



MAIDSTONE MODEL ENGINEERING SOCIETY

Spring 2021

www.maidstonemes.co.uk

Maidstone Model Engineering Society

Spring 2021 Newsletter

Luke's Spot.....	3
At the Park.....	4
Chairman's Report March 21	7
John Hutt	10
Vinyl Machine	14
Superheaters.....	20
Calendar	On the back

Cover photos

Do you enjoy taking photos? Send them in for future cover photos

Your Committee

The committee exists to serve the club, to look out for the clubs interests and to make decisions on behalf on the club and its members.

Each committee member has volunteered and been elected by the membership at the AGM.

We are your committee, if you would like a point raised, either write/email to Martin, or talk to one of us and we can raise an issue on your behalf.

Chairman - Tom Parham
 Vice Chairman - Chris Hawkins
 Secretary - Martin Parham
 Treasurer - Edgar Playfoot
 Press Officer - Luke Bridges
 Sue Parham
 John Hawkins
 Andy Bridges
 Chris Williams
 Jack Ruler
 Amy Dixon

Cover photo: Luke and Andy's Polly 6 - from 10 years go...

Luke's Spot

And here we are again.... At what is the start of hopefully the beginning of the return to normality however cautiously and slowly.

Inserted with this newsletter are the latest guidelines and position of the club (as of 12th April) and following which should see an increase in club activity.

On personal news, my workshop, which is being built by me and Dad is now secure and awaiting a bench - a drill already having been obtained and a lathe in store waiting. Once its usable, Northumbrian work can re-commence towards a complete boiler and completed chassis.

IMLEC is the next club event to look forward to (covid and restrictions depending) and is currently planned to be held on the 20th to 22nd August and currently we have over 15+ entries across the three days of competition. More details as they are confirmed and the lifting of restrictions goes ahead.

This year wont be a normal one by any means, but there should be plenty of opportunity to get back out on the track or running engines, to see what has been produced over the winter, what has made progress or what new projects have been started. It really is what makes the club tick, the chatter, the help, the encouragement and the enthusiasm to try new things.

This year should also see the return of the shorter news sheets in between issues now that something is happening again. I have a few articles planned on a variety of subjects from super heaters, to me building my first boiler, 3d printing, gauge 1 and where many began - Mamod engines.

If you have anything you would like to contribute, even if you don't feel you could write a whole article, even notes are valuable information for others, and I am more than willing to type up from hand written or jotted notes.



Join our members page at facebook.com/groups/Maidstonemes
And like our public page at facebook.com/maidstonemes

At the park

General Works - Jack Ruler & Chris Williams

Regular checks are being carried out at the club site, and yet more damage to the roof has been found, as well as minor damage to bricks on the bridge.

Household and Catering - Sue Parham & Amy Dixon

Amy Dixon was co-opted to fill the vacant spot on the committee. Chris Williams moves to General Works. Fridge and freezer have been emptied, and thoroughly cleaned.

Public Running - Sue Parham & Chris Williams

A return to running is being investigated, more details in Chairman's update (inserted with this newsletter)

Safety - Tom Parham & John Hawkins

First aid kits will be checked for expiry dates and topped up or replaced as required.

Permanent Way - Chris Williams & Peter Kingsford

The council have been cutting back tree branches near the track and have cleared them away from the track.

Fuel - Tom Parham

More coal would be obtained

Club Locos - Tom Parham

Enterprise - Available for use.

Gertie - Currently has had all wheel sets removed for turning.

SNCF - Available for running.

Doris - New water pipes still need testing

Rolling Stock - Andy & Luke Bridges

As of publication all of the trollies at the club have been checked over, lubricated and cleaned after a longer than normal period of no use. If you go to use trollies, please make sure they have been signed off as 'OK' in the Trolley Register (a red folder in the book shelf)

Index of Articles

This has started to be compiled and will shortly be available online on the newsletters page of the website. www.maidstonemes.co.uk

Currently we are up to the end of the 1980's and should be up to date by the next newsletter.

IMLEC


Entries are being received and planning continues.

The planned dates which have been circulated are

Friday 20th August - Sunday 22nd August

If you are interested in assisting or taking a role for the competition, please get in contact with Tom Parham

We also have an IMLEC mini-website, which can be found on the maidstonemes.co.uk site, and clicking IMLEC at the top then following the link.



