Sydney Live Steam Locomotive Society Anthony Road, West Ryde, N.S.W.



'Newsletter'

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Unusual Working at West Ryde.

Major civil engineering works at the southern end of West Ryde yard resulted in the curtailment of normal through working in that area..

To cater for an expected flow of passengers who were not aware of the situation, special arrangements were made by the Department with the co-operation of Traffic, Signal and Mechanical Branch Staff.

Two trains were assembled - one six car and one five car set. Locomotives were marshalled at each end of the trains, smokeboxes leading, and operated to the temporary ends of the track as push - pull sets

nicers of the Traffic Branch were placed at the termini to assist passengers and to place flags and detonators at the appropriate positions.

No problems were encountered and as a result of the co-operation of all concerned, the Department received both revenue and the public good will which would otherwise have been lost.

It is hoped that normal working will be resumed in May

Running Days.

February. With the drainage work in full swing and now some time behind schedule it was decided to run a reduced operation on our normal third Saturday. A sign on the main gate directed patrons to the Park Lane entrance, there was no entrance fee and the canteen did not operate but we had two birthday groups and a few other visitors who were very happy to put up with the restricted conditions.

We ran two push pull services. On the elevated, Bernie Courtenay, SMR 10 class, was on the normal end with Brian Carter, "Perseverance" on the reverse end. The train started with three cars, but grew to five cars later in the afternoon. I travelled as guard for the afternoon, taking the rear seat for each direction of travel.

The train used the loop on the way back to the station to give some variation. Mick Murray and Mark Gibbons acted as station masters at the track extremities and probably more by good luck than good nagement did not have both elevated and ground level services terminate at the same time.

Henry Spencer, TGR "R" class, and Max Gay, "Bitza" ran the ground level train making use of both the inner and outer tracks.

We carried over 500 passengers for the afternoon without any mishaps. We did not have any problems with the passengers changing their seating direction at each terminating point. The four drivers enjoyed the variety of running in this manner, the elevated lever frame was given plenty of use and there were no problems crossing over from the loop to the main on the elevated.

This turned out to be a great afternoon, thoroughly enjoyed by the members who came along and some very happy customers who did not have their afternoon's plans spoilt.

March. Another good day weather wise despite the rain that we have had. With the civil engineering works in full swing, very delayed now due to the rain, the same end to end working operated.

Henry and Max, once again provided the ground level motive power. The elevated track running was again powered by Bernie and Brian. A variation for this month saw Brian at the head of the consist for normal running, anti-clockwise, with Bernie leading for the clockwise leg of the run.

We had, once again, a reasonable crowd and a good time providing the service. Late in the afternoon I was at the regulator of Bernie's 10 Class, it was a very good experience. Starting had to be careful to see that the slip eccentric had adjusted before opening the regulator and it was interesting as one rolled backwards through the station trying to shovel some coal into the fire. All in all another good day with some very happy members of the public who did not have their plans for the afternoon spoilt.

April Running Day

The April run was very similar to the previous two, with perfect weather bringing welcome running conditions after the Easter rains. Brian & Bernie managed a 6 car train on the elevated, while Henry, Max & Warwick took turns with the 6 cars on the ground. 511 rides were given, which shows that we have progressively got better at the push-pull running over the last 3 months. This is quite an astounding figure given the limitations of the operation. The Oops! of the day was accompanied by the understatement of the month. Henry reports that Brian Hurst, as guard, leant back and said to Henry on the rear loco in his usual calm and collected way "Henry. I think you better stop. Max is heading up to Loco!"

1999 Convention

Despite the wet weather, this years convention was very friendly and good fun. There was a good selection of motive power, including 3½ inch gauge, and scale rolling stock, in attendance. The wet made the loco depot and other selected sites (mainly the toilet entrances & trade stands) very boggy, but everyone soldiered on and had a good time. An electric fork lift style unloader has been installed. This is an improved version of the Illawarra club's, is very reliable, very well engineered and master of its task. The Saturday was reasonably dry with the rain starting around 1600, while the Sunday was wet. This cleared for a lovely starry & moonlit night where some very congenial running occurred after the presentations. Certainly some locos were seen to produce pyrotechnics made all the more spectacular by the high speeds! An unexpected highlight were the tiny tortoises that paraded across the 5 inch gauge station en route to the creek. There was a 'save the tortoise' campaign as they were picked up and given a helping hand over the tracks, and avoiding big feet! The Monday was clear but as the rain set in about lunch time the locos were being loaded and the return exodus was under way. On the Saturday, Hornsby had a braking demonstration set up. After a few initial stops, a lot of drivers used the track side speedometer to see how fast they could go!

