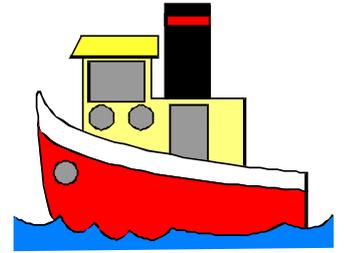


Wheels and Floats



Newsletter November 2019

TAURANGA MODEL MARINE AND ENGINEERING CLUB INC.

The Secretary
PO Box 15589
Tauranga 3112

Palmerville Station Phone 578 7293

Miniature Railway Memorial Park
Open to Public, weather permitting
Sundays in Summer: 10am to 4pm approximately
Winter: 10am to 3pm approximately

Website: www.tmmecc.org.nz
Facebook: Memorial Park Railway Tauranga

MEETINGS

General Members Meeting every first Tuesday 7pm.
Committee Meeting every second Thursday at 7pm.
Maintenance Tuesday mornings from 9am.
Engineering discussions Tuesday evenings 7.30pm.

COMMITTEE

President: Russell Prout 548 2881
Vice President:
Club Captain Bruce McKerras 577 0134
Secretary: Jason Flannery 572 1165
Treasurer: Owen Bennett 544 9807
Committee: Ash Thomas, Max Donnelly,
Joanne Knights, Bruce Harvey
Brian Fitzpatrick.
Boiler Committee: Peter Jones, Bruce McKerras,
John Heald.
Safety Committee: Chris Pattison (Chair), Peter
Jones, Warren Karlsson.
Editor: Roy Robinson 07 5491182
royrobkk@gmail.com

CONVENERS

Workshop: John Nicol
Track : Bruce Harvey, John Stent.
Librarian: Chris Pattison
Rolling Stock: Bruce Harvey
Website: Murray de Lues

OPERATORS 2019

3 November P Jones
10 November W Karlsson
11 November B McKerras
17 November N Bush
24 November M de Lues
1 December B Fitzpatrick
8 December B Harvey
15 December P Jones
22 December W Karlsson
29 December B McKerras
5 January M DeLues
12 January B Fitzpatrick
15 January J Flannery
26 January B Harvey
2 February P Jones
9 February W Karlsson

President's Report

Hello readers, not sure how many people actually read my comments as there is no way of knowing. Hopefully you find a little bit of interest but nevertheless I shall continue to write it as I see it.

Considerable effort has gone into one of our electric locos, Silver Fern which has run now for more than 4 years almost continuously. A major service has revealed failed bearings, damage to motor commutator and issues with controllers. Some of those issues have caused further damage like worn shafts and damaged gears. Thanks to Warren K for stripping and identifying

these issues and Peter D for CADing all the components in 3D we now have a comprehensive assembly from which improvements can be made. Along with some electrical overload protection, all new bearings, new motor, new controller, new shafts and axles we should get at least another 4-5 years of excellent service. It takes a while to reverse engineer things and even longer to get the necessary approvals but at the end of the day we trust in the team to get the job done right. Well done to you all.

Bruce H and Jason lead the team through the annual WOF's on all ride cars. Along with the brake component replacing, adjusting and tightening the ride cars also got the clean and polish. Great effort by all at the Saturday playday.

Jason has also surpassed himself again with the modified (prototype) lever action points system to be found on the number 2 line before Tunnel #1. For some time this set of points has given problems especially when backing through them. Hopefully this is now a thing of the past. I urge all drivers to make themselves familiar with the operation and have a play.

Oct 26 saw our first Halloween night run. We opened early (as there was a rugby match that many wanted to see) and it was a slow start but very soon we realised that our customers were just enjoying the park in the outstanding weather. Sure enough they queue grew and grew and before long the enormity of the situation became evident. Thanks to the hard work by our team led by Jason and Bruce M as Duty Operator we successfully carried over 1500 remarkably dressed and made up patrons through the graveyard, darkened tunnels and up the windy (yes cold and windy as the night rolled on) incline. The team were well fed by Zara, Barb and Roy who again did an outstanding job. An exceptional event and so well supported, thank you everyone.

November 2nd was to be a nostalgic trip on the William C Daldy Steam Tug on the Waitemata harbour. Regrettably, due to very low booking numbers this had to be cancelled. It is not often that as a club or group we get to take advantage of such a good discount for events like this but alas unless you show your support early and get behind these events they will likely become few and far between. Let's hope there will be another opportunity to do this.