IMLEC 2021 - Maidstone Model Engineering Society

20th - 22nd August 2021 (COVID dependant)

The Maidstone Model Engineering Society was founded in 1929, and construction started on the track located in Mote Park in 1949. We have expanded a bit over the years, and facilities have improved somewhat. As a club we have decided that it was time that we should present our facilities for the use of IMLEC: the International Model Locomotive Efficiency Competition. Unfortunately our 50th anniversary already had a host, although we were able to offer a home for the competition for 2020 - but due to Covid-19 this will now be 2021 - 20th - 22nd August 2021 (COVID dependant)

We would like to take this opportunity to invite all to apply to take part in the competition, or to come along to watch. We will endeavour to accommodate all entries, potentially commencing the competition on Friday afternoon if deemed necessary.

For the competition we will run in our usual anti clockwise direction of our 1826 foot long dual gauge aluminium raised level track. The minimum radius on the running line is 50ft, and the maximum gradient is approximately 1 in 80 for a short section, predominantly 1 in 100 for much of the climb.




The track can be a demanding drive, with the climb starting around the first bend, although varying in grade, the climb stops at the exit of the far end loop, before commencing the long descent back to the station.

This intention is for the final run of the competition to be early afternoon on Sunday, leaving time for those travelling a long distance to have a comfortable journey home, also we will be passenger hauling for the public after the competition has come to an end. Visitors are welcome to participate in public running should they wish to, although speak arrangers will be required for those that do.

With plenty for visitors to the 450 acres park to enjoy, it's a great location to visit for all the family, regardless of whether or not you are entering. There is a leisure centre located within the park and a large, recently refurbished, children's play area, a watersports centre etc.

More information on the club may be found at www.maidstonemes.co.uk

Send completed application forms to Tom Parham at tom_parham@hotmail.co.uk



MMES Spring 21 Wordsearch

R	F	S	P	A	W	E	R	T	S	V	P	E	J
R	C	B	O	I	L	E	R	R	R	E	I	R	M
O	O	H	H	E	N	A	R	O	K	V	T	U	A
T	N	A	S	N	E	R	S	L	R	I	B	S	I
C	T	E	K	O	N	H	R	L	N	T	U	S	D
E	R	T	R	R	T	M	E	E	S	O	F	E	S
J	O	O	O	E	E	E	D	Y	H	M	F	R	T
N	L	K	W	K	N	M	N	E	U	O	E	P	O
I	L	L	H	C	D	B	I	L	N	C	R	N	N
C	E	I	R	A	E	E	L	X	T	O	S	N	E
A	R	L	S	R	R	R	Y	A	I	L	H	E	D
K	R	H	S	T	L	S	C	N	N	E	M	E	C
E	G	E	L	G	L	A	O	C	G	C	E	G	C
J	O	O	E	N	G	I	N	E	E	R	I	N	G

LOCOMOTIVE
 CYLINDERS
 TROLLEY
 SHUNTING
 CAKE
 ENGINEERING
 PRESSURE
 TEA
 WORKSHOP

CONTROLLER
 TENDER
 BOILER
 INJECTOR
 COAL
 MAIDSTONE
 BUFFERS
 TRACK
 MEMBERS
 AXLE

Chairman's Report March 21

As I sit here to write to you, the sun is shining, but I am struggling to find something to recall about the club since the last time I was writing to you in this way. Unfortunately, not a lot has been happening of late, however not a lot has been happening at the club, although the committee has still been continuing behind the scenes to return things to normal as soon as possible. We have been trying sort out the roof too, although we have the funding, we did have a contractor who was looking to help us, although we lost contact with them. We are currently hunting for a contractor who is willing to do the work and confirm with them for the job to be done.

We do have a couple of the committee checking on the sit on a regular basis, who are monitoring the leak from the roof, as well as keeping an eye on the rest of the facilities. A recent issue that has been identified is the decking on the traverser is in a degraded condition with the wood starting to break, which pushes this up the list to be rectified and we are looking into possible long-term solutions for this.

