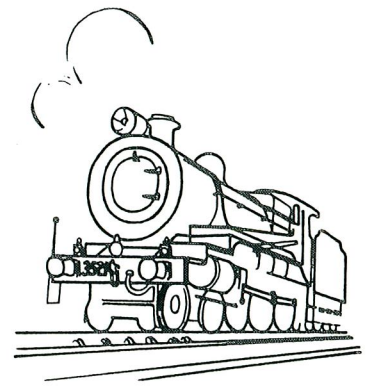


Sydney Live Steam Locomotive Society
Anthony Road, West Ryde, N.S.W.



'Newsletter'

Vol.27. No. 3.
August 1999.

President's Report-1998/99-Fifty Years Old!

1. Running Days

The year in review gave a good result for running days with only one day affected by wet weather, but 4 days affected by council drainage works. This resulted in us giving 14,500 rides. The figure has been falling over recent years, but this year it is substantially lower due to the council drainage works. The injury rate of 0.02% maintaining the low levels set in recent years. This is pleasing however we do need to be continually vigilant and careful in our operations to ensure passenger safety.

During the drainage work we provided a basic service with one train on the elevated and one on the ground level. These trains were operated with a locomotive at each end, and passengers were requested to turn round and face the correct direction when the train reversed. These services were highly successful and were greatly appreciated by the public. The working was unusual & innovative (to say the least) and as we became more experienced the number of rides given increased to 811 on the May running day which is a quite remarkable figure.

Special thanks needs to be given to the ladies who assist in the kiosk. This is an important part of our activities, is greatly appreciated by our public (and members) and which is a very professional and efficient operation.

Our charity day for the year was held in wonderful weather conditions with 2517 rides being given. Income was donated to the Malcolm Sergeant Cancer Fund.

2. Our Fiftieth Anniversary

The Society held its Fiftieth Anniversary Dinner Celebration on the 11 July 1998 in the Denistone Bowling Club across the road from our grounds. This was a highly successful event attended by 102 members, spouses & friends and which finished all too early. Presentations were made to the founding members present Brian and John Hurst, and to John Hurst on the occasion of being Treasurer for 50 years, an event which we have previously mentioned and which is still worthy of further recognition. Allan Mackellar, who could not be at the dinner, received his presentation at the Club a short time later. The Society also produced an anniversary book detailing our beginnings and subsequent development. While similar publications have been seen from the UK, this would be the first such publication in Australia, and copies were provided to all members, libraries, and close friends of the Society and it is available for general sale. Many thanks to Brian Carter who has arranged the retail distribution.

3. Financial Results

The Society had been preparing for the Anniversary expenditure for some time. We were also acutely aware of a truncation of activities due to the impending construction by Council of storm water drainage inputs in the lower end of our grounds. In the event the extended period of construction due in part to an unusually protracted period of wet weather, and then to the usual contractual difficulties, has adversely affected our income. It is a tribute firstly to the Treasurer for his sound management of our funds and secondly to the members contribution through support of running days that we have not in any way had to curtail any activities and in fact expenditure has remained high with us making the most of the opportunity to upgrade facilities while being partly incapacitated. As the works report shows, we have made significant improvements to our track, signalling, steaming bays and grounds seating without being limited by funds. In summary, our

position is sound and with the track back in operation it should not be long before we return to our previous position.

4. Our Membership

Firstly I must express my thanks for the input of Peter Shiels who resigned as a Director earlier this year. Peter is a wiz with the welder and is responsible for most of our large welded structures. Also to Ron Larkin who has spent 14 years as a Director and is not standing again. Ron has been one of the stalwarts of the running days and Laurelle has been very active in running the kiosk. We wish them well. Our membership has seen a very slight increase in recent years and this seems to be continuing. It is pleasing to see that our newer members are proving to be very active in the Societies activities, and I trust they enjoy the congenial environment. A small but steady influx of new members is vital to the long term success of the Society. We now have 72 members which includes 2 provisional members.

5. Projects

The Society has pressed ahead on many fronts. Many members have been involved with these works and to all of these- many thanks. Some of the work done includes the manufacture of new track panels for the inner main deviation and the outer main bottom curve; extensive resleepering; the galvanising of the loco depot roads to save painting; new signals on the elevated track operated from the ground frame; new power supplies for the elevated steaming bays and elevated signals; the repair and upgrading of our seating; and the ongoing carriage maintenance including replacement of brake diaphragms.

