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August
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The MICROMETER

AUCKLAND SOCIETY OF MODEL ENGINEERS INCORPORATED

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REGISTERED NEW ZEALAND PUBLICATION



Timothy has completed the jig for the safety fence at the smokebox corner, and welded up the first two panels with material that Allan Bailey and Grant had prepared over the last few Saturday working bees. When the posts for these panels are completed, they will have a trial fitting, and then be sent to the galvaniser. Eventually another 20 similar panels will need to be manufactured.

President's Report

August 2021

August already, and the days are getting longer! Congratulations on making it this far, but unfortunately some haven't. Therefore our best wishes go to the friends and families of Peter Tomkies, and Alan Pritchard's wife, Edna who both passed away recently.

The good news is that the fibre connection has been successfully completed, and the club now has reliable phone and internet. This should ensure the future of the system and allow better use of technology in the club, particularly with entertainment presentations. Sunday running, when possible, has also continued to be popular with the public, and should continue for the next few months. We are pushing the capacity of our rostered members for duties so if you know of friends or family who would like to help out but may not be interested in becoming members, they would be most welcome to do so and should contact Greville with their details.

Tim has started work on the trial fence panels which will be installed alongside the track above the pedestrian underpass, and once the final design is proved construction will begin, which should tie in with the blockwork to be completed in the summer. Additional Working Bees will be required so keep an eye out for notification in the Micrometer.

Greg Burrows has other commitments which means he will be unable to contribute to workshop nights (thanks for getting it off the ground, Greg), but Pete Woodford will ensure they continue, though I am sure he will appreciate any offers of help or suggestions. Items for club meeting entertainment are always welcome, and it would be great to be able to give as much advance notice as possible to the members, so please let the committee know if you come up with an idea. There is always plenty to keep us busy on Saturday working bees so if you can spare a couple of hours it will be appreciated.

I hope most of you are still actively modelling and I look forward to seeing the results on the Bits and Pieces table.

Cheers,

Mike Moore.

President Mike is recommending that all members read the MEANZ update sent as a separate attachment in May. ASME is an active member of MEANZ, members should keep a lookout on the website too <http://www.pnmec.org.nz/meanz.php>, a good place to find other clubs when you are travelling. Just like us, our friends nationwide always welcome visitors.

AUGUST CALENDAR

- Tuesday August 3rd, 7.30 pm** - General Meeting ASME Clubrooms
Tuesday August 10th 7.30 pm - Workshop Night, ASME Clubrooms
Tuesday August 17th, 7.30 pm - Committee Meeting, ASME Clubrooms



Train Roster

Date	ASME		DUTY		ROSTER	
	Electric Driver	Electric Driver	Steam Driver	Train Controller	Station / Guard	Station / Guard
1-Aug-21	M Hollis	D Housley	Voluntary	<u>P Dowdeswell</u>	L Brown*	D Beecher
8-Aug-21	J Lankow	M Moore	Voluntary	<u>D Black</u>	R Crook*	M Luxton
15-Aug-21	R Reichardt	P Woodford	Voluntary	<u>T Lawrence</u>	R Shearer*	B Matchett
22-Aug-21	I Ashley	A Bailey	Voluntary	<u>S Meikle</u>	K Ryan*	R Souter
29-Aug-21	G Beazley	M Granger	Voluntary	<u>T Robinson</u>	A Stratton*	M Vickers
5-Sep-21	B Matchett	M Hollis	Voluntary	<u>D Russell</u>	D Beecher*	J Anderson
12-Sep-21	K Ryan	D Housley	Voluntary	<u>G Wills</u>	D Wilson*	A van Zon
19-Sep-21	M Moore	M Plant	Voluntary	<u>B Aickin</u>	L Brown*	R Shearer
26-Sep-21	J Lankow	R Reichardt	Voluntary	<u>P Dowdeswell</u>	R Crook*	M Vickers

Bold and Underlined Name = **Train Controller**, i.e. the person in overall control of all operations for the day

Bold with Asterisk* Name = **Stationmaster**, i.e. the person responsible for activities in the station area and for the day's takings.

At the date of publishing Auckland is still at COVID Alert Level 1—Please follow the rules and encourage scanning in

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.

