

Number 601

May
2015

The MICROMETER

AUCKLAND SOCIETY OF MODEL ENGINEERS INCORPORATED

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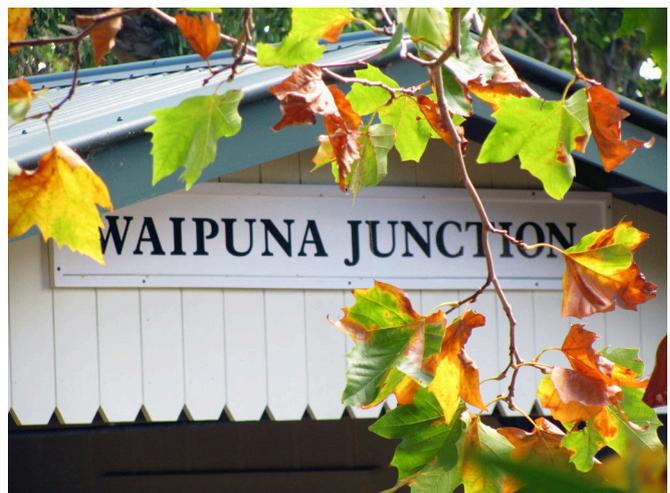
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REGISTERED NEW ZEALAND PUBLICATION

Autumn comes early to Waipuna Junction

More pictures on page 8.

(Photo by Dave Russell)





Train Roster

Date	Electric Driver	Electric Driver	Steam Driver	Train Controller	Station / Guard	Station / Guard	Station / Guard
3-May-15	D Booth	B Cotton	Voluntary	<u>D Russell</u>	M Luxton*	H Martin	C Mitchell
10-May-15	P Dowdeswell	M Granger	Voluntary	<u>D Black</u>	G Murray*	A Pritchard	M Richardson
17-May-15	M Hollis	D Housley	Voluntary	<u>T Lawrence</u>	J Olsen*	K Ryan	A Shirley
24-May-15	J Lankow	D Moffatt	Voluntary	<u>S Meikle</u>	R Stratton	R Street*	G Taylor
31-May-15	M Moore	P Moy	Voluntary	<u>T Robinson</u>	P Tomkies	J Burnett	R Crook*
7-Jun-15	M Plant	R Reichardt	Voluntary	<u>D Russell</u>	R Copeland	J Davies	G Healy*
14-Jun-15	P Woodford	B Aickin	Voluntary	<u>G Wills</u>	G Dickey	P Jones*	H Martin
21-Jun-15	I Ashley	A Bailey	Voluntary	<u>T Lawrence</u>	M Luxton*	C Mitchell	A Pritchard
28-Jun-15	G Beazley	D Booth	Voluntary	<u>S Meikle</u>	G Murray*	M Richardson	R Stratton
Note: Some changes in May also							

Bold and Underlined Name:

This is the designated **Train Controller**, i.e. the person in overall control of all operations for the day

Bold with Asterisked* Name:

This is the designated Stationmaster, i.e. the person responsible for activities in the station area. The Stationmaster is also responsible to account for the day's takings.

Drivers: Please keep your eyes open for unusual or suspicious behaviour around the track which may affect the safety and/or smooth operation of our trains. Report such activity to the Train Controller.

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.

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.

APPEAL FOR MORE TRAIN CONTROLLERS

As members are aware, the Sunday running is what allows ASME to be able to pay for most things it decides to do.

Also this ensures that the Member Subscription is kept very low. In total the members subs do not even cover the Insurance bill annually.

We have had comments from the public that there are not many steamers on these days!

To this end I would like to be able to roster a steam loco on again.

However it is all the steam drivers that are tied up on Train Controller duties.

To free them for a Steam Roster again, we need alternative Train Controller personnel.

It is not an onerous task; just requires completing paperwork and being available to assist in any incident.

Please let me know if you can help.

Greville Wills
Vice President

President's Report

May 2015

Model Engineering can mean different things to different people. When steam locomotives were the greatest machines routinely encountered everyone wanted to make and have their own – now we make and own them more from nostalgia. Or perhaps because they still are the greatest machine ever made? At a recent meeting a prospective new member told us that his interest is in restoring old machine tools. That's becoming quite a common interest with some beautiful results in some of our members' workshops. Many of us still cherish our old machines, most of them British, such as Myford lathes or milling machines. Some of this is quite well founded sentimentality based on our attachment to the English Model Engineer journal and the fact that for decades the limit of an ML7 defined the output of the amateur's workshop. A workshop of this scale is still an entirely satisfying and manageable arrangement for quite a few of us and these graceful old machines still provide comfort and solace to many. To others, particularly those of us with professional skills (which does not include the writer) they sometimes are said to provide little more than a frustrating way to get a job done.

