also work taking place on a crew car (which was being converted from an ex-NSWR carriage). Locomotives were also being worked on, including some from NSW, and also some second-hand ballast wagons that had been imported from the Southern Pacific RR in the USA. We also had a glimpse of the enormous Greater-Freighter covered wagons used by SCT Transport (which utilise the double-stack loading gauge). The overall impression was that the rail freight industry in WA was booming, and that Gemco's rapid expansion of their production facilities was taking place at the right time. It is unfortunate that a busy road bisects Gemco's two workshops and that the newer of the two sites (which looks after locomotives) does not have direct rail access.

The Gemco company provided refreshments. Like many manufacturing companies, photography was not permitted here.

The tour concluded with a bus trip back to Perth, demonstrating that traffic congestion in the evening peak hour is not confined to the Eastern States.

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## Alcoa at Pinjarra

This trip was primarily an inspection of the ALCOA company's operations in the region between Perth and Bunbury. Our trip started with a train ride on the new railway to Mandurah. The outer sections on this railway were covered at considerable speed (130 km/h). The speed is one of the reasons why the new railway is popular with commuters, and the speed differential will increase in rail's favour as the Kwinana Freeway becomes more congested. The extensive housing development along the coastline was also evident.

A variety of quirky and unusual decorations and sculpture are features of the stations on the new railway.

We boarded a bus at Mandurah and travelled to the ALCOA alumina refinery at Pinjarra. Here we entered the visitors' centre and had a refreshments. After this was a presentation of the history and present state of the aluminium industry in WA. The ALCOA company operates three refineries in WA (at Wagerup, Pinjarra and Kwinana). Bauxite ore is mined in the hills inland from Pinjarra and refined into alumina. From here it is shipped to Port Henry and Portland (Vic) where it is smelted into metallic aluminium. We were introduced to our guide Moira, who took us around the site for the remainder of the day.

Even though Aluminium is the most abundant mineral in the Earth's crust, it does not occur in metallic form in nature and is difficult to extract from the ore. The process is a complex one, involving dissolving the ore in a heated caustic liquor, and then extracting the alumina. There is an expanding program of utilising co-generation, and other energy-saving initiatives. We also witnessed the bauxite and alumina train loading facilities. Trains associated with the aluminium industry form the bulk of the traffic on the railway line south of the Perth metropolitan area. Since the terrain is quite flat, trains of a considerable weight can be hauled by a single locomotive. The Alcoa company depends heavily on rail transportation of its products.

After this our bus journeyed uphill to Alcoa's mining leases in the Darling Ranges. The perplexing problem of die-back, caused by an underground fungus *Phytophthora cinnamomi*, was also explained. There are measures in place to reduce its spread, but unfortunately the climate and soil characteristics of WA suit this foreign invader. Our bus had to go through a washing plant before venturing into the mine lease roadways.

Here we witnessed the large off-road mining machinery in action, and the maintenance workshops. The process of stripping off topsoil and storing it, and subsequent revegetation, was also explained. Over the past thirty years, large areas have been revegetated and the progress is very impressive. Our bus stopped at a treetop-level lookout with an impressive view over areas that had been mined and rehabilitated.

Our tour then visited a site where WestNet Rail staff were rebuilding a level crossing, and also a nearby bridge which had been recently converted from a transom-topped structure to a ballast-topped structure. Of interest was the writer's first close look at a narrow-gauge hi-rail, which used non-standard rear wheels to suit the gauge.

Finally, we had a short visit to a yard at Kwinana where a variety of ARG rollingstock could be seen, including some ex-Queensland Rail coal hoppers which had been modified to increase their capacity.

The bus trip continued through the Kwinana industrial area with many rail-served industries. The new Mandurah railway was observed from a different perspective (from the bus) for the final leg back to Perth on the Kwinana freeway.

In all, a very interesting day, and thanks again to the organisers.

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## **ROSS CROPLEY: Technical Tour to Dampier and the Hamersley (Pilbara Iron) Rail network.**

After two days of pretty intense listening and absorbing the presentations, the time came for 40 CORE participants to journey on the North West Technical Tour of Rio Tinto's Pilbara operations and get down and dirty at the practical end of the business of intense freight movements and all that that entailed. And so we all gathered at the Convention Centre for the bus trip to Perth Domestic Flughafen for the 2 hour flight to Karratha by Qantas at 10:45, a 737-800. Our Coach Captain, or Bus Driver if you see them that way, was an ex Hamersley driver, an interesting introduction to the tour.

