

The MICROMETER

AUCKLAND SOCIETY OF MODEL ENGINEERS INCORPORATED

PO Box 14570, Panmure, Auckland 1072, NEW ZEALAND

Club House: Peterson Reserve, off Peterson Road, Mt Wellington, Auckland 1060

Number 694

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October 2023

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The final part of the replacement of the old subway bridge and sides has now been completed, aside from the safety netting which will be happening shortly. This was a lengthy process but it should provide longevity and enhance safety at this part of the railway.

President's Report October 2023

Hello everyone

September has gone very well for us. Earlier this month we gathered a team together to install the new bridge side's for the subway overpass to enhance the safety of riders over the crossing. Although some of the netting is still missing, this will be completed by an upcoming working team. I'd like thank Tony Lawrence for his fantastic work in initially assembling it, along with Allan Bailey, Chris Whitiskie, Steve Watson, John Lankow and Roger Shearer for helping to install it.

Additionally, we are planning to install the new points onto the mainline by the station on the 7th October, so if anyone would be interested in coming to help do that, all hands would be much appreciated. Most of the work is in getting the new heavy points brought down from the workshop to the track, so experience isn't required—just hands to help lift!

Due to some unfortunate circumstances with the Waipuna Hotel, we have had to bring forward the Annual Luncheon to the **11th of November**. For anyone who had the previous date penned in their calendar, please make sure that you update it. The luncheon will cost \$20 per person attending and you are welcome to bring your spouse or partner! As we still need confirmation for attendance, please email info@asme.org.nz so we can confirm numbers for this date asap! The cutoff date will be the 6th November.

Finally, at the upcoming General Meeting on the 3rd October, we will be having our annual auction. If there's anything you'd like to submit for the Auction, that's the best time to bring it with you!

Thanks

Philip Dowdeswell

Remember to watch the ASME Website. www.asme.org.nz

Members should keep a lookout on the MEANZ website too, www.meanz.org.nz. It is a good place to find other clubs.

When you are travelling, just like us, our friends nationwide always welcome visitors.

THIS MONTH'S CALENDAR

Tuesday, October 3rd 7.30 pm - General Meeting, (Clubhouse)
Tuesday, October 10th 7.30 pm - Workshop Night, (Clubhouse)
Tuesday, October 17th 7.30 pm - Committee Meeting, (Clubhouse)



Train Roster

ASME

DUTY ROSTER

Date	Electric Driver	Electric Driver	Steam Driver	Train Controller	Station / Guard	Station / Guard
1-Oct-23	R Reichardt	B Matchett	Voluntary	<u>D Russell</u>	D Wilson*	A Tolstykh
8-Oct-23	I Ashley	A Bailey	Voluntary	<u>G Wills</u>	R Crook*	R Copeland
15-Oct-23	D Housley	J Lankow	Voluntary	<u>B Aickin</u>	M Luxton*	H Dando
22-Oct-23	R Shearer	M Moore	Voluntary	<u>P Dowdeswell</u>	K Ryan*	R Mascarehas
29-Oct-23	M Vickers	C Whitisie	Voluntary	<u>T Lawrence</u>	R Souter*	A van Zon
5-Nov-23	R Reichardt	B Matchett	Voluntary	<u>S Meikle</u>	D Wilson*	A Tolstykh
12-Nov-23	I Ashley	R Shearer	Voluntary	<u>D Russell</u>	R Crook*	S Watson
19-Nov-23	D Housley	J Lankow	Voluntary	<u>G Wills</u>	M Luxton*	C Billiau
26-Nov-23	M Moore	A van Zon	Voluntary	<u>B Aickin</u>	K Ryan*	H Dando

Please Note:

If for some reason you are unable to attend on your rostered date, you are respectfully reminded that it is your responsibility to find a replacement member to fill the gap – please don't let the rest of the team for the day be left short-handed. Note: the Train Controllers for both affected days must be informed of the swap in advance. It is the responsibility of the person who initiated the swap to do this. Also advise Bob Aickin who is keeping track of the number of duties each of us perform during the year.

