

The MICROMETER

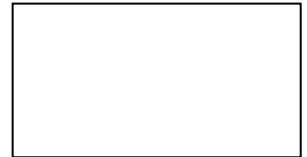
THE AUCKLAND SOCIETY OF MODEL ENGINEERS INCORPORATED
Peterson Rd Reserve, Panmure, Auckland
PO Box 14570, Panmure, Auckland 1741, NEW ZEALAND
Club House Telephone (9) 570 5286
Club Web Site www.asme.org.nz

Number 541
November 2009



President	Gary Farquhar	576 7025
	E-mail address	president@asme.org.nz
Secretary	Brian Cotton	820 3381
	E-mail address	info@asme.org.nz
Editor	Dave Russell	446 0957
	E-mail address	editor@asme.org.nz

REGISTERED NEW ZEALAND PUBLICATION

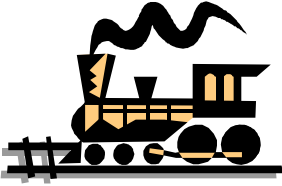


**A huge thanks to all our members.
Your efforts towards the Jubilee
resulted in a hugely successful
event, comments have been made
that the exhibition was truly world
class.**

**Club Meeting and AGM
3rd November 2009**



**Highly acclaimed award winning BR "Evening Star"
By the late Dave Watts**



Train Roster

Date	<u>Electric</u>	<u>Electric</u>	<u>Steam</u>	<u>Steam</u>	<u>Station</u>	<u>Station</u>	<u>Extra Guard</u>
1-Nov-09	D Black	D Booth	<u>R Van Ryn</u>	--	P Jones	T Lawrence	D Leybourne
8-Nov-09	B Cotton	R Craig	<u>G Anderson</u>	--	W Lord	I Lyons	H Martin*
15-Nov-09	T Crake	P Eaton	<u>G Wills</u>	--	S Meikle	A Murley	G Murray*
22-Nov-09	M Granger	J Harrison	<u>G Bell</u>	--	E North	J Olsen*	W Parker
29-Nov-09	D Housley	J McManus	<u>L Farquhar</u>	--	G Quayle*	R Reichardt	M Richardson
6-Dec-09	T Robinson	J W-Buys	<u>A Gasteen</u>	--	K Ryan*	A Shirley	R Stratton
13-Dec-09	P Woodford	J Yearn	<u>M Jack</u>	--	R Street*	T Taylor	A Watson
20-Dec-09	D Black	D Booth	<u>B Piggott</u>	--	I Ashley*	P Boyes	G Briggs
27-Dec-09	-----	Xmas / New Year Break - No Roster in Operation – Voluntary Running					-----

Bold and Underlined name – is the designated **Train Controller**, i.e. the person in overall control of all operations for the day. If you are the **Train Controller** you should phone around the others rostered for that day to make sure they remember to turn up.

Bold with Asterisked* name – is the designated **Stationmaster**, i.e. the person responsible for activities in the station area for the day. The Stationmaster is also responsible to account for the day's takings. **Please Note**, there is no expiry period or date on train ride tickets previously sold.

Club Calendar November 2009

November 3 rd	General Meeting and Annual General Meeting
November 10 th	Committee Meeting
November 17 th	Workshop Night this month at Graeme Murray's, 41 Beechdale Cres, Pakuranga Graeme is promising to show how to us make some small useful items.

Presidents Annual Report

It is with pleasure that I submit my annual report to the membership for the occasion of our 50th AGM.

This year has been an important year for the club being our fiftieth. As we are all well aware discussions started several years ago on how was the best way to mark the occasion. A decision was made to hold a public exhibition of our members work and to try and get as many models of past members that we could, not only to show to the public but to members who have not seen them before. To this extent we more than succeeded. Months of planning and organising has gone into the facilitating of the exhibition, mostly under the control of the Jubilee convener, Hugh Martin and his team and the result of the exhibition was a great success both in the eyes of the public and for the members. The weekend celebrations were marked with a jubilee dinner attended by 119 people, including two people who were at the initial foundation meeting in 1959. It is a pleasure to report that from the exhibition the club made a profit in the vicinity of approximately \$8632.00. This money will put on investment in our bank and used for future development projects and a contingency fund for any major maintenance that may arise.

Our membership has remained constant with currently 110 financial members consisting of 54 ordinary members, 26 senior, 14 country, 12 life and 4 junior members

Sadly several long serving members pass away during the year. Derek Simons after a short illness, Tony Ray from Tauranga and Don Le Compte a life member who had lived in the far North for many years.