The fact is that in 2015 there are many innovations which are more accessible and affordable than ever before. We see or hear of these from time to time and the message I get is that we would like to see more. It's not just machines either, there are materials and products such as adhesives which have made stunning progress in recent times. We will be reflecting these interests in our upcoming meetings.

In May we welcome the return of a representative from Henkel, their best known product for us being Loctite. Peter Leach is a qualified fitter and turner with 25 years' experience on the tools before joining Henkel. Peter has some enthusiasm for our activities as his father was an NZR driver whilst his own background has more to do with yachts than trains. More of that on the night.

In June we will turn to horology (clock-making), an interest of many of our established and new members. In July we intend to have another industry guest talking about advances in machine tool design and manufacture and in August we hope a talk about heat treatment and hardening. All of course subject to the availability of our guests closer to the time.

A new arrival on the Club library shelves is the American Home Shop Machinist. There has been a perception of a decline in the popularity of the English magazines although the Model Engineer's Workshop seems to be building successfully. The bi-monthly Australian journal is also doing well and is held in our library. In New Zealand we have not had so much contact with the American movement, generally called Home Shop Machining but it is alive and well and served by a similar range of affordable modern equipment to that available in Australia and New Zealand. The committee looks forward to your comments. We will, of course continue to maintain and build our collection of the English journals.

Now that the station at Waipuna Junction is restored, the club railway has renewed capacity and ease of operation. The running afternoons are an enjoyable way to spend a Sunday but become difficult if crews on the roster do not show up. One day in the last month had to be abandoned to the dismay of potential passengers. Please check the roster in this newsletter, they can occasionally change.

David

Next Meeting Tuesday May 5, 7.30 pm.

This month's speaker is Peter Leach, sales engineer for Henkel NZ specialising in Loctite products. This month Peter will talk about anaerobic adhesives and thread locking.

In 1953, American professor Vernon K. Kriable developed anaerobic threadlocking adhesives in his basement laboratory at Trinity College in Hartford, Connecticut. Kriable's company, American Sealants, founded the Loctite brand, which was promoted as ushering in a new era of mechanical reliability by eliminating the vibrational loosening of mechanical fasteners, a frequent cause of machine failure. In 1956, the name Loctite was chosen by Kriable's daughter-in-law. Loctite sealant made its official public debut at a press conference at the University Club of New York on July 26 of that year.

In 1963, American Sealants changed its name to the Loctite Corporation. After Vernon Kriable's death in 1964, his son Robert H. Kriable, also a chemist, served as chief executive until 1985. The Vernon K. Kriable Foundation was established in 1984 in honour of the co-founder.

In 1964, Loctite introduced cyanoacrylate adhesives (a repackaged Eastman product, invented at Eastman Kodak in 1942), also known as "Super Glue". It was the first of many new products, including silicones, epoxies, acrylics and the development of new Loctite anaerobics. The 1980s brought about the addition of a line of micro anaerobic adhesives.

The brand was parodied in Roald Dahl's 1980 book *The Twits*: - Mr. Twit uses a glue named "Hug-Tight" in a trap used to capture birds.

In 1997, Loctite was acquired as a flagship brand by Henkel, a German Fortune 500 company. Since then, Loctite has remained a primary Henkel brand and a supplier of household adhesives, epoxies, spray adhesives, construction adhesives and home repair, sealants and fillers.



Bits and Pieces April 7 2015

Conducted by Peter Woodford, with photos and reports by Dave Russell.



The first items on the table this month were some CD-ROM, DVD and hard disk drives taken to pieces and the individual bits labelled on cards by Graeme Murray, quite fascinating and surprising that we throw away such intricate pieces on a regular basis.

Graeme also brought in an item from his old Air Force days in the form of a rotatable wiring connection that had many connections to connect through to the other end and allow the thing to rotate and remain connected at the same time .



The “what is it” for this month was supplied by Mike Moore. The item looked like some sort of valve but turned out to be a large magnetic earthing clamp for welding.

A piece that was a bit of a mistake was produced by Greville. It is part of the mounting for the vacuum chamber for the trolley brake system but somehow the thread got very close to the inside diameter (or vice-versa)!



Greg Burrows and some work mates have been competitively investigating the best way to machine a hard plastic block piece used as a holder for some test probes on an assembly line.