On a lighter note, 6 of us rolled up to Hamilton's Halloween night run on 2nd Nov and were immediately greeted with 'come and eat pizza'. After a little nibble and a cup-a both Bruce's Phantom and my Oakford Express were offloaded and running. I started with 4 ride cars and before long had 7 in tow. The queue was quite long and the food carts meant they were all eating too. Joanne upstaged us all with her Halloween glam but I must say it was not train driving attire, the photos say it all. Thank you to our hosts (HSME) and especially Keith and Bianca for making us all welcome. Thank you also to Bruce, Max D, Peter D, Joanne and Ben for supporting me on the club visit. A great night had by all and thanks to Bruce, coffee and cakes for supper at BP on

. the way home.

Upcoming events

TMMEC Open Weekend Nov 9-10 with night run on Sat 9th

Max D birthday (yep finally turning 16) on 29th Nov

Xmas Parade 30th Nov

National Model Engineering Convention Jan 10-12, 2020. Registrations on line.

Russell Prout

President



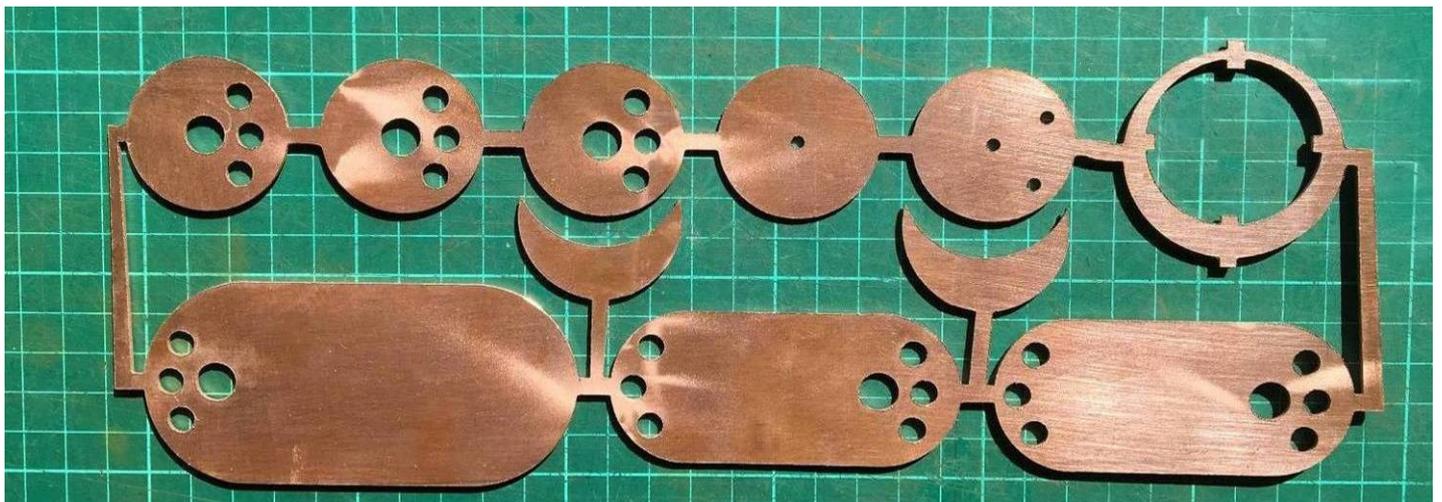
Some shots taken at the
Hamilton Halloween Run



Double Fairlie project Part 2

By Geoff Hallam

The boiler and gas tank for the Double Fairlie were the next items on my very extensive "to do list". I designed the boiler to incorporate a simulated 'wagon top' firebox and crown sheet. This was going to be easier to make by using two different diameter copper tubes, therefore not a true wagon top, but this will be disguised behind the side tanks. The tube plates and crown sheet were drawn up in Aspire and test samples were cut out of 2mm styrene sheet on the CNC machine, just to see how it would all fit together. The test parts were a good fit in the boiler tubes so the next step was to get them water jet cut out of 2mm copper. I also have a couple of Hunslet locos under construction so decided to include their tube plates in the same drawing. I couldn't find any 2mm sheet in my stock cupboard so I sacrifice a piece of 4" diameter copper tube. After a couple of annealings and many passes through the bending rollers set to neutral, a suitable flat piece of 2mm sheet was obtained. All the plates were tabbed together in the drawing so they didn't disappear into the sludge below the water jet table. I left the project with the operator and he said he could fit the job into his schedule next week. I received a phone call a couple of days later saying that he couldn't get his software to cut the circles, even though I had exported the drawing as a .dxf file as requested. As there was nothing I could do from my Aspire package, he sent the file to the manufacturer of his machine (Israel I think). They sorted the problem out and sent the file back the next day. How's that for service? The cutting process cost just \$65.00 and the result can be seen below.