In addition to this, planning for IMLEC is continuing, we currently have 16 entries ranging from a 3½" Derby 4F up to a 5" P2, and a fair spread in between. It should be an interesting weekend at the end of August (20th-22nd)

Despite the club site being closed during lockdown, we have been able to maintain bi-monthly meetings on Zoom, and I must thank all who have contributed to these. A highlight for me has to have been the bits and pieces nights, we've had a variety of subjects talked about at them, from 3D printing, injectors and model trucks and trailers, to progress on duchesses, and a Great Western Hall and City. Most of all it was great to see that you guys are still making progress and keeping going through these times, I know that for me, of late, motivation has been low although I'm hoping for a bit of a

rise as we can get out playing again soon. I do have a couple of volunteers who have offered put evenings together for us, but if you have anything that you think would be of interest to the club for an evening, or a segment of an evening then let me know, I don't want to have to keep pestering the same victims, sorry I mean willing speakers, too often.

I am sure many of you are wondering what the plan is for returning to the club, we will confirm the plans as the government regulations change, but let me put you in the picture of the current plan. By the time you read this we should be back to seeing life at the club, with maintenance and work being carried out at the club, including boiler testing, limited test running, use of facilities and maintenance of the site. The next stage will be to introduce socialising and play time, although this would need to be restricted in numbers, therefore we will be looking at dividing time at the club to allow working parties which are unrestricted to numbers alongside play time. The next step would be to look at reintroducing passenger hauling before removing all restrictions all together. Let's hope that the national conditions continue to improve to allow this to progress.

We may be looking at Saturday sessions for boiler testing as demand and availability requires, as we did last year, in order to be as flexible as possible for you all and spread out the numbers at the club. Please do get in touch with a boiler tester if you wish to get a test done.

I think that's about it for now so I will sign off. All that is left to be said is I am looking forward to seeing you at the club over the coming season.

Tom.

11 People on a Rope

Eleven people were hanging on a rope, under a helicopter – ten men and one woman.

The rope was not strong enough to carry them all, so they decided that one had to leave, otherwise they were all going to fall.

They weren't able to choose that person, until the woman gave a very touching speech.

She said that she would voluntarily let go of the rope, because, as a woman, she was used to giving up everything for her husband and kids or for men in general, and was used to always making sacrifices with little in return.

As soon as she finished her speech, all the men started clapping

JOHN HUTT

16th OCTOBER 1931 - 10th October 2020

By Stephen and Jill Weaver



John was a husband, dad, granddad, great grandad, big grandad, and big brother to sisters Rita and Shirley, all of whom can recall times when he has been there for them and an inspiration to them.

John was born on 16 October 1931 at 45 Liberty Street, Brixton, London, where he spent his early days. It was a mere stone's throw from the Oval - which may have inspired his lifetime interest in cricket. The following years saw the family grow when Shirley and Rita arrived. John's first school was Sudbourne Primary

School in Brixton. After this the family moved to 71 Raeburn Road, Blackfen, Sidcup. At the age of 16, John left school and joined an engineering company, much to the relief of his Mum. John had a dream to join the Navy but was not old enough to do so when he left school. He did very well at the company and received excellent reports. But then, when he was old enough, he joined the Navy, much to his Mum's disapproval - the reason for her disapproval was that he could not swim! Whilst John was in the Navy, he saw the world and made some particularly good friends as they served on the same ships, mainly aboard The Manxman.

John met Pat in Danson Park, a well-known meeting place for cou-

ples! John had been meeting someone else but instead found a damsel waiting for her date...and the rest is history. It was the start of an exceedingly long and special relationship. John was then deployed for two years with the Navy, and Pat waited for him to return home. On 2nd April 1955 John and Pat were married at the Church of the Ascension, Plumstead. They started their married life living with Pat's parents in Abbey Wood. John worked at Chatham Dockyard and when the dockyard closed, he was sent to Portsmouth with the Navy, and they found a flat in Portsmouth. At last, they were able to live as a married couple. By the time daughters Lynn and Jill were born, John and Pat had purchased a bungalow in Sittingbourne and in 1961 John retired from the Navy. Soon after that, Clare arrived, and the family was complete.

The bungalow was far too small for the family and a move to Northwood Drive followed, this proved to be a happy family home for many years. John found an engineering position at Bennett Opies, a factory in Sittingbourne, where they encouraged John to further his education – at his age!!! - and in July 1969 he passed his Higher National in Mathematics at night school. The girls were so pleased... as he could now help them with their Maths homework! John then got a job in the workshop at Shell Research in Sittingbourne, where he worked until he retired in 1989.

