NEWSLETTER April 2020

Hello Gents, this month's newsletter is quite different from the usual read, primarily because there is no news! We have been on the official lockdown for nearly three weeks now, and I know some have been on their self imposed isolation for longer. I have not heard to the contrary so hope everyone is keeping well and trying to keep occupied.

In a previous message I said if anyone needed anything delivering, I would be pleased to help but I am following guide lines and now not going out unnecessarily. I think people will now be aware of all the delivery services from individuals and business's "stepping up to the mark". It is at times like these that we can appreciate how fortunate we are living in this area.

Thanks to the people who have contributed towards this publication, and Nevile for collating and sending it out. Who knows how long this situation will last, but I think it's fair to say it will be a few months before normal service is resumed? Any contribution towards another letter in another six weeks (or so) time would be most welcome.
I have never typed as much in my whole life!

Hopefully this edition will give members ideas for contributions to editions of the newsletter for the future month(s). Some members felt that it was good idea to keep the newsletter going because it helps people keep in touch and hopefully keeps up morale in these unprecedented times. One idea suggested was that people discuss and provide photos of a favourite model build, interesting engineering experiences or even recommend books or magazine articles that have inspired them in their modelling.

Jonathan

The following has gone viral on social media, but it is so good that there are no apologies for reproducing it here:

- **A Lucky Break……..**

I went to the Driffield Agricultural Show last year, followed by a show at the weekend. Whilst preparing for the start-up of my open crank vintage engine (oiling and greasing etc), I found that the *Staufer* (Grease spring loaded cup) had come apart some of which was missing.

So, a trip to Driffield show ground was called for. I duly went the following morning. Fortunately, I found the little tell tail oil splash and in the middle was my missing part. Talk about a needle in a hay stack!

John Nesom

P.S. Hope everyone is keeping well. *Cheers John*.

- **York in World War 2**

Perhaps members might be interested to view what Cooke-Troughton & Simms did in WW11.
Tony Simons sent me this, I have tested it and it works for me.

https://player.bfi.org.uk/free/film/watch-cooke-troughton-simms-in-wartime-1939-1945-1939-online

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Ted Fletcher

- **Lathe Topics – Don't Take Your Machines' Accuracy For Granted!**

('Skilled Technicians' look away now)

I am sure I run the risk of telling old hands something which will be blindingly obvious to them. Also, what follows may seem a lot of words to describe the checking, and I hope, correction of what on the surface seemed to be a simple problem. I hope that in writing this, thought will be stimulated and perhaps a comment or two provoked from fellow members as to whether my approach was a good one. I also hope to encourage others to check their own set-up. Could I suggest any thoughts and comments be emailed to the Newsletter Editor to appear in a future issue?

I am building a 3.5" gauge steam locomotive to LBSC's 'Maisie' design. A little while ago I decided it was time to stop putting off the turning of the cast iron wheel castings and to get stuck in. When drilling the holes for the axles, I felt (not for the first time whilst using my lathe, a *Myford Super 7*), that despite using a centre drill to start the holes, the drill I was using was 'wandering' a bit. I also thought I detected a slight deflection when the drill was first starting its cut. This deflection was very small, and as I wear vari-focal glasses anyway, I wasn't entirely sure if it was an optical illusion. Anyway, I progressed on through the drill sizes finishing with a reamer (5/16" diam.).

The last operation to finish the wheels was turning the outside treads to the same size. I did this by turning them one at a time on a stub mandrel held in the chuck. I turned this mandrel using the top slide and 'miked' it just at one point on its diameter. All seemed well, or so I thought. It wasn't until I tried one of the wheels on it for sizing that I found two things were odd:

- some wheels slipped on nicely but others where sloppy and,
- for the ones that did fit, once over the initial part of the mandrel, they too where 'slightly loose' when pushed fully on.

Further checking ('miking') of the mandrel suggested that the seat just turned was in fact, slightly tapered from front to back. This suggested that the top slide was not moving parallel to the lathe bed when the turning was carried out.

The fact that some wheels were loose on the mandrel suggested to me that some of the holes drilled must also be oversize. Subsequent checks indicated that some of the holes also seemed very slightly tapered, though ironically in the opposite direction to the mandrel!