I left all the tabs on the parts to stop the plates dropping into the boiler during the soldering process. They didn't need much cleaning up, just a light file in each corner of the tabs to square them up.

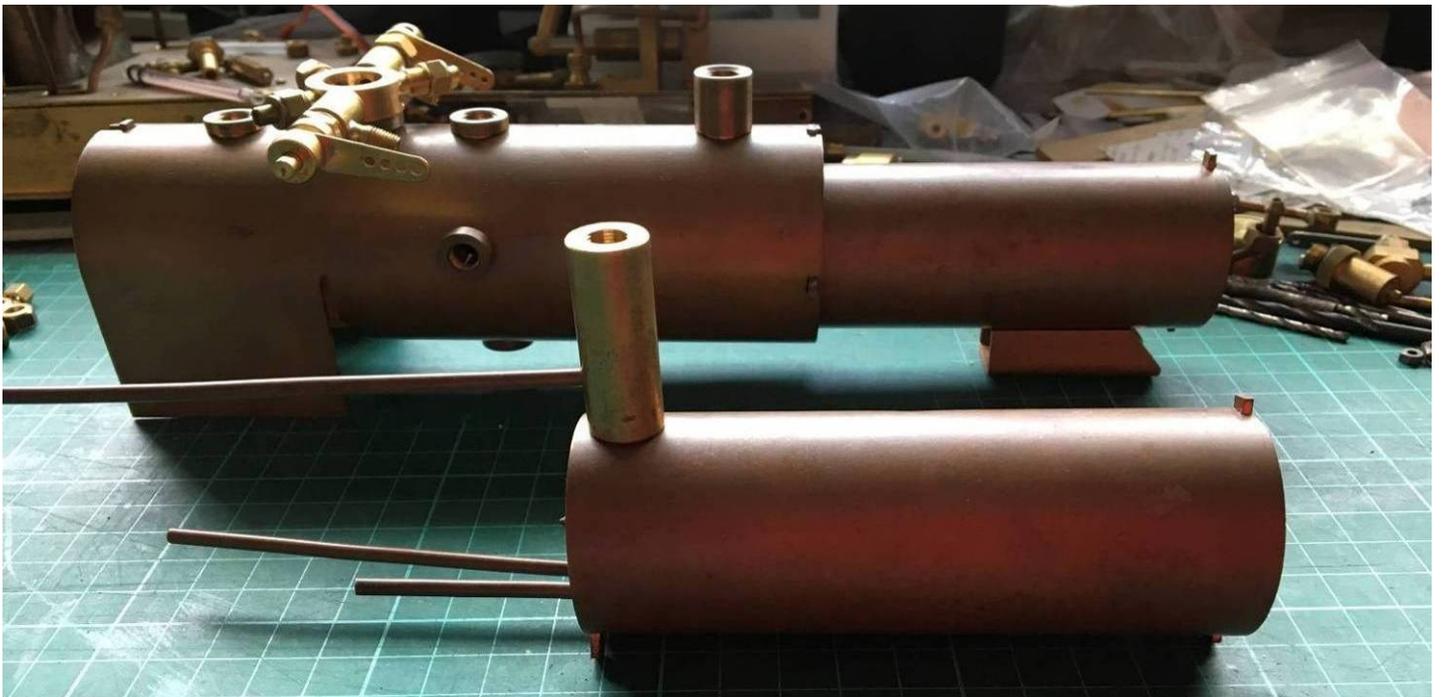
Bushes were turned from bronze rod and tapped part way through. This would hopefully reduce the risk of burning the threads in the heating process. It would also give an easy start for a tap to be run through afterwards keeping it true to the bore.

A 2mm thick U shaped girder stay was formed to support the crown sheet and was to be held in place by a 4 BA bronze screw and nut after fluxing.