While not a project of our desires, the council drainage work is now all but behind us. It has been gratifying to see how members have contributed to the various tasks that were enforced on us. While the gratings are not particularly attractive I believe that we will see some positive improvements as a result of this work. Because of the covering of the previously exposed drain top at the bottom end of the grounds, the picnic area will be more attractive. The track has been upgraded and the formation should better assist retention of superelevation in what has been a very difficult area in which to retain a proper setting. Hopefully the entrance will be concreted, and already some of the neighbours junk has been cleared away, and a new fence provided. I think we would all agree that Henry has been an excellent representative for us (particularly at his consulting engineer's pay rates!) and I don't think that the negotiations and liaison with both council and contractor could have been performed one bit better.

I should also mention the myriad of maintenance activities which are also carried out by members. Tasks from the repair of the lawn mowers and brush cutters, to painting, track tamping, and the ongoing gardening all help in having our grounds neat & tidy, and, in my opinion, we present one of the most professional appearances to our public of all the engineering societies.

6. Model Engineering Activities

This has been a year without any new locomotives entering traffic & hopefully this is the calm before the storm! I am aware of a number of new locomotives that are very close to being finished and others that are making varying degrees of progress. This is one of the principle reasons we exist and we should encourage these activities at every opportunity.

7. Interclub Activities

Attendance at events outside the Society's grounds has always been one of the pleasures of membership. Visits to Canberra, Hornsby, Wollongong, and to Newcastle for the convention this Easter have been enjoyed by members. At the convention, Barry Potter received the most popular locomotive award, while John Tulloch received the AME Under 25's Award for his very nice P Class tender. Visits to Barry Potter's at Orange have been made by a number of members and these visits are always greatly appreciated by members.

8. AALS & AMBSC

The Society continues to be active in assisting both AALS & AMBSC. We presented two motions to the AALS AGM (one carried) and one to AMBSC (also carried). In particular, the motion to AMBSC is intended to place the future positions of boiler inspector more accessible to model engineers. We rely on our boiler inspectors for the operation of steam, and the traditional industry sources with professional qualifications are becoming more limited. Hopefully AMBSC will put in place arrangements which will help us prosper into the

future by promoting training and authorising a breakdown of the tasks to be done by the appropriate level of competency. Your President has also been involved in the AALS training sessions across the States which is aiming to place the various safety related activities on a common level of understanding, and provide a basic awareness of our legal responsibilities.

9. Our Future

Our newsletter is tending to grow a bit, but I am sure our worthy editor would appreciate some more contributions from members on their projects. I don't think there is anything he would like more than to have a selection of articles to chose from! John has stewarded our publication now for 22 years and I believe it is more than comparable with other Society's journals in quality of content. Well done John. I should also thank our other Office Bearers & Directors. Henry, who handles an inordinate amount of correspondence with the minimum of fuss, really eases all our tasks. John is equally the maestro of the money- you just have complete confidence that all things are in complete control. Bernie is really the brains behind all that goes on-he has a sixth sense to be able to judge issues and this helps keep us on a steady keel. Ken Baker has shown that military coolness and together with Brian Kilgour keeps our boilers inspected. I also need to place on record the service of Bill Richards who is standing down as Track Superintendent. I do not know how long Bill has fulfilled this role, but I suspect it is a lot longer than he has officially had the position! The organisation of track and its safe operation has been expertly handled by Bill and it will be a hard act to follow, except that I feel that the Society in general is mature in its train operation, with those safety aspects that matter being second nature to our experienced operators.

It is often not too wise to try and predict the future, but I will stick my neck out and suggest that we are in a sound position, and I think we will continue to stay so. With the council works behind us, there are plenty of activities that lie ahead. These include the beautification of our public entrance, some more greenery around the grounds, hopefully an improved unloader to make that task easier and safer from a wider variety of vehicles, ongoing track upgrading, and maybe even those long dreamt about bank engine sidings, or station awnings! I am sure the public will continue to support us, but it is with the members that our continuing success lies. We exist for the members and by the efforts of the members. Whatever our own personal reasons for being a part of this, it must be said that we do it because we enjoy it, and if we can share this pleasure with others, then all the better. Thank You.

