

'Newsletter

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May 2003.

Running Day Reports.

February. After the heat wave conditions and total fire ban that caused the January public day to be a non-event we all hoped for some kinder weather. The day was warm and not too humid. We did not have the usual variety of motive power, but, as the crowd was not all that large we managed to provide a good service and tallied up 1262 rides by the end of the day.

The elevated track had two trains running. Jim Leishman, Ps4 with three cars and van formed one train while Mick Murray, "Tinkerbelle" made up the second train. There was to be a third train but Paul Taffa's Hunslett was failed in loco due to a broken gauge glass. Both trains ran the whole afternoon.

On the ground level we had one of the usual combinations of Henry and Max, TGR R class and "Bitza" on the inner main. There were double-headed Lee locomotives on the outer track. C3112 driven by Ray leading C3506 with Matt at the regulator pulled one six car train while a second train on this track was hauled by John Hurst, 4-8-2 Mountain. During the afternoon this locomotive spent some time in the depot but returned to continue in revenue service.

As mentioned earlier the crowd was not large but there were several party groups and the shaded areas were taken up very early. In all a very easy afternoon.

March. This running day turned out to be a very busy venture. We had a very large crowd; they were queued over the footbridge for a lengthy period of time. Warwick was gatekeeper and mentioned that some of the large party groups with pre paid tickets saved a lot of trouble calculating the entry charge. There was a good selection of locomotives on hand but just sufficient members to run the show. We really need a good roll up on running days so that we can have a bit of a break during the afternoon, we can not do this if every one there is fully committed for the whole of the time. As running got under way the queues for each station filled quickly, the one for the elevated track did not seem to shorten all afternoon.



Elevated trains were run by the following drivers: Paul Taffa had the Hunslett in running order again with a replaced gauge glass and ran the whole afternoon. Ken Baker ran a few cars with his "Simplex". Jim Leishman drove the Ps4, 4-6-2, with three cars. We had double Brians, Rawlinson with Blowfly and Carter with Perseverance with a three-car train. Jim Mulholland ran the Pansy 0-6-0 light engine. The outer main had Henry's TGR R class and Max with "Bitza" at the head of one train. This became a triple-header when David Thomas, B10, 2-6-0, coupled

up in front and provided a spectacular combination, very popular with our visitors. Late in the afternoon Henry retired the R class leaving the 0-6-0 and the 2-6-0 to carry on. With a restricted load they handled the running very well. The second train on the outer was a Lee built pair of locomotives. Matt Lee controlled C3506 leading Barry Tulloch D5902 train engine. On the inner track Ray Lee ran C3803 on one train and John Hurst's 4-8-2 was the motive power for the second train. In the locomotive depot we had Brian Muston's 4-6-0 Springbok and Don



complete with smoke box, cab and other plate work completed. The locomotive is a very fine piece of work and has been run on compressed air. This just needs the boiler popped in and its ready to go.

We had a visit on the day from Channel 7, a cameraman and presenter Mark Warren preparing a segment for "Sunday Sunrise" a program that goes to air at 8.00am. to 9.30am. on Sunday mornings. Mark interviewed a few of the members as the camera rolled and left mid afternoon. The cameraman stayed much longer doing some

extensive camera work including a special run with Ray and C3803 to himself. It would be interesting to view all of the film taken. We hope to be informed when it is to be put to air. More free publicity! The photo shows some of the crowds in the grounds.

We provided a total of 2466 rides for the afternoon.

April. With this running day on Easter Saturday and members away or at the Convention it was possibly going to be a difficult running day. The weather saw to finish it all together. So in four months we go from one extreme to the other, January too hot, April too wet. At home at Seven Hills the weather was cloudy but not raining, even got washing dry. On the way to West Ryde the light rain started and it got



more consistent the closer I got to our grounds. Needless to say we were washed out. Jeff Sorensen did get his C3142 in steam; I am not sure how long he braved the constant rain to have a run. I enjoyed some discussion with Bill, Barry and John Tulloch and Ray Lee. I saw the boiler plans for the current Tulloch projects and then headed home after Barry wondered what I was doing at the grounds with the Z19 so close to completion.