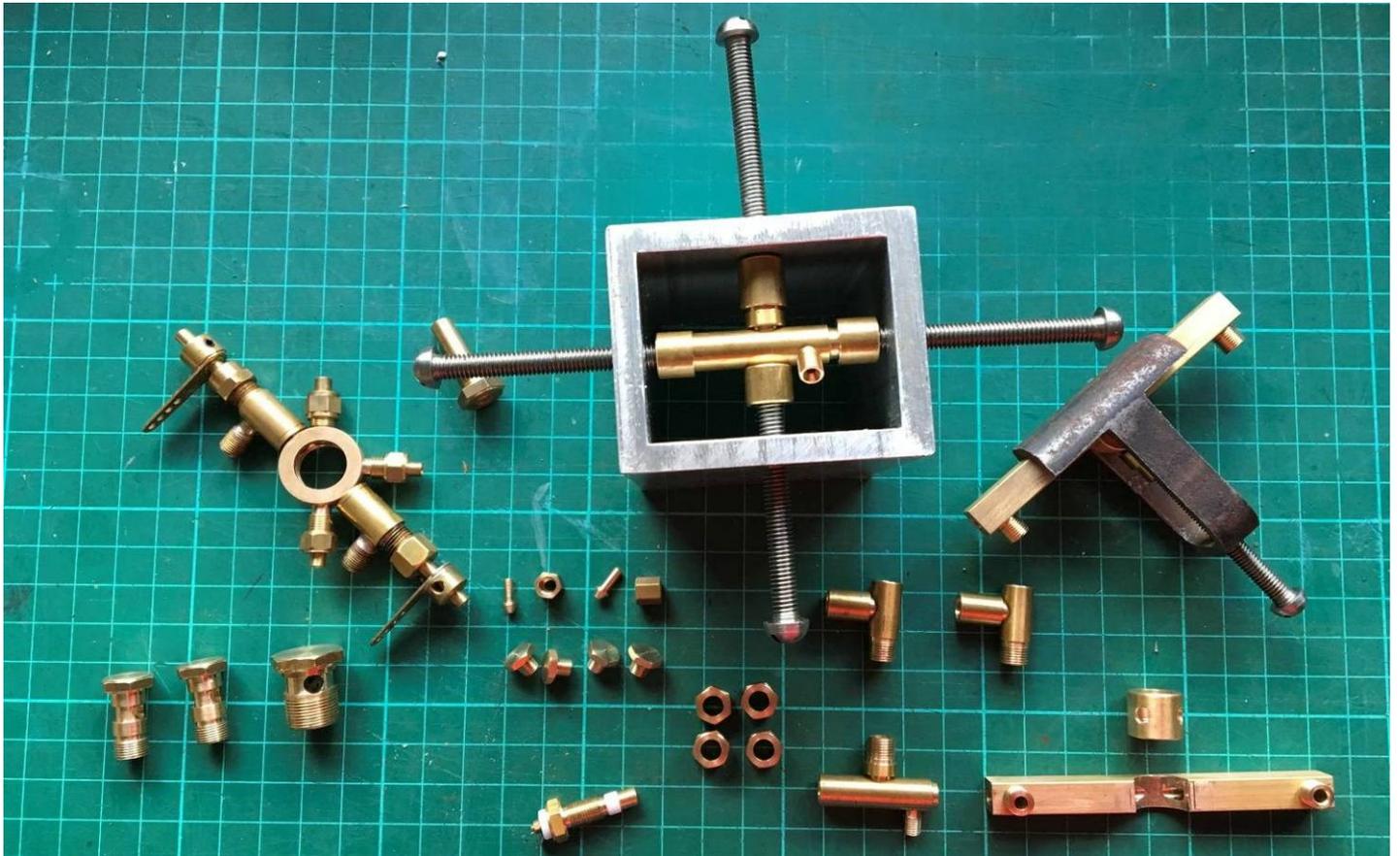
3mm boiler and gas tank stays were threaded on both ends.

A double coil 3mm steam heat tube was also bent for the gas tank.

The rest of the work on the boiler and gas tank can be seen in the next photograph.