Last year the committee discussed the pro and cons of registering to become a charity under the recently introduced Charities Act 2005. It was agreed that we submit an application for registration. This we did and waited many months for a response due to the number of applications the commission had received. Eventually our application was accepted with our having to amend a couple of rules in our constitution. Receiving charity status mainly impacts on our obligations for taxation liability

This year our sublease with the Auckland City Council for our part of the grounds we occupy expired. Some of the area (mostly under the powerlines) is owned by Transpower and leased to the Council who in turn sublease it to ASME. The council has agreed to renew our sub lease, but only until 31 August 2011. This date falls in line with the expiry of the head lease which Auckland City Council has with Transpower. Transpower has advised council that on the expiry of their lease term (viz 31/8/2011) they will not be renewing the lease. We understand that it is a policy decision of the Transpower Board that no new leases will be issued for property under Transpower control, and that this is not negotiable. We accept that the problem is genuine and relates to the security of the power supply to Auckland.

This development therefore presents a significant problem for the club as to our situation at the expiry of the lease 1n 2011, but we are trying to find a solution which may enable ASME's continued existence at the current location beyond August 2011. Noting that any solution must accommodate Transpowers principal use of the land. The committee has asked David Black to act on our behalf in trying to firstly establish the full situation and secondly investigate possibilities that we can enter into to remain on the site after the expiry of the lease. To this end David has discussed the matter with Transpower putting our situation and we are currently working on a presentation and representation to be made to the CEO. This involves discussing with him our wish to remain at the site; inviting him to an onsite meeting to show what we offer and why we should stay. Our present approach is to accept the Board's policy decision, but seek a licence to operate instead of a lease on the land. I need to stress that it is an extremely delicate situation and we have to tread very carefully, so I request members to not make any public or negative comments that may harm our case.

The Tuesday club have continued to attend to the maintenance and other projects throughout the year. Without this dedicated group of members the rest of us would have to put in a lot more time and effort to keep the club and property in the good state.

I wish to extend thanks to the committee members, who have all contributed to the smooth running of the club on your behalf. They have shown continued diligence, and every committee meeting has usually had the full contingent attending.

Special thanks must also go to Hugh Martin for his taking on the daunting task of being the Jubilee exhibition convenor and Murray Lane for his time spent researching and writing the history book as well as all the members who were able contribute some time and service to the cause.

So where to in the immediate future,? Apart from the situation with the lease it is planned to finally finish the reinstallation of the signals. Some trolleys are in need of wheel replacements and we are in the process of redesigning some of the trolleys bogie system to get a better and less likely to derail unit. There is some maintenance and safety issues requiring attention around the clubhouse

The AGM will see some committee members not standing for re election Apart from myself, Brian Cotton, David Black and Arnold Watson are stepping aside. Therefore we will have some vacancies to fill in particular the President, Secretary and Librarian. If you are keen to assist in the running of your club I hope that you will let it be known to some members. There is a nomination form included in this newsletter.

We have also included a draft of the Bereavement Assistance Scheme that, if you wish, can be included in your Will. This scheme is to facilitate assistance with the disposal of any workshop equipment, materials or models upon your death or incapacitation and clearly sets out by way of a flow chart the procedures that we will take to assist the executors of the will.

Finally, as I stated, I agreed to my name going forward for the President on the condition that it was only for one year. I would like to thank you for your help and support throughout a very busy and demanding year.

Gary Farquhar

Rogers observations, General meeting 13th October 2009

I hope many people are writing in to express wonder, awe, thanks, etc to all concerned with our 50th jubilee celebration and all the people that made it happen! It was great! The track running, dinner, free book etc, all made it worth while!

As we did not have a "Bits and Pieces" on Tuesday night, due to the "bargain basement" auction, here are some ramblings for the "Micrometer"

First a Web site. <http://www.mekanizmalar.com> is by an engineer who likes doing "Flash" animations. It's "cool"! Doing some further study at college, I stumbled across this website looking for methods of calculating ratios of epicyclic gearboxes. You can alter the lengths of cranks, rods etc on various mechanisms, and see the effect they have.

I don't know if any one had a go at building the paper vertical steam engine a while ago? I did. It's a well designed engine which you print out from a web site, and with care, a lot of cutting, glue, and time you end up with a pretty accurate engine! There are even pictures of finished ones running on air! Well..... after 10 attempts (and lots of expensive ink!) to get the trunk guide assembly square enough for something to run up and down it, I started having this uncanny feeling of "de-ja vue". I also had lots of other feelings, like chucking it in the bin etc, but I started to think, "I've been through this before!?!?" Then it dawned on me..... my wooden clock!

A word about the wooden clock I put on show... I think the judges were very kind, thank you. It s a bit like entering a one horse race.... You can only win, as long as you compete!

