

STEAM**LINES**

NORTHERN DISTRICTS MODEL ENGINEERING SOCIETY (PERTH) INC.

March — April 2010

April Run Day

by Andrew Manning

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The April public run day, held on Anzac Day, was our best so far this year. It seems our new advertising arrangements are now paying dividends. We had 13 members helping out and generally enjoying a yarn while waiting for a turn to drive one of the engines in steam: three Blowflies and my Springbok.

After a slow start the station queue often became quite long and we reverted to single lap rides for a while. All of the engines behaved well and quite a few members had a chance to drive. The earlier start time of 10:00am seems to work well, in fact we were hauling passengers by 9:40am.

Above: Tom Winterbourne (previous owner of Andrew Manning's Springbok) arriving at the station. Photo: Andrew Manning

The slow start allowed Ron Collins to get some learner driver time up. Ron will be able to take his Simplex directly into revenue service in a couple of months.

With the increased membership helping out on run days it is perhaps a good time to get the model engineering display together and manned. I am sure there are lots of visitors who would be attracted to such a display and to the Society.

Andrew Manning

CALENDAR OF EVENTS

Event	Location	Time	Date
General Meeting	Club Meeting Room Vasto PI, Balcatta	8:00 pm	Friday 14 May
Club Run Day	Club Track Site Vasto PI, Balcatta	09:00 am — 2:00 pm	Sunday 16 May
Public Run Day	Club Track Site Vasto PI, Balcatta	10:00 am — 2:00 pm	Sunday 30 May
AMRA	Claremont Showgrounds	10:00 am — 5:00 pm	Sat, Sun, Monday 5—7 June

March General Meeting

The March General Meeting was held on Friday 12 March 2010 at the Lindsay Adams meeting room commencing at 8:10pm, chaired by Andrew Manning.

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

Nigel Sales notified members present that he and Pauline have sold up and are moving interstate to live nearer to family. He also gave a report on the signals that he has been party to.

Andrew formally thanked Nigel and Pauline for their invaluable input since joining NDMES from the U.K.

Model Engineering:

Nigel Sales offered for sale some small twist drills, tube cleaners and cast domes. He also presented a genuine traction engine oil can to the makers of two fine Fowler traction engines, namely **Paul Costall** and **Ron Collins**. Greatly appreciated and closely guarded.

Steve Reeves displayed a kerosene style headlamp which he has made for his 7¼ inch Mountaineer. It is battery operated, has a commercial reflector and brass surround and a lost wax cast crown.

Peter Harding showed two small commercially available stationary engines.

Doug Pitney showed a cylinder pattern he has made in order to have several cylinder sets cast for the 3½ inch gauge Virginia locos being made.

Paul Costall presented the club with two beautiful bed quilts made by his wife Kathy—see page 3. Paul showed several wheel sets he had machined on the CNC lathe.

Andrew Manning presented the boiler from a 2 inch scale Sims and Jeffries traction engine he has for sale. Much of this has been made and the asking price is around \$2,000. He also made mention that a 5 inch Simplex is currently for sale at approximately \$2,200.

The meeting closed at 9.10 pm.

Members enjoyed a drink and a good yarn.

April General Meeting

The April General Meeting was held on Saturday 16 April 2010 at the Lindsay Adams meeting room commencing at 10:15am, chaired by Andrew Manning.

Items from General Business:

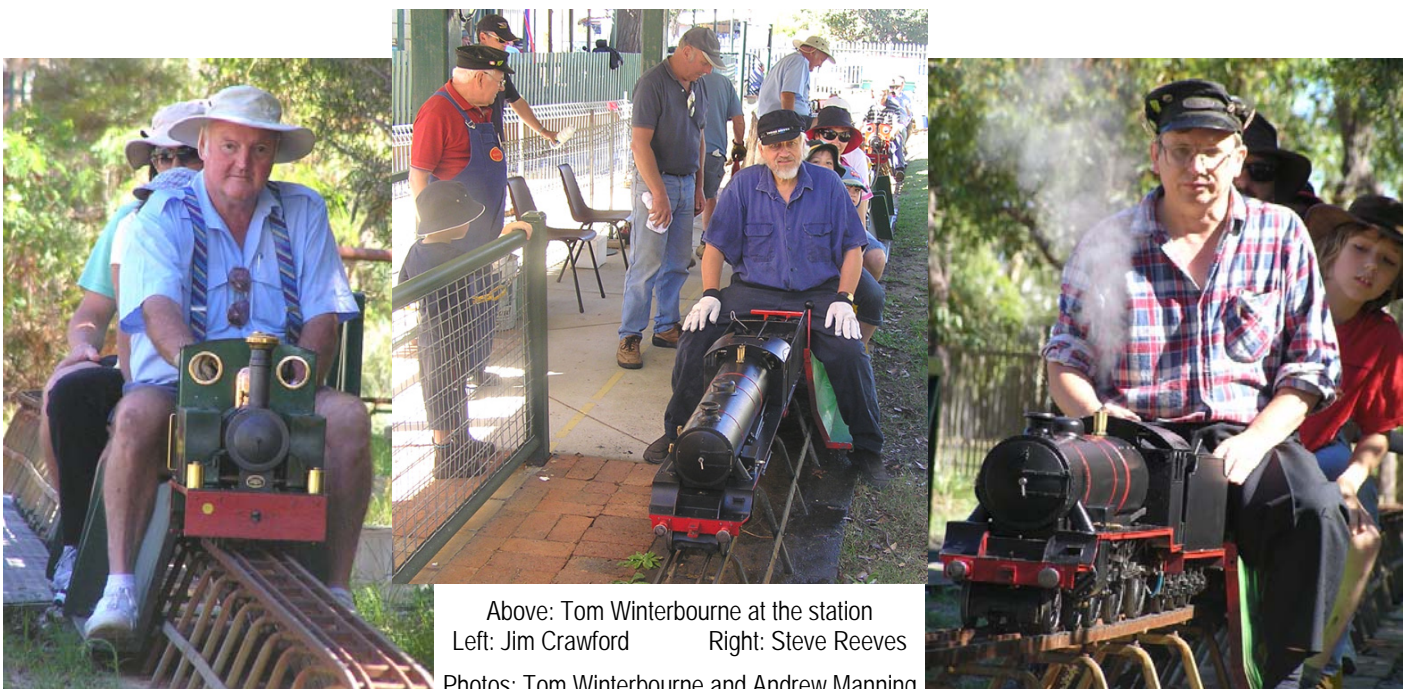
AMRA preparation update: Steve Reeves has the overall organisation in hand. Paul James is organising the quilt raffle and Clive Chapman will oversee the static model display.

Clive Jarman reported on the recent AALS Convention he attended in Queensland. Items mentioned: stainless boiler code still being considered; copper code to be updated: silver solder use - see Reeves website for important information. Convention attendance was approximately 300, with 100 locos and well received.

The meeting closed at 10:55am.

Paul James, Secretary

More Photos from the April Run Day



Above: Tom Winterbourne at the station
Left: Jim Crawford Right: Steve Reeves
Photos: Tom Winterbourne and Andrew Manning

President's Report for April

by Andrew Manning

Things are progressing nicely at the grounds, including the grass and weeds. The ground level track is all in position and has been used, but requires to be levelled and ballasted before we can put it into service. Our competent person, David Naeser, has inspected the track and will issue an inspection report to the Committee in the near future.

Providing all is OK we will be able to start using the track. Passenger hauling will not be possible until the station fencing and services have been installed.

Tony Jones is on his last section of track. We will then have a siding through the tunnel and out on the station side. If it had not been for Tony's determination to get the track down it may well still have been a pipe dream.

RAFFLE



We have 2,000 raffle tickets to sell. They are in books of 25 at \$2 per ticket. The first prize is a large quilt with a detailed loco drawing as the material pattern. The second prize is a lap quilt in the same material, as shown in the photos above. The third prize is 50% off a private party at NDMES, and the fourth prize is a \$50 voucher from Bunnings.