I chickened out at this stage and asked my good friend Andy if he would give me a hand to silver solder everything together. It has been about 38 years since I have built a boiler and my hands are not as steady as they used to be. My attempt would have had silver solder all over the place if I had tried it on my own. I decided also to get all the boiler fittings prepared so that everything could be soldered in one day trip to Andy's workshop.



I made a couple of jigs to hold all the bits and pieces together. The aluminium square box is shown holding one of the bottom water gauge fittings together. The 4 x 1 BA screws have brass plugs on the ends to minimise heat damage to the fittings and hold the parts square.

This jig also held the two parts square for the water gauge top fittings as well. Steel box section was used with one screw to hold the water gauge turrets square. I decided on a multi port turret for the two throttle bodies and steam take offs for the whistle, gas tank steam heat, gas/ steam pressure control valve and pressure gauge.

The small fitting in the bottom centre of the photo is the water level detector. Teflon kindly donated by Tony was used to make the insulators and a bronze threaded stud was made for the sensor. I have made a simple electronic circuit to give a pulsating loud tone and a flashing LED when the water level gets within 3mm of the crown sheet.

I mentioned before that we had the hottest summer on record, not a great time to be soldering a boiler together in the middle of the day! Sweat was pouring off us by the end of the job.

Andy is very skilled at boiler making and has many boilers in small and large scale under his belt.

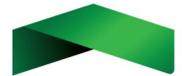


From the Hamilton Halloween run

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I bought some 1mm Easy-Flo 45 wire many years ago and now it was going to be put to good use.

We soldered the bushes in first and the crown sheet girder stay to see how the solder flowed.

This old solder is far better flowing than the new Cadmium free stuff we have to buy these days. Andy also used his ready mixed flux paste which was far superior to my old powder flux.

We soon had the parts going together in about five heating stages. The pickling process turned every part bright pink and we only needed one re heat to fix a small pin hole.

Blanking screws were screwed into all the bushes and a hydraulic test was done to 150 psi on the boiler and 300 psi on the gas tank. Our friend John Bremner called in during the later stages of the gas tank soldering and we commandeered him to solder the gauge fittings and turrets. He had a far steadier hand than both of us for the intricate parts. Andy and I were really pleased that he turned up when he did, not sure if John was!

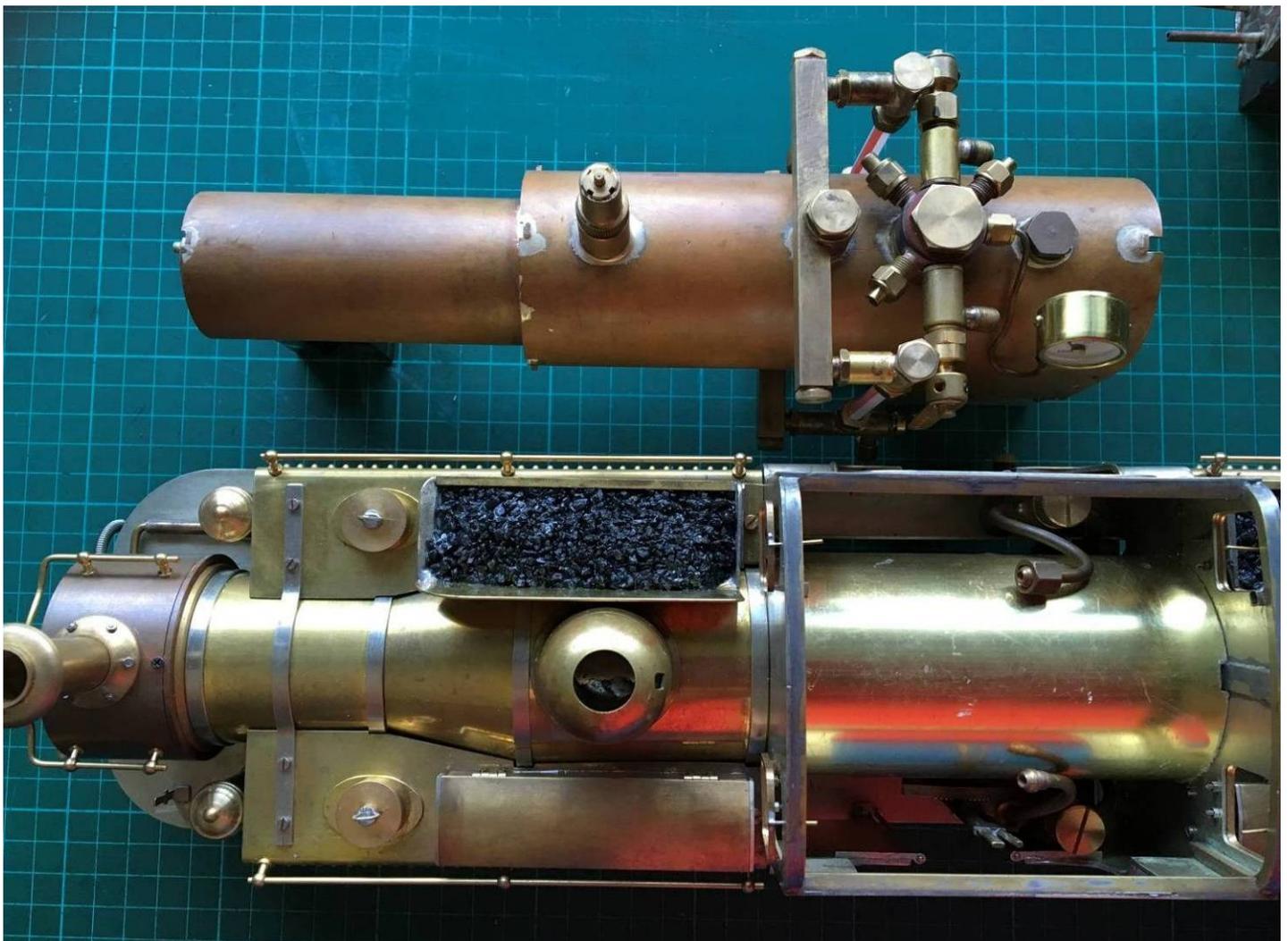
The main steam turret looked as though it would be a horrible thing to solder together neatly and we left it till last. The strange thing was it turned out to be the easiest and the solder flashed around neatly and didn't run up the threads for the union nuts (thank goodness).