Presidents Breakfast and Sick Kids Day.

Everyone came out of the woodwork for the Presidents Breakfast. Even our President arrived before the fire was lit! It was great to see everyone and have a yarn. The cooks led by the capable chief cook controller Barry Milner together with Vic, Bill, Bernie and others (all egging the cooking on!) did a great job. We devoured snags, eggs, onions, bacon and toast with gusto. The washing up was expertly done by Brian 'mother' Hurst as well, showing he has a wide range of skills most of us would not want to own up to!

The breakfast was followed by the Malcolm Sargent Family Day where we open our grounds to the families of the kids that Malcolm Sargent support. Malcolm Sargent surpassed themselves this year with an animal farm, a juggler (juggling sharp things!), face painting, floating balloons, plaster figure painting, pony rides, dancing and singing, sausage sandwiches, and an African Tribal Drumming workshop, which had a lot of noisy participants. Locos in attendance included Henrys R (which remained on standby all day), Graeme Kirkby's 5035, David Thomas' B10, Mick Murray's Tinkerbelle, David Lee's Ruston, Paul Taffa's Hunslet, Jim Leishman's PS4 and the Allison's V Class. Ray Lees VR S class was present for a boiler test.

We started running around 11am with Andrew driving the V on the inner main with Greg as guard, swapping roles on occasion. This was Andrew's first official public drive, now he is of age. Greg experienced one of those brake failures going down hill (always a possibility with our vacuum arrangements), but this was due to a defective Teflon valve with the teflon being stuck in the hole. The V was withdrawn, the offending teflon discarded and it than ran the rest of the afternoon on a metal to metal seat.

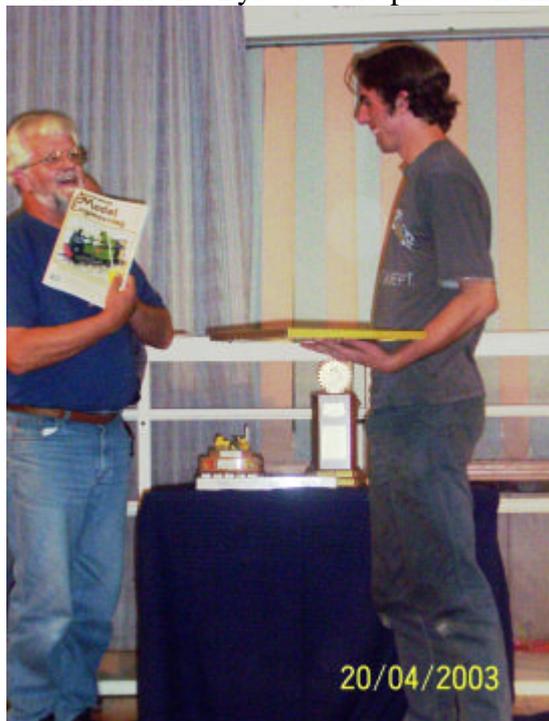
Paul Taffa formed the second train on the inner. Graeme ran on the outer with 5035, while on the elevated Mick with Tinkerbelle, David with the B10, and Jim with the PS4 gave good service. David Lee let some of the visiting kids have a drive on the Ruston. This was a great job. I saw one little chap there early on who was there last year wanting to know where the train was that he could drive like last year! I hope they keep coming back!

There were lots of smiling faces and everyone seemed quite happy about how it all went off.

Apart from our neighbour mowing his grass in the middle of proceedings, it all went off very well. The railway ran perfectly, our visitors had a great time. They started to wend their way off around 2pm, and this let us wind down slowly. Ultimately the B10 found its way to the ground and coupled to the front of the V, and round and round and round they went hammering hard up the grades and round the curves.

Easter Convention Report. from Warwick Allison.