The raffle will be drawn on 9 July at our General Meeting. Members are asked to sell as many tickets as possible and we will be selling them at AMRA.

Paul James has the ticket books and will issue them to members. Pick up a couple of books at the meeting on Friday night, or contact Paul on 9457 7175.

The quilts were pieced, quilted and designed by Paul Costall's wife Kathy. The larger one is 1.3m x 1.8m (single bed sized) and is valued at \$300. The other is 1.3m square (approx) and could be described as either a 'lap quilt' or a 'throw' and is valued at \$250.

Proceeds of the raffle will go to raise much needed club funds. A special thank you to the Costalls, particularly Kathy Costall for her hard work and generosity.

Ken Cooper is working on improving the installation and operation of the points, having installed thick rubber matting under the station entrance points to keep them clear of leaf litter.

John Martin has been beaver away reconditioning a flat car for use as a run day equipment car. On it will be mounted and stored all of the signals etc. that we need to put out each run day. This will reduce the frustration of trying to find everything each run day.

We will have the raffle tickets printed by the next run day for the quilt raffle. We have 2,000 to sell, so I invite members to help sell the tickets (see item below).

AMRA is quickly approaching, it is the long weekend at the beginning of June. Please try to help out. Contact Steve Reeves on 0408 955 692.

Attached to the Supplement for this issue you will find the calendar of NDMES events and roster for the rest of the year. We will continue with the format adopted so far this year and will keep public run days at 10am to 2pm for the full year.

Andrew Manning
President

AMRA

AMRA will be held once again at Claremont Showgrounds over the Queen's Birthday long weekend, 5 — 7 June.

This is traditionally our big revenue earner for the year, so please make the effort to help out, either at the stand sometime during the weekend, or assist with the setup on Friday evening and the removal on Monday evening.

Contact Steve Reeves on 0408 955 692 for details.

LOCO NUMBERS

Some of you may have admired the embossed number plates on the locos at Kentin Engineering recently.

These were done by Ken's son Malcolm on one of their CNC milling machines. So if you fancy some really professional number or name plates for your project, talk to Ken — they may be able to do some for you at a reasonable price.



Prelude to Construction of a TOAD

by Tony Jones

As an exiled Welshman that lived alongside the main GWR line from Newport to Liverpool, we could not help as children, observing all the different classes of locos from fast expresses to war time goods - American ten wheelers.

The engines that are now fully restored and well known to us now I would have seen at some time or another pass by; the names like Caerphilly Castle, Beaufort Castle, Kings, Courts, Saints, and I even remember North Star. By no means least, we saw all the various tank engines carrying goods and animals towards the war effort (WW II).

This brings me to the last truck in the goods trains, the **TOAD** (not the one in the hole). This was the Guard's van built by GWR. They had a veranda on the rear end where the handbrake is situated, and had the comfort of a pot bellied stove fed by good Welsh coal.

They commenced construction in 1888 to about 1913. The weight of the TOAD increased over the years from 10 to 12 tons to 16 to 20 tons, and even some at 25 tons, but the common standard was 20 tons. They even tried a 3 axle van but production of these variants were limited. Sanding gear was installed to drop sand forward of the axles regardless of the direction it travelled.

One peculiarity that many guys have noticed and made comments on was they had white painted letters on the sides saying "Not For General Use" - did this mean keep your hands off or keep to a designated area? Most of the vans had their Depot name painted on each side. The painted wooden body was drab grey with black metalwork. I don't remember them ever being repainted, so they became very drab indeed.

As you know I was drawn to building a "Pansy", the tank loco that served all the Welsh valleys taking miners to work and school kids to school. Therefore I thought it was logical to have a Toad to match the loco.