Warwick Allison

June 1999

Annual General Meeting

At the meeting this year the following office bearers were returned:

President Warwick Allison

Vice President Bernard Courtenay

Secretary Henry Spencer

Treasurer John Hurst

Directors Brian Carter, Ken Baker, Jim Leishman

Chief Train Controller Barry Milner;

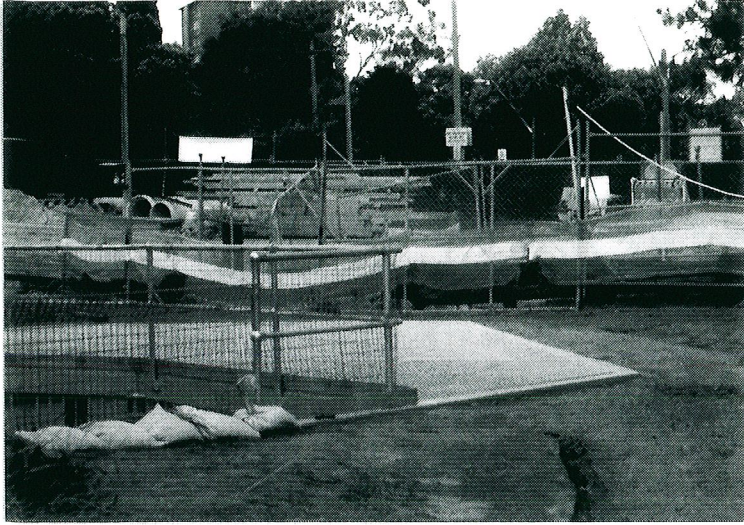
Track Superintendents Ground Level-Warwick Allison; Elevated-Jim Leishman.

Running Days.

May. Once again we provided an end to end service. The day was very good as far as the weather was concerned and we did not disappoint a number of birthday parties. (one group seemed to have enough equipment to stay for a week.) The elevated track was served by the now regular crew, Drivers Carter and Courtenay and their locomotives , five cars and Guard J.Lyons. There was a change on the ground level with Warwick and the "V" class replacing Max and "Bitza", Henry and his loco were there as in previous times.

The afternoon was very successful, lots of rides with no problems and happy customers at the end of the day.

June. Back to normal running. A good lot of hard work had been put in to have all tracks back in operation. As a safety measure some carpet underlay was placed beside the ground level tracks where they crossed the grating covering the big sink hole just south of our foot bridge. We still needed to use the Park

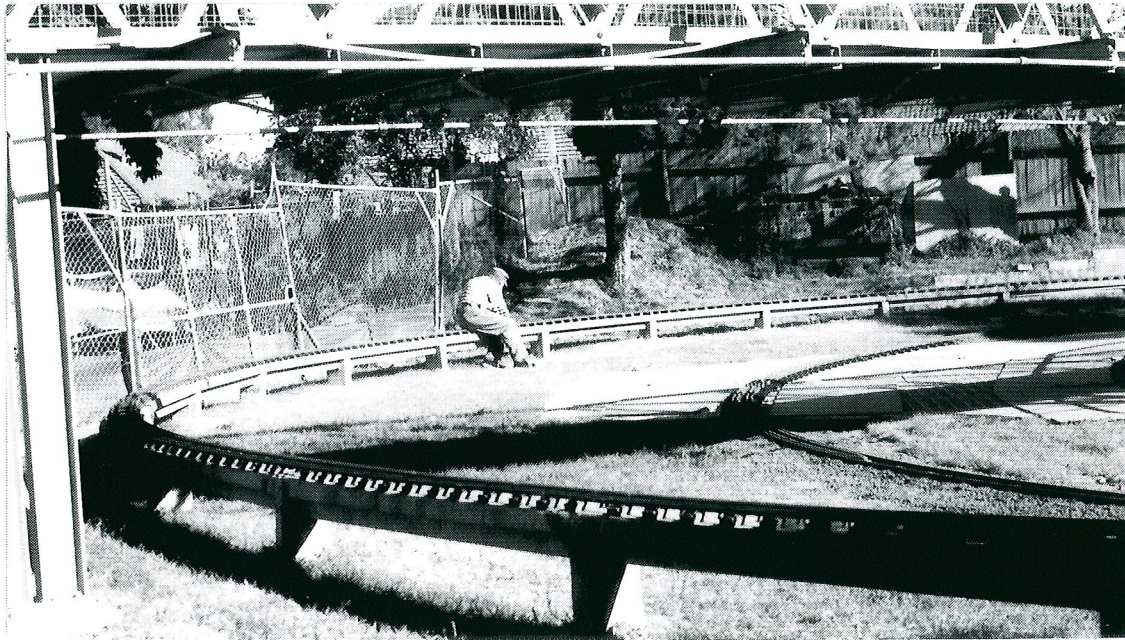


Left.

Work is still underway but the grate over the large sink hole and its railing are in place.