SLSLS had a number of representatives at this year's convention at Penfield in Adelaide. Familiar faces included David Thomas, Lionel Pascoe and Dean, Max Gay, John and Bruce Hagan, and the Allison clan. We put forward 2 motions, one for AALS to obtain their own internet domain name, and this was passed, and the other for the Constitution and Bylaws to be placed on line, and this was lost (by a small margin-it would only need 3 clubs to change there position for this to get through). The most popular loco (SSME award) went to Bruce Willis of Illawarra Live Steamers for his new 5 inch gauge 38 class.



The under 25s AME encouragement award went to our own Andrew Allison for his Tasmanian Railways E class covered van. It was disappointing that this was the only entry, but good that it was considered that it was worthwhile to make the award. Andrew received a nice set of metric micrometers, and it is the second time he has won this award. Part of the award was an advance copy of the next issue of AME, as shown in the photo!

The Southern Federation Trophy went to Peter Lawson (Evandale) for his contribution to the hobby. Peter was a driving force behind the Evandale convention. The Aradlay - Triton trophy for the best first attempt went to John Andrews of the QSMEE for his Marie E. The Bolton Trophy was not awarded this year.

The weather for the convention was absolutely perfect, even a little warm. The expected numbers doubled in the last month, (I understand loco attendance went from 40 to 80!) and as usual track space was at a premium, but



everyone got a fair go and seemed to find the track they needed. The ultimate train of course was run on Sunday afternoon.

A quadruple header of Roger Kershaw (34 class), Bob (AMRS) 3614, Dean Pascoe

(3811), and Andrew Allison (V1224) hauled a long selection of Western Australian stock, one riding car, and then a long selection of NSW rolling stock.

As it started out of the yard it had the photographers running forward to get the best vantagepoint!

Neil Campbell with the 'Old Girl' also ran daily with a nice selection of British four-wheel rolling stock. He sends his regards.

The Penfield club put on a good show and certainly the work they put into it all was enormous considering they had virtually rebuilt the railway over the previous 2 years after having been removed from their previous site.

The convention for 2004 is at Bunbury, West Australia.

The last day (Monday) of the convention was a visit to Railway Park at Prospect (Adelaide Miniature Steam Railway). This is 5 inch only and consequently attracted a select group. It was a very pleasant day and the AMRS members made us very welcome and put on a BBQ lunch which was very much appreciated. They have reticulated rainwater, which was also appreciated after the Penfield town water supply caused all the leaks to leave white streaks on fittings and boiler cladding. Recent work included some lineside buildings of a high standard including a working water wheel. Maurie Turner made an appearance and asked to be remembered to Bill Richards and Alan Mackellar. I passed on a reciprocal message.

The Tuesday was a visit to SASMEE at Millswood. This is a very old and well-established society, and the grounds were complete with a boat pond and a working steam display of miniature engines, some of which were built the century before last!

There was a good roll up of 5 inch and the smaller 7¼ inch gauge locos. The signals here are magnificent with track circuiting in place for the tunnel areas and some other places, and signals that are true to prototype. There were even some very nice searchlights with full working mechanisms. Another scrumptious lunch was provided and was very much appreciated. They have a double circuit with both tracks going through a tunnel at the western end.

We had a very pleasant trip back, and every where we went there were trains



and miniature railways (just as well Wendy did the bookings or I would have been in trouble!) We stayed at Naracoorte in the south east of South Australia. While this is renowned for its limestone caves, it also boasts a SAR V class 0-4-4T loco in a park. (There was a 7¼ inch gauge version at the convention.) And lo and behold, the caravan park had a 5 inch gauge railway (\$3.50 a ride!) as a local tourist attraction.

Thursday night was at Horsham for a planned visit to the Grampians and what do we find right outside the caravan park but the Wimmerra Live Steam Society. They have a dual gauge ground level railway with the track constructed of steel flats pushed into slotted plastic sleepers.