What I am endeavouring to do is outline briefly the way I built the Toad. It is supposed to be useful as a ride-on car to carry my weight of 85kg. I remembered seeing construction details in a ME magazine a few years back. It took me a while to find it spread over 3 copies of ME, but I was disappointed to find that it was dimensioned in inches and for 7.25" track. After stewing over it for a week, I bit the bullet and started to draw it up on AutoCAD and translate all the figures into metric and to 5" scale. The drawings took a while but as soon as I had enough to construct the chassis I was into it.

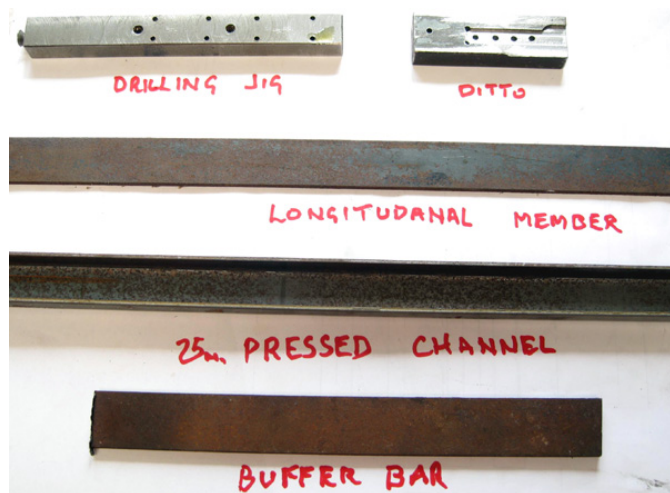
The first requirement was channel rails for the perimeter of the chassis. They had to be 25mm deep from 1.6mm black steel. I searched my workshop but could only find 30mm deep channel. I pondered but decided it was out of scale. One day on a trip to Di Lena's to get rail ties I bumped into Mr Di Lena who was an old friend from way back. I asked him did he have pressed channel 25mm deep x 1.6mm. He said: "No, but I can make it for you." In ten minutes I was walking away with 4 pieces of the required channel for \$15.

So construction started. The buffers were 25 x 12 flat bar (strange that) and machined on the ends to let in the channel rails. All holes were drilled and counter-bored as they could not be accessed after assembly. The next part was very interesting, 25 x 3 flat bar (strange again), it entailed longitudinal and cross members to be cut to form an egg crate construction. They were very carefully marked out with a scribe, and with a 3mm cutting disc, the three cross-members were cut in a pack so that they were exactly the same spacing.

I found the cut was a trifle tight so each one was carefully filed with a ward file to make a neat sliding fit. Top and bottom edges were given a spot of arc weld and a very rigid chassis was the result. No daylight can be seen in the cuts.

To be continued next issue...

Tony Jones



Above: The chassis takes shape.

Left: Various items required to make the basic chassis.

Photos: Tony Jones

Farewell Bob Brown 1934 — 2010



This photo, taken on 2 June 2002, portrays Bob, then a member of NDMES, participating in the NDMES Exhibit at AMRA.

Photo: John Shugg

Bob Brown passed away on 1 May 2010. Bob was one of the pillars of Model Engineering in Western Australia. Someone that always had time to help and advise people interested in model engineering. He will be missed by all who had the privilege of knowing him.

Andrew Manning

Bob Brown's passing will have saddened his many friends made over the many years of Bob's involvement in the hobby. Our sympathies go out to Freda, his wife, and to Bob's many friends.

I can well recall his very generous, positive encouraging remarks about the boiler plates I presented to Bob when he was one of our club's Boiler Inspectors!! I also recall his humorous and informative talks given over several club meeting nights on Boiler building. He was a very skilled builder of copper boilers and very highly regarded in the hobby. Bob never hesitated to pass on his skills and knowledge to the many who sought his help over many years.

John Shugg

Below right: Bob at the 2008 Sandgroper's gathering at SWMES.

Photo: Jim Clark

Eulogy for Bob Brown

by Steve Reeves

Bob Brown was a major contributor to our hobby as he was not just content to build a locomotive and run it. Instead he used his skills to encourage others, wrote articles for the Model Engineering Magazines, became President and founder of clubs that promoted our hobby, and made many friends all over Australia as well as America and of course in the UK.