John was lucky enough to walk all three girls, Lynn, Clare, and Jill down the aisle when they married Mick, Michael, and myself, Stephen. Soon grandchildren arrived, with Sarah, Martin, Christopher, James, Danielle, Charlotte (Lotty to Granddad), Alexander and Samantha, and great grandchildren Louis, Jareth, Rayne, Mason, Olivia, and Wyatt, all of whom were adored and spoilt rotten.

John and Pat's claim to fame came in 1990 when they were approached by the Post Office at Sittingbourne to help with the TV program Surprise Surprise, to surprise Dale, their postman and friend for many years. This resulted in Cilla Black and Bobby Willis,

plus film crew at their home, drinking coffee and surprising Dale. They went to the TV studio when the program was aired and became famous overnight! The happy couple enjoyed many holidays in their trailer tent, then caravan, all around the UK and once even driving to Spain. They even ventured to the Isle of Man but left their caravan at home for this one. Then there was the time when John and Pat turned back time and became kids again with the whole family at Disneyland Paris for Pat's 60th birthday. John took part in many sports including cricket and table tennis and in later years, bowls.

As a skilled engineer he was brilliant at making miniature steam trains and a traction engine, and he enjoyed running them at Mote Park and the Isle of Sheppey Model Club. Water was in John's veins and he had great sea legs - apart from the time on a canal boat when he went to grab the railing on the side of the boat, missed and landed in the canal. Pat was more concerned than John, but we all had a laugh about it afterwards.

In 2018, John lost his one great love, Pat. After this John lived on his own in the family house, but he missed his Pat so much. The girls, Lynn, Jill, and Clare went to see him as often as they could, he loved their company and a good chat. He went to Age UK once a week also, but he sat in the back room as he did not like all the chat from the ladies in the main room. He had his radio and was always listening to Classic FM and he had his newspaper to read. He was a happy man especially on the odd occasion when he won the raffle and came home with a packet of rice, a bar of chocolate or a tin of soup. 2020 was the year we were unfortunate to have the Coronavirus pandemic, this hit us all. But the girls still managed to visit every week, nothing would stop them. John seemed to be doing well by himself but did get very lonely. At the end of August John was taken into hospital with pain in his back. It transpired he had three aortic aneurysms, one had started to leak but repaired itself...that man was a living miracle, as we all knew anyway. We were told he should



not be here, but we then had six weeks bonus time with this special man, the man we are all proud to call our Dad. He was called home and is with Pat now - and we see that star in the sky shine brighter.

Sue's Bit

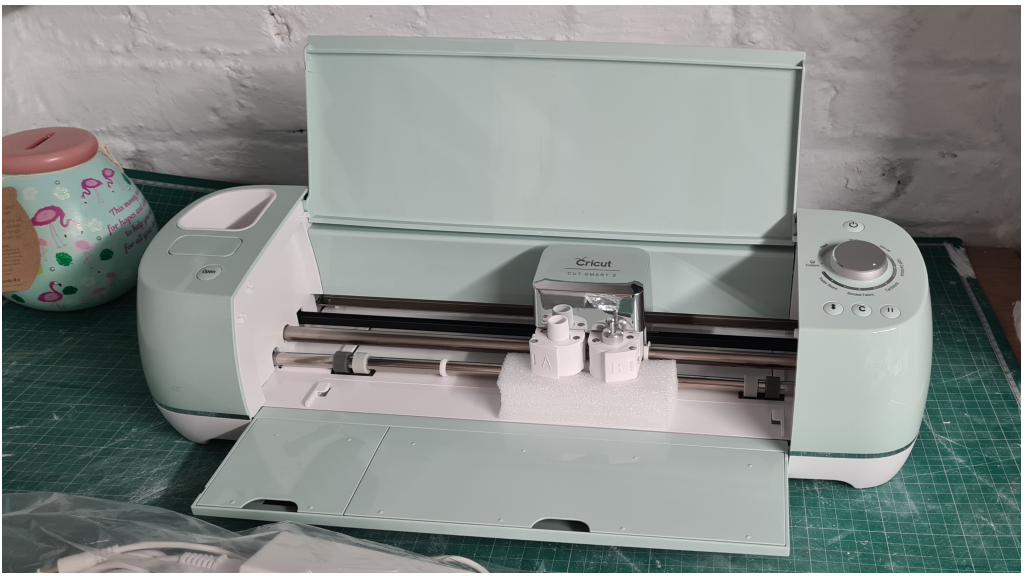
John joined M.M.E.S. in April 1993. He built two L.S.B.C. designs, a 3½" 2-6-2 Betty, and a 5" 0-6-2 Mona. I can recall John running these on a Sunday morning sometimes while Pat sat on the bench in front of the Clubhouse watching, and I would serve them both tea and cakes that they really appreciated. I would have the odd chat with Pat when she sat by herself. He would take his turn in being Traffic Controller for our Sunday afternoon public running and attended some of our monthly Friday club nights. I am really annoyed with myself that I cannot find any pictures of John on one of his locos. I cannot believe we do not have one somewhere, but I have not been able to find one in our digital storage for the last 20 years. I will keep looking, but if any member does have a photo, please let Luke have a copy so perhaps we can print it in a later edition of the newsletter.

