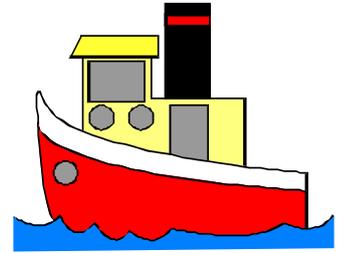




Wheels and Floats



Newsletter August 2016

TAURANGA MODEL MARINE AND ENGINEERING CLUB INC.

The Secretary
PO Box 15589
Tauranga 3112

Palmerville Station Phone 578 7293

Miniature Railway Memorial Park
Open to Public, weather permitting
Sundays in Summer: 10am to 4pm approximately
Winter: 10am to 3pm approximately
Website: www.tmmecc.org.nz

MEETINGS

General Members Meeting every first Tuesday 7pm.
Committee Meeting every second Thursday at 7pm.
Maintenance Tuesday mornings from 9am.
Engineering discussions Tuesday evenings 7.30pm.

COMMITTEE

President: Peter Jones 543 2528
Vice President: Bruce Harvey 548 0804
Club Captain: Bruce McKerras 5770134
Secretary: Murray de Lues 027 3020930
Treasurer: Owen Bennett 544 9807
Committee: Warren Belk, Shane Marshall,
John Stent, Russell Prout, Clive Goodley.
Boiler Committee: Peter Jones, Bruce McKerras,
John Heald, Paul Newton.
Safety Committee: Warren Karlsson, Bruce Harvey,
Peter Jones, Malcolm George,
Marty Rickard.
EDITOR: Roy Robinson 07 5491182
royrob@wave.co.nz

CONVENERS

Workshop: John Nicol
Track : Bruce Harvey, John Stent,
Russell Prout
Marine: Warren Belk
Librarian: John Nicol
Rolling Stock: Clive Goodley
Website: Murray de Lues
Driver Training: Clive Goodley
Club Captain: Bruce McKerras

OPERATORS 2016

21 August N Bush
28 August R Salisbury
4 September G Barns
11 September B Fitzpatrick
18 September C Goodley
25 September B Harvey
2 October P Jones
9 October W Karlsson
16 October P Lindsay
23 October B McKerras
30 October N Bush

Greetings Members.

What a great club night on the 2nd August, the room was full and our table was as always a centre of interest. This month Geoff Hallam's milk bogie wagon which he introduced at last months meeting is progressing and just about finished, a CNC project and a topic for discussion. David had the boiler for his steam boat on display an interesting work of art, then what followed was a talk by Murray about early life interests prompted by his fathers interest in manufacturing fishing rods, a discussion followed about our club accepting an offer to purchase several assets belonging to John Heald and the an interesting talk about the recent visit to America lead by Shane Marshall who has purchased a steam locomotive which is quite large. John Stent had a

couple of examples of diesel burners to show us, may be the way in future. Quite a night and it is great to see club members who come all the way from Rotorua on a regular basis to join us on club night. I think our club is alive and well. Murray has started the ball rolling with something he has been interested in during his life that is not associated with our club interests, really looking forward to the next contribution.

At our last AGM I made the comment that there are projects that need to be worked on, some are on the wish list and some are on the need list, and this is an opportunity for members to get involved with the future of our club through project sub committees. The need for a future plan for our club has been stated by many, lots of times, but realistically what we have is a hobby to relax, to avoid thoughts about the future. However we do need to plan ahead for the future of our club so that we don't do things that we will say later "we should have done that", and to make sure what we are putting our free time into is worth while in the long term. We have a round house sub committee, a club room development sub committee and a gauge one develop committee. Lots of committees, yes too right, the important thing is that not all the sub committee members are the same members on each committee. I see this as the way ahead to get members involved to take ownership of our club into the future, not the same people making the decisions but fresh eyes and ideas. We are an active, progressive, enthusiastic club and always encourage members to plan ahead, however there needs to be a balance between how much members time we need to generate revenue and maintain our assets, at the same time encouraging our members to progress their hobby interests. I agree the railway is an interest and hobby for a lot of our members and long may this continue, in fact it is essential that it does. We have a diverse group of members who have a lot of skills and how we support the personal interests of our membership and at the same time using their skills and time to maintain our club structure is always going to be a challenge. OK I'm off the soap box.