Driving to Echuca we passed Elmore (about 40km before Echuca), and here was a 7¼ inch gauge railway on the land between the road and the railway at the grain silos. It must be nearly 2 km to go around the loop. This was built using council assistance as a local tourist attraction, and was operating the day we were there with some very nice VR style locos and sits in multiple unit stock operated by petrol engines. (Rides \$10 a family!)

Passing through Echuca we saw the sign for the local miniature railway there which is located at the Rotary Steam Rally site. A quick visit here (it is quite solidly built and is a multigauge with swing nose points) and we were on our way to Jerilderie for the night. Tocumwal has a model railway in an old shop near the railway station (the old road rail bridge over the Murray is worth a look) and a couple of kilometres out of town is a heritage centre with a VR 0-6-0 hydraulic and a selection of VR rolling stock. At Jerilderie, the brochure in the motel advertised the Jerilderie Mini Rail. This has a fair run in a large area across the billabong from the town. Again 7¼ inch gauge ground level.

The last day was a long haul home through some pretty dry country. Lake Urana looked pretty big and blue on the map, but doesn't now exist!

Prior to the convention we visited Moonta on the Yorke peninsula. This is an old copper mining area, which boasts the remains of the buildings that housed the Cornish Beam Engines that were used to keep the mines clear of water.

These were very impressive, and while the machinery is mostly gone, some beams and pump rods remain to give some indication of the nature of the machinery. There were several boiler explosions over the life of the workings and the history had been recorded through the cartoons of a local mine employee who was also very talented in the arts and involved in the community. Cartoons have a habit of capturing the thoughts and opinions of the moment, in a way official reports never can. One cartoon had a boiler attendant being interviewed by an inspector, asking him what steps he would take if the situation happened to him. The answer was 'Very long ones, Sir!' There is a good National Trust Museum at



Moonta in what was the mine's very impressive school building, with a good display of these local cartoons and other relics. A 2 ft gauge railway can provide rides to and from old Moonta station (now a tourist information centre) through the mining area. Recommended.

The Baldwin Tender.

In the last Newsletter I credited the building of the Baldwin tender illustrated by two photographs to Barry Potter. Roger Kershaw was the actual builder with a bit of Potter guidance. Sorry about that, but most of us would not mind having our efforts considered to be Barry's!

Membership News

At the May Directors meeting, Andrew Allison has been granted provisional membership (now he has come of age!) This will probably mean he will vacate the signal box for the footplate!

Interclub Visit Coming Up

This time it is SLSLS's turn! It was 1995 since we last hosted an Interclub, and it's on again on 31 May 2003. This should be a great day. We will provide morning and afternoon tea and a sausage sandwich lunch. Dinner orders will be taken and we will need to arrange this as well. Running should go on into the night, so it will be a big day. While this will generally be a day for the visitors, if you want to bring that loco, then please do so. They want to see our offerings as well! Please bring down your exhibits as early as you can to allow things to be set up. We have advertised the event in AME, so we should expect good numbers with good weather!



Loco & Rolling Stock News

This photo shows the attended multitude witnessing the pressure test on Henry's Shay boiler reported last issue. We have seen more parts for David Thomas' South Australian 620 class, including a mighty fine one piece cab. Also seen around are water cut parts for a NSW 26 class and also parts for a QR A10 for the Allison's. These were items such as coupling rods, connecting rods, motion plates, frames etc and they certainly make a very neat job. Warwick Allison's V Class is back on track after receiving its boiler ticket after its steam test a mere 2 weeks before the convention departure date!

At long last the Editor's Z19 is all but complete, numbers are still to be attached. It did however have its steam test and maiden run on Saturday 10th May. All went reasonably well but I have a few things to look at before its next run. Ed.

Hazards and Assessments

This is underway. If you want to be a part of it, see Warwick Allison or Mick Murray. To a certain extent, this may dictate the priorities on our works program, so if this is likely to be a concern for you, you are welcome to contribute!

Works Reports.

Elevated Track.