Vinyl Machine

By Amy Dixon

For Christmas I got a Cricut Explore Air from my Mum (greatest gift ever!). A Cricut vinyl machine has a blade sitting in a holder that cuts the material at different pressures that you can set on the machine itself or further settings within the app on your device. To cut the material with this blade you put your material on a cutting mat which you “load” into the machine which then moves the bladed sideways and backwards/forwards to cut the material whilst moving the mat through its rollers. This machine gives you so many options of vinyl stickers / clothing vinyl / card / poster-board (over 100 materials to use) to make. I have recently been making vinyl stickers and vinyl to put on to clothing for our wedding.





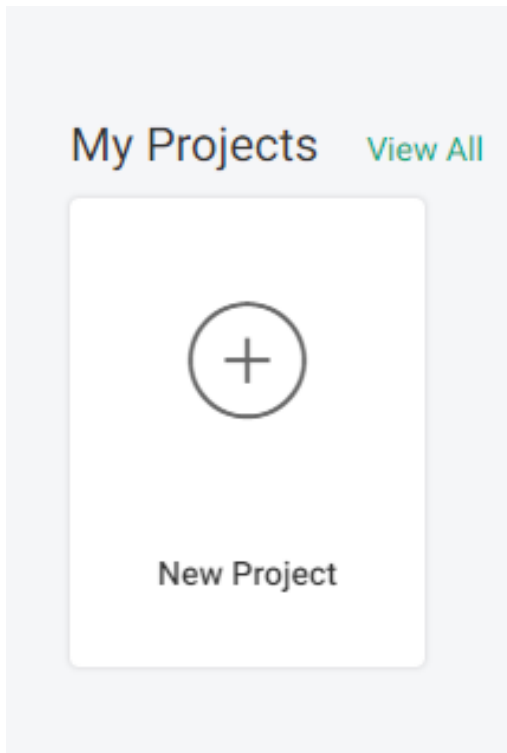
The whole process at first was pretty daunting as a roll/sheets of vinyl are not cheap! I have made many many mistakes and sure I will continue to make them as I get more comfortable with the machine and my crafty makes.

As we are getting closer to IMLEC (20-22 August), my darling Husband-to-be has asked if I could make up some signs so those taking part and spectators (lets hope covid gets on its bike before then) to aid them to find us in the Park.

The process of making a sign (which is going to be quite large) to me right now seems quite daunting as it will be the biggest sign I will have made and probably will ever make.

For Cricut, you use software called “Design Space”, it’s pretty user friendly (most of the time) and I have got to grips with how to work it and then make my items from it.

For IMLEC, I am looking to make a replica of one of these signs (insert train sign here). Now for IMLEC it is going to need to be large so people can see from a distance. So this one sign will probably need to be made in 3-4 sections and then putting together on the piece of metal I plan to use for the sign itself.



To upload the image of the hand in Design Space, you would follow these steps:

Open up Design Space.

Create a new “Project” (this is what Cricut calls them).

Click on “Upload”.

Find the image on your device, and then click upload.

Once the image is in your designing space you can change the size to your hearts content (SVGs are better than an image as SVGs do not work on “pixels” so the image will never become pixilated).