Whilst acknowledging I had hit a few hard spots in the wheel bosses when drilling, and that it had probably caused a degree of wander, I felt maybe I should also check not only the top slide, but also the alignment of the tailstock. I thought this might explain the slight deflection of the drills when starting. Could this cause some holes to be oversize even after reaming?

Checking the topslide:

On the *Myford Super 7,* the topslide is graduated on the facing edge of the casting. This in turn lines up with a single graticule line marked on the top of the cross-slide. I have long doubted the accuracy of this arrangement when setting the zero-degree point (the setting for parallel turning). Due to the thickness of these lines, it leaves the exact zero point open to some interpretation.

I think the most likely reason for the tapering effect on the turned mandrel was the topslide gib screws.
I suspect that in the past, if the topslide had seemed in any way to lack a smooth resistance when operated, I had 'tweaked' individual gib screws to either restore a smooth sliding action or to overcome tightness. However, over a period of time (years?), I had in fact set the sliding part of the topslide very slightly askew – that is, away from the parallel. Following adjustment of the tailstock (see overleaf), I set the topslide lines/graticule to where I believed the zero point to be. I then put a parallel test bar between centres, and clocked the reading along the bar whilst traversing the cross-slide. I followed this by moving the topslide on its own.

I did indeed find an error on the topslide of not tenths of thou, but a thou! This reminds me of the time I almost bid at a Club auction for a dial test indicator graduated in tenths of thou's, stopping myself at the last minute by telling myself it would make my life a misery !!

Sorry guys, but my accuracy is measured in thou's if I am lucky, tenths don't get a look in! Anyhow several tweaks of the gibb strip later, found a good smooth slide, and no needle movement on the indicator. I felt I had finally resolved this problem.

Tailstock adjustment:

The first thing I looked at was the tailstock. I wanted to see if the slight deflection of the drills had been caused by the tailstock being slightly off centre.

I know some people will have offset their tailstocks several times over the years, depending on the type of work undertaken. In my case I had no reason to do this, and I had accepted it the way I found it. I inherited the lathe from my late father.

I was a little surprised that there is so little information available (in written form) as to how to check and correct the centring. Even the *Myford* handbook didn't seem to make much reference to it, other than telling the reader that the tailstock could be set-over by the adjustments provided for taper turning.

So, having looked at the exploded diagram in the *Myford* handbook, I could see the tailstock casting on the *Super 7* is in fact in two parts:

- an adjustment, affected by a gib strip on the underside of the bottom half of the casting, working against the inside of the lathe bed shears and,
- a transverse tongue or thrust-block (square dowel?) which is also part of the bottom casting. This allows the top half of the tailstock to bear against it, and provides for limited transverse adjustment. Having slackened the screws on this transverse adjustment, I tried unsuccessfully to move the top part of the casting in relation to lower part. In doing so, I did find the lower gib strip had a little slop.

Prior to adjusting the lower gibb to give a smooth contact along the bed, I removed the tailstock completely to free-up the upper and lower parts of the unit. This allowed the upper part to slide on the thrust block without shake or stiffness. What I actually found was the top casting absolutely locked onto this thrust block affording no adjustment whatsoever. I think this situation emanated from the time of manufacture, as there was no sign of rust on either component.

Having reassembled everything, I adjusted the lower gib, as mentioned. Remembering a tip I had once picked up, I brought the two lathe centres together point to point, separated by a thin metal strip (about 1/32" thick), lightly held between the two points. The theory is that if the points are off-set one to another, the strip will deflect (and presumably if one is higher than the other then it will tip backwards or forwards). In my case there was no back to front movement, but there was a slight deflection. I adjusted the tailstock thrust screws until the metal strip was no longer offset. Finally, the tailstock was moved back along the bed. The test bar was then put between the centres and the cross-slide traversed along its length to check for minimal movement of the needle on the dial.

Conclusion

Having now done all this, I hope things are going to be better. Certainly the parallel turning has improved, and if I am due to turn anything of length in future, I will first run a dial down the test bar before starting. With regard to holes being drilled slightly oversize, time will tell if I have really solved the problem. I shall end this missive by saying that *Loctite* is a God-send for people like me who are not able to achieve tenths of thou fits in their work and are too scared to even attempt push fits!!

Colin Bainbridge.