The Bolton Trophy went to Max Faulkner of QSMEE with a very nice 7¼ inch gauge QR BB18¼. This was complete with everything that the full size locos had, including being complete with enamelled mug and tool kit. The most popular loco went to Barry Potter for his immaculate 55 class. As Barry said-if you build enough locos (40), eventually you get recognised! The Australian Model Engineering Under 25's award (a set of micrometers) went to John Tulloch for his P class tender, which really is a lovely piece of work. Andrew Allison came away with a set of telescopic gauges for his effort of an QR A10 class tender chassis. Bill Belton of the Tullamarine Society was awarded the Southern Federation's club member of the year award for his involvement in the hobby.

At the AMBSC meeting, our motion for a review of the requirements for being a boiler inspector was passed. Nearly all the speakers spoke in favour of the motion where the aim is to try and open up some of the variou aspects of boiler inspections to more model engineers. There was also a fair bit of discussion on the issue of circulating devices for Briggs boilers.

At the AALS meeting, Hornsby Model Engineers put forwarded a motion requiring very specific braking requirements. This motion was lost but a motion requiring clubs to produce a 'policy' on braking will probably be put up for next year. Our motion amending the definition of 'locomotive' in the code was passed, but the wheel standard issue was lost. A quick assessment was done during the meeting and no one seems to use the fine scale track standard, so we will probably do some subtle rewording and present it again next year, where hopefully it will be more acceptable. The AALS meeting closed at the remarkable time of 2130! Good work LMLSLS in trying circumstances!

Next year the 2000 Convention will be in Queensland at the QSMEE track at Strathpine. Should be a good time! (2001 is expected to be South Australia. but the Penfield site is under threat, while 2002 could be Tasmania.)

President's Breakfast

The May Day wet weather certainly had no effect on the culinary delights that now typify this highlight of the social calendar. In fact, this year, if anything the food was better than ever. Members have the BBQing, egg poaching, bread toasting and tea making down to a fine art, no doubt because of the overseeing of head chef, food supplier and taster 'Onions' Richards. The only hurdle that needed to be overcome was the wet firewood, which fortunately delayed the event sufficient so that the President could arrive before the meal

started, rather than afterwards as seems to be the usual occurrence at past events. In any event we were entertained by Mark Gibbon's excellent videos of our past and then viewed 'RailCrash', an excellent production on railway safety made in the early 70's, which was supplied by John Lyons. Again, as is the custom, the whole process was repeated at lunch time. Why is it called the President's Breakfast? Well, maybe if it's a bit like the Horses Birthday, its a day we can all be Presidents!

Annual General Meeting

This will be held on 1 June. Peter Shiels has resigned as a Director which was accepted with regret at the March Director's meeting. It is anticipated that some Director's positions will need to be filled, so please give consideration as to supporting members who would be able to contribute in this role. At this stage all those occupying Executive positions are available for re-election. A light supper will follow the meeting.

Works Reports

Seating

Allan Cottrell, Brian Hurst and Bryce Peak are continuing to make good progress with this. New treated pine timber has been fitted as well as galvanised steel bracing to improve stability. The seats are also being strategically repositioned to simplify mowing.

Council Drainage Works

This has progressed, but nowhere near as quickly as we would have liked. Henry has been liaising with the contractors, and his experience in industry has proven him to be the perfect contract manager, with good relations being maintained and our position strongly put. Unfortunately some rework and the usual contractual hassles has meant that work has not progressed as quickly as we would have hoped. At the time of preparing this Newsletter, Monday May 10th., I can report that the inner ground level bridge is replaced but still needs its rubber packing pieces. There has been a lot of levelling carried out giving a new land contour to that end of the ground. The rain is still causing delays so it is looking likely that we will not be into relaying the track till the latter part of this month.