VH-VXH appeared to be fully loaded on departure at 10:56, with an arrival at 12:45 being recorded, along with the comment that the gang would be summoned to fill in the hole made on touchdown (read dropdown). This is the norm apparently, due to the shortness of the runway. After luggage collection, we were transferred to the Rio Training Centre in Dampier for a Safety Induction and Rio Tinto Overview of the forthcoming activities, presentation on Ramsys, a software system for predictive track maintenance and fault analysis and a distribution of Rio Tinto 'show bags' which included safety vest, safety glasses and sun hat.

From here we were taken to the nearby Hearson Cove area for a background history and explanation of the various rock art finds in the vicinity by a local guide. The particular site looks like the remnants of a mining operation, with large boulders heaped in long rows. But the description of a multitude of carvings and depictions of both animals and human figures into the rocks provided a fascinating insight to the history and culture of the local aborigines. The tour required some athleticism and climbing skills on the part of some of the group in order to get close to most of the carvings, but the rewards were well worth the effort. Although the group saw many such carvings we were informed that there were many more to be recorded and catalogued in the nearby valley. Close to this ancient landscape was a modern fertiliser plant, a stark contrast in this harsh environment.

Next it was to our various places of accommodation, either in Dampier or nearby Karratha. That evening, the group attended a dinner in the appropriately named Hamersley Room at the Peninsula Palms Motel, overlooking Parker Point ore loading wharf, where we had the opportunity to meet and mingle with our Rio guides for the next day's inspection of Pilbara Iron's facilities in the area. Two interesting items came out of the evening. The first was that bookings for flights and accommodation had been made 18 months before, due to the demand on such resources in the area. The second was that an ad on the local t.v. gave an indication of the cost of living in the mining region: a one bedroom house was for sale at \$425,000, and that single room rents were \$225 per night. After a very enjoyable evening, we returned to our respective lodgings, ready for the next day's visits. The view of the port at night was quite magnificent, with four ships docked and loading proceeding apace under the glare of hundreds of high intensity lights.

At the briefing at 7 Mile Operations Depot next morning the group was divided into 4 subgroups, each with its own specialist guide. A safety briefing was held again to reinforce the safety message that is crucial to all of Pilbara Iron's operations. From here, each group dispersed to inspect a particular facet of the operation and then reassembled before visiting the next area, interspersed with morning tea and lunch. The 4 facilities inspected were: Operations, which included Control and Driver Simulator, led by Sid Hay, Ports and Dumpers, led by Kellie Parker, Track, led by Michael Bailey and Rolling Stock Maintenance, led by Trent Ludlow. They were ably assisted by Tracy Cordwell and Trevor Nunn.

Operations:

One is greeted by the mounted Name and Number plates of "Pendennis Castle" in the entrance of the

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Operations Centre, this certainly reminding one that this was a Railway location. Due to space considerations, the group split into two, one visiting the Control room, a hive of activity with the network displayed on multiple screens, each colour representing occupied sections, requested sections, trains, maintenance vehicles, HiRails, booked out sections or clear sections, etc.

Downstairs was the driving simulator, which although now quite old, is invaluable in training drivers in proper train handling techniques and showing the effects of poor driving practices and the resultant forces throughout a train which may cause breakaways or derailments. Gradient profiles, power or dynamic brake readings and brake pressures are all displayed and the in train forces are shown on screens as the train is operated under various scenarios. Faults or other problems can be introduced to test the driver's reaction and the remedial action taken.

Afterwards, we were given a preview of a paper to be presented to a Rail Safety Conference on how Rio is tackling the problem of operational safety of Hirails, since they do not operate track circuits reliably and Control may not know where they are at all times. Using technology to increase safety of these essential vehicles was highlighted. In addition there was an overview of the Automatic Train Operations and the new Remote Operations Centre in Perth.

#### Ports and Dumpers:

The Ports and Dumpers covered the two rotary dumpers in operation, the viewing of the wagon placers, the tipping and associated dust containment system, operations room and the stackers and water spraying at the stockpiles. Also shown were the reclaimers, which is the second part of the blending process prior to being conveyed to the ship loaders. Samples from the shipments from the various mines are made and the appropriate stacking/blending and reclaiming made to suit the customer's requirements. The maze of conveyors from the different stockpiles is known, not surprisingly, as "Spaghetti Junction". The old gravity feed system of wagons to the original Parker Point dumpers and then return to the empty rakes has been replaced with powered wagon placers, the entire rake of ore wagon remaining coupled throughout the unloading process and the loaded trains locomotives detaching and attaching to an empty rake. Also seen in this area was the fuel train which supplies the different mine sites.