Below.

Ready to go for the June running day. The carpet underlay can be seen as well Don Jones making some adjustments on the elevated track.



Lane entrance as the new turf was still very wet and spongy and would have suffered if it were used as a thoroughfare or picnic areas.

It was very good to get back to our normal running. The ground level was serviced as follows :- inner, Warwick Allison with the "V" class and Ray Lee C3803 on separate trains. Outer, Bernie Courtenay SMR 10 class double headed with Max Gay, "Bitza", while on a second train Lionel Pascoe, C3811 ran with Barry Tulloch, D5902.

The elevated ran three trains, Brian Carter "Perseverance", Jim Leishman and the Southern Ps4 and Stuart Larkin driving the C35. Ron was there as well enjoying some time at the grounds.

We had a reasonable crowd, the weather was fine but cold as to be expected for June and we accounted for 1500 rides. We needed to have a crossing attendant near the elevated station to help our visitors with their strollers etc., to avoid the foot bridge.

Contractors Day. We held a special day on the following Saturday, 26 June for the contractors. Some fairly ordinary weather limited the crowds, but those that attended had a good time with the BBQ sausages and salads. Some intrepid members didn't worry too much about the rain. Loco power was provided by John Hurst with the Mountain having its first trip after the enforced layoff, and Lionel Pascoe had 3811. I don't

know what was gleaming more, the locos immaculate paint or the grin on Lionel's face! Jim Leishman had the Ps4 out on the elevated, and the V class ended up with 16 cars on the inner to create a bigger chuff!

July. After a week of rain we had a fine but very cool day. The lower end of the grounds were kept out of bounds again as they were still very wet under foot. The new grass is making good progress and should become a surface come spring time and some drier weather. The public again used the top entrance with assistance provided at the elevated track crossing for those in need.

For the first time that I can remember for a normal running day there was only one train on the elevated. This train was hauled by Jim Leishman's Ps4, taking three cars and a guards van.

On the outer ground level two trains operated, Ray Lee with C3803 on one and Peter Shiels C3901 on the other replaced by John Hurst and his 4-8-2 later in the afternoon. On the inner track Ken Baker, 'Simplex' and Bernie Courtenay, SMR 10 class ran one train with the second train hauled by Henry Spencer, TGR R class and Max Gay 'Bitza'. Barry Tulloch D5902 replaced this combination later in the afternoon.

Two of our far away members Trevor Arney and Trevor Collett were both at this running day and Don Jones had one of his D57 class tender bogies on display.

We gave 1560 rides for the afternoon, it was a good crowd but the area out of bounds did not present a problem even though there were a number of birthday party groups.

Works Reports

Seating

Allan Cottrell, Brian Hurst and Bryce Peak with help also from Jack Grierson and Martin Yule have finished the seating. New treated pine timber has been fitted as well as galvanised steel bracing to improve stability. This has been a model project to show what can be done with a small band of dedicated members attacking the problem and disproving the doubters. The seats will last at least another 25 years and the Society has been saved a considerable amount of money. Work has now commenced on providing concrete plinths for our newer seats so these can be bolted down and left outside. On behalf of those who sit on the seats-Well done chaps!!

Fencing

Work has advanced well on the provision of fencing of the track. All the fencing removed by the drainage work has now been replaced as well as new sections along the inner main to complete the arrangement in lieu of the stakes and nylon rope that has existed for some time. Staining posts are being added and the final wire with adjusters should make a low maintenance arrangement. At the time of completing this Newsletter the fencing is all but finished.

Track Work

Five track panels on the outer main which connected the track lifted for the drainage works have been lifted, resleepered, the formation dug out, provided with weed mat and reballasted. Henry Spencer has sourced and laid some second hand conveyer belt matting on the grate adjacent to the track. Hopefully this material will provide a long term solution in providing passenger safety at this location.

Drinks Fridge.

This was returned to the club house last Saturday following an extensive re-build by Ken Baker. It is now in top class condition, runs smoothly and keeps the drinks cold. Ken has fitted a drain pipe and trap to help with more efficient operation.

Visit to Barry Potter's

This happened on 29 & 30 May. On the Saturday afternoon about 37 people enjoyed the running which also continued on the Sunday morning. There was single & double headed trains, long and short goods trains, engine and tender first! Barry has regraded some of the track to remove one of the more limiting challenges! The BBQ lunches and the hospitality of Anne & Barry were of course memorable events. After Saturday

night dinner in the RSL, members adjourned to the Gibbons' motel suite to watch the excellent video taken by Mark during the day.