More and more paint is continually being applied, and the signals are now complete and they certainly look the part. There is nothing better than a stark red, white and black lower quadrant signal! Also recently completed is a concrete ramp walkway with galvanised steel plate covers over the points rodding at the crossover. This makes walking in this area much safer.

Ground Level Railway.

Work has progressed on the excavation and the concreting of the carriage shed apron. This work removes an ankle-twisting hazard, and makes it a lot more pleasant for working in this area. The approach point work has also been lifted, the formation repaired, weed mat provided and the track reinstated and ballasted. Bernie Courtenay and friends has modified some carriages into guard's vans. These have vacuum brakes and will better match the train consists. The older guard's vans have been withdrawn.



The photo shows the new guards vans being trialed. Just what are you sucking on there Brian? Behind is the excavation for the new carriage shed concrete apron.

A notice board has been erected on the inner main near the Hawkesbury Bridge. This is a traditional cast iron NSWGR plate with lots of words and should add some interest. A scale fettlers hut has also appeared.

Grounds Improvements.

David Thomas has acquired a number of mature plants and these have been planted around the grounds. They certainly make an improvement. The fences were finally completed and some tidying up work has certainly made this area look smart. The surplus spoil has been removed and the area near

the flagpole has received some good soil for grass growing which hopefully will repair this area. The plastic pipe drain bend has been relocated behind the new fence and the rest buried and this removes a further obstruction to foot traffic in this area.



Agreement was also reached to purchase a new tipping trailer. Upon receipt the old trailer will be sold.

For Sale: Still Available!! 25 litres of Nuwood Boiler Disencrustant. An ideal boiler treatment for that steel boiler, or if you own a big old establishment, for the central heating system! Never opened. A life time supply. \$70. Ring Warwick Allison 4739 5921

Drafting Machine and Drawing Board.

If interested talk to Bill Richards

For Sale - Trailer

The current trailer is offered for sale through this newsletter and offers are invited. This magnificent trailer is fully galvanised with hungry boards fitted, and is currently registered. It is complete with a spare tyre. Offers should be in writing to the Secretary and will be considered by the Board at the July Board meeting on 1 July. The lowest or any offer not necessarily accepted. Offers from members and others are welcome.

Main Gate Key.

Bill Richards has a main gate key that was found at the grounds, if you have lost your key see Bill.

Alterations to Signalling and Safeworking

West Ryde (Metropolitan-North): Provision of Medium Turnout Indication on CI 1.7.

Since 3 May 2003, a medium turnout indication has been brought into use on CI 1.7 signal. When number 7 lever is operated, CI 1.7 will display a band of yellow lights (caution turnout indication) inclined to the left under a red light. This indication means that the turnout route is set, and the next signal is at stop.

When CI 8 signal is cleared, CI 1.7 will then display a pulsating band of yellow lights (medium turnout indication) under a red light. This indication means that the turnout route is set, and the next signal (CI 8) has been cleared.

The additional indication has been provided due to the limited sighting on CI 8 signal due to obstruction by the BBQ chimney.

Wednesday Members Get Together

Everyone knows about Wednesday mornings at the grounds! The first Wednesday of the month is now being used by a number of members for a run and BBQ lunch. Feel free to participate. There are no rules. Run forwards or backwards, inside or outside, as long as you enjoy yourself! Henry can provide details!

Diary

31 May	Interclub Visit at our grounds!
3 June	Annual General Meeting
7-9 June	Hot Pot Run Illawarra Live Steamers
21 June	Public Running Day
1 July	Directors Meeting
19 July	Public Running Day
5 August	Members Meeting
16 August	Public Running Day & Next Newsletter!

Garden Roster.