Anyway, while living in a small flat in Surrey, England before coming to NZ, and not having a workshop and not many tools etc, we found a book at a steam fair one summer. It was titled "Build a paper clock" and was a printed book where you cut the gears and fold them from the stiff card pages in the book. Sounded good, and from the pictures etc, it looked possible! Well..... yes, you guessed.... it was ^%#^% difficult! After a few weeks of work and trying various ways of strengthening the card with cold glue etc, I gave up and decided to make the gears out of wood.

This also was not very easy as the tooth profiles were all wrong for any sort of meshing to be smooth. So I redesigned each gear and tried various simple tooth profiles. I found one accumulated too much error dividing up with a compass if you draw each tooth and keep going all the way round the blank. So by dividing the disc into 4 and then starting afresh on each ¼, the errors kind of evened out.

Using strips of wood from "Argus?" and making the blanks have the grain running radially like pieces of pie, the teeth are quite strong. Anyway, cut a long bit of cardboard short, by making needle roller bearings from dressmakers pins and beads and playing with many tooth profiles, we ended up with a clock that did run for many months. It got about 4 hours on one winding. A fair bit of trial and error went into the escapement, and its probably still not right. It also has a lot of friction in the wrong places.

By bringing it to NZ I think the wood has dried out as some gears have cracked and it doesn't want to run for very long, only about 10 minutes at a time in fact. So, does one remake the parts or rather keep it as it is, as a pleasant memory of long hours in the mornings and evenings at the kitchen table in a flat in Surrey, England?

Paper models are still fun though, and the family have made many giant insects and airplanes etc from Canons website. (I refill the cartridges!) The motorbike models from Yamahas website are highly detailed and the artists who put them together with their own embellishments are amazing. For me though, I think now that we do have some space and machines, I will stick to metal for my projects!

Regards,
Roger van Ryn

Jubilee Update Report

The words of our Dave Russell, our editor in an email regarding the Jubilee event, I thought, summed it up nicely. Quote: "I think the atmosphere within the club is recharged with new camaraderie amongst the membership. I think this is largely due to the success of the jubilee and the necessity of everyone working together as a team to achieve a great result for the club".

It is also fair to say that no matter how you wish to measure the weekend, it was a great success, having achieved all its objectives. Thanks to the wonderful support of the membership we had an exhibition that rivalled the very best, with over 250 items covering the full spectrum of our interests. Sincere



thanks must go to those family estates and museums that kindly loaned their treasures for our special event.

The public support exceeded our best forecast which helped to ensure it was a successful financial venture.

The dinner was always intended to be that one special time when we remembered and thanked those past and the older members for their dedication and efforts in leaving us with the magnificent picturesque facility that we as a Club enjoy today and share on Sundays with the public.

The dinner setting was superbly orchestrated by that small group of ladies I often refer to as "the dinner ladies". Thanks to them.

To the small team who put up with the endless emails and questions from yours truly over the past year, who worked so hard to put the whole event together – thank you, you did well.

Where to now we have reached this milestone as a Club, and what will the next 10, 20, or 50 years bring? One thing for sure, is that I won't be helping with the 75th event, but an invitation to attend would be nice! So task complete, but I do intend writing an article based on the subject "Beyond 50 years". So, until then, keep well.

Cheers

Hugh

Committee Meeting Notes – 20th October 09

The minutes of the previous meeting were read and confirmed as a true record.

Matters Arising: Auckland City has agreed to a short term sub lease until 31 August 2011, in line with the Transpower lease expiring. We are awaiting formal documents.

Correspondence:

In - VERA, AECT, Public Trust

Out – Ranji Otton, Christine Black, Jan Dunn, Jocelyn Murray, Virginia Reichardt, Ainsley Cotton

Sub Committees:

Boilers: One boiler re-tested

Works: A number of areas requiring maintenance were discussed.

Library: Nil.

Stores: A large number of books were sold at the Jubilee.

Safety: Possibility of building one new passenger trolley to the English drawings and design that Mike Jack has given to the club, Arnold and Tim investigating and examining the drawings.

New Members: 3 new members after the Jubilee

Finance: Statement of accounts, plus payments for approval read and approved.

General Business:

There was a discussion about disposal of the display tables and the ASME display at EMEX.

Signals – in abeyance for now.

There was a discussion about the Transpower lease.

An issue arose whereby a bearing failed on one of the trolleys during the Jubilee. There appears to be a problem with the oiling of the trolley bearings. Some of the wheels require maintenance due to wear.

A design for new trolleys was discussed.

The clubhouse roof may require a repaint. This is to be checked.

The revised bereavement scheme is to be placed in the next newsletter and discussed at the next general meeting.