- **Seafaring Tales**

I thought I would write a little bit about my time at sea when I was young. I hope some of you will find it interesting. Memories are a bit hazy of details at times but here goes.

When I was offered a job as an engineer on a ship I had not much idea what it entailed, the farthest I had been from Yorkshire was the Isle of Man. My joining up papers said something like *"Pick up your ticket from the office in London, fly from Heathrow to Sydney to join a ship in Sydney a couple of days later".*

It was the first time I had seen a Jumbo jet, and a couple of hours later I was sat in it! We had two stopovers for a couple of hours, and after being air sick for most of the time, we flew over Sydney Harbour. What a magnificent sight that was ~ the Harbour Bridge and Opera House. In my opinion that view should be listed as one of the '*Seven Wonders Of The World*'. Later that afternoon I had a walk around the part of Sydney near to my hotel, and saw a poster advertising a new film. I thought I would relax for a couple of hours. I sat down and there on the screen was Malton market place! The film was *'All Creatures Great and Small'.*

I took a taxi down to the docks the next day and I signed on P&O Cruises *SS Oronsay* as a Junior Engineer Officer. It was the biggest culture shock I have ever had. The *Oronsay* was built in 1950 and was spending its last years cruising out of Sydney. It was 28,000 tons of almost worn out metal. That turned out to be hard work, but also rewarding. We sailed later that afternoon for a fortnight cruise around the Pacific. In fact, that was the routine for the next four months. The exception to that was a cruise to South Africa and back to Sydney.

https://www.youtube.com/watch?v=hZbKdaJMzGM

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The Engineering Officers were in charge of everything that moved on the ship! There were also Electrical Engineer Officers, Ventilation (Refrigeration) Officers, Radio Officers and Deck Officers. The day to day running of the boilers, turbines, generators, refrigeration plant, distilling water from sea water, galley steam, sewage disposal etc. were taken care of on a *'four hours on - eight hours off'* watch system. Three watches covered 24 hours a day, namely, 12 to 4, 4 to 8 and 8 to 12. There was also a small team of day worker engineers covering daily maintenance.

It didn't matter if you had a degree, or City and Guilds, everyone started as a junior (JEO). On a watch in the Engine Room, there would be a 'Third' (3EO), who was qualified at College after gaining a Department of Trade Ticket, and two JEOs. There were also a few engine room ratings who were tasked with cleaning, oiling and greasing (and very importantly brewing tea). There was a 'Fourth' (4EO) in charge of the Boiler Room with a couple of firemen. The primary task was to keep an eye on the water level in the boilers.

Anyway, back to being a 'first trip JEO'. The job consisted of various tasks: a) making sure the bilges were kept as dry as possible, b) checking any machinery for oil leaks, hot spots, vibration, steam and water leaks, and also fire

hazards etc, c) taking pressure and temperature readings and filling in the watch log book, and d) last but not least, making water.

Large pressure vessels, *'Evaporators'*, maybe 8 ft in diameter were filled with seawater, and heated by steam running through coiled pipes inside. The atmosphere inside was reduced to 'a good vacuum' to make the water boil at a lower temperature.

The steam was collected and condensed into distilled water. It sounds simple but there was an art to getting everything adjusted to the optimum. Nearly all the flows were adjusted by hand. The distilled water was primarily for boiler feed water to make good the losses in the system. Any excess was pumped into tanks for domestic use. Domestic water had to be treated to make it taste like water. There was a bit of rivalry as to which watch made more water.

It could be very hot at work. Imagine the seawater surrounding the ship's hull being in the 80°Fs, in addition to all the steam powered plant, and it is easy to see that it made it very thirsty work. Dehydration could be a problem if you were not drinking lots and taking "salt" tablets. The indication you were low on salt was when the sweat running off the end of your nose didn't taste salty!! The steam pipes were lagged but nothing is perfect There were fresh air blowers but when the outside temperature can be up to 100°F, you had had enough after four hours.

The 'Third' (3EO) had his station at the Control Panel, directly beneath two big air blowers, and apart from his rounds, that's where he stayed when it was hot!! Usually the 'Third' knew everything and was much respected. He oversaw everything on the watch. Being a Dept of Trade qualified engineer, if something did go wrong, he was responsible. With steam at about 750 psi and 900°F, it is dangerous stuff if it escapes. Sometimes a steam leak was easy to locate, and at other times it wasn't, but a sure way of finding it was with a magic wand! A broom handle with a bit of rag tied on the end. Accidental burns were an occupational hazard.