June. '03.	B.Courtenay, K.Baker, J.Grierson, M.Haynes, L.Pascoe, J.Sorensen, N.Sorensen, D.Thomas, P.Taffa.
July '03.	J.L.Hurst, J.B.Hurst, C.Bunnik, A.Cottrell, J.Leishman, J.Lyons, B.Peake, M.Tyson, M.Yule.
Aug. '03.	B.Hurst, T.Eyre, P.Brotchie, M.Gibbons, G.Kirkby, M.Lee, R.Lee, B.Rawlinson, B.Tulloch, J.Tulloch,
Sept. '03.	H.Spencer, G.Croudace, W.Fletcher, M.Gay, D.Lee, B.Muston, J.Noller, P.Sayer, A.Allison

Gate Roster.

June.	John Lyons.	July.	Jim Mulholland.	August.	Mick Murray .	September.	Scott Murray.
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Editorial.

Following the tale in the last Newsletter about American rail fans and the FBI. I just happen to notice the April issue of Trains Magazine at the newsagent. Since September 11, 2001 and the increase in internal security in the U.S. it seems that in some quarters being a rail fan is considered to be un-American. I did not read the full article but it seems that the sentiments mentioned in the last Newsletter are very wide spread.

With this Newsletter our production technology moves a bit further away from the steam age. I will fill you in with the next issue.

John Lyons

Locomotive Transfer List

Date	Locomotive	From	To	Remarks
29 March 2003	V 1224	Midland Workshops	West Ryde Loco	Ex Boiler change and tone up.

A New Boiler for the V

by Warwick Allison

It was an interesting time without the V. The time not running was spent on the gate, on foot patrol (literally!) and enjoying going home reasonably clean at the end of the running day. It is wonderful to watch the trains go past, and talking to the happy people certainly brings home the sense of achievement and satisfaction we provide to the public each running day. Perhaps more so than when on the footplate.

But the lack of an engine is a serious thing. You can't help when there is a shortage of motive power. You can't do those silly things like trying to pull every carriage in the carriage shed. And you can't maintain that sense of which bits of the track need attention next.

So work needed to be stepped up. The engine was stopped originally for a boiler test and some mechanical work. The mechanical work included attention to the axle pumps. These suffered from deteriorating performance, and a lot of clunking. The ashpan was rotting at the seams (it was brass silver soldered at the joins), and the stainless grate had a hole in the middle, which I had previously patched with some deft electric welding upside down through the hopper ashpan door.

The mechanical work was attacked first. The pumps were removed and new barrels made. These were from bronze and were longer than the previous ones, to maximise the support the barrel gives to the ram. Oil lines to each barrel were run up to an oil box. This will mean I will now be able to get some oil in the right place! The balls and seats were redone. The pounding of the ball in the valve box had closed down the outlet and was obviously making it harder to pump.

A new hopper ash pan was constructed out of stainless steel and MIG welded at the corners. It was my first attempt at MIG and its pretty terrible, but at least it holds together and it cannot be seen. The hopper doors were fitted with a stainless steel rod clip. This is instead of a mechanism operated by external levers as per the prototype. These are now decorative. A new stainless grate completed the mechanical work.

The Briggs boiler was then given attention. It needed new refractory in the firebox, and some work was done to provide better support for this. However in the dabbling it was suspected that things were not quite right. Measurement of the crown (as best could be made) implied the thickness was down on what it should be. The crown stay was also wasted. After some deep contemplation (and a desire not to unduly stress the boiler inspectors) it was decided to abandon the steel boiler and construct a new copper one. The engine would be off the track longer, but the bliss of 3 yearly boiler inspections and a much simpler inspection process would make it all worthwhile.

The superheaters were removed from the steel boiler, but not without damage, so new superheaters were also in order. These old ones were a fair bit short of the combustion chamber. The later new ones are substantially longer.

A start was made on the computer and a new boiler was drawn up using CAD. This was the first time we had seriously used this method. All boiler flanging plates were designed on the CAD using the boiler drawing as a base. These were printed out and glued onto thick plywood. It was a simple task to run along the line using a new super duper jig saw brought for the purpose. The boilerplates were done the same way with copies of the plates glued to the copper and the same treatment with the jigsaw.