Ground Level Track

Construction of new track to replace the old angle iron track on the outer main has been completed, by Bill Richards and Peter Shiels. Four panels have been fitted with bridge check rails, and these are a masterpiece of track construction. All the removed track has been resleepered where necessary, and old straight angle iron track will be replaced with the new track currently stored under the footbridge.

New Lower Quadrant Signal

The signal has now been erected and connected to the ground frame and is fully functional, including connection of electric lighting for the lamp! Mick & Scott Murray have fashioned up a slack wire device to enable the signal ex loco and the proposed loop arm from the new signal to be worked from the same lever. Hopefully we will fit a dead end style tumbler arm for movements to the loop as this will be just the right size for the post.

Elevated Track

The new 12v supply for steam raising has been finished by Mike Tyson. For those who prefer this method, the power supply is located in the corner of the tool shed. Please switch it off at the end of the day, if you use it. Hopefully soon it will be joined by a 24v supply to feed the elevated signalling. This will permit this equipment to be removed from the ground level signal box supply which will return the current (i.e. amps!) levels to something more likely to be long term acceptable. We are over 30 amps on this supply. David Lee is also working on some 'wings' for the elevated stub points. These are an attempt to prevent protruding feet from colliding with adjacent parts of the track if we run passengers down the loop. If successful, it will improve our flexibility of operation. Thanks also to Dave for the fire extinguishers. These should help summer running.

Roundhouse Roads

Mike Tyson has now reinstalled the loco roads after their galvanising. There is no doubt that this lifts the appearance of the loco depots and eliminates a lot of painting (and the decrepit look that precedes the painter!)

Overheard between SLSLS club members at the Convention

First Member: You can come with me in the Volvo.

Second Member: But I don't have a hat!

Anniversary Book

There are still copies available. Cost is \$9. See Warwick or the ticket seller on running days.

New Years Eve

Some members are thinking of a New Years Eve night run. This would start as early as you like going through a BYO BBQ tea and then on into the final throws of the century (if you consider it happens this time-otherwise its another excuse to do it again next year!). Whether people would be in a fit state to then drive home might influence a later New Years Day morning finish? For those interested, New Years Eve is a Friday.

Membership News

Mark Gibbons has been accepted as a provisional member. Mark is building a Blowfly. Alan Coucil was accepted as a full member at the April meeting. Congratulations Alan. We hope you have a long and beneficial association with the Society.

Stereo Amplifier

We are still after a stereo amplifier at the 'right' price. It needs to be of a size to be able to fit in the cupboard with the video player. The purpose of this is to permit the video to play sound through the previously donated loud speakers.

Diary

29,30 May Visit to Barry Potter's at Orange. (Highly recommended!)

1 June Annual General Meeting & Members Meeting 5.6 June AALS Training Sessions in our club house.

12,13,14 June Hot Pot Run, Illawarra Live Steamers

19 June Public Running Day
6 July Directors Meeting
17 July Public Running Day
3 August Members Meeting

21 August Public Running Day & next newsletter

Visit to Barry Potter's

This is planned for 29 & 30 May. Our last visit was blessed with superb weather, which Barry will arrange to repeat. It is a BYO everything (don't forget your locos!) Make your own arrangements for motel or caravan park accommodation. If you bring some snags for lunch, I'm sure a BBQ can be found, and there will undoubtedly be an evening rendezvous at an appropriate establishment. A highly recommended event. Thanks to Anne & Barry for having us.

AALS Training Sessions

The AALS is arranging training sessions to promote a better understanding of the boiler code, boiler inspecting and legal & insurance requirements in operating miniature railways. The NSW sessions will be held in our clubhouse on the 5 & 6 June 1999. The Saturday (whole day) is for boiler inspectors and the Sunday morning is for club executive & directors. A BBQ lunch will be provided for the attendees. As the Saturday will be our usual work day, members will not have as easy access to the club house facilities as they would normally have and your tolerance in regard to this is appreciated. In return, however, we should be able to

slightly expand the lunch to included SLSLS members who are working on the grounds that day. Morning & afternoon teas will occur at set times on the programme, and we will need to align with them.

All Aboard!-This train goes Where?