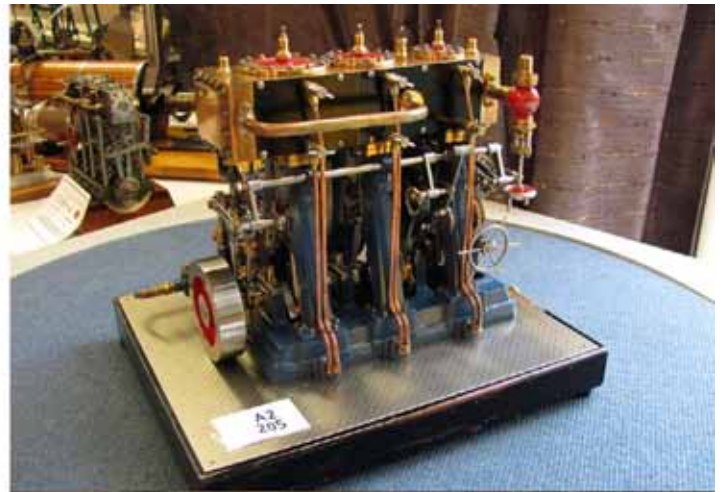
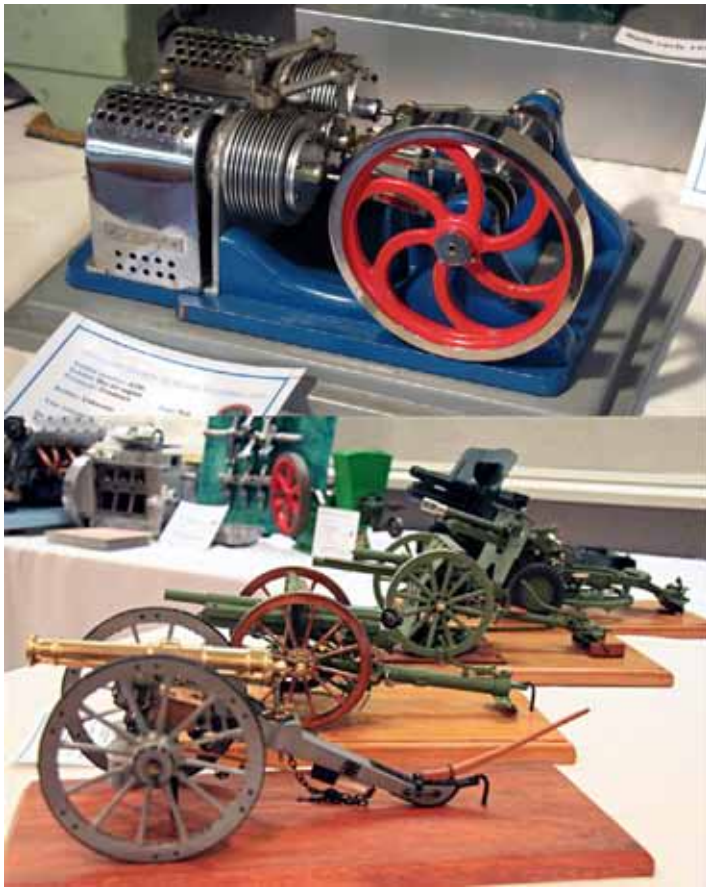
The workshop night for November is at Graeme Murray's house.

Approximately \$880 was raised at the annual auction.

Brian Cotton

A.S.M.E. 50th Jubilee Exhibition





Auckland Society of Model Engineers Awards 2009

Top award only awarded for the show late Dave Watts for 5" 'Evening Star' locomotive.

Jackson Cup	Mike Orange	A443 Modified 7 ¼" Phantom locomotive
Kresta Cup	Allan Foster	A114 Rootes TS3 engine & A519Cam grinding unit
ASME Shield	Mike Banks	A516 Tool grinding attachment
J & E Hocking	Hugh Martin	A401 GWR 5100 class tank locomotive
Committee Cup	Hayden Purdy	A231, Oscillating engine, A820 pens, A821 candle holder
Horological Trophy	Roger Van Ryn	A603 Wooden clock
Baker Memorial T	Peter Swager	A317 Allchin Traction engine
Les Fitt Mem A	Jim Yearn	A439 3 ½" Lucky 7 locomotive
Beginner's Medallion	Chris Ratcliffe	A440 Evening Star locomotive tender
VHC	Jim Greasley	A311 BSA motor bike
	Murray Granger	A432 Modified Simples locomotive
	Jack Rennie	A449 3 ½" freelance tank locomotive
	Ross Purdy	Collection of stationary engines in show cases
	Ross Purdy	Two 1.3 cc Mills engines