The details of the swap should be noted in the Run Book. Also, please ensure the member you arrange a swap with is one who is rostered to undertake the same role to ensure we always have members with the appropriate training and experience on the day.

Club Notices

The annual ASME Club Lunch is confirmed for;

Saturday November 11th, at Waipuna Hotel. Please note, this date has been updated from the original December 2nd. It will cost \$20 per person and you are welcome to bring your spouse or partner! The cutoff date for signing up is the 6th November so please email info@asme.org.nz so we can confirm numbers!

Model Engineering Journals

ASME has an extensive range of Model Engineering Journals (ME and MEW) in the library, managed by Mark Luxton. The collection goes back to the first editions. However as new copies arrive binding takes a while, so the latest may not be available for a while.

If you would like to read the latest edition they are free to borrow electronically from Auckland Public Libraries. The easiest way to borrow them is using the LIBBY app. If you are a member of the Auckland Library System (anywhere in the SuperCity), this gives free access to an ME and MEW e-sub. If you encounter difficulties take your device (an iPad is ideal) into any Auckland Library Branch.

Please let the editor know if you have been using this service successfully, or have encountered any difficulties.

Beejax Castings

One of our new members – Stephen Watson needs a new project.

He is just finishing a Stationary Steam engine.

He maybe interested building a loco.

Does anyone have any of the Geth Creagh castings for the Bjax loco?

Please contact Greville or the secretary (Dave)

Annual Auction

Our annual auction will be held at the general meeting on the 3rd October.

EC Birthday – Part 2

Last month in Part 1, we covered the re-gauging of the wheels, the start of replacing the bearings and repositioning two of the four motors to increase clearance above the rails and repainting of components.

During the week starting 31st July, work continued by Grant at home – this included rusting treatment and repainting of the front & rear platforms, all fasteners, complete chassis frame and rest of the cross tubes and derail bars. One afternoon and another night shift working bee at ASME (Timothy & Grant) saw the rest of the new bearings fitted, the bogies reassembled & the repositioning of the bolster cross members welded higher up in the chassis frame. It was decided to swap the position of the axles within each bogey to even out the flange wear that had occurred over the past 30 years. Timothy worked through the weekend (5/6 August) on the modified brackets for the motor repositioning, while Grant provided the steamer service on the Sunday (6th) with his Beejax (Hotpot) and two A&G Price trolleys to fill in for the Ec and assist the Dsc on another busy day.

During the following week (starting 7th August), the corrosion on the battery security frame was cleaned up & repainted (at home) while another evening (Timothy & Grant) and daytime working bee (Timothy) was consumed changing the wiring guides and completing other remaining items. The reassembly of all of the major components (by Timothy & Grant) took place at the working bee on Saturday 12th August (assisted by some of the regular attendees – Allan & Greville) when the EC was put back into running order and tested on the track, being passed for regular Sunday services which recommenced the next day (13/08/2023).

A few minor things still need to be completed – repainting & refitting of the imitation springs, steps and rear cowcatcher. Also the repainting of the carbody – might there be a member out there who would like to volunteer to undertake that job?

With hindsight this turned out to be a much bigger job than originally envisaged, taking a full 3 weeks. However, quite a few improvements were made (besides the original wheel re-gauge job) which should help ensure reliable running for many years into the future.

Grant Anderson –
24/09/2023



David Black (First Published in the West Franklin Breeze, September 2023)

Auckland Suburban Railways: What Went Wrong after the War?

By 1930 Auckland had a magnificent new railway station designed by the celebrated Auckland architects, Gummer and Ford. The upper level of the station carried the new main line from the waterfront which curved gently to rise through Parnell to meet the old southern line through Newmarket. An underground level of the station included platforms ready to accommodate a proposed underground line to central Auckland and on to Morningside, which had been incorporated by Gummer when he was commissioned to design the Auckland Civic Square in 1924. The square was never built because, apparently lacking public support, it was voted down by the Council. Gummer and Ford went on to design the new Beach Road Auckland Railway Station, complete with the underground platforms which were built and are still there. Sadly, corporatisation of New Zealand Railways in the 1970's lost public ownership of the building, associated with a failed attempt to turn it into a casino. In the capital, Gummer went on to design a second magnificent station for Wellington which opened in 1938 and remains in use today, also housing the railway executive offices.