All platework is 4mm and the barrel and firebox was rolled from the one piece. It was no mean feat to close up the barrel!

Four superheater flues each 1¼ inch diameter and 26 5/8 inch diameter tubes are a big increase on the Brigg's 4 superheaters of 1 1/8inch, and its 19 5/8inch tubes. There is no combustion chamber on the copper boiler and the extra tube length seems long, but makes sure all the heat is extracted into the water. There is a lot more gas area. The Brigg's combustion chamber was dry on all sides except the crown and the tubeplate and its benefits to steaming (after experience) is dubious. The maximum allowed by the copper code was 8 inch outside diameter. The Briggs was 8inch inside diameter. The difference seems small, but the 5/16inch wall on the Briggs makes it look



substantially bulkier. I went for girder stays on the smokebox tubeplate and backhead, and this arrangement is certainly simpler than longitudinal stays. It also avoids clogging the barrel up with rods. They are however rather deep!

Flanging the 4mm plate was a task that needed some strength. Simultaneously we were making a boiler for Andrew's A10, and the 3mm plates on this were a significantly easier job. Most of the plates were too big too hold in the vice and they were clamped to the bench for flogging-oops! sorry, flanging!

Drilling the holes for the tubes was stressful with it being very difficult to keep the holes on centre as the drill size increased. Ultimately all the plates

and other components were given the nod by the boiler inspectors and work started on gluing it all together.

A fresh set of oxy and acetelyne bottles, some new LPG bottles, an oxy regulator, new oxy hoses, a new nipple for a Sievert blowlamp, and lots of silver solder made a big impact on the bank account.

A start was made on the A10 boiler, and our technique was practiced. What was found effective on the A10 boiler was then tried on the V. It didn't work! Variations in the relative thickness of components meant that I needed to be able to assess the job and develop a detailed plan of attack for each brazing operation. Eventually I think it proved easier to braze the bigger boiler, as the heat could be better controlled.

The large LPG blowlamp was used to generally heat the job and the work couldn't be done without this. The flame was very large and noisy and we had to shout instructions over the roar of the flame. The first lesson learnt was don't point the barrel at the garage door! The LPG flame used to provide the general heating when directed into the barrel made it like a huge torch straight onto the garage door. A repaint of the door followed (it needed it anyway) and was completed before other members of the family came home.

The brazing operations were performed in fairly quick succession and the job progressed well. The dome bush was machined to suit an O ring as was the wet header. All bushes were of bronze. Pickling was done initially in a garbage bin but this was very unsatisfactory with regular sloshing of the pickle over the surrounding area. The boiler just did not fit. More expenditure and the pickle was transferred to a 110 litre green wheelie bin. The boiler still could not be totally immersed, but a two stage operation where it was placed in one way, then lifted out and put in the other way using a chain block and a rope tied through the dome hole proved to be the easiest way to manipulate it.

Another inspection and the go ahead to put it all together was given. The large number of stays was daunting but in the end we got stuck into it and a few days later it was all done. The technique here proved to be defective. With the boiler on its back, the stays were dealt with in only 2 heats. The ultimate problem proved to be a lot of pinhole leaks in the stays. Where the stays were silver soldered flat so that gravity could help in the running of the silver solder, a good leakless joint resulted. Those soldered with the plate vertical suffered a much higher number of leaks even though the silver solder looked pretty good for penetration. Moral-Take more time, position the job correctly, and take the work in smaller bites.

Eventually the job was all together and pressure testing commenced. One member has described his boiler construction results as being reminiscent of the El-Alamein fountain! I understood the reference!

The leaks were identified and the boiler reheated and they were addressed one by one. After several attempts the pressure rose higher and revealed new leaks! I do not know how big some of the holes would be. To see a teardrop form next to stay over a period of 5 minutes, or an area of plate simply look wettish after 10 minutes, must imply an area of only microns for the water to escape from. But escape it does!