Complete boiler with all the fittings attached

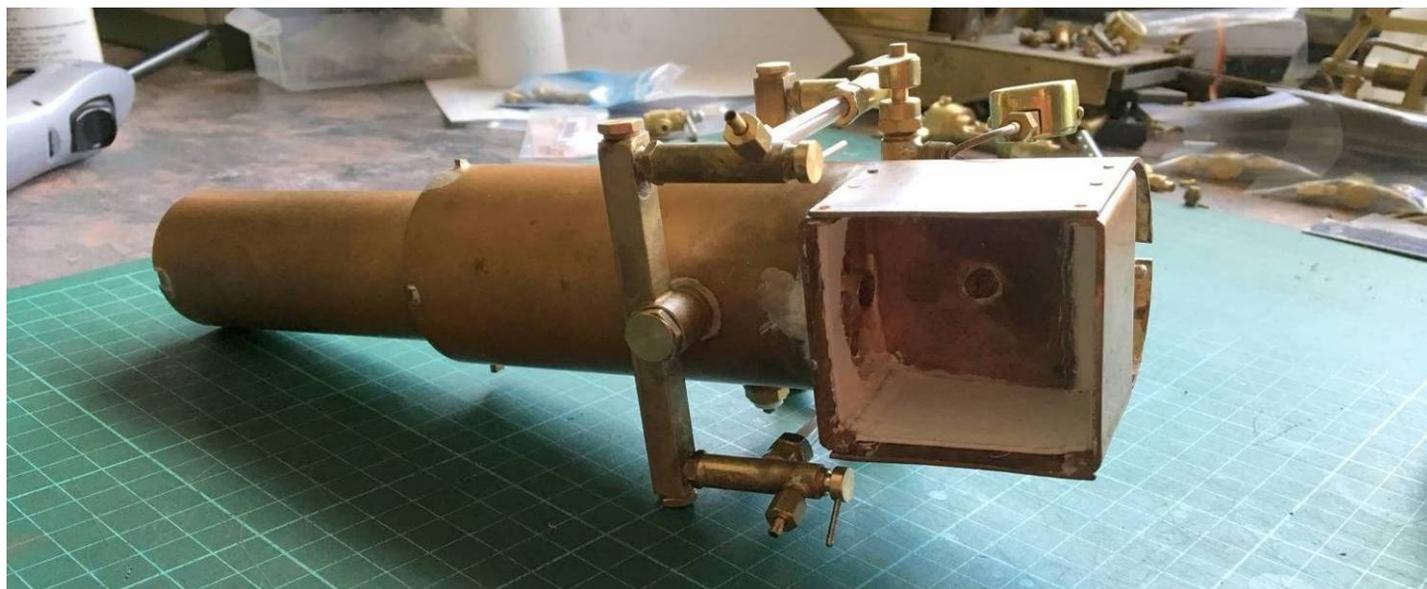
There are always a few things you would have done a little differently after the event (when it's too late) especially when scratch building. I could have moved the bushes for the Enots valve and main turret towards the back head a little bit. Things are a bit tight but thankfully it is still workable. The next photo shows the plan view of the boiler alongside the body I have to squeeze it in to. It doesn't show the fact that there is only half a millimetre clearance between each end of the top water gauge turret and cab sides!! That was more by good luck than good design. I will have to make sure I keep the paint thin on the inside of the cab J.