In the 1930s New Zealand Government Railways benefited greatly from the leadership of an outstanding general manager Garnet Hercules Mackley. He introduced railcars to New Zealand, including the classic "Standard" design which were built in Hutt Workshops near Wellington. They ran on provincial lines out of Wellington for nearly 50 years. Mackley also promoted electrification of the railway network, starting in Wellington, which was opened by Minister of Railways Dan Sullivan and Wellington Mayor Thomas Hislop on 2nd July 1938. It was immediately successful and is still being extended. Garnet Mackley retired in 1940, to enter a career in private business and soon became a parliamentarian until 1949. Under his leadership Auckland would have been included in a national electrification project, had it not been for the war and a change of government. By 1946 the earlier plan to develop Auckland's suburban railways remained in place and was reviewed by the celebrated English consultant engineers Sir William Halcrow and Mr JP Thomas who were renowned experts on passenger rail systems. Their brief was straightforward. They were presented with two proposals, both of which included complete electrification. They noted that Auckland was suffering from increased congestion which would continue to grow and confirmed that the best solution was to develop the suburban railway. The report touched on the possibility of "road widening" (a terribly English way of referring to motorways) instead of rail. They described it as "a palliative or temporary measure, as the projected increase in motor vehicles would quickly devour all of the extra space created and take the city back to square one". In contrast their suggested plan (including the Morningside deviation) was regarded as a more logical investment because it would increase the Railways annual capacity to 200 million passengers.

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However, the consultants also observed that Auckland needed a coordinated local or regional authority to oversee transport rather than relying on the numerous small Auckland Councils and the varying relationships with each other and Wellington. The authority which Halcrow and Thomas argued for was very similar to what is now Auckland Transport. Mackley, a National MP, had left, having been appointed to the Legislative Council (Upper House) soon to vote itself out of existence. Sadly, Mackley's railway experience was never properly used by the government of the day, as during the post-war years he was in the opposition. In 1950, the new Holland Government appointed William Massey's nephew, Stanley (later Sir Stanley) Goosman, a road haulage and construction contractor from the Waikato, as Minister of Railways. Goosman immediately dropped the proposals to improve on Auckland's rail network and instead focus on motorway building. When he opened the first of Auckland's motorways in 1953, he is reported to have said to a reporter "my boy, the future of Auckland is with the motorcar". The Morningside deviation continued to be the plan for the Auckland underground railway which fell and re-surfaced many times for 30 years. Now it has come to fruition as the City Rail Link (CRL), the largest civil engineering project ever undertaken in New Zealand and one which has been carefully and properly designed. It is expected to be open sometime between now and 2028. I suspect that Gummer and Mackley would be pleased with it. I can't say what Sir Stanley would say about the current mess his motorways have created. Granted, not everyone gets everything right at first, although I would have to say that Gummer and Ford, the 1920s New Zealand Railway engineers and Garnet Hercules Mackley came very close to it. Garnet Mackley died in Te Kuiti, aged 102, in 1986. He lived to see the construction of the North Island Main Trunk electrification which opened in 1988. The Sir Stanley Goosman Bridge over the Taramakau River near Jacksons on the West Coast recognizes Goosman's later service as Minister of Works, but there are no railways named after him.

Workshop Night with Dave Housley



All of this month's workshop items were presented by Murray Hollis who brought with him more question than items displayed. The pump assembly provided a few answers to his problems with silver soldering and the techniques involved. The items in the foreground are nipples he had turned up and asked about soft solder opposed to silver solder there is a paste available on the market ready mixed with flux and silver solder that one coats the faces to be soldered join them together and heat with a torch until the silver solder runs around the join, a very neat method. The subject of bending pipes was broached and the advice on the finer diameter pipe was to anneal the area to be bent usually one has to give it a lemon test of suck it and see.

The tap in the centre is a bottoming tap and has to be used when the tapping drill depth is in excess of the thread depth. If needed for full thread depth of say particularly shallow holes and it is your only one it can be ground carefully to full thread form by grinding off the cone front and gently grinding the backing off for the thread clearance at the tip

His drill chuck was tightly engaging with the key and methods to evaluate what was causing the fouling and rectification were discussed.