Miniature cups

ASME 2009 Jackson Cup Mike Orange 7 ¼" Phantom Loco	ASME 2009 Kresta Cup Allan Foster Rootes TS3 Engine	ASME 2009 J & E Hocking Cup Hugh Martin GWR 5100 Class Loco
ASME 2009 ASME Shield Mike Banks Tool Grinding Attachment	ASME 2009 Committee Cup Hayden Purdy Oscillating engine	ASME 2009 P Baker Mem Trophy Peter Swager Allchin Traction Engine

ASME Bereavement Scheme

As you know the present committee has been looking at a bereavement scheme that would be suitable and acceptable to members of ASME. This process had been put on hold due to the workload required for Jubilee planning.

The committee would now like to progress this plan further and indeed in the near future put in place a scheme that would suit the requirements of the club membership. To this end Arnold Watson has reworked the previously published draft to more reflect what we think would best serve the membership. This is the committee's recommendation and will be discussed at the November general meeting. After discussion and any modifications required it is anticipated that the scheme be voted on at the December general meeting. See below...

AUCKLAND SOCIETY OF MODEL ENGINEERS Bereavement Assistance Scheme

I.....

(Please print full name)

of

.....

(Residential address)

request that in the event of my death or incapacitation, the Executive Officers (President, Treasurer, Secretary) of the Auckland Society of Model Engineers Inc (ASME) will :-

- offer assistance and/or advice to my trustees & executors on a "best endeavours" basis, for the disposal of my workshop equipment, materials, models, and technical books/magazines (the property) to their best advantage or in the way required
- explain to my trustees & executors, if requested, the general strategy recommended by ASME for the disposal of the items (Appendix 1 attached), and organize and manage the process for them
- endeavour to provide such further assistance in the matter that they request

I understand that :

1. This request is not binding, and I can withdraw it at any time by notifying the secretary of ASME in writing.
2. If or when assistance is required, the responsibility rests with my trustees & executors to make the request to ASME in writing, to which ASME will then respond.
3. My trustees & executors will be free at any time to instruct ASME that no further assistance is required.
4. Participation in this scheme cannot in any way affect my will, nor does it give ASME any authority whatsoever over my estate or to act in any way contrary to the wishes of my trustees & executors.
5. ASME may benefit by receiving items of the property according to my will, or by receiving as donations any items that my trustees & executors may decide upon, but will give assistance under this scheme without any charge or commission whatsoever and without any expectation of donations.
6. The Executive Officers of ASME will nominate a Panel of members to provide the assistance and will so far as possible ensure that the Panel has the interests of my trustees & executors as its sole objective.
7. The Executive Officers may replace any member of the panel at their discretion, and my trustees & executors may request the Executive Officers to make such replacement.
8. Communications between my trustees & executors, the Panel and ASME Executive Officers will be held strictly confidential.
9. The procedure for the sale of the property offered to my trustees & executors is as set out in Appendix 1, which has been approved by a majority vote at a properly convened ASME members meeting.
10. Participation in this scheme by my trustees & executors is to be on the strict understanding that they and all my beneficiaries indemnify ASME and all its members against any legal action or claim because of any act, statement, omission or other thing whatsoever done by ASME, its Executive Officers, the Panel or any of its members acting in good faith.

My wife/nominated person's full name is
(Please strike out as appropriate) (Please use block capitals)

If a nominated person, please state relationship (if any)
Detail any Special Requests or Instructions (using a separate signed sheet if necessary)