The first safety committee meeting has been held under the chairmanship of Warren Karlsson. In future newsletters there will be safety notices included, please read and take note.

Happy Modeling

Peter Jones.

Editors Comments

Nothing to do with the mag however I attempted to be in early and book some accommodation in Nelson for the 2018 Convention at the handy Tahuna Motor Camp. I was advised that no bookings would be taken until Easter 2017 . As possible accommodation places are advertised on the Nelson Convention site I have gone back to Tracy Gibbs the contact officer who is to come back to me with more info. Watch this space but suggest you book early if you wish to be "next door" to the Convention site.

Roy

TRACTIVE EFFORT TESTS ON A PHANTOM AND TAMAR ENGINE

Tractive force can either be defined as 'Starting Tractive Effort', or 'Maximum Tractive Effort' plus 'Continuous Tractive Effort'.

Starting tractive effort is tractive force that can be generated at, or from, a standstill, in other words the engine is restrained with a load strain gauge in between and throttle opened to gain the highest reading before any wheel slip occurs, if any.

Maximum tractive effort is defined as the highest tractive force that can be generated under any conditions without damaging engine or tracks.

Continuous tractive effort is the tractive force that can be maintained indefinitely, as distinct from the higher tractive effort that can be for a limited period before mechanical problems occur.

In full size practice Dynamometer cars are usually deployed to not only work out tractive effort (can be designated as 'power') but give correct speed set against load.

For our testing we are using the simple test of 'Starting Tractive Effort' which will give an indication of what the locomotives can haul without slippage and possible damage.

Most model steam locomotive owners at some time or other have probably wondered what their engines are capable of hauling. Engines having different wheel diameters and configurations that may no doubt give slightly different readings from the two above named. Petrol/Diesel/ electric appear to be a different kettle of fish.

I for one have been keen to find out more, until Russell Prout came along with an electronic type, very accurate, scale which could be set up to do a static drawbar load test indication. Bruce Mackerras was the first to have his Phantom chained back to one of the viaduct support columns. With throttle wide open the engine pulled 45 Kg's and no wheel slippage. The Tamar went through the same test, fully loaded, and pulled 74Kg's, no slippage.

From these simple tests it was fairly easy to work out from the static tractive effort tests as to what the weight of the locomotive should be to try and avoid wheel slippage on a dry level track. The figure is about 4 times the static tractive effort reading. Not sure on the Phantom engine weight but the Tamar is 510Kg's fully loaded with 60 litres of water and 30 KG's of fuel. Thus the minimum weight required is about 300KG's.

The next stage was to try and work out what the engines were capable of hauling on a level track on 100lbs pressure, in full gear. The draw bar figure per ton is difficult to ascertain with perfect accuracy. However the figure of 10KG's per metric tonne was rounded off as an attainable figure, without wheel slippage, used by some railroads in full size practice. This has since proved reasonably accurate. Thus the Phantom should easily pull between 4 and 5 ride cars, depending on length and weight. The Tamar would be between 7 and 8.

The next big question was what load could safely be hauled from a standing start on the steepest part of the club viaduct with curve included (I understand this is about 1 in 40). This was tricky, however it was decided to base the figure on 15KG's per metric Tonne instead of 10KG's. At this point in time I think the Phantom is 2 to 3 ride cars maximum bearing in mind the total weight of passenger's is unknown at any one time.

The Tamar is thus based on 5 ride cars, which has proved to be fairly accurate and proven with a near 100lb pressure on the steam gauge. Cylinder size is 70mm, stroke 110mm. Valve gear Marshall.

Would love to see a 4" scale Shay go through this test, would give some very interesting results.

John Heald

“The Cabbage” Isle of Man

The custom-made diesel locomotive bought at a cost of £400,000 has been out of service awaiting repair for a whole year - and during its short time on the steam railway it has only pulled 34



passenger

trains. The troublesome loco, which

has been bedevilled by technical problems since it was shipped from the States in 2013, was last week craned up so its wheels could be sent across for investigation and repair. Diesel no.21 was withdrawn from service in TT week after a routine inspection found a problem with two loose tyres. Director of public transport Ian Longworth said at the time it had been prudent to take it out of service and repairs would have to wait until workshop space becomes available. Window. Jeremy Reece, Isle of Man Railways' assistant chief engineer, told the Examiner: 'The bogies of Loco 21 were removed on Tuesday last week. 'This is to allow the wheels to undergo a detailed assessment and repair by a specialist railway engineering company in the UK.' He confirmed that this related to the issue with the loose tyres. He said more information could be released when the assessment has been completed. If the problem was established to be as a result of a manufacturing fault, Isle of Man Railways will be looking at making a claim under the warranty. Does this story sound familiar???????????????