The February 1999 issue of "Light Railways" contains a report of the International Association of Transport & Communication Museums' annual conference in Adelaide last October. It listed the principle problems facing museums today as being: a decline in nostalgia; a rise in individualism; reduced family activities; declining leisure time for those with good incomes; more attractions for leisure time (i.e. increased competition); & a time of rapid change in the rail industry. The DB Museum in Germany reported improved attendance after replacing many railway displays with children's activity centres! It appears that static displays of locomotives are no longer sufficient.

How this relates to us is interesting to ponder. The nostalgia aspect is worth some thought. Obviously the days where our older visitors can retrace their steam experiences of youth are going. We will be simply seen as an interesting alternative form of motive power giving rides for amusement and live steam should have a real advantage here over tin buzz boxes. Sailing boats would be a similar situation. We might not commonly use now the tall ships of past, but those that do exist, from the small sailing skiff to the larger training vessels, do no because they are different.

offerings are more activity based so we have a high level of support from very young families with birthday groups-(our principle income earner I would suggest) which occurs because of the usual intense interest that new families have in group activities for young children coupled with our good value prices. We 'compete' well here. Model engineering does tend to be an individual activity as the large numbers of participants who are not members of clubs (as determined through the AME surveys) would testify and the fact that we do most of our activity in our home workshops, so our existing at all shows we are already coping with that issue. The declining leisure time aspect is probably apparent, but then we would not normally attract the teenage years or perhaps that older dual income middle aged group that hasn't quite got round to thinking of slowing down or retirement.

The Society however depends for its success on the membership. A good active membership is the core and our membership and, while not growing in size, has certainly been a bit more mobile in recent years which brings in new enthusiasms and talents and is good for us. I think we are providing a low price quality activity for our 'financiers' and while this continues we will prosper in both membership and public support. I often think we worry too much about the future. If you do the right thing well, the future will take care of itself.

If you haven't been down lately, why not come and see what is going on! While you are here, do a bit of pruning, or mowing, or whatever and stay for a cup of tea and a chat. Better still, dust off that loco, renew that ket and light a fire. Opportunities every Saturday!

Warwick Allison.

Garden Roster.

June '99. B.Hurst, T.Eyre, P.Brotchie, M.Gibbons G.Kirkby, M.Lee, R.Lee, B.Rawlinson, B.Tulloch, J.Tulloch.

July '99. W.Richards, W.Fletcher, F.Collins, M.Gay, R.Larkin, S.Larkin, D.Lee, J.Noller, G.Robertson, H.Spencer.

Aug. '99. W. Allison, R. Barlow, B. Kilgour, B. Millner, D. Mulholland, J. Mulholland, V. Scicluna, P. Shiels

Sept. '99. B.Courtenay, K.Baker, B.Carter, V.Condon, J.Grierson, M.Haynes, L.Pascoe, J.Sorensen, N.Sorensen, P.Taffa.

Gate Roster.

June. S.Larkin. July. D.Lee. August. M.Lee. September. R.Lee.

Editorial.

The extended time scale of the drainage work has created an interesting period in the Societies operation. I feel that the move to provide a limited service has had some benefits even though it caused some disquiet with

some members. I was surprised to hear, at an extended family gathering, from some people who live around the area questions such as "what is going on ", " are you being closed down ", " how soon will you be back in business ". For the casual observer the southern end of the ground certainly looked like a disaster area, and, with our sign taken down one could have easily thought 'they have gone." For the public who have bothered to walk up Anthony Rd., to our other entrance we have provided something of the third Saturday activity that they have come to expect.

A number of birthday celebrations have not been spoilt.

The members who have worked on these running days have, I feel, enjoyed the variation of the train operation. We have operated in a safe manner and it has seen more activity than the usual round and round running and certainly it gave the Signalmen more of a challenge. The loop on the elevated was given plenty of use, the ground frame being attended all afternoon. The smaller numbers have been well contained away from the works site while the safe working staff at each terminus have handled the change of seating arrangements without any problems.

All being well, in a few months, things will be back to normal and the activities of early 1999 will take their place as another feature in the Societies' long and successful history.

John Lyons.

The Development of the Steam Locomotive on the N.S.W. Railways.

by Mr. C.A.Cardew. Continued.