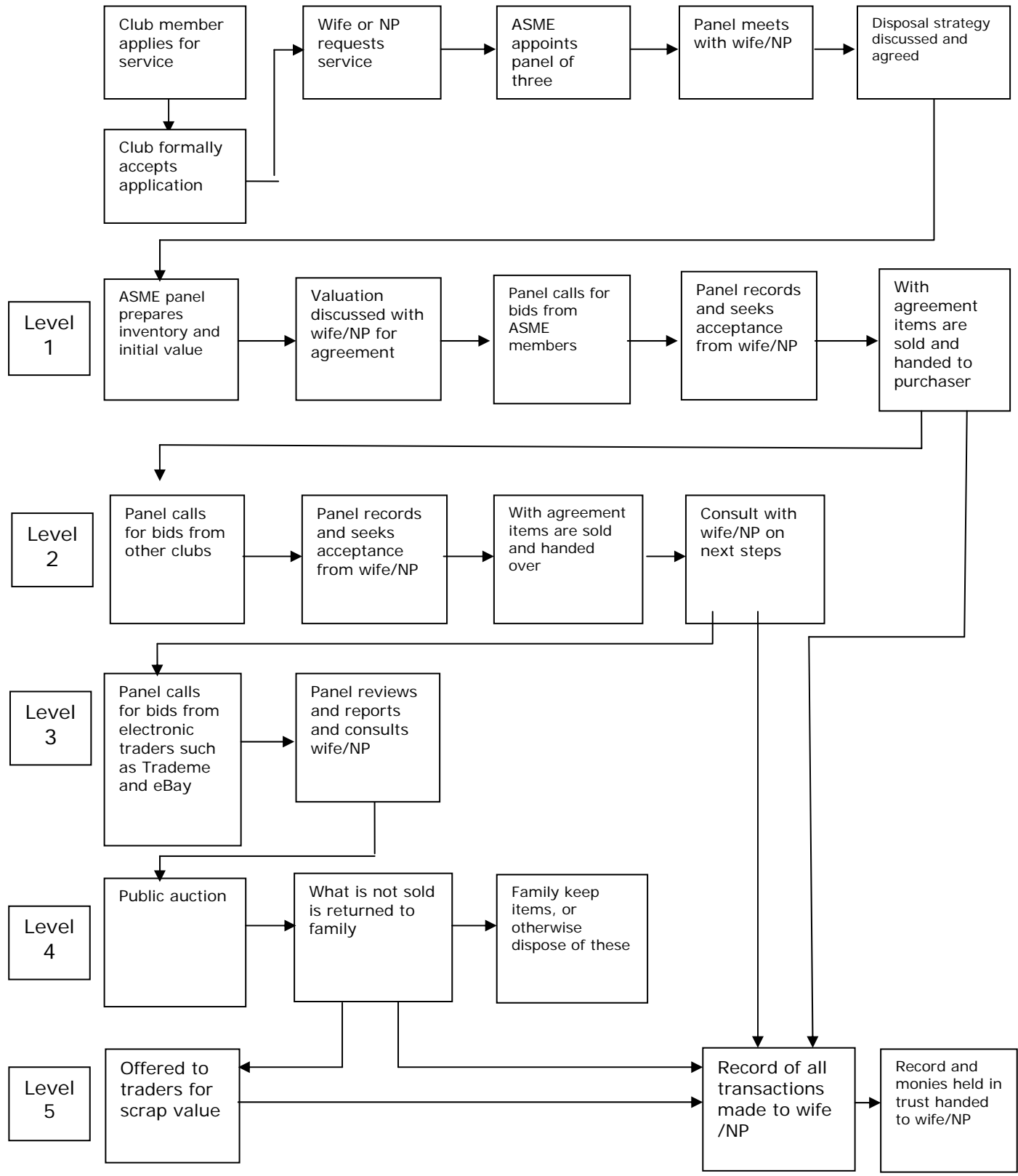
Signed:

Witness
(Sign and print name, to be an ASME Club member)

Date

Date

**AUCKLAND SOCIETY OF MODEL ENGINEERS
BEREAVEMENT SCHEME**



Upcoming Model Engineering & Associated Events

- 5-11 Jan 2010 Nelson Society of Modelers Inc., Steam and Cinders 2010 International Live Steam Convention www.nelsonmodellors.org.nz
- 28th Mar 2010 6th Karaka Vintage Rally, "100 years of Masport" (see letter on notice board)
- 5-11 Jan 2010 Nelson Society of Modelers Inc., Steam and Cinders 2010 International Live Steam Convention www.nelsonmodellors.org.nz

Around the Clubs, reviewed by Alan Emerson

Durban Society of Model Engineers, Sept and Oct 09

Club news and a write up on Members visit to the National Steam Meet at PMB with a couple of good photos. In the Oct edition is an article on American warships plus an article on a member of the Knysna Model Engineers complete with photo of his workshop.

Wanganui's Mixed Traffic and Railscene Aug/Oct 09

Good Club news and photos of all the groups' activities and some good jokes. Also a wanted advert for a steam engine to drive a 20 to 25 foot stern wheel paddle steamer.

Wheels and Floats, Tauranga, Sept 09

Club news and photos of their Tuesday Table [like our Bits and Pieces] .More on Herbert Ackroyd Stuart, inventor of the hot bulb engine. Some facts and figures on BTUs and on drawbar horse power.

The Keirunga Park Platform, Spring 09

Cover photo of LMS Stanier Pacific Princess Elizabeth crossing the Ribbleshead Viaduct on the Settle to Carlisle line. Inside is a write-up by Maurice Clarkson on his visit to the UK where he took the photo. Great story, with pictures, on the building of a steam jeep. Good article too, on sugar cane engines to model in 71/4" gauge. Hint from Mike Orange on re-aligning mill-drills if you have to move the head in the middle of a job. He fitted a laser light to the head to shine onto a plumb line hanging as far from the head as is practical, then wind the head up or down keeping the light on the string, simple.