#### Track:

The interesting fact to come out at the outset was that there has only been the one maintenance contractor since the original Hamersley Iron days, a shining example of trust, confidence and a co-operative approach in a long term relationship to the benefit of both parties. Then it was outside for a demonstration of the Italian manufactured truck mounted mobile flash butt welder. Examples of welding faults in rails were on display, having been recovered following detection by flaw detectors. From here, it was to the Speno area, where their latest Hirail Ultrasonic rail test car using Quad Core technology was on display. A description of their railgrinding program was given, using their two grinding trains, as well as their switch grinder.

#### Rolling Stock Maintenance:

The 7 Mile Workshop visit included an inspection of the GE Evolution locomotive no. 8121 - the cab even had that 'new car' smell! It was surprising to learn that Pilbara Iron spend approximately \$m1.5 per new loco to bring them up to their requirements. Before visiting the cab an elaborate safety system of key locking a derail on the loco road and multiple keys to lock the derail key was undertaken to ensure that there was no chance of another loco entering the road which we were occupying. Then it was to the wagon area where a pair of new QRRS (Chinese) ore cars was located. This consisted of a control car, for braking and a non control car. Wagons are always operated in pairs, a drawbar between them and a rotary coupler at one end of the pair.

As had been the case on all visits, the time had beaten us and we had to return to the main depot building. With such a complex operation there was always more to see, more questions to ask and more information to

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be gleaned from our guides. After a final assembly and round of thanks to our hosts, it was back on the bus to the airport and the usual check in and security procedures before boarding Qantas flight 915 aboard B737-800 VH-VXQ for Perth. A pleasant flight, 26' late, into the gathering twilight was slightly marred with the entertainment system on the entire left (port) side of the plane going down after about 30 minutes into the flight. At least we still had the picture; only the organist on the Wurlitzer was missing. Perth arrival was at 19:36 where some members of the group changed for connecting flights to far flung destinations and the rest boarded a bus back to the Convention Centre and accommodation or home, or in readiness for the Spotlight on Metro Rail tour the next day.

Overall, the tour highlighted the massive size of the Rio operations in the Pilbara and how each part of the supply chain was critical to the success of the whole operation. High standards of maintenance and monitoring of all facets of the processes were obvious. The emphasis on safety was continually stressed to all participants and the awareness of this was clear to all.

Perhaps the only disappointing aspect of the tour was not being able to be next to 'the high iron' when 20,000 tonnes of ore rumbled past at 80k's on its way to the unloader. Maybe next visit!

## **MAX MICHELL: Offers a pen picture of one part of the BHPBIO Technical Tour to Newman.**

Jimblebar Junction, a remote outpost on the BHP Billiton iron ore railroad 397 km from Port Hedland slumbers in the midday sun. The great arc of blue sky contrasts with the red earth, leavened by dots of grey and green of the endemic spinifex and mallee. Apart from an occasional passing vehicle on the nearby road and muted chatter from inside the simple operations office there is little in the way of sound to disturb the day. The two tracks and twin crossovers, which at this point split the 7 km long crossing facility, await the next train.



A bit after 12.30 a vague rumble is audible from the south, which in time evolves into an approaching ore train from Ore Body 18 headed by a new 4300 hp EMD SD70ac and a rebuild 4000hp GE dash 8. Trailing behind are 112 ore wagons that average 150 tonnes gross each – 37.5 tonnes axle loading, although axles can and do get to 40 tonnes at times. The trailing load of 16,800 tonnes is indeed a respectable load.

The train comes to a gentle halt, relying in the main on the superior dynamic braking capability of the leading ac traction unit right down to less than walking pace, requiring a minimum application of air to bring the train to a complete stop. The solo driver in time emerges from the cab

and clambers down off the great hulking locomotive – not a particularly aesthetically pleasing beast but a hugely effective one in ensuring the continuous supply of iron ore to the waiting world markets.