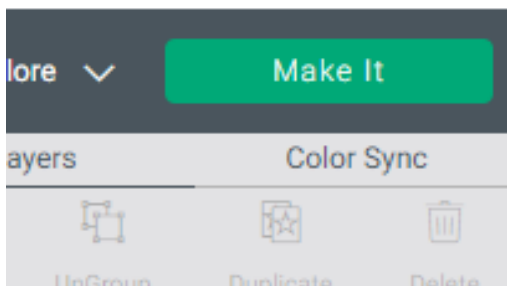
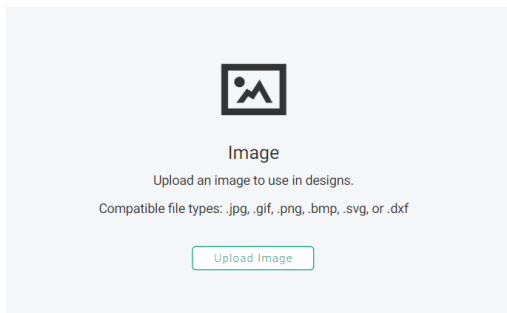
I then will add some text (font is yet to be decided) and to do this, I will follow these steps:

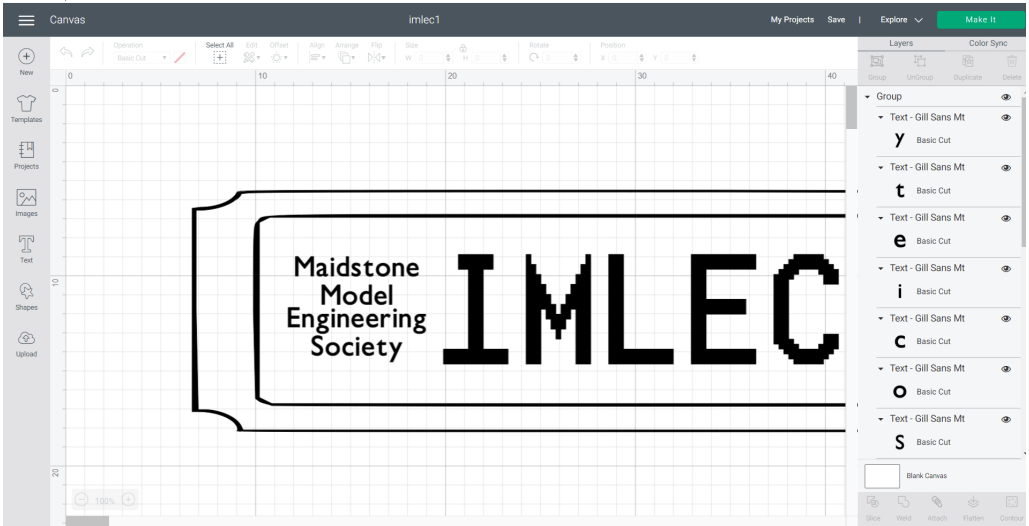
Click on the “Text” option.

Type in my text.

I can change the font, font size and letter spacing (can spread the letters out or bring them closer together).

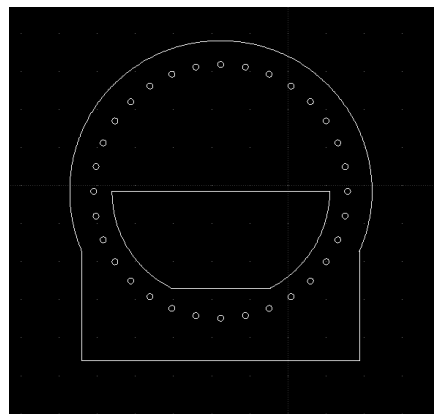
Once the text has been inserted I can move both the text and image around so I can get the best looking sign. When I am happy with the design, I will then “Weld” it together and then click on “Make”. The software will prompt





me to align my cutting mat in the machine, once done I then press a button on the machine which starts the cut. In the machine there is a blade which will cut out the vinyl based on my design, on more intricate or larger designs it can take quite some time (my longest cut time so far is 15 minutes). Once the cut has finished you remove the cutting mat from the machine and then “weed” the excess vinyl (this is removing all the vinyl around the wording/image and all the inner parts of a letter).

Luke’s extra bit - As a bonus of Amy’s vinyl machine being able to cut paper or card, it has come in useful in being able to test cut 2D CAD files before sending to be cut in metal. And thankfully, unlike pretty much all laser cutters, the Cricut prefers proper (read Imperial) units in drawings, no need to convert to silly units first which is so much more helpful when just testing a drawing.