Engine Booster, Los Angeles, August 09

Great photos of the TTOS run held in August. The weather co-operated along with the Kounty Kitchen to keep everyone happy.

Model Torque, Hawke's Bay, August 09

Interesting Club news, all seems to be going well. Article on Nevil Chute's book Slide Rule. Seems he did a lot more than write books. For sale are a number of items including plans and castings for a 5" Sweet Pea, a Boxford lathe, a diesel loco and some other items. Contact the Vice President on [06]8437277 for more details.

Blast Pipe, Hutt Valley and Maidstone Engineering Societies, Sept 09

Good coverage and photos of Club events. Interesting article on what is going on below us in NZ. More on Train Mountain with pictures of two big engines. Photo of a curious 0-1-0 Loco.

Swarf, New Plymouth, July 09

Club News and stories from two of their younger members.

Alan E

Classifieds

For Sale

Small Precise Horizontal Mill

As displayed at the Jubilee exhibition, this mill was built by the owner to a very high standard. ¾ hp, single phase, with 4 speeds via pulleys to the main spindle which runs on ball races. Comes with two mandrels 5/8" and 1", stand included.

\$3500, Contact Stan Locke, (09) 480 5115

Workshop Tools & Two Locomotives for sale

Item 1

Trupro 6" geared head lathe with 1 metre long bed in excellent condition. (Little used) Single phase.

Includes 3 jaw and 4 jaw chucks, face plate and steadies.

Full range of tooling including tipped tools and spare tips.

Item 2

Geared head mill/drill in excellent condition. Three phase motor could be converted to single phase or supplied from an electronic speed controller.

Two speed motor with lowest speed of 50 rpm for the spindle, and power feed on the quill

Includes rotary table, vices, and clamps.

Comes with full tooling, including multi tip cutters, with spare tips.

There are a lot of milling cutters, reamer, drills etc.

Item 3

Compressor complete with set of various guns.

Item 4

Small Ryobi linisher with spare sanding belts.

Item 5

Martin Evans B1 (Springbok) locomotive, complete. English made with professional boiler including certificates. In running order but will require boiler test. In excellent condition.

Item 5

Unfinished rebuilt Royal Scott locomotive to Norman Spinks drawings and castings. 90% completed.

Professional boiler made in England with certificates.

Locomotive and tender chassis complete. Apart from platework (some have been made) all parts and fittings have been completed.

Plans and ME magazine articles on the construction.

The locomotive is mounted in a rotating stand with glass cover.

Excellent workmanship.

Item 6

Various items of work shop hand tools etc.

These items have been inspected by Murray Lane and seen to be of the highest standard.

Ring Murray if more details required. Phone 5348396.

Contact Richard Kennard 5330181 or 021350250. Richard is a tool maker and was a member of ASME and is relocating to the UK for a number of years.

Clayton Steam Wagon in 2" scale

As displayed at the Jubilee exhibition, this fine model is the articulated version with riding trailer, 2 years old. Photos are available from owner.

\$6000, Contact Alan Emerson alanemerson@xtra.co.nz or phone (09) 536 5543

NZR – DXR 8007 Diesel Electric Loco in 7-¼" gauge

As displayed at the Jubilee exhibition, Professionally built by Ikon Engineering Ltd

For further details, specs, price please contact Dave Giles ikoneng@xtra.co.nz or ph (09) 576 7162

ASME Club Library

The club has a fantastic archive in the Library. The upkeep and binding of the many volumes contained continues to this day and is a very costly exercise. Please feel free to borrow books from the library, if you have not borrowed books before just talk to the librarian on any club night.

ToolsNZ.com
Lathes, Mills and accessories

* Free Freight

Quick Change Tool Post 4 sizes (smallest shown) \$98 \$26

Model Boiler \$63

1/4" Press Button Oiler \$2

1/4" Oil Hole Cover \$2

34mm dia \$29

23mm dia Grease Cup \$6

Chucks Include one Arbor: MT1, MT2, MT3, MT4, R8 \$51

Internal Micrometer \$89

3" \$29
4" \$36
5" \$59

3" \$29
4" \$36
8" \$79

Steam Engine Kits

\$23

www.ToolsNZ.com

* Free freight within NZ for orders placed on line in Oct-Nov 2009
Use promotion code 'ASME Oct09' when ordering to get free freight