Barely 15 minutes later a loaded train from Newman, behind a similar pair of locomotives but this time with the GE leading, comes to a similar gentle halt beside its compatriot. A few minutes are all that are required

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before the latter train whistles out and slowly accelerates its heavy burden toward to coast; only this train has another two locomotives mid train with another 112 wagons trailing behind them – a train of no less than 33,600 trailing tonnes with around 17,000hp, relying on remote control of the mid-train locomotives under the command of the one and only driver up front.

The earlier arrival continues to slumber in the afternoon sun for another hour or so until a flurry of activity indicates an arrival from Jimblebar (formerly known by the delightful name of McCamey's Monster), this one headed by a GE dash 8 and two former Union Pacific 3000hp SD40's, which closes up on the standing consist and couples to it. Barely 20 minutes later yet another consist, this one from Ore Body 25, draws up behind the now double consist standing train, its SD70ac and GE dash 8 coupling to the rear to form a triple consist train.



So now there is, in order, an SD70ac, GE dash 8, 112 loaded wagons, GE dash 8, two SD40's, 112 loaded wagons, SD70ac, GE dash 8 and a final 112 loaded wagons – all up a trailing load of 50,400 tonnes, 3.4 km long, conveying nearly 43,000 tonnes of iron ore using 26,600hp of distributed power all under the control of a single driver at the head end.

As extraordinary as this train may seem as it slowly drags its enormous length away into the surrounding remoteness, it is actually an everyday event – the heaviest regular train operation anywhere on the planet. Two and four stroke engines chant their way slowly past and into the distance, to be replaced by the rumble of endless ore cars, punctuated at intervals by the notched up cacophony of the second and eventually third remote power units. Some 8 minutes after it first starts moving the end of this monster train passes and slowly recedes into the afternoon haze to the north. A total of 84,000 tonnes of train have just gone past in little more than two hours - a quite respectable ship load of ore in only two trains. One of the great railroading spectacles anywhere is largely hidden in the remoteness of the North West of Australia, observed only by those who work there and those who deliberately choose to go there to see.

Quiet resumes at Jimblebar Junction for the time being, at least until the next train, an empty triple consist, arrives an hour or so later to disassemble into separate consists to relieve each of three loaders of another 14,000 tonnes of ore. And so the routine continues, day in and day out.

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## **ALEX STONEY: Has some general comments.**

The first point must be that the CORE 2008 Conference was very well done. Both the RTSA Organising Committee and the Conference Organisers did their jobs very well. The registration desk was friendly and efficient, despite the considerable weight of the material handed out.

The Conference Proceedings makes heavy reading. The CORE 2004 Darwin conference had the Proceedings Papers also distributed on CD-Rom, all in one file. CORE 2008 Proceedings Papers were also distributed on a USB memory Key, also all in one file. Separating them is possible, not difficult but tedious, and only if you have a pdf-writer. Next CORE we might improve our green credentials if the Proceedings are offered with the choice, at application time, either (a) complete on paper, with USB memory key, or (b) only on USB memory key plus a list of papers each with synopsis, (i.e. abstract or summary), or perhaps also (c) on CD-Rom, also with paper list with abstracts. A small forest might be saved.

Running four parallel streams made it difficult for some to attend all the papers they might have wished to hear. Three streams would probably have added a day to the conference, but could have been considered.

The lunch facilities in the Exhibition area were good, but the near absence of seating made the meal less than pleasant for some who may have been tired of standing. The main dinner on Tuesday night was excellent, although a bit severe for those who took the tour to Mandurah that morning, starting at 5 a.m.

The post-conference tour to Newman, to the BHP Billiton Iron Ore mine and railway, was an important highlight for me, but only a few trains were close enough to see in operation. The Mia Mia Resort at Newman was very satisfactory considering its location and function, as was the company of those who went. I particularly appreciated the excellent helpful company of Peter Martinovich as group leader. Seeing some of the ore cars, probably of the series I designed for Comeng years ago, was an enjoyable highlight, as I had not seen them in operation before. The hospitality of the BHP Billiton staff was a great credit to them, particularly with their concern for safety after several recent unfortunate fatalities, although their safety record is good. My thanks go also to Sharon (or was it Karen) who drove the bus for us covering some long distances.

## **PAUSE A MOMENT – THE ANSWER?**



The strange attachments to both rails on both tracks in fact elicited zero responses! Either it was too hard or a big yawn.

In fact these are main line slip joints with movement monitors which are installed at intervals between Tahmoor Station (on the Southern main line) and Redhill tunnel to monitor subsidence that may occur due to long-wall mining of underground coal.