Superheaters

By Luke Bridges

Lets start at the beginning and ask ourselves -

What is a superheater?

Seems a simple question, but with a deceptively simple answer.

A superheater, takes the steam from the boiler, passes it back through the hot gasses to raise the steam temperature further before going to the engine (I use “engine” instead of cylinders because of a point that will be hit on later)

If superheaters and superheating was truly so simple, then why is there so much discussed about its merits and different methods, placement and degree of superheat?

In reality, superheating is not such a simple subject, especially in our miniature size's.

In full size, it's a well proved concept and point, unless just a small yard shunter, undertaking short, slow working then a superheater is a necessity to gain maximum performance, power and economy from expensive fuel and water on services where cutting a fuel and water bill can make or break a balance sheet, and being able to pull a longer train with more fares also wins in its favour.

But in miniature those economic concerns are very rarely part of a builders thoughts. Fuel and water are provided by club's as part of membership, and unless wanting to pull more than the single or double trolley for long extended multi-lap runs, then superheating is a much debated topic.

But why?

Generally this could probably be broken down into the following

1. Added complexity to make and design, maintain and on boiler tube layout
2. Incorporated into a design to be in keeping with a particular prototype
3. An unquantifiable effect on how well an engines “goes”
4. Miniature engines very rarely do any longer than 10/15min runs due to water or fuel capacity in tanks or bunkers

I have heard more discussion around point 3. more than any other and indeed there are many very well running engines that do not have superheaters at all - take Andrew's Lochwood for example.

If that's the case then what is the point?

How well an engine “goes” is as much down to the driver or the coal than how well an engine is built or designed. An owner/driver who has learnt the particular qwerks of their engine and has got their head around driving and firing their own engine to the point they can happily run for fun or pull passengers all afternoon very rarely notices any steaming issues (unless something goes wrong)

How well and engine “goes” is such a hard point to prove that it often goes unchallenged and untested.

Back to point 1. then and is a very valid point - making superheaters or adding superheaters to a design requires skill and knowledge, most of the time from a few people to get right and working. Taking an existing boiler design and adding super heater flues requires knowledge or boiler making and design, welding superheater elements needs a good welder and then there is the wide variety of designs about, concentric tubes or spear heads, over the fire or stopping at the tube plate and I know many people who are vocal about the pro's and con's of each.

Point 2. around if just because the prototype did or didn't have su-

perheaters - to me, personally, this is almost irrelevant. In miniature we do much that does not follow full size practice, but being model makers, we make it appear to be visibly correct as much as possible. So adding or not adding superheaters that are hidden and tucked inside the boiler and smokebox should make no discernible visible difference to a model.

The final point I have listed separately as has difference to that already discussed. Superheaters have a working range, if they are not hot enough they do nothing and are just longer steam pipes. However, once they get to a temperature high enough to impart that heat to the steam in the short time it passes through then they begin working well. This part about the time the steam is in the super heaters is critical to their functioning.

There are a few factors that affect this time. These could be listed as, length of the elements, number of elements, size of elements, steam demand from engine and steam pressure from boiler.

Some are obvious such as length, number and size of elements, if the steam is following a longer path, at a lower speed due to the size and number of elements, then it will spend longer being heated by them.

Boiler pressure plays hand in hand with the demand from the engine. Higher boiler pressure means the engine needs less volume to complete a cycle which therefor also slows flow down in the superheaters. cut-off and wear in valve gears also affects this flow in the same way, the shorter the cut-off the less steam is consumed and so the flow is lower. Wear often has the opposite effect and increases steam flow and can contribute to artificially longer cut-offs.

From the above list we can see that a slow running engine, over a “short” distance mostly running at long cut-offs will have the greatest challenge in seeing a difference with superheaters as to make

them work well, they need to be hot, and at lower speeds and demands the elements will not be hot enough due to lower draught on the fire to be more than steam dryers.

The opposite case, of high rpms, high demand, hot fire and use of reverser correspondingly means that a super heater would be more noticeable as the engine would be being pushed hard anyway, and would be able to be pushed harder with a superheater,

Now please be aware, I am not trying to get into the debate of if you “should” push an engine hard, that is a debate for another time, but the running hard or not is a part of the superheater question.

From a personal point of view and experience of driving different engines with and without superheat, to notice a difference is much easier on a small engine. This being to the fact that they work harder to do the same work - imagine a Duchess vs a Pug both trying to pull a double trolley of adults and see which one barks harder.