Club Notices

Help Wanted

Greville has been busy converting A&G Price 5" gauge trolleys to run on our 7-1/4" gauge track and has now finished the second one. But there are still 2 more to do, and he would like some assistance with these.

is quite involved, but Greville has produced all the parts required in the form of a kit, along with a comprehensive set of instructions, to make the job as easy as possible. If any member can help with this work, please contact Greville.

Missing Magazines

Model Engineer – Vol 216 No 4529, 4530; Vol 218 4562; Vol 222 4609; Vol 224 No 4636.

Model Engineer Workshop – No 240 April 2016 Live Steam – Vol 51 No 1, 2, 3 (2017)

Mike Jack is organising scanning & printing of the missing magazines so that the (currently) incomplete volumes will soon be able to be bound and available to members.

Beejax Patterns

The Beejax (an improved Ajax) was designed by ASME member the late Geth Creagh.

They have been found in the ASME basement—contact Mike Banks!

Bits and Pieces, with Dave Russell is paused for this month while Dave relocates to his new country estate at Puhoi. A bumper edition is expected for our spring edition in September.

A NOVEL ANSWER TO A NOVEL PROBLEM

(First Published in the Breeze, Waiuku in July)

David Black

In the absence of anything about model engineering this month, the story of the development of the Biontech/Pfizer vaccine for the Novel Coronavirus COVID-19 is worth telling. Dr Uğur Şahin is the son of a Turkish immigrant born in Germany 55 years ago growing up in Cologne. He qualified as a physician and worked in clinical medicine soon developing an interest in the treatment of cancer particularly turning his interests to harnessing the immune system. Dr Şahin's wife, Dr Özlem Türeci, is the daughter of a Turkish Physician. The couple met whilst pursuing academic careers in the south-western city of Homburg. Both doctors developed a passion for the immune system as a potential ally in the fight against cancer and married in 2002. They started their first pharmaceutical company—a manufacturer of generic drugs -Ganymede—in 2000. Dr Şahin continued working at Mainz university - he never gave up academic research and teaching. They gathered a team and succeeded in gaining venture capital funding, sold Ganymede in 2005 by which time the original team was busy building their new company, Biontech, founded in 2008.

Their work included in-depth study of mRNA, a versatile messenger substance capable of sending genetic instructions into cells with the hope of making individual patient customised immunotherapy drugs for cancer. Along the way they had seen an opportunity to create a new method of making customised vaccines for viral illnesses.

It was in 2018 that Dr's Türeci and Dr Şahin were beginning a cooperative project with the multinational drug company Pfizer in the hope of applying their ideas to an improved vaccine for influenza. This was a completely novel approach to vaccines which also held the potential advantage of being able to easily and regularly modify the vaccine as the virus changed its spots to avoid resistance - a particular issue with influenza. They were at the stage of foundational preclinical work with Pfizer when the pandemic hit in 2019. In January 2020 Şahin came across a scientific paper on the new coronavirus outbreak in Wuhan and it immediately struck him how their ongoing work could be adapted to tackle the new challenge of COVID-19.

Biontech quickly assigned around 500 staff to what they called "project lightspeed" to work on several possible approaches gaining immediate support from two international pharmacology companies - Pfizer in America and Fosun in China by March 2020. They had already started work in January 2020 with the objective of achieving an ideal immune response, already knowing how they could adjust their existing technology to achieve it. Even in the initial phase 1 trial it was clear that the novel vaccine was going to work. However, the issue was the extent to which this immune response could be relied on - traditional vaccine efficacy is usually between 50 and 70% but when the efficacy trial showed 95% that was a very welcome surprise.

At the same time many other researchers around the world were working hard on more conventional approaches to vaccines against COVID some with considerable success and some with no luck. The trials came and went, the results looking better and better. One dose of the Pfizer/Biontech vaccine gave substantial immunity in a few days and a booster after 2 weeks raised the protection to 95% - very high for any vaccine. Adverse reactions were confined to those related to the individual immune response – in most people trivial but in some people a few days of mild flu like illness -always with full recovery. The best news of all – only published last month - is that the existing vaccine after two doses seems to be, so far, dealing equally well with the new strains which are evolving.

The downside of this novel vaccine is that it must be stored at very cold temperatures – no problem for New Zealand as we are very skilled in freezing technology for our produce. For our Pacific friends, however, New Zealand has acquired purchasing rights for enough other vaccines which are easier to look after. For our Pacific friends, however, New Zealand has acquired purchasing rights for enough other vaccines which are easier to look after.