Bob first became interested while a young lad in the ship building docks of Manchester. His first projects being steam boats where he put his carpentry skills to good use. It was here that he learnt his copper smithing skills which he was later to use in the building of miniature steam boilers.

In a semi-professional role this enabled him to retire early and to buy Mrs. Brown lounge room furniture amongst many other things.

So well known did he become that he became an adviser to the Australian Miniature Boiler Committee and has made many friends all over the country through boilers he has made for them.

During his lifetime he has built over nine railway engines some of which can be seen today running at the various clubs here in Western Australia and over East.

Lately he went back to his Model Engineering roots with the construction of little stationary steam plants.

Encouraging young people was also a very important part of the hobby for him. There are many of us who have, while in our teenage years, visited his workshop once a month to learn the Model Engineer's craft. Along the way we picked up important life lessons as well. Many of us got our first jobs and apprenticeships through demonstrating the skill he has taught us.

Bob Brown's sense of humour is legendary. He was always a part of a club's run day. As we steamed our engines up in the early morning sunshine he was always there telling humorous stories and adding a colourful atmosphere to the day's operation.

Bob, on behalf of all of us in the hobby I would like to thank you for the valuable contribution you have made and the good example you have set.

You have enabled our hobby to grow and prosper, for which we are all deeply in debt.

Steve Reeves



The Foundry — Johnston & Wells Part 4

by Andrew Manning

The pattern shop was a loft over the back of the machine shop. Patterns were stored on a mezzanine floor down each side of the machine shop. The pattern shop was quite large and well lit. It contained a big band saw, several wood lathes of different sizes, a planer and of course work benches and layout tables. The machines were driven from overhead shafts by flat belts.

There were two pattern makers, Fred and Tim. Fred was getting on a bit, and wasn't too sure about me. Tim was relatively young and encouraged me with a lot of patience, answering my questions and showing me techniques. Looking back, all of the men in the various areas of the works were friendly and happy to answer questions and involve me in what they were doing if I was sent to help them. The men just seemed to get on with their work — I cannot recall any complaining or grumbling about work conditions or pay.

My first job was sweeping the floors, with a lot of breaks to watch the two pattern makers at work, largely hand crafting the wooden patterns.

The first pattern making job I had was to turn up sticks of core prints of various sizes on the wood lathe. These were truncated cones used on the ends of pattern to make the mould imprint that supported the core. It was the first time I had used a wood lathe and it was quite exciting to see how fast the wood took shape. I had to turn the cores to specific sizes, measuring the diameter using slip joint calipers and a steel rule.

During this period I made a pattern for a small lathe bed about 500mm long, moulded it, and had it cast in grey iron. The lathe was finished some 20 years later for my father, who used it to make several stationary engines and the start of a Tich.

As I established myself as being useful, the pattern makers involved me more in their work. It was some time before they would let me use the band saw and I was never allowed to use the planer. I would go out with one of them to help measure up fire places for cast iron hearths and back plates. These were installed when the brick work was beginning to crumble, or to improve the heat from the fire.

Back at the pattern shop I would help to make up the patterns from ½" ply, sand and paint them with shellac, that is after forming the internal corner fillets with beeswax. The wax was formed using a heated steel ball on a rod, the ball being heated over a metho burner.

The majority of patterns were shaped by hand using the hand planes, chisels, spoke shaves, files and sandpaper. A large disk sander was used to establish draft on vertical surfaces.

The workshop was brick walled but had open trussed timber roof frames. The workshop had not been painted since it was new 60 or 70 years earlier. Things were quiet, and I had just started work for the school holidays. Fred the senior pattern maker decided that we should have a clean up and paint the shop. I was put to work cleaning the walls down and scraping off the loose paint. It was slow and tedious and very dusty. I decided that I would speed up the process with the air hose from downstairs. You can imagine the dust and mess as I let go with the air hose after 60 years of dust accumulation. Fred was not happy. He went on holidays until the place was cleaned up. It took us a good week to clear the dust and paint the walls.