The two curved pipes on the fire box wrapper are from the Roundhouse Lubricators. After building the boiler these pipes don't reach the turret by 3 mm!! Something changed somewhere in the build process and it now means I have to make two new lubricators with longer copper pipes. Oh well, best laid plans L.



The inner firebox sides have been lined with 1 mm thick ceramic fibre.

I bought a 300mm x 600 mm sheet from Aliexpress for just a few dollars. The fibre is held in place with white silicone glue that came with the Aster Evening Star kit. You can see in the next photo that the gauge glasses have blow down valves on both sides. This will help in emptying the boiler at the end of a run and of course clearing any bubbles from the glass.

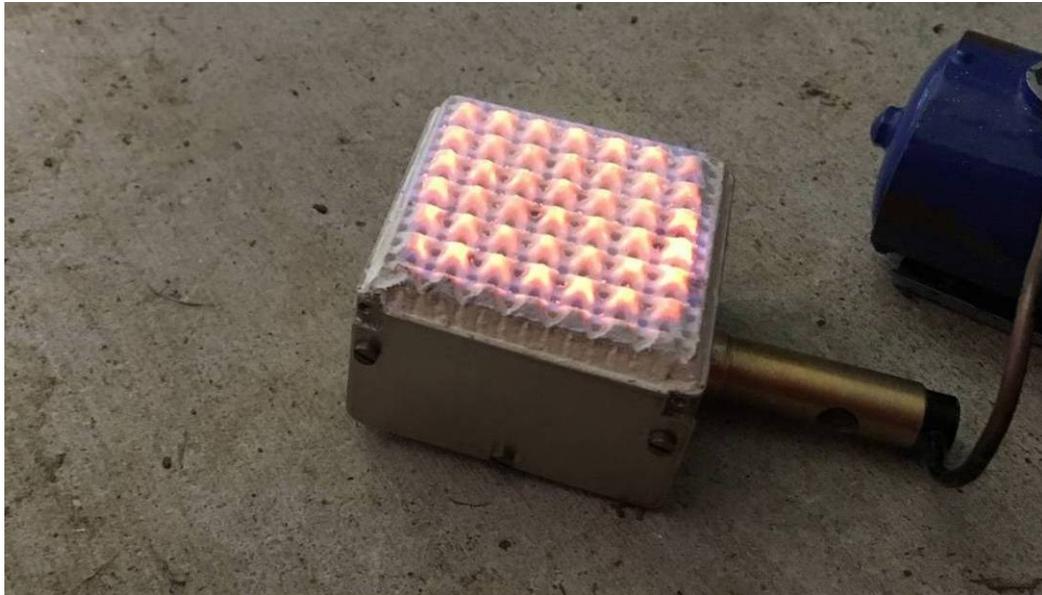


The ceramic burner was the next part to be experimented with. A plenum was made from nickel silver sheet and the brass air mixing tube was silver soldered in. I have a gas fired Black 5 that was made in China with the same type of ceramic burner, so I decided to see how it was made.

A close inspection of its burner revealed that they had mounted a vertical 12 mm diameter round bar mounted in the plenum at the end of the air intake pipe. I assumed that this must be there to make the air/gas mixture to swirl around the plenum. I had a problem with a previous attempt at gas firing the Aster Mikado. The flame was always higher at the mixing tube end of the burner. It was well worth adding this extra part to this burner to see if