The final object is a test manifold to check the pressure tightness and performance of his hand pump or any other feature he may manufacture

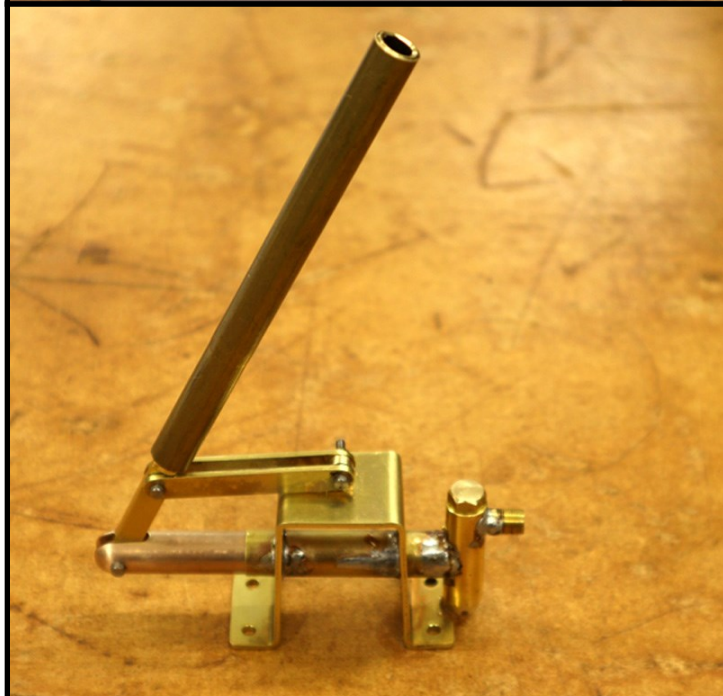
Dave Housley

Bits & Pieces

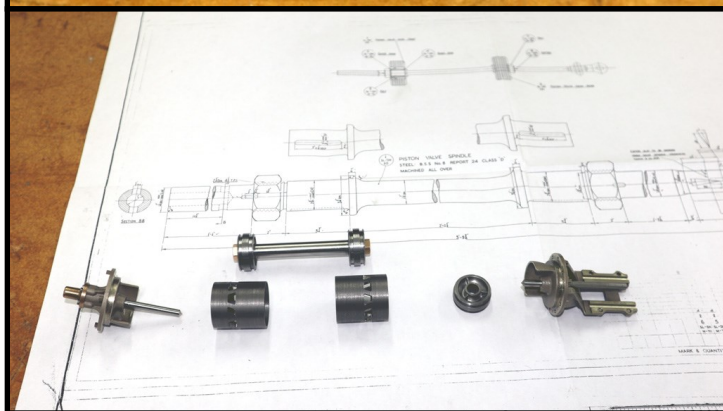


First up tonight is an item from one of our newest members, Cameron Billiau, it is a turbo impeller ordered to his specs from a supplier in Malaysia. Anyway Cameron explained the impeller is based on an automotive turbo type that has had modifications following his instructions to suit the Jet Turbine engine he is developing, Cameron's specs say it should deliver 2.4 Kg of air per second when turning at 132,000 rpm. I can't wait to see his engine running (from behind and at a distance !).

Really nice to see a different project from a new young member.



The next item was a hand water pump for Murray Hollis's "Titch" Locomotive under construction. Murray explained that he had managed to break a small drill bit in the job and was stuck with how to remove the broken bit. After some research he discovered this could be done by using a substance called Alum, (Hydrogen Sulfate), a google search will suggest other brews. Seems it will remove HSS from any non Ferris metal and aluminium.



Looks like Mike Jack is starting to get into high gear with his BR class 3 loco project, he is deep into producing the many parts for the piston valves and their sleeves and end covers with supporting parts. The drawing shown in the photo is one of the "works drawings" that Mike is working from for this project.

As many will know Mike is producing a number of these locomotives as an ongoing project with many constructors following as the parts become available.