With working twice a day, you ate maybe once or twice a day, slept for a few hours maybe twice a day, and had a little 'drinkie' twice a day. If you were in port and not on watch, it was good to get away and a look around, maybe sampling the local delights (food and drink!). You might imagine it could be difficult fitting it in a 24 hour day sometimes, so the simple answer was to sleep less!

They were an excellent bunch of blokes who worked and played hard. We didn't have much contact with 'The Chief' or 'First Engineer', they were like God. I do remember 'The Chief' saying to me, when he was doing his rounds one morning, and a sewage pump had stopped and there was stuff overflowing everywhere. *"People come on these cruises and eat like pigs and s*** like elephants."*

We used to work four months on and two months off. After 4 months though, you were ready for a rest.

That rota wasn't cast in stone, and I was lucky in that I only had one winter in the U.K. in six years.
Our Personnel Manager had a very difficult job, but on occasions he rang up when I was on leave, and asked for a favour, and I would sometimes say yes. I had the favours returned a couple of times. I signed off a ship in Sydney, cashed my plane fare in, had leave over there and then picked up the ship again. One year I got permission from the Captain to load a motorcycle I had onto the *SS Oriana* in Southampton, and sail to Sydney. I worked for a couple of months, and then took my leave and rode around part of Australia for two months. I picked the *Oriana* up again and worked my way home !!

If I remember correctly, because I was out of the UK for most of the year, I was able to claim my income tax back.

Jonathan Milner

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- **An Incident At The End Of The Main Runway At Heathrow In 1975. (A True Story!)**

My first “proper” job was in the Acoustics Department at British Aircraft Corporation Weybridge from 1974-1976. The Acoustics Department had its own dedicated laboratory (which is now part of the Brooklands Museum, and later became Cliff Richard’s rehearsal studio!). This laboratory had various rooms, a noise room, a siren chamber, an anechoic chamber, and a reverberant chamber. The main project I had was to perform acoustic vibration tests on integrally machined and formed stringer/rivet assembled skin panels in the siren chamber. I recorded the accelerometer readings so the boffins at Filton could produce modes of vibration for each panel type. They also wanted to ascertain the fatigue performance of each type of construction, so there were also crack inspections.

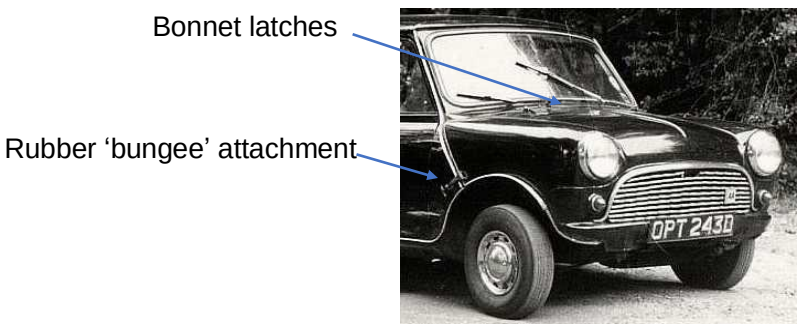
Working on the blowers in the Noise Room

My car on Brooklands track behind the Acoustics Lab. **

Sometimes I helped to carry out flyover noise trials on BAC 1-11 hush kits (at RAE Bedford), and Concorde flyover and take off noise measurements at RAF Fairford. This entailed standing at the side of the runway recording the noise on tape for later analysis, and taking a photograph flat on my back (with a plate camera) as the aircraft flew over. This was used to accurately determine the aircraft height (from a wing span measurement) as the aircraft was flying too low for radio altimeter accuracy.