The mine workings are now apparently (or have gone) under the railway and are slowly working northwards. One assumes monitoring the Nepean River is by watching the water level !

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## **LAST MEETING - 24<sup>th</sup> Sept: as reported by Malcolm Cluett**

### **Railway Industry Safety Standards Board (RISSB) presentation by Kevin Taylor, General Manager**

The speaker's background included 35 years in the Royal Australian Navy, specialising in Risk Management. This is his fifth presentation to an RTSA meeting, the others being at interstate branches. Reference should be made to the RTSA South Australian chapter's July 2008 newsletter (on the RTSA website), where a detailed summary of the RISSB presentation can be found.

RISSB is the operational arm of the Australian Rail Association. It does not get involved in policy aspects of ARA work, but is linked to ARA strategic objectives. The ARA is moving towards a single national regulator for the rail industry.

RISSB standards are not compulsory. Otherwise there could be legal implications.

RISSB standards are issued free of charge, while *Standards Australia International Global* documents need to be purchased, or the user needs to be a subscriber.

RISSB is accredited by SAI Global. RISSB standard documents have separate Authors and Validators involved in the development of new documents, and both of these are independent. (This is not the case in the preparation of SAI Global's standard documents.) The Chair of the RISSB Development Advisory Board is Dale Budd, who is well known in the Rail Industry.

A major objective is harmonisation of railway Standards and Codes, reflecting similar objectives within SAI Global. (ie, common terminology). SAI has around 1400 current standard documents. RISSB has 200 standards. All of these need to be regularly reviewed and updated to take into account changing circumstances and technological developments (say once every five years). There are some legal issues of the documents becoming out of date. This is quite a workload for a small organisation, and RISSB's procedures (with independent Authors and Validators) is more rigorous than SAI Global's committee system. RISSB's Standard Development Steps are on RISSB's website.

Some of the RISSB standards that are under review are associated with Heritage Railways, and in particular the safe operation of steam boilers. Experience in the operation and repair of locomotive boilers is declining as older staff retires, and the replacement staff have no experience of steam power in everyday service. A new code of practice for the maintenance of locomotive boilers will be issued in March 2009.

Some exemptions are sought from the Disability Code for rail operators. An example was the provision of low platforms in the whole of the Brisbane metropolitan area. It would be very difficult to provide level platform-to-floor access from every station in the Brisbane area, unless the time-frame is reasonably long.

Rationalisation of the various railway Rule Books is also under way. For example, to operate a train from WA to the Qld border, seven different Rule Books are involved. This is a competitive disadvantage for rail transport. Communications systems is another example where there are numerous standards applying within state boundaries, or within a particular operator. Rationalisation can be done when communications systems become life-expired and need to be replaced. RISSB has done a survey of other related industries, (ie, Health, Aviation, Offshore Petroleum, etc) in relation to things like drug & alcohol policy. Safety in the railway industry over-rides privacy, and the railway unions generally support this.

# NEW SOUTH WALES NEWSLETTER



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Level Crossing Safety is a significant concern for RISSB. Two level crossings were recently fitted with enforcement devices (automated cameras functioning like Red Light Cameras at a road crossing) and these recorded 668 infringements in one month for the pair of crossings. The speaker has had a few meetings with representatives of the Road Transport Industry regarding level crossing safety, where they were of the opinion that train should slow down when approaching a level crossing! The speaker was able to cite a number of instances where trains entered a level crossing at a very slow speed, and trucks still crashed into the trains. This led to locomotives being written off, and of course endangers railway employees. RISSB is coordinating a national advertising campaign on level crossing safety. (A successful campaign is already under way in New Zealand, aimed particularly at high school students.)

RISSB is fostering links with the UIC (International Union of Railways) and other bodies. The speaker referred to the large amount of information on the ARA and RISSB web sites. He was thanked for a very interesting presentation.

## **LETTERS TO THE EDITOR**

*Letters to the editor are very welcome. In general letters should be relatively concise (no more than half a page) and should relate to either past material in the Newsletter, events or activities of interest, or reminiscences or future watching of the rail industry as a whole. If in doubt write anyway – the editor is quite pleasant to deal with after that first cup of coffee in the morning.*

## **MEETINGS**

Future meetings are listed in the table toward the back of this Newsletter. Meetings are normally on the 1<sup>st</sup> Wednesday of the month at 11.30 for 12.00 in the large meeting room off the main concourse of Sydney Central (Steam) Station. The venue can be found in the North West corner of the main concourse opposite platform 2, next to the Lost Property Office.