We all know that we should not use a file on items in the lathe but here is a file designed for that purpose. It is a long single-cut design with a good handle of course. Both the edges had no teeth so as to avoid damage to the chuck as was explained by the owner, Mike Banks.



Mike also brought in a tail stock chuck removing wedge he made from a piece of Duralumin off a Sunderland flying boat propeller.



A lot of time was wasted, as Mike Banks explained, in making a pair of inside to outside valve linkage for his King locomotive. A new, corrected pair are underway as can be seen in the photo.

Mike's last offering tonight was a very fine parting tool 0.040" (1.00mm). He keeps the masking tape on to avoid cutting himself.



Lastly, Peter Woodford talked about his own offering for this evening in the form of a set of four vacuum gauges. These were Kawasaki branded and used for synchronising the four carburettors on a 4 cylinder motorcycle. This gear has been largely made redundant by the abundance of electronic fuel injection on modern bikes.

This drone "landed" on the table but was not part of the Bits and Pieces display.

Instead, it was the subject of a fascinating address by visiting speaker Geoff Patterson, who described the "works" and the operation of this versatile machine. It has 8 motors with contra-rotating rotors for propulsion and a camera mounted on gimbals underneath. It takes one operator to guide the aircraft, and another to operate the camera.



Library News

Very soon, David will be ordering some new additions to our library collection of the popular **Workshop Practice Series** books. We already have a considerable number of these, but there are some gaps and the intention is to make sure we have a complete set. In addition, should any ASME member wish to order any of these books for his own personal library, he should talk to David, who hopefully will be able to get a personal copy at a reasonable price.

I have listed below the entire set of these books to date. If you wish to find out more about any of these books, check the ASME library and/or go to www.specialinterestbooks.co.uk and click on "Workshop Practice Series" for details of the contents and the author's qualifications.

1. Hardening, Tempering and Heat Treatment	Tubal Cain
2. Vertical Milling in the Home Workshop	Arnold Throp
3. Screwcutting in the Lathe	Martin Cleeve
4. Foundrywork for the Amateur	B. Terry Aspin
5. Milling Operations in the Lathe	Tubal Cain
6. Measuring and Marking Metals	Ivan Law
7. The Art of Welding	W. A. Vause
8. Sheet Metal Work	R. G. Wakeford
9. Soldering and Brazing	Tubal Cain
10. Saws and Sawing	Ian Bradley
11. Electroplating	J. Poyner
12. Drills, Taps and Dies	Tubal Cain
13. Workshop Drawing	Tubal Cain
14. Making Small Workshop Tools	Stan Bray
15. Workholding in the Lathe	Tubal Cain
16. Electric Motors	Jim Cox
17. Gears and Gear Cutting	Ivan Law
18. Basic Benchwork	Les Oldridge
19. Spring Design and Manufacture	Tubal Cain
20. Metalwork and Machinery - Hints and Tips	Ian Bradley
21. Adhesives and Sealants	David Lammas
22. Workshop Electrics	Alex Weiss
23. Workshop Construction	Jim Forrest and Peter Jennings
24. Electric Motors in the Home Workshop	Jim Cox
25. The Backyard Foundry	B. Terry Aspin
26. Home Workshop Hints and Tips	Edited by Vic Smeed
27. Spindles	Harpit Sandhu
28. Simple Workshop Devices	Tubal Cain
29. CAD for Model Engineers	D. A. G. Brown
30. Workshop Material	Alex Weiss
31. Useful Workshop Tools	Stan Bray
32. Unimat III Lathe Accessories	Bob Loader
33. Making Clocks	Stan Bray
34. Lathework - A Complete Course	Harold Hall

- 35. Milling - A Complete Course
- 36. Photo Etching
- 37. Dividing
- 38. Tool and Cutter Sharpening
- 39. Model Engineers' Workshop Projects
- 40. Bearings
- 41. Grinding, Honing and Polishing
- 42. Metal Worker's Data Book
- 43. The Mini-Lathe
- 44. The Metal Worker's Workshop
- 45. Basic Lathe Work
- 46. Workshop Machinery
- 47. Three-Phase Conversion
- 48. Mini-Lathe Tools and Projects
- 49. The Milling Machine

- Harold Hall
- Brian King and Azien Watkin
- Harold Hall
- Harold Hall
- Harold Hall
- Alex Weiss
- Stan Bray
- Harold Hall
- David Fenner
- Harold Hall
- Stan Bray
- Alex Weiss
- Graham Astbury
- David Fenner
- Harold Hall



Here are some “Comings and Goings” at the Panmure Basin Festival Day, March 8th 2015. It was a beautiful day, crowds came for a ride or three, and both Electric locos were in use. Also, the new blue trolleys took to the track for the first time. It looks like the bright sunlight made photography amid the deep shadows a bit of a challenge, but **Dave Russell** took some nice shots nevertheless.