The Double Fairlie repaint

Just recently I had the misfortune of running my battery powered Double Fairlie at a G Scale members track. Some of you may be saying “what on earth has this got to do with Gauge 1?”

“There are lessons to be learnt from what has to follow” I can assure you.

I bought the brass scratch built Double Fairlie many years ago from GRS in the UK. It is very nicely made and is one of my favourite Festiniog engines. The photo below shows it running on Bert’s scenic mountain railway. This track was a most realistic environment for the engine but the curves were so tight that even three link chains wouldn’t allow me to run my rake of four coaches. The swing on the bogie coaches caused derailments on every curve, hence the solo coach.

The engine was a bit of a ‘plain Jane’ in that it didn’t have any of the black panelling or lining. That didn’t alter the fact that I loved it and looked after it.



It had been running nicely at the G Scale members track and I decided to stop it in the shade on a section of track that was about 600 mm off the ground while I talked to another member of the group. I had seen a young 3 year old boy who was a visitor and he had shown great interest in the engine as it ran around the garden. I asked him not to touch the engine as I saw him standing close to the engine and looking inside the cab. I thought nothing more of it as I chatted away. The next thing I saw to my horror was him pushing the loco and carriages off the

track onto the ground in an angry destructive manner, not at all in a playful way. Well, I exploded with anger and if he had been on my side of the track I would have been reported to the police for belting a minor!!!! So the moral of the story is, don't trust the little buggers even if they do look interested and angelic. His mother apologised profusely but as I said to her "an apology won't pay for the time and effort it was going to take to repair and repaint everything".

Now this could happen at any garden railway meeting G Scale or Gauge 1, so be warned, and keep your wits about you if there are small children running amok! If it had happened to one of my Gauge 1 engines he would have felt my full fury and I would probably have ended up in court!

I took everything home and left it on my workbench for several days before I could even bring myself to look at it. The loco side tanks were damaged and both boilers were scraped down to bare brass. The front white metal buffer had taken the brunt of the fall and had to be straightened and repainted. I pulled the locomotive to pieces and repaired the side tanks. I had no idea what colour or make of paint had been used so decided to give it a total repaint.

Luckily I still had some LMS Crimson Lake paint from Precision Paints left in a tin. I rubbed the boilers back and resprayed them and the paint was an almost perfect match. It was so close that I decided not to repaint the side tanks. The area of damage was to the tank tops so I decided to spray them satin black and panel them instead. The cylinder covers and valances under the footplate were also sprayed crimson lake. I decided to get the lining done at the same time rather than leave it until later when it probably would never have got done! The red paint I had didn't have enough pigment and looked too washed out as a 1 mm line. I found a roll of 'Trimline' that I had purchased about 20+ years ago that had 0.5mm and 0.8 mm lines in red. I thought the adhesive would have been well past its use by date, but not so. A test piece stuck like the proverbial, so I decided to give it a go. Would you believe it took just under 5 metres of tape to line the model and there was hardly any wastage? It was very easy to apply and it doesn't shrink back if you stretch it a little. It also formed very easily around the curves on the lower valance. I don't think I will try and use Trimline for the white/black/white lining on the side tanks as they are too complicated. A local print company that specialises in car decals has assured me that they can do it. All I have to do is supply a CAD file and they can print it out so all three lines can be applied at once without any alignment problems. Sounds too good to be true but he said if I am not satisfied I don't have to pay. I would be a fool not to try it, because if it does work I have several loco's to complete, including the City of Truro.



Well this is how she looks at this stage, as good if not better than new again.

While I had the loco in pieces I looked into the possibility of adding two sound cards. I had always wanted to do this but never managed to find two cards at the right price!

Many years ago, Sue managed to organise a trip for me to Boston Lodge workshops in Wales for a two week working holiday. After working on the power bogies of 'Merddin Emrys' for a week, the workshop Forman asked if I would like to fire 'David Lloyd George' from Portmadoc to Bleneau Festiniog and back the next day. (Can a duck swim?) I still remember the thrill of hearing the bark of the superheated exhausts reverberating off the cuttings. The two power bogies were very rarely in synch with each other, giving an exhaust sound that I had never heard from any other engine. The stereo sound effect from standing on the footplate with an exhaust for each ear was just --- Wow! You would have to experience it to understand why I rave on.

