



NORTHERN DISTRICTS MODEL ENGINEERING SOCIETY (PERTH) INC.

September—October 2009

Sandgroppers 2009

by Jim Clark

Inside this issue:

Meetings	2
President's Report	3
For Sale/Wanted	5
Letter from the UK	6
GLT Report	7
Traction Engine Rally	8

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Vice President
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Secretary
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The sixth annual Sandgroppers Weekend was held at the South West Model Engineers Society track in Forrest Park, Bunbury over the weekend of 7-8 November.

There was a good turnout from clubs all around WA, with people from as far away as Albany and Geraldton.

There seemed to be more of a road steam flavour on Saturday, with several traction engines and two steam cars in operation. However, there were a variety of locos circulating, both steam and internal combustion type, and a

(Continued on page 4)

CALENDAR OF EVENTS

General Meeting	Club Meeting Room Vasto PI, Balcatta	8:00 pm	Friday 13 November
Public Run Day	Club Track Site Vasto PI, Balcatta	11:00 am—3:00 pm	Sunday 29 November
Christmas Run / Club Run Day	Club Track Site Vasto PI, Balcatta	(times to be advised)	Saturday 19 December
General Meeting	Club Meeting Room Vasto PI, Balcatta	8:00 pm	Friday 8 January 2010
Public Run Day	Club Track Site Vasto PI, Balcatta	10:00 am—1:00 pm	Sunday 31 January 2010

September General Meeting

The September General Meeting was held on Friday 11 September 2009 at the Society's meeting room commencing at 8:00pm, chaired by Andrew Manning.

The full Minutes of Meetings are enclosed with Steamlines as a separate Supplement for members. Some highlights of general interest are reproduced here.

Applications were received from 4 new members: David Smith, Nigel Williams, Noel Outram, and Chris Smith. John Shugg moved to accept the new members, Ron Collins seconded. Members agreed.

Andrew Manning informed members about the forthcoming Annual General Meeting and that the current membership fee did not cover the standing costs required to keep the gates open, current fees being \$100 per member, \$50 per partner. The new Membership fee was set at \$130 per annum and pro rata for partner.

Model Engineering:

Nigel Sales showed a working traction engine lamp in 3" scale that he built from lost wax castings from a UK manufacturer at a cost of £84 a pair and passed around the leaflet from the manufacturer with the price list.

Jim Clark showed a headlamp for his loco made from a good value LED torch from Big W modified to suit.

Andrew Manning talked about finding a Worthington Simpson duplex steam pump in the roadside junk pick up. Took it home, a squirt of oil and it was away on 100kPa of air.

Steve Reeves showed and talked about a 2-6-0 0-6-2 Garret that he was building. He showed the frames and boiler plans and various parts he had bought including gauges, nameplates motion brackets etc.

The formal meeting closed at 9:20pm. Members then enjoyed tea and coffee and a good yarn.

October General Meeting

The October General Meeting was held on Friday 9 October at the Society's meeting room following the Annual General Meeting, see report below. The meeting was chaired by the new President Andrew Manning.

The locker for storage and sale of special materials to members is ready for stocking. Ken Austin will price some materials and suggested that a price list be placed inside the locker door so there is no confusion as to prices. Members agreed to this suggestion.

Clive Chapman suggested an all day club run day (no work) to play and to train new drivers. Andrew discussed a full work day perhaps once every second month. Committee will discuss and report to members at the next meeting.

Replacement AMRA fencing to be investigated. It must be child-proof and lightweight. Ken Austin suggested we draw up a list of possible future expenses so they can be prioritised.

Hare & Forbes November Sale. We are to run the sausage sizzle on 12, 13 and 14 November.

Model Engineering:

Nigel Sales showed some photos of his loco running on the partly completed ground level track. He also invited offers for sets of brass locomotive nameplates he has in his possession.

Andrew Manning displayed a collet chuck and associated end mills purchased from CTC Tooling at a very competitive price. He also displayed a new lubricator with a side feed arrangement that he is making for his loco.

Meeting closed at 9:35pm.

Paul James, Secretary

NDMES Annual General Meeting

The 2009 Annual General Meeting was held on Friday 9 October at the Society's meeting room commencing at 8:00pm. The meeting was chaired by Acting President Ken Austin. There were 22 members present.

The President's Report and Treasurer's Report were read to the meeting and accepted by the members.

The Returning Officer for elections was John Martin.

As there was only one nomination for President, Treasurer and Secretary, the nominated members filled the positions. The Committee member positions were filled from those members present as there were no formal nominations.

The office bearers for 2009-2010 are:

President:	Andrew Manning
Vice President:	Ken Austin
Treasurer:	John Shugg
Secretary:	Paul James

Committee Members: Phil Gibbons, Tony Jones, Nigel Sales and Ken Cooper.