Around The Clubs

May 2015

Reviewed by Tony Lawrence.

Please note that as most of these Newsletters arrive by email nowadays, there are an ever diminishing number of them being filed in the folders at the clubrooms. However a good portion of these letters are available in the Public Domain at the respective Club websites.

Slipstream, Auckland Model Aero Club – April 2015

Again, lots of good photos of models at Club night held in the ASME clubrooms. Special guest was De Havilland expert and author Janic Geelen.

Reports on flying days at Aka Aka, and Karaka. Also a good indoor evening at the Balmoral Hall. A crisp editorial discusses the Pros and Cons of presenting and the responsibility of returning trophies in today's social environment. Well said Stan.

Wanganui Mixed Traffic and Railscene, Wanganui MRES Inc. February – April 2015

Lovely photos and editorial covering a visit to Richmond Harding's Aviation Museum. In one hangar is a Spitfire undergoing repairs, in another hangar was a Tiger Moth in airworthy condition. It also housed displays, an Iroquois helicopter engine, and a Memorial to lost topdressing pilots. Working bees have been well attended, mostly in cleaning out the workshops to make room for some more valuable junk, as well as the Drewry loco parts, recently acquired from Waitara. The Wanganui Vintage Weekend was well attended, even though the star attraction, Ab 663 from Mainline Steam, broke down en route and was very late arriving.

The Narrow Gauge, Adelaide Miniature Steam Railway Society Inc. April – June 2015

January public running day was cancelled due to extremely hot weather. Some beautiful examples of scale rolling stock recently constructed by members. St Johns Ambulance had run a sausage sizzle at running days, now undertaken by the Lion's Club. Maybe Mr Whippy could do with some competition at ASME ???. Many pages devoted to a visit to the workshop of a Mr Glenn Smythe, who is building a full size 50 Ton replica of a SAR 3'6" gauge Z class loco. After 10 years of work, the engine is about half completed.

Northern Views, Whangarei Model Engineering Club Inc. – April 2015

In January, Dave Giles delivered his newly built petrol/electric loco for Club use.

The loco has now been sheeted out at local company Martin Wallace Ltd. It appears to be a Kiwirail type Dx, but I may not be completely correct. A fine looking job, now back at the club workshop having couplers, handrails and other fineries fitted prior to painting.

Article about a new 500Hp, Cummins powered shunter for the U.S. Navy at their Bremerton, WA. Dockyard. A poignant open letter, lifted from, and credits given to Australian Model Engineer Magazine, with regards to the apparent lack of interest shown by incumbent members towards prospective younger participants in this hobby. Work days have been well attended with progress being made on the “Snack Shack”

Interesting photos of a theme park in South Korea, the “Choo Choo Park Railway” a bit like the Luge at Rotorua, in which 4 wheel buggies roll down a hillside railway, and are then hauled back to the top by a British made funicular railway on a 16% grade.

Blast Pipe, Hutt Valley M.E.S and Maidstone M.E.S – April 2015

Pictures and articles covering the Palmerston North SME open weekend and The Great Manawatu Steam Fair. The monthly meeting included a presentation from Trevor Heath on his steam related travels in Africa, including re commissioning of a mothballed Kenyan Garrett into a tourist venture. Nice photo of Caleb Scott's 7 ¼ “gauge J 1211.

Steamers and Dreamers, Manukau Live Steamers – April 2015

Heidi Loco for sale, looks great with Greg Burrows at the controls. Contact the Owner, John Middleburgh at 09 412 8804

Great photos of Glenbrook Vintage Harvest Festival. An invitation to Queens Birthday open weekend, 30th May – 1st June 2015.

Wheels and Floats, Tauranga Model Marine and Engineering Club February – March 2015

Several pages of really good humour to fill out this edition! Photos of a new club loco , running chassis being tested, looks to be a rather large Bo-Bo type battery electric.

Appointment of a “Club Captain”, to organise social events and driver training activities. Explanation of old printing industry terminology, and how the modern “A” series of paper sizes came about.

Diary of recent visit to MLS. “Phantom Day”

TAURANGA MODEL MARINE AND ENGINEERING CLUB INC.



has great pleasure in hosting the

2016 NATIONAL MODEL ENGINEERING CONVENTION AND HOBBY EXPO

**From Thursday 7 January to Monday 11 January 2016
at Memorial Park, Tauranga.**

Proposed Special Events include:

Friday evening run for steam locomotives - watch the sparks fly from our new viaduct.