It was this sound that I wanted to try and replicate. The Double Fairlie "Merddin Emrys" also had a superb chime whistle which was going to be a challenge to reproduce.

I had used the sound cards from Mylocosound with great success before and ordered a couple for this project. I bonded two magnets to each power bogie rear wheel set and installed reed switches to pick up the rotation. The two cards fitted perfectly into the spaces under the dummy coal bunkers as can be seen below. Everything for once was fitting perfectly into place!

Geoff Hallam

DOLLARS and SENSE:

A tongue-in-cheek study on the viability of building and running a miniature railway.

A group of 10 model engineers, to be called "The Team", decided to evaluate whether the building and running of a miniature railway was likely to be a profitable exercise. From time to time individuals would be unable to attend and would be replaced by other railway enthusiasts, to maintain sufficient manpower to run the railway. The personnel would provide sufficient numbers to have a ticket sellers, ticket clippers, several drivers, marshals, and a rostered Operator. The railway would run each Sunday, weather permitting. The exercise would be based on 10 persons working for one and a half days a week, the extra half day being used for rolling stock and railway maintenance.

Because of their enthusiasm for the project the team would not draw any remuneration from the enterprise, but would have to allow say 100 man-hours at \$30 per hour to assess eventual viability. Annually this would be a cost on the enterprise of approximately \$3000.

The City Council would be approached and "the team" would negotiate to lease a few acres of park land for the enterprise. Possessing rather magical qualities they would be able to very quickly provide a building and about 1km of railway including tunnels, elevated viaduct with bridges, complete with safety fences. Also a steaming bay and traverser would be built for local and visiting locomotives, with marshalling yards for ridecars and resting consists.

Several locomotives and rolling stock would be planned, 2 or 3 petrol powered, 2 battery electrics, a steam locomotive and several ridecars. Only 3 locomotives would be used at one time, each pulling 3 ridecars, which would take 7 or 8 minutes to complete the circuit.

The combined value of the infrastructure and rolling stock would be about half a million dollars, and these fixed assets would depreciate by about 10% per annum. The enterprise would be

granted tax exemption on the basis it would be a "non-profit organisation" need to factor

| | |
|---|----------|
| Annual Income | \$80,000 |
| Annual Expenditure | \$50,000 |
| Excess income over expenditure | \$30,000 |
| Return on Investment of \$500,000 at 6% | \$30,000 |

emtion on the be a "non-profit but it would in GST.

Income would be achieved by the sale of individual tickets or a multi-ride concession ticket for train rides to the public. On an average estimate of 900 rides per week, 47,000 rides per year, allowing for wet days, concessions and GST, should realise approximately \$80,000 income for the year.

Expenditure would be based on predicted expenses including land lease, rolling stock maintenance, electricity, phone, printing, stationery, fuel, workshop, insurance, catering, building and grounds maintenance. If wages as above were factored in, the total annual expenditure would be approximately \$50,000.

Income over expenditure should realise a profit of approximately \$30,000 and if applied to the fixed assets of \$500,000 would indicate a return on investment of 6%.

Conclusion: The Team might be better to consider investing the capital rather than create and run a miniature railway business, only to achieve the same return. However heart might win over head, taking into account the enthusiasm of miniature railway engineers, so probably the miniature railway would be created regardless of the dollar return.

Disclaimer: Any perceived similarity to a New Zealand miniature railway is entirely coincidental.

Owen.

Anagrams

Presbyterian

When you rearrange the letters:

Best in Prayer

Election Results

becomes

Lies—Lets Recount

Desperation

becomes

A Rope Ends It

Snooze Alarms

becomes

Alas! No More Z's

The Eyes

becomes

They See

A Decimal Point

becomes

I'm A Dot In Place

Dormitory

Becomes

Dirty Room

The Earthquakes

becomes

That Queer Shake

Slot Machines

Becomes

Cash Lost In Me

Eleven Plus Two

becomes

Twelve Plus One

The Morse Code

Becomes

Here Come Dots

Mother - In - Law

becomes

Woman Hitler