Paul Costall has kindly taken on the role as Birthday Booking coordinator.

With the completion of elections the Annual General Meeting was closed at 8:20pm. **Paul James, Secretary**

Notes from the President

by Andrew Manning

The end of the year seems to be going full on, not only are we making some great progress on site with the Ground Level Track, we are also booked out for events and are turning down requests for birthdays/functions.

The last Public Run Day was very quiet public-wise, but there was a good roll up of members. The "Blowfly Brigade" did the bulk of the passenger hauling. It will be great to see some of the big locos back on the track, Springbok is only a couple of weeks away as are one or two of the others, so next year we should have a much wider variety of locos in service.

By 2:30 pm on the run day we had no passengers so we shut down operations. The day had been relatively hot and I think everyone was pleased to get an early start to packing up. I will suggest to the Committee that we look at changing our public running times to say 10am to 1pm for the summer months.

One of the issues we are faced with is the lack of qualified drivers. To meet this challenge it is planned to have regular Club Run Days where members can gain experience driving, or can run their own loco without the public pressure. November is too busy to kick this off, but we do plan to have a Christmas Club Day on Saturday 19 December.

I have been giving the Club Run Day some thought and would like to suggest the following: That each Saturday or Sunday following the General Meeting be a Club Run Day, from 9:00am to say 3:00pm. During that time we can conduct training, play trains and run demos in the workshop on machining, boiler making etc.

Members can turn up when ever they like. The key requirement being that we have a relaxed enjoyable time with a few members left at the end of the day to pack up and secure the site. We could do as many other clubs do and have our General Meeting some time during the day. Bring your thoughts to the next General Meeting on Friday 13 November.

Track building is on hold as we get the underground services installed for points, signals and communications. The trench has been dug and we have started installing cables, pipe and conduit. We have discovered some earlier installations of water, power and reticulation which we will add to the site drawings.

In the last week we have had two further applications for membership submitted, one coming complete with a very nice 3½" Mountaineer.

Some Important Dates for your Diary:

13 November — General Meeting

12-14 November — Hare and Forbes sale - we are doing the sausage sizzle.

28 November — Birthday party- 12:00 to 2:00pm

29 November — Public Run Day

5 December — two Birthdays: the first at 9:00am, the second 12:00 to 2:00pm

19 December — NDMES Christmas Run/Club Day

8 January — First General Meeting of 2010

16 January — Birthday party: 9:00am start.

Andrew Manning, President



Above: Jean Crawford and Cathy McCafferty waiting to serve passengers at the canteen window. Thanks Ladies!

Photo: Nigel Sales

Below: "Come on, Andrew!" Tony Jones overseeing Andrew Manning as he gets steam up in the steaming bay.

Photo: Nigel Sales



Sandgropers Weekend 2009 (cont)...

by Jim Clark

(Continued from page 1)

good deal of activity was taking place all afternoon on the elevated 3½" track.

Particularly impressive on the ground level track was the replica tram recently completed by Colin Puzey of Yarloop Steam Workshops fame. It's a lovely piece of work and lots of fun to drive or ride in. For those who haven't seen it, he also has a full size replica steam tram at the Yarloop workshops which is a real masterpiece and worth a trip to see.



As always, the SWMES put on a great spread for the Saturday night dinner—no one went home hungry! There were large quantities of delectable home cooked cakes for morning and afternoon teas, and lunch too.

Thanks from everyone who attended to all the SWMES members, partners and helpers for their hospitality and for putting on another really great weekend of steam action.

Jim Clark

Left: Tom Talbot's steam car at speed with Brian Lawrie hanging on tight...

Above right: Ed Brown taking a break from driving the big stuff.

Below right: Colin Puzey's replica tram looked great and was a big hit.

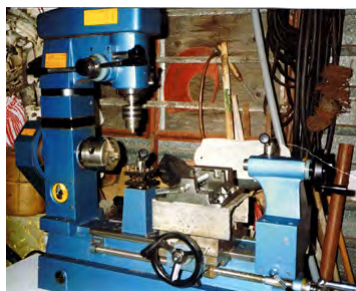
All photos:
Jim Clark



FOR SALE

Lathe/Mill — a very simple machine as shown in photo. Asking price is \$600.

Please contact Andrew Manning on 9446 4825 for details.



Flat Wagon Kits — full sets of parts to build Ernie Redford style flat wagon riding cars: \$500

Please contact Ernie Redford on 9401 5597.



5" Track — the club has 30m of 5" elevated track for sale to a good home. It is fairly rusty, and can be viewed at the rear of the grounds. Contact Andrew Manning.

Wooden formers for building a 5" Britannia boiler — free to a good home if you are building one. Plus a copy of the plans if needed. Contact Jim Clark on 9446 5870.