Superheating. Cont. "The advantages accruing from the use of highly superheated steam with locomotives are clearly very great, first in economy secured in the annual expenditure on fuel (and it must be realised that the annual coal bill for the New South Wales Railways was once nearly Five Million Pounds), second in the increased distances that can be run between points of replenishing fuel and water supplies on the tenders of the locomotives, and thirdly, through the much livelier performance of the engine in train service. And so the strength of the inducement to produce satisfactory superheating equipment, and adapt other parts of the locomotives for working with high temperature superheated steam, will be realised, that there were difficulties in the way to be overcome.

Initially, superheater headers and steam joints all gave trouble by leaking in the smokebox, and element piping burned badly under heat and burst, all with the result that often the draft on the fire was destroyed, and the engines would not then steam. The intervention of the 1914 - 18 war also did not help, because it was not possible to import the improved parts and equipment that were being developed abroad. Under these circumstances there was produced, on the Schmidt fire tube principle, a locally designed superheater known as the "Lucy", named after the Chief Mechanical Engineer according to whose ideas it was evolved. This was quite successful, but in after years the improved designs and material produced by the specialist superheater companies in different countries, and worked out to meet the needs of the various New South Wales locomotive types, came to supersede it, but always there was the insistence on designing for high steam temperatures, and hence the move progressively made from three rows of superheater flues with twenty four element assemblies to four rows of thirty two, and finally to three rows of eight and two rows of six, thirty six elements in all, with the C38 class locomotive, which resulted from the combined efforts of Messrs. The Superheater Company of Australia Pty.,Ltd., and the locomotive design staff of the New South Wales Railways.

Beside the superheating apparatus itself other developments were necessary. Most of the locomotives using saturated steam were fitted with slide valves but these, with the flat surfaces involved, and the heavy steam load acting there on , had the valve and port faces too severely scored and worn by the fierce action of the superheated steam, and engineers abroad had already found the only answer to this problem to be the use of piston valves , preferably of the inside admission type. This, of course, with existing locomotives involved re-designing of the cylinders to provide the required valve chambers, and altering the valve gear to suit the change from outside admission slide valve to the inside admission arrangement for the piston valve, all of which was done satisfactorily, but with the piston valve itself it was otherwise. The early design of the valve head, following the practice of Dr.Schmidt himself, used a single ring only for steam tightness, and one that was very wide, it being believed from early German experience that narrower rings both broke and severely cut the faces of the valve chamber liners. This was not only erroneous, as it was proved some years later, but the excessively wide rings themselves at once had inadequate flexibility of spring tension, quickly wore their

own, and the valve liner faces and then actually leaked more steam away uselessly to exhaust than the superheating of the steam was in the process of saving. It took a long time before this was realised, and meanwhile because of this, and other development difficulties mentioned earlier, the merits of the superheated locomotives were being hotly disputed by the practical men engaged in operating them in service. However in due course, it came to be appreciated that there was this adverse factor operating, new piston valve heads with two narrow rings each were substituted, and with that change, together with improvements in the superheating apparatus itself, and the development of the principle of supplying a little steam when the locomotive is drifting (just enough to eliminate the vacuum in the cylinders otherwise formed when piston valves are used) the superheated steam locomotive came into its own, and received the encomiums which was its due from an appreciative locomotive running staff.

There remains one other very important matter connected with the use of superheated steam on locomotives, which cannot be allowed to pass without mention when reviewing the obstacles to its successful application either here, or elsewhere, and that is the question of valve and piston lubrication. Of course, one of the first requirements in this regard was the development of a suitable oil to meet the very high temperature conditions, but that was a matter the dealing with which was almost entirely in the hands of the oil supplying interests. But, equally important, was the question of the kind of lubricator that should be employed to deliver the oil to the parts concerned, and the means of distributing it to the surfaces where it is required. Of course, either with saturated or superheated steam oil delivery to these parts is complicated by the fact that,