AALS Training Sessions

The NSW sessions were held in our clubhouse on the 5 & 6 June 1999. These took place while members worked on relaying track. Our visitors (about 50 each day) were very impressed with our facilities and many took the opportunity to inspect the finished work. Many thanks to all the members who assisted with the organisation on the day, to make things run smoothly. It was good to see the SLSLS catering machine in full swing after our enforced reduction in services. Thanks girls!

Anniversary Book

There are still copies available. Cost is \$7.50. 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

A family event to report is that Mick Murray was accepted as a full member at the June meeting while Scott Murray has been accepted as a provisional member at the July Directors meeting. Both would be well known to members of the Society. We hope you have a long and beneficial association with the Society.

Stereo Amplifier

The long sort after stereo amplifier has been thankfully provided by George Robinson and installed by Scott Murray. The video can now reverberate steam locomotive sounds through the loudspeakers previously donated by Ray Lee.

Diary

11/12 September	Interclub Run-SSME-Luddenham
18 September	Public Running Day
25/26 September	Canberra Invitation Run
2/3 October	Central Coast Birthday Run
8/9/10 October	Hornsby Birthday Run
16 October	Public Running Day
23/24 October	Miniature Traction Engine Rally- Inverell
30/31 October	Blowfly Rally-Orange
6/7 November	Wagga Wagga Invitation Run
20 November	Public Running Day & next newsletter
21/24 April 2000	Annual Convention-Warner Queensland.

Garden Roster.

Sept. '99.	B.Courtenay, K.Baker, B.Carter, V.Condon, J.Grierson, M.Haynes, L.Pascoe, J.Sorensen, N.Sorensen, P.Taffa.
Oct. '99.	J.L.Hurst, J.B.Hurst, A.Cottrell, A.Coucill, J.Leishman, J.Lyons, P.Lyons, B.Peake, M.Tyson, M.Yule.
Nov. '99.	B.Hurst, T.Eyre, P.Brotchie, M.Gibbons, G.Kirkby, M.Lee, R.Lee, B.Rawlinson, B.Tulloch, J.Tulloch.
Dec. '99.	B.Richards, W.Fletcher, F.Collins, M.Gay, S.Larkin, D.Lee, J.Noller, G.Robertson, H.Spencer.

Gate Roster.

September. R.Lee. October. C.Leggett. November. J.Leishman.
 December. J.Lyons.

Editorial.

I thought it may be an idea to mention how things go together in the Newsletter. Any special pieces of writing, such as the Annual Report or other articles, will acknowledge the Author. The rest of the news part of the Newsletter is compiled by President, Warwick, and myself, or sometimes a combination of the two of us with me adding to or modifying Warwick's contribution. It is great to make use of computer technology. Never the less it is always good to have other material on standby for publication, if any members feel that they have something of interest please get it to me so it could help make our Newsletter more interesting. Something that I would like to have is some articles on " how it was done " for some of the locomotives or accessories that members have completed. Think about it please, it could help other members considerably.

John Lyons.

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

by Mr. C.A.Cardew. Continued.

Feed Water Heating.

At the other end of the steam circuit from superheating the question of feed water heating prior to supply of water into the boiler was not neglected though, in the final outcome, it must be regretfully recorded not with the same fortunate results. On the New South Railways there was never any attempt made at waste, or smokebox gas, feed heating, the application of the principal being entirely confined to the diversion of part of the exhaust steam to heat the feed. The first entry into this field was at about the same time as superheating was being introduced, and this by the employment of the Exhaust Steam Injector. Superficially considering the use of exhaust steam, which has a pressure seldom exceeding 5 PSI, to inject water into a boiler wherein is high pressure steam at, maybe, 200 PSI, or more, the idea seems impracticable but, when it is appreciated that the working of an injector depends on the velocity head imparted to the delivery arising from the flow and condensation of the operating steam jet applied, and it being known that a very low pressure steam jet still has a very high velocity if discharging into a vacuum caused by its condensation, the reason for exhaust steam Injectors working in practice will be understood. Even so, it is customary to boost the exhaust flow in the injector by a small auxiliary live steam jet.

Any one time there were some 200 locomotives, or more, of various classes equipped with these Injectors on the New South Wales Railways. The object was, of, course, fuel and water saving, and the overall value of such in service on these railways could be fairly placed at some 4 and 5 % of same, respectively.