NEWS ITEMS WANTED

As always, I need more items for Steamlines. Don't leave it all up to the few stalwart correspondents — surely you have seen, been or done something of interest to other Model Engineers recently?

How about a few words and photos showing your current project? Or an article about somewhere you've been? Or a short article on how you solved some workshop problem? Please email your material to:

jimclark@hardwareandsoftware.com.au

or post c/o Secretary, PO Box 681, Balcatta, WA 6914

May The Flow Be With You... Part 2

by Jim Crawford

Continued from July-August issue of Steamlines — an ongoing series of articles on loco operations by Jim Crawford, the Society's Driving Licence Examiner.

The importance of clean water.

Once water is in the tank, it is considered essential to have a fine-mesh filter/strainer at the inlet of pipelines before delivering this water to pumping devices of any type. (Hand, axle, steam-driven mechanical, electric transfer-pump, or injector). Inadequate filtration here can, and usually does, lead to blockages, sticking valves and excessive wear on fittings downstream. Failure can quickly follow.

I should mention the situation with Blowfly's driving-car water tank. I am certain that not everyone knows about the fine mesh filter fitted inside the tank at the front left-hand end, leading to the injector feed pipe. This was a necessary fitting, due to the amount of grit dropping into the tank water when gas cylinders were changed.

If a driver of Blowfly is experiencing injector water-feed difficulties, firstly check that there is water in the tank (it has happened!) Secondly, check the filter. If necessary, the filter can be removed by unscrewing anti-clockwise, followed by a clearing backflush with a tap or hose. It can then be re-installed.

Before launching into the next stage of our look at matters hydraulic, there is one important point that I will correct. Quite a few of our Membership have favourably commented upon the design of NDMES Driver's Licences and have thanked me for this result. The truth is, that it is not of my doing. The design, printing and supplying of laminating sleeves is down to the efforts of member Vince Devine, who organised this a couple of years ago at no cost to the Society.

As we all seem happy with the design parameters, I will take this somewhat belated opportunity on behalf of all members to thank Vince for his endeavours.

Atmospheric Pressure.

Most people would know that atmospheric pressure at sea level is 14.7psi (101.4kPa). However, I wonder how many realise what a vital part this pressure plays in our daily lives. Drinking through a straw, siphoning liquid from one container to another, the priming of a water pump and the Bride's vacuum cleaner, all would be useless without it.

It is also a necessary factor in the operation of our live steamers. Let's look at a typical scenario in miniature.

Assuming that all preliminaries are completed, we have a locomotive in steam and a tender full of water. The need arises to transfer tender water to the pressurised

boiler. Leaving aside other devices which can be used for this transfer (i.e. Injectors, etc.), we turn to the manually operated ram-type pump.

This is usually tender mounted, for a couple of good reasons. The first is that it is within easy reach of the driver. Imagine leaning over a long tender to activate a loco mounted hand pump, perhaps for an extended period. Even if it could be reached, for many of us, the back pain would smartly curtail our pleasure.

The other reason is our old friend, atmospheric pressure.

Now, before we go further, I want to take a look at a line from the tender to a loco-mounted pump, be it hand or axle driven. It is clear that the water within the tender does have weight and can therefore flow through an outlet. The pressure available at the outlet is limited by the height of the water above the outlet, i.e. the "Head".

Normally described as the *weight* of a column of water, one square inch in area, the head is expressed as pounds per square inch at the base of the column.

The weight of a one square inch column of water 12 inches high is 0.434psi (2.99kPa).

Taking a look at our loco tender sizes, I suppose water depth, when full, would be around 6" (optimistically). The pressure available to move the water from the outlet would be $0.5 \times 0.434 = 0.217\text{psi}$. (1.49kPa).

I think you will agree that this is the best part of very little driving force and if we are looking for a reasonable flow at the water's intended destination, then the diameter of the delivery pipe must be increased or its length shortened — perhaps both.

It is time to move away from the arithmetic, as my calculator battery has gone flat and I don't really have enough fingers and toes! What does all this mean in practical terms when we are trying to top up a boiler in steam?

The ram-type pump is known as a "force pump". This means that, providing the ram chamber is full of water and the tender by-pass is closed, when the ram is moved forward the water has no choice but to travel through the delivery valve, the pipe, the check valve and into the boiler. That's fine, but what about getting water to the pump in the first place?

We have already seen that the pressure of the tender water is not going to give us much help, so we need to look elsewhere.

That's it for now. Next time we'll take a look at the vacuum formed by the operation of the pump, the sizes of delivery lines and common problems with pumps.

Jim Crawford

An Occasional Letter From The UK

by Dave Burman

Although I reside in the UK, I am a member of the NDMES, and I have spent a few Saturday mornings painting track panels a pleasant shade of silver. This occurred during my 5 month stay in Perth earlier this year.