Some of the weeps were solved by peening, and eventually the last few were caulked with lead free soft solder. My Maisie's hand pump was doing the pumping. By now things were looking a lot better. An official test at the club actually proved more successful than at home. There must have been a bit of leakage in Maisie's pump!

New superheaters were constructed. These were the usual copper spearhead type, 3/8inch diameter elements with two in each flue. They run almost the length of the flues, and have a much bigger area than the ones in the Brigg's boiler. The existing safety valves had new steel hexagons silver soldered on to make removal and replacement easier. Because the new boiler is smaller in diameter than the old one, new steel hoops were constructed to mount the lagging. Similarly a frame was constructed around the firebox for mounting the lagging. There was plenty of room to fit the thermal wool lagging between the boiler and the lagging.

The Brigg's was supported on a waist support in front of the water wall barrel connection. Without the water walls this support could be moved well back and this balances things much better.

A lot of time had been expended in the correction of weeps, but the target of the convention was looming ever closer.

The new boiler is about 12 kg lighter than the steel. Some compensation for this was made by placing a 9kg block of lead in the frames directly above the middle driving axles. This maintains adhesive weight, and lowers the centre of gravity to give a noticeably more stable locomotive.

Reassembly proceeded apace, with a number of new or reconditioned components produced. Eventually the spray gun gave it a coat of green paint and then black on the appropriate bits. Down to the club for a steam test to bake the paint (oh, that smell!) and after we had adjusted the safety valves and been given the OK it was out onto the track for a trial trip.



The copper boiler was quite different to the Briggs. It made plenty of steam without the blower and hence was significantly quieter. The boiler seemed gentle, if a boiler can be described as gentle. Running light engine was no trouble. This was a problem with the Briggs - it really wanted a decent load, or a lot of blower. Eventually it was pulling 16 club cars. 3 boiler feeds on (2 pumps and an injector) with an open regulator and still its blowing off! Coal consumption seemed lower (no doubt without that fierce blast the Briggs always needed and the improved superheaters, and the blast was sharper no doubt due to the more effective superheaters. Three yearly boiler inspections will be a big boon. Less time off the track and simpler future inspections! Here are the statistics:

Parameter	V CLASS (Copper Boiler)	V CLASS (Steel Boiler)
Heating Area		
Heating area -firebox & comb. chamber (sq. in)	315	141
Heating area-tubes (sq. in)	1,235	645
Heating area-flues (sq. in)	388	271
Heating area-water walls etc (sq. in)		93
Total heating area (sq. in)	1938	1150
Tubes and Flues		
Gas area through tubes (sq in)	7.13	4.52
Tube length (in)	27	21
No. of tubes	26	19
Tube dia (inside dia)	0.55	0.5
No. of flues	4	4
Flue dia (inside dia)	1.125	1
Water Walls		
No. of water wall tubes		10
Water wall dia (in)		0.5
Water wall length (in)		4
Wall headers		2
Wall header diameter (in)		0.75
Header length (in)		7
Superheaters		
No. of superheaters	8	8
Superheater dia (in)	0.375	0.375
Superheater length (in)	26	14
Superheating surface area (sq in)	490	263
General		
No. of cylinders	2	2
Bore (in)	2.25	2.25
Stroke (in)	3.25	3.25
Driving wheel dia (in)	6.375	6.375
Grate area (sq. in)	75	70
Boiler pressure (psi)	100	100
Boiler Weight (kg)		
Dry	55	68
Wet & Half Full	64 (9 litres)	
Wet & Full	71 (16 litres)	

Newsletter' is Published by: Sydney Live Steam Locomotive Society Co-op Ltd.

Track location is Anthony Rd, West Ryde adjacent to the car park behind West Ryde shopping centre. Telephone (02) 9874 8696

Postal Address: The Secretary, PO Box 124 West Ryde NSW 2114

Web Page Address: <http://www.pnc.com.au/~wallison/slsls.htm>

Public Running Day is the THIRD Saturday in each month from 1.30pm. Entry is \$2 adults, \$1 children. Rides are 50c each