They gave trouble, and after some years in use they were converted to live steam injectors. The view is expressed that this was unfortunate, and that the various troubles might have been overcome by more careful analysis of the causes, and devising of remedial measures for the conditions here. In this connection it has to be appreciated that there were many thousands of locomotives abroad fitted with these exhaust steam injectors and, although the uneven gradient contour of many of these lines in New South Wales were not the most favourable to the good working of these injectors, that in itself would not be a sufficient reason for their rejection. Actually, shortly after the latter action being taken there were official tests made of the working of, and economy from, one of these injectors here, with the head of the English firm making and supplying same for world use riding on the foot plate throughout. There was no trouble with the working of the injector, but the remarkable feature was that the coal consumption on the test using the Exhaust Injector was within a hundred weight of the same consumed on the other test when using the live steam one, which was a most irrational result. The head of the firm concerned consulted with me, expressing dissatisfaction and astonishment, while regretting that the assignment of conducting the tests had not been mine. Later, I was actually so commissioned with the same injector on another locomotive, and quickly found that the change-over valve, which switched from the use of all live steam, as for the condition when the locomotive was either standing or drifting, to exhaust steam working when the engine was steaming, did not operate. Here, of course, was the explanation for the previous debacle, though a most unfortunate one it must be thought for

the head of the Exhaust Steam Injector Company concerned. But, those familiar with the variables which enter into the conduct of these tests with a locomotive on the road must pay tribute to the accuracy of the testing, by which on a run of some 300 miles, with a trip consumption of about 6 tons of coal, the two tests were carried out with a difference of less than 1 cwt., of coal consumed. Superb, but as it turned out, futile testing indeed. Upon my correcting this fault an overall saving in coal consumption, as compared with the employment of the live steam injector on the same locomotive, of approximately 4% resulted. However, the question of returning to the use of Exhaust Steam Injectors was not revived.

The other excursion into the province of feed water heating did not pass the trial stage but, nevertheless, is worth recording. In this case a direct acting pump operated feed heater of the open exhaust steam type was employed, known as the A.C.F.I. Feed Water Heater. These tests, on a C35 class locomotive, were made by myself and with the apparatus working satisfactorily, an overall saving in coal, as compared with live steam injector feeding, recorded some 8%. The decision was made, however, not to proceed with any policy in respect of it on account of insufficient economic attraction, because the initial cost was considerable, maintenance costs were likely to be appreciable, and the price of coal at the time was not high.

Reviewing this decision from the view point of later years the comment might be made that, with the cost of coal increasing as it did, and had application been made to a much larger locomotive than was chosen, and for which the initial cost of purchase and installation would have been a little greater, but which would have burned annually a much larger quantity of coal, with correspondingly in the aggregate more coal saved, a different economic picture might have been presented. As it was, however, notwithstanding that, particularly in Europe (where coal was not too cheap) and on the large locomotives of the various railways in the United States, pump operated feed water heaters of one kind or another were extensively applied, feed water heating on the locomotives of the New South Wales Railways, whether by Exhaust Steam Injectors, or by Pumps, or by any other means, though for a time occupying a place in the railway scene ultimately was withdrawn, and entirely disappeared from it.

Frames .

Concerning the main frames, the plate type, until the very latest locomotives, predominated on New South Wales Railways Locomotives. The plate design was established as, and remained almost universal, English practice from within a decade , or two, of the early beginnings of the locomotive. When well designed it is a satisfactory arrangement except for the larger locomotives, and the tendency ultimately to develop frame cracks. The combination forged and built up bar frames in New South Wales appeared only on locomotives obtained from the U.S.A. Of early English origin this type of frame , of course, became, and for long was, the very hallmark of the American locomotive. It was found on the locomotives here , however costly to maintain, and when cracks through the larger cross section members occurred with the workshop technique of the time there was a difficulty in making effective repairs. Finality in frame development was reached with the largest locomotives being provided with one piece cast steel frames, the first locomotive class to have same being the D57 Class. With the D57 class the three cylinders were two separate castings, left and centre cylinders formed one , the right hand cylinder formed the other. The C38 Class frames went a step further and included the cylinders and air receiver in the single casting. The type of frame under consideration was an American development, and only in the U.S.A. , and by one firm of Steel Founders there, was their production undertaken, none else having mastered the involved foundry practice and means of coping with the metal contraction problems in casting. The New South Wales Railways with the D57 Class locomotive were it is believed, the first of any railway outside the U.S.A. to adopt this design, which is undoubtedly the best of any, indeed, there were not many lines other than the various American railroads (on which finally it became almost universal) that did employ it.

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

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