len the engine is steaming, during the working stroke the cylinder contains high pressure steam, and all the time there is high pressure steam between the valve heads of the piston valve, only in the case of superheated steam there is a very much hotter and drier gas being handled than that with saturated steam, the moisture in which latter is not without some natural lubricating qualities of its own. In the early development of the superheated steam locomotive in Germany it was very firmly layed down that forced feed lubrication, by a mechanically operated plunger type lubricator driven by the movement of the locomotive, was essential with the application of high temperature superheated steam, and a number of reasons for this requirement were stated by the German Engineers. It can be said, however, that experience has both proved that insistence on mechanical forced feed lubrication to the valves and pistons of superheated locomotives, and some of the reasons advanced for its necessity, are fallacious. It was soon found with the superheated locomotives of the New South Wales Railways that the same hydrostatic sight feed lubricators as had been used with saturated steam, with some improvements to the delivery system, were quite satisfactory, and for many years all these locomotives were, and a great majority still are, (1965) thus equipped. It is true that, of comparatively late years, mechanical lubricators driven by the movement of the locomotive have been fitted to certain new locomotive classes, and that on older class the formerly used hydrostatic type had been supplanted by a mechanical lubricator likewise so driven. However, the opinion is expressed from personal experiences with

) last mentioned class both before and after the change that, although there was no actual trouble arising after the conversion was made, the free running results with the previously used hydrostatic type were superior.

There are the following Briefly, some reasons might be submitted as to why this possibly should be so. points of difference between the two types of lubricators, some of which it is suggested may favour the use of the hydrostatic type more especially on these railways. Thus, the hydrostatic lubricator delivers the oil on a time basis, but under the control of the driver, who can adjust the rate of oil feed at any time by observing and varying the number of drops passing each sight glass in a given time, say a minute, but who normally sets On the other hand the mechanical type the desired rate at the beginning of a run, and then does not alter it. supplies the oil entirely on a distance basis, at a rate which is pre-determined by the arrangement of the internal mechanism and which, irrespective of train speed, or any other circumstances, does not vary, so that for every mile run there will be the same number of drops delivered, and as such as had been mechanically fixed On the New South Wales Railways more than most train speeds fluctuate widely, and beforehand. sometimes frequently, ranging from, say, 15 to 70 m.p.h. and, correspondingly, with a distance of one mile occupying from 4 minutes to 51.4 seconds. At the slower speed the locomotive will be mostly working hard on a steep grade, the steam temperature will likely be at its hottest, and the valve travel at nearly its longest, while each drop of oil will have to survive in suspension in the high temperature steam in the cylinder for a long period, whereas at the higher speed these conditions will not appertain although, on the other hand, admittedly surface rubbing speeds (more especially of the piston) will be proportionately higher. hydrostatic type lubricator will, of course, supply oil much more lavishly to the moving parts concerned under the low speed conditions, and less abundantly when the speed is high, whereas the mechanical type will not differentiate in this direction, and the view is expressed that, taken on balance for meeting the conflicting factors which are involved by the extremes in operating conditions which are encountered on these Railways (though not necessarily where these do not exist on many others) the hydrostatic lubricator has an advantage. And further, while there are obvious objections on account of possible neglect to give the necessary attention, and of distraction from concentrating on other important duties, the opinion is expressed there is, over riding these, advantage in the driver being able on his own initiative to alter the rate of oil supply to meet any special circumstances arising as, for instance, in the not rare occurrence of a period of priming, due either to over filling the boiler, or to bad water conditions, following which the impaired lubrication resulting of the parts concerned requires quickly to be restored. In these, and similar circumstances, the remedy can readily be applied by the driver temporarily increasing the oil feed rate whereas, with the mechanically driven lubricator, there is nothing that can be done, except to carry on while the lubricator in time gradually restores good lubrication conditions.

Finally, in respect of the adoption and development of locomotive superheating by the New South Wales Railways it may be recorded that, though the conversion of locomotives previously using saturated steam, and the construction of new locomotives which from the beginning received superheaters, ultimately more than three quarters of the total locomotive stock, that is to say approximately 900 engines in all, were superheated. The advantage secured by this conversion and the new construction program, with most of these locomotives subsequently having many years of life working as superheated locomotives, will be appreciated. If only without allowing for anything else the economy in coal consumption be considered, it will be realised that the cumulative financial gain deriving from a reduction, which can be conservatively estimated at 20%, in the consumption of a commodity at one stage costing these Railways between four and five million pounds a year, and continuing over a long period of years, must have amounted to many millions of pounds."

to be continued.

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

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