In 1975 when Concorde was undergoing an ‘endurance flying’ programme from Heathrow, trials were set up whereby noise and vibration measurements were taken at various locations on the flight path, and various types of buildings in the area were installed with accelerometers and microphones. The only type of building that couldn’t be represented was a typical American style house, and as Concorde was needing to operate in America, one was specially built at the end of the main runway. I was part of the team which dismantled the equipment in the house. As we came out for the last time, a gentleman approached us. He was very impressed that we had got planning permission for a house so close to Heathrow. He asked us who to ask for planning permission, and we fobbed him off with “probably the Airport Authority”. He thanked us, and told us that he was interested in having a parking area just there for his fleet of oil tankers! The area of Great Britain or Ireland this gentleman’s accent was from? …… I can’t possibly comment.

** Mini Modification. You can see below that I had improved on Alec Issigonis’ innovative car design. The Mini was a brilliant concept, but I reckon he missed a trick. The engine bay was appalling to work in (I know, as I had to keep it going through rain and shine with little money and no garage!). Some corrosion on the wings led me to remove the wings and bonnet, and install a full glass fibre front, which was hinged to tip forward. Like the Triumph Spitfire, access then became a dream. Little did I know I had also created a ‘crush zone’. This was tested when I rammed a car at a roundabout accidently. There was no damage to the other car (the guy went away perplexed), and I only suffered a small 1” crack under one of the headlamps which was readily fixed using GRP repair techniques.



Nevile Foster

- **Some News From Leeds East Airport (LEA ~ ex RAF Church Fenton)**

The newsletter has been reporting on the progress to flight test of Ivan Shaw's innovative all composite single seater 'personal aircraft' G-SEKA.

Before the current crisis, Ivan was putting the aircraft through its paces with fast taxy trials at Leeds East Airport (LEA). The taxy trials went well but have thrown up a few minor anomalies, which required modifications.

Ivan thought these were best accomplished back at Hutton le Hole. All the engineering parts and materials have arrived, and the aircraft will soon be complete. Ivan would like to give a report on the modifications once completed, so that more detail can be included in the next newsletter.

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- **Items for Sale and Requests for Tools.**

i) Request For Band Saw

A club member is looking for a bench top metal cutting band saw. If anyone has any experience of a particular model, good or bad, or has one for sale please contact me. *Jonathan*.

ii) Digital Multimeter

Ted told me the small digital multimeter on sale in **Lidl** was very well made for the money. *Jonathan*

iii) Items For Sale From Ian Bryce.

There are a number of items still for sale, belonging to Ian Bryce.
Please contact Jonathan Milner for purchasing or viewing.
All are new or as new except the small scribing block as shown in the attached photos.

Small vertical slide.	£30
MT2 boring shank	£30
MT2 stub milling arbour.	£10

iv) Remaining Item For Sale From Brian Mallot's Workshop.

This is the remaining item for sale from Brian Mallott's workshop. Funds raised will go to PEEMS.
Please contact me Jonathan. Cheques preferred, made payable to PEEMS

A small boat propeller 8x10, weighs about 1.6 kg. Not sure what it is worth, offers over £25 ?.

- **And Finally ……** (This was sent in by David Proctor)

Tae a virus

Twa months ago, we didna ken,
yer name or ocht aboot ye
But lots of things have changed since then,
I really must salute ye.

Yer spreading rate is quite intense,
yer feeding like a gannet
Disruption caused, is so immense,
ye've shaken oor wee planet.

Corona used tae be a beer,
they garnished it wae limes
But noo it's filled us awe wae fear
These days are scary times.

Nae shakin hawns, or peckin lips,
it's whit they awe advise
But scrub them weel, richt tae the tips,
that's how we'll awe survive.

Just stay inside , the hoose, ye bide
Nae sneakin oot for strolls
Just check the lavvy every hoor
And stock-take your loo rolls.

Our holidays have been pit aff
Noo that's the Jet2 patter
Pit oan yer thermals, have a laugh
And paddle 'doon the waater'.

Canary isles, no for a while
Nae need for suntan cream
And awe because o this wee bug
We ken tae be…19.

The boredom surely will set in,
But have a read, or doodle
Or plan yer menu for the month
Wi 95 pot noodles.

When these run oot, just look aboot
A change, it would be nice
We've beans and pasta by the ton
and twenty stane o rice.

Ye might be gallus noo ma freen
As ye jump fae cup tae cup
But when we get oor vaccine made
Yer number will be up.

Willie Sinclair (with acknowledgement to Robert Burn's *'Tae a Mouse'*)

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