Recollections of a misspent youth by Bob Fosberry, Part 1

I left school in the middle of WW2 and started work the next day, I was 14 years old. The place was The Castle Engineering Works, it was adjacent the Castle Inn and both businesses were run by the same gent, a Mr. Edward James Hart. In fact the pub was run during the day by his wife. "TED" Hart described himself as a "General & Consulting Engineer" his background was Ships Chief Engineer. I don't recall which line he was with but he used to rabbit on about the Mauritania & Lucitania quite a bit. The engineering business was a "one man band" run by Ted with the assistance of a boy, I was that boy. I didn't want to be an engineer, I wanted to work with radios but..... my father ran the local gasworks and needed maintenance on his machines. Ted Hart was the only engineer in town not up to his eyeballs in war-work and his boy (my brother) had been dragged screaming into the army so the old chap was getting behind hand with the work. When my father put the hard word on Ted his reply was that he couldn't deal with all the work on his own and he needed another boy. To this my father replied, "I have another son who can leave school, he will start for you in three weeks time!!!

My first day didn't start well, the old chap greeted his new employee with "where's your bl#/#dy tie". I told him I didn't own a tie as I had burnt my school tie the previous night. He then shouted "IT IS AN ENGINEERS PRIVILEGE TO WEAR A TIE TO WORK, YOU ARE NOT GOING TO WORK HERE LOOKING LIKE A F*##*#ing NAVVY WITH AN OPEN NECK SHIRT. Being a cheeky little twit I told the old chap that I did not own a tie and at my rate of pay it would be some weeks before I could afford one. This had a strange effect on the old the man, he changed colour, waved his arms about and made some strange noises in his throat. Finally he turned on his heel and stormed out of the workshop muttering. He was back in about five minutes with three ties in his hand which he threw at me with the words "you now own three ties and WILL wear one to work every day".

This set the pattern for the rest of my working life and I continued to wear a tie to work until the day I retired, although I didn't stay in engineering.

My second day at work was not quite such a drama, I was wearing a tie of course and was on my own drilling 1 3/4 inch holes in some cast-iron rollers. The drilling machine was in backgear and was also in autofeed, the sun was on my back and I was dozing. I woke to the impression that some one was pushing me down. Wrong again, my donated tie was in the drill and I was being pulled in. Fortunately my foot was on the striking gear* and the drill stopped instantly, I extricated my mangled tie and considered myself lucky to be none the worse bodily. This is when I learnt to keep my tie tucked into my shirt. A, to hide its damaged state and, B, to stop it happening again.

As well as the Gasworks we also did maintenance for the Brewery, the Tannery and Shippams (a meat & fish factory), these were the four main industries in the town and kept us busy all of the time. The gas works was 90% steam work. Shippams was mostly steam for cooking; they had some electrically driven machines and two large petrol driven alternators to supply power to the factory.

Most of the work for the Brewery was repairs to bottling and capping machinery. The Tannery was mostly electrically driven machines but they had this humongous single cylinder diesel engine. This was a horizontal engine made by National Gas and ran an alternator which supplied the factory needs during the working day. I never took any measurements of this machine but it was BIG. When a decoke was required we would disconnect the big-end, draw the piston and raise the piston & conrod on two sets of chain blocks.. On the appointed day of the decoke, the engine would be run up in the normal way at start of work. It would then be closed down at midday. We would arrive at 2pm and start dismantling, then the local maintenance man would have to crawl into a very warm cylinder with a chipping hammer to do the decoke. This was great in the dead of an English winter but hell on wheels in the summer. The engine had to be reassembled that day ready for use the next morning.

The top of the flywheel on this machine disappeared through a slot in the ceiling and the underside through a slot in the floor. At 14 years old this device of the devil scared we witless, I was scared to be in the same room with it. If you stood in the doorway of the engine room the air displaced by the movement of the piston caused you to sway to and fro. One day while in the engine room getting some tools from our lockup, there was a loud bang and a wheezing noise, I looked over my shoulder expecting to see the huge flywheel coming straight for me but the engine was still chomping away quite normally. On investigation I found the compressor that raised compressed air to start the diesel and was in some way tied in with the sprinkler system had split its piston and jammed the valve and the air was escaping from the receiver. I ran off at high speed to the end of the tanning yard to where my boss and the maintenance man were working. All out of breath and excited I tried to explain the catastrophe, the two men thought my agitation was hilarious and started loudly singing a nonsense song which completely drowned out my words. So I shut my mouth and got on with the job in hand. Half an hour latter I calmly described to them what had happen to the compressor and the air in the receiver and, I was suitably impressed by how excited and out of breath they both got. I seem to remember one of them suggesting I was a sex crazed idiot who's parents were unmarried or words to that effect. Needless to say the diesel didn't run next day.

To be Continued...