## **AN ONGOING APPEAL**

There are a multitude of activities and developments happening within our industry, again highlighted by both the editorial and last meeting report this month. Issues ranging from the high level (policy and the like) through major construction and acquisition to relatively minor matters that often go completely unrecognised and unreported are all part of our industry and in most cases are only known in detail by relatively few of us.

We are always on the lookout for interesting and varied topics for meetings later in the year and beyond. Basil has done a great job in getting an interesting and varied program up over the last 12 months, but he would welcome any, all or more bright ideas from members. So if you have a pet topic, or are overcome with curiosity about something of interest in the rail domain, then contact Basil at [basil.hancock@railcorp.nsw.gov.au](mailto:basil.hancock@railcorp.nsw.gov.au) and let him know your thoughts.

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**COMING NSW MEETINGS: (black indicates confirmed, red indicates tentative)**

| DATE                          | SPEAKER   | TOPIC  | LOCATION                                     | TIME               |
|-------------------------------|---|--|--|--------------------|
|                               |   |  |  |                    |
|                               |   |  |  |                    |
|                               |   |  |  |                    |
| Wednesday 5<br>November 2008  | Graham Haywood<br>United Group Rail             | Pacific National Class<br>92 Diesel Electric<br>locomotives and the<br>ARG derivatives | Central Station<br>Concourse Meeting<br>Room | 11.30<br>for 12.00 |
| Wednesday 12<br>November 2008 | Many – see elsewhere in<br>this Newsletter      | Symposium – Metros -<br>Future Rail for Sydney   | Old Customs House,<br>Circular Quay          | ALL DAY            |
| Wednesday 3<br>December 2008  | Speaker from the NSW<br>Office of Rail Heritage | Sustainable Rail<br>Heritage Management<br>Strategy                                    | Central Station<br>Concourse Meeting<br>Room | 11.30<br>for 12.00 |

The program for the first half 2009 will be included in the next Newsletter – we are just waiting to confirm speakers and dates before announcing them (it is not good practice to announce things before getting the OK from the individual concerned!!). There are some very interesting topics in the pipeline, but of course if you have something you would dearly like to see or hear about (or share with members) then by all means contact Basil Hancock and let him know.

We will continue with lunch time meetings at Central for the majority of our 2009 gatherings.

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## KEY RTSA SYDNEY CHAPTER COMMITTEE CONTACTS

|                  |                   |                     |  |
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| Andrew Mackay    | Treasurer         |                     |  |
| Tomas Magyla     | Committee         | Coen Stoltz         | Committee  |
| John Watsford    | Committee         | Paul Harris         | Committee  |
| Chris Venn-Brown | Committee         | Lucie Mitchell      | Committee  |
| Malcolm Cluett   | Committee         | Katharina Gerstmann | Committee  |
| Candice Ng       | Committee         |                     |  |

## CONTRIBUTIONS TO THE SYDNEY NEWSLETTER

Part of the function of RTSA is to keep members in touch with what is going on in the industry and with each other and to that end we are only too happy to publish items of interest. Articles, letters or editorial comment for Newsletter are very welcome. We have several hundred members locally some of whom have stories, events or developments of interest that could make an interesting item for our NSW Newsletter.

Contact details are –

The Editor, Max Michell,

- e-mail to [samrom@bigpond.com](mailto:samrom@bigpond.com),
- phone 02 9331 5662 or
- post to P.O.Box 279, Potts Point, NSW, 1335.

For all other matters relating to RTSA Sydney Chapter contact Andrew Honan (Chair) or Bill Laidlaw (Secretary) as above.

## CPD CREDITS

**Engineers Aust members who attend RTSA meetings and events will qualify for CPD credits as per the Engineers Australia criteria. Members are responsible for recording their own CPD for audit.**

## NOTICE TO MEMBERS RECEIVING RTSA NEWSLETTER BY EMAIL

If you receive this Newsletter by post but would prefer to get it by e-mail (quicker and more reliable) then please let the Canberra know (address in the page header). E-mail saves time for you and costs for RTSA, which in the end can only mean better service to our members. There are occasions when email members are able to be advised of events or changes at very short notice which cannot get to mail members in time to be of any use.

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