"Off the Rails" - miniature traction engine and steam road vehicle run.

Model Engineering Challenge and Presentation of Les Moore Trophy with prize money \$1,000 for the winning club, \$750 for the runner up and \$500 for third.



Hobby Expo in QE II Centre catering for all interests including model aeroplanes, electric trains, model power boats, model ships, model engineering, plastic kit models and war games.

Prize - best presented operational steam locomotive/traction engine.

Prize - best static model.

Saturday Evening - Dinner and prize-giving.

Convention registration details will be available on 1 April 2015 for downloading from the Club website www.tmmec.org.nz or contact us C/- The Secretary, PO Box 15589, Tauranga 3112

(Sample Registration Form only. For full size form and other info, go to the tmmecc website).

Registration No: _____



2016 NATIONAL MODEL ENGINEERING CONVENTION AND HOBBY EXPO

7 - 11 January 2016
Hosted by: Tauranga Model Marine and Engineering Club (TMMEC)
PO Box 15589, Tauranga 3112
www.tmmecc.org.nz
Email: tmmecc.webmaster@xtra.co.nz

NB:
Check our website for our club's
operating rules and details of
the pre-convention briefing
for operators of locomotives
and traction engines

Please complete the
attached Information
Sheet to assist us in the
successful running of
the Convention

REGISTRATION FORM

Please post or scan and email completed Registration Form and Information Sheet to TMMEC by 1 December 2015

Name: _____ Name(s) of accompanying partner and family members (if applicable) _____

Email address: _____

Address: _____

_____ Phone No: _____ Day

Club: _____ Mobile No: _____

Briefly list the Locos, Engines, Ride Cars, Traction Engines, Boats and Models etc you propose to bring (Please complete full details on the attached Information Sheet)

Please bring for inspection your current club issued **Driver's Licence** appropriate to the locomotive(s) and/or traction engine(s) you wish to operate, and current **Boiler Certificate(s)** if applicable.

By submitting this Registration Form and acceptance of my registration by TMMEC, **I agree** to be bound by the Rules and Procedures of TMMEC and all other rules that govern this event. **I hereby certify** that my models comply with MEANZ Safety Regulations and that I am a member of a club affiliated to MEANZ.

Waiver and Indemnity: In consideration of the acceptance of my registration by TMMEC, **I accept** that I participate in 2016 National Model Engineering Convention and Hobby Expo entirely at **my own risk**. **I agree** to accept responsibility and/or liability for any damage I may do to myself, fellow participants, and/or third parties, equipment or possessions. **I waive** all and any liability or claim against the organisers, sponsors, officials and assistants for any claim arising from my actions and will **indemnify** TMMEC for any claim made against it, or any of its members or any other persons as a consequence of my actions.

Please complete the boxes below and fill in the appropriate amounts. Note: all \$ are NZ\$

Registration Fee (for all or part of Convention)		40.00
Family Registration partner and children (for all or part of Convention)	\$10.00 each	
Cloth Badge, Metal Badge, Morning and Afternoon Tea	Complimentary	✓
Polo Shirt with Logo (Circle size: S, M, L, XL, XXL)	No. required _____	\$35.00 each
Cap (Circle size: S, M, L)	No. required _____	\$12.00 each
Bucket hat (Circle size: S, M, L)	No. required _____	\$12.00 each
Thursday – Lunch (including drink)	No. attending _____	\$11.00 per person
Thursday – Evening	No. attending _____	\$26.00 per person
Friday – Lunch (including drink)	No. attending _____	\$11.00 per person
Friday – Evening	No. attending _____	\$26.00 per person
Saturday – Lunch (including drink)	No. attending _____	\$11.00 per person
Saturday – Evening – Convention Dinner	No. attending _____	\$37.00 per person
Sunday – Lunch (including drink)	No. attending _____	\$11.00 per person
Sunday – Evening	No. attending _____	\$26.00 per person
Monday – Lunch (including drink)	No. attending _____	\$11.00 per person
TOTAL - Pay by cheque to TMMEC or direct to 03-0435-0461711-00	All charges include GST	\$

Preordered meals

Please use full name in Dep Ref if making payment using direct banking. If remitting money from overseas, please make sure full value in NZ\$ is sent.

Please refer to our Website for information regarding our fail safe braking requirements

- I will attend the pre-convention briefing for operators
- I wish to participate in the Friday evening event for steam locomotives
- I wish to participate in the miniature traction engine and steam road vehicle run(s)