An interesting job I played a part in was the making of a pattern for a large cast gear wheel. The pattern maker made a single tooth of correct profile somewhat longer than needed, with a base extended down about 50mm. The required tooth length and true depth were marked out on the blank then carefully removed on the band saw such that there was a tooth profile at each end of the blank and a space the size of the required teeth between them. This was the tooth former. Pieces of soft wood were prepared as blank teeth. They were fitted, in turn, into the space in the tooth former, secured into position by two screws from the back of the extended base. On the lathe a wooden cylinder was turned some 75mm dia. and a bit longer than the tooth former. The centre section of the cylinder was relieved slightly for a length slightly greater than the length of the gear teeth. Sand paper was glued into the reduced diameter of the cylinder such that the grit was no higher than the cylinder surface.

With the cylinder spinning in the lathe the former, held in both hands, was positioned so the two profiled ends of the former were on the cylinder and the tooth blank over the sandpaper. The former was then rolled up and down on the sandpaper until the blank was fully formed. The process was repeated 60 times to make a full set of teeth. The teeth were carefully glued and nailed to the wheel base. There were lots of beeswax fillets to form before the wheel was painted and sent down to the foundry.

The rear wheel rims for the steam rollers I talked about earlier were machined on a faceplate lathe in the machine shop. The first cuts were deep to get through the cast surface and the load on the overhead drive was such that intermittently all the machines in the shop slowed down. There were yells and abuse directed at the bloke machining the tyres when it really slowed down.

Across the road from the machine shop were the boiler and blacksmith's shops and another great set of experiences — another time!

Andrew Manning

An Occasional Letter from the UK

by Dave Burman

Continued from the January—February issue.

The following is a description of the system used at the Peterborough MES to unload the engines, move them onto the steaming bays, then onto the running track.



The photo above shows the hydraulic lifting table used to take a loco from a car and transfer to the traverser. The hydraulic ram is manually pumped (leg power).

The previous issue included a photo of the lifting table in use, with a loco about to be pushed onto a short section of track that connects to the traverser. The traverser is then pushed to align with a steaming bay.



The next photo (above) shows the steaming bays down one side of the steaming area. The grey objects hanging under the track are used to hold the ash when the fire is dropped at the end of a run.

Once the loco is fired up it is placed on the traverser which is then aligned with the left hand track which leads down to the running track.

The track drops down until level and parallel to the running track (see photo at right).



A steaming bay in use for firing up and giving advice and assistance whilst the driver is preparing a loco, or perhaps just for looking!

All photos: Dave Burman

The track leads onto a traverser. At the end of the traverser a section of track is hinged and with the use of a lever it is lifted and lowered. The loco is placed on the traverser, the hinged section lifted. The traverser is moved so that the hinged track is aligned with the running rails and then is lowered to allow the loco to move onto the running track — see photo below.



The box contains an interlocking system, such that when the traverser is moved, the approach signal turns to red.

If a train is already in the section then the release lever (white knob above) cannot be operated.



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An Occasional Letter from the UK by Dave Burman

(Continued from page 7)

The loco is placed on the traverser and moved across to the running track.

With the traverser aligned with the running track the hinged section on the end of the traverser is lowered, as shown in the photo at right.

The loco runs down the running rails, the traverser

is moved back ensuring the release lever enters the interlocking box to put the signals back into normal operating mode.

Now you can
play trains!

Dave Burman



FOR SALE

Lathe that was advertised in Steamlines a couple of issues ago is still available. It is a very basic machine with milling head. \$500 ONO.

Contact Andrew Manning on 9446 4825 for details.

Locos ex South Africa — Ken Austin has some details on locos for sale. Contact him on 9409 2336.

NEWS ITEMS WANTED

As always, I need more items for Steamlines. I'm running very short of items both short and long to fill the pages with interest. Remember, it's only as good as your input!

Please email your material to:

jimclark@hardwareandsoftware.com.au

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

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