During a conversation with John Shugg, I asked if it would be of interest to the club members if I put together an occasional article about the model engineering scene in England: John said try it and see, so this is my first one. I do enjoy visiting the various model engineering shows that occur on a regular basis in the UK, so the following is an overview of a show I visited early in August.

The Guildford Show

This is an annual show put on by the Guildford Society of Model Engineers. Guildford in the UK is a large town about 40km south west of London. The club is located in a large park on the outskirts of Guildford — some of the show is in the club grounds and the rest overflows into part of the park.

The exhibits ranged from locomotives and traction engines to boats. The club has a raised 5"/3½" track and a 7¼" ground level track. Both were used throughout the show with a large variety of engines providing rides to the show attendees, a selection of which follows - below is a GWR Armstrong goods outside frame 0-6-0 and a LMS (BR) Duchess, on the right a BR Britannia, and below that, one for Andrew: a LNER B1.



Dave Burman joined NDMES a few months ago and quickly joined the track building crew at NDMES. Dave is pictured here at the North London Society of Model Engineers track at Colney Heath, where Dave has been a member for some years. He says he is now enduring the British summer!

Photo: Dave Burman, courtesy John Shugg



An adjacent field was used for the trader stands, plus a show ring for traction engine models. A large marquee was used to exhibit a wide range of models, the most interesting technically was a 5" gauge Great Western gas turbine locomotive #18100 with a gas turbine engine under construction, shown on the following page.

7¹/₄" Rail Construction Report

by Tony Jones

The fabrication of the last piece of track was completed two weeks ago, but doesn't mean we are finished, it's a bit like building a boat, once the hull is finished you think "Oh its done!" Far from it, it is only half way there.

Track has been stacked around the grounds for over three weeks, waiting for cable conduits to be put underground. In mid-October the Ditchwitch was hired and the slaves dragged it around the site—they must have felt like slaves as it was b...y hard work, apart from the machine having a mind of its own. Due to the nature of the sandy ground a third of it tumbled back into the ditch. This meant that on Saturday we spent a lot of time scooping the remains out with special 75mm wide shovels.

Then we got serious and had a good turnout of willing helpers who stuck at it and we achieved quite a bit. Short conduits were cut to length, long ones dragged into place. Rag mouses were blown through and pull wires established, tee junctions were fitted and terminal boxes were sunk into place. It now looks as if a pair of Fowler ploughing traction engines have been messing around the place. Photos will be taken of all ditches and pipework noted for me to try and get into some sort of order on a drawing, reverse engineering I think they call it. I don't think a drawing is vital as most of the ditches are printed indelibly on the minds of the guys who worked on them.

Apart from the conduit laying, other work has progressed in between times. Ken Cooper is still progressing with the points and I fixed up an anchor for the loading rail that goes onto the turntable. A big surprise was on the first hot day the turntable 'swelled' enough to make contact with the outgoing rail and a grinder was used to take 1mm off the ends. So the next session, also a warm day, I hastened to cut the telescopic blocks on the end of the straights, only to find that a 2mm cutting blade kept binding as the gap closed on me.

When the cutting was completed we had to develop a method of cleaning out the holes in the blocks from 12mm to ¹/₂" as the pins were ¹/₂". We used our lifting tackle to raise the rail ends propped up with a brick and then were able to put a ¹/₂" drill bit through without breaking my wrist. When the drilling was completed the pins were tapped into place no dramas. That was a cool morning and the gaps were seen to be over 6mm now. So it is important to allow for expansion even on 7.25" track. Oh! last but no means least, sleepers were laid right around to the twin trees close to the container. It won't take long now to put the station straight together to complete a simple circuit. We will soon be looking for a new fabricator to do the next section of the inner circle.

Tony Jones

An Occasional Letter from the UK (cont...)

by Dave Burman



(Continued from page 6)

Left: GWR #18100 gas turbine powered engine under construction.

A selection of steam wagons and traction engines were on display in the parade ring, a couple of which are shown here.



And finally, the photo at the bottom right proves that the South Africans are everywhere!

Dave Burman

All photos: Dave Burman





Northern Districts Model Engineering Society (Perth) Inc.

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2009 Traction Engine Rally — Jondaryan



The 2009 Miniature Traction Engine Rally was held on the 24-25 October at the historic Jondaryan Woolshed outside Toowoomba.

A good contingent of eight West Australians attended, unfortunately without engines due to the costs of transporting them so far.

These photos provide a few views of the event.

Jim Clark



Above: AME Editor David Proctor congratulating the winner of the AME Traction Action Trophy.

Left: Shearing stands in the woolshed, which has been in continuous use since 1861.

Right: An unusual freelance steam tricycle built by a local man, Neville Morris.



Left: A full size working steam rock crusher.

Right: A beautifully finished and finely detailed Foden steam wagon.

Below: And of course, a shearing demo!

All photos: Jim Clark



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