With my Trojan (0-4-0ST) as an example vs an Enterprise (2-6-2T) on similar loads of a double trolley, it is very much less noticeable when the superheater starts working well. On Trojan you can tell as a driver when the superheater (a single stainless, over fire, spear-head element) gets up to temperature as the exhaust sharpens, notching up doesn't lose power and what may be a white exhaust turns clear. On the Enterprise it takes a much larger load to have such a noticeable superheat effect. Also worth noting is that on my Trojan, pulling three loaded trollies plus a dynamometer car, the first lap or two use noticeably more coal and water than the subsequent flying laps. The axle pump on for just the duration of the top corner and two shovels of coal being sufficient most laps, some less if the fire stayed hotter through the station.

For my money, I'll always put a superheater on any engine based on experience from Trojan, even my 3.5" Northumbrian will be getting a twin element superheater, although being so small, if it will be ef-

fective, only time will tell (at any rate, on that design it makes the plumbing simpler.....)

This then makes it sound like I would advocate superheaters ONLY when intending to run hard or long, but this is not the case.

Lets consider why ANY engine has a superheater.

Superheaters are added to designs to primarily increase efficiency.

Increasing efficiency is certainly a good win regardless but, increasing the efficiency of an engine has bonus side effects. As already noted with Trojan, once superheaters are at temperature, coal and water usage are significantly reduced. Which means three things, I can run longer on the tank capacity before needing to stop to fill up, driving/firing becomes easier and much less intensive leading to more enjoyable and reliable drive, increased efficiency for the same input means greater power output, which means I can pull a greater load with not much more effort (other than more prone to wheel slip)

This hints at another effect of superheaters, particularly when retrofitting to existing design or running engine.

If nothing else changes, boiler heating area stays comparable to grate, engine and exhaust remain unchanged, then generally adding superheat will decrease the draught on the fire, certainly once elements are hot. And this isn't just a miniature engine phenomena, it was noted too by Wardale and Porta, and for good reason.

This is one of the reasons that Kylchap exhausts were adopted by LNER's express engines which low cut-off's and high superheat.

If adding a superheater means an engine consumes less steam, it also means less goes up the chimney, and thus less draught on the fire for which to maintain boiler pressure and element temperature.

Now less draught may, in some cases be desirable if the fire was previously being thrown out the top, but in most cases this can

cause a disappointing lack of steam after a while of having a hot superheater.

Imagine this scenario, a small engine with a small superheated boiler sits in the station, build up a good fire and steam and moves off with a load, at pull away the elements are probably not up to temperature, but boiler pressure alone at these now low speeds is fine and speed is gained. As the elements warm up and start to get hotter, steam consumption lessens, at this point the fire is still probably hot enough to maintain pressure and so the loco keeps at pressure and speed fine. But now at temp, the draught is less and so fire cools and loses pressure, at the same time the elements cool and now we are left with a cool fire, lower pressure and cool elements - far from what was intended by adding superheat....

To solve this, the draught must be considered at the same time as retro-fitting a superheater. This need not be anything drastic or complex, but double checking dimensions, alignment, maybe looking at the exhaust pipe arrangement and restrictions or a Kordina. But it must be looked at as a complete system not in isolation.

The number of elements is relational to the size of the effect, only a single element wont be as noticeable as four elements, but however small it may be, it will still happen.

If you've made it this far through what is a fairly dry article, then congratulations - after I have dug out my references (Wardale, Porta etc) then part 2 of this article shall follow.

For those interested, we have an article in the archive - by Jim Ewins, Autumn '85 page 3 also concerning superheating as well as google turning up a vast haul of knowledge.

MMES DIARY DATES 2021

IMLEC at MMES

20-22 August 2021

For the foreseeable future, all club nights will be happening on a Zoom call and details emailed out the week or two before.

If you are not receiving these notifications, or would like them a different way, please let Tom know. If you would like assistance accessing the Zoom calls and meetings, also please let us know and we'll assist where we can.

COVID-19

When attending the club, please remember follow all social guidelines.

Extra signage has been put up at the club and a one way system in operation.

Any persons attending the club must sign in using the sheet on the table inside the clubhouse.

We are watching the governments guidelines and will publicise any changes that need to be made, either imposing or relaxing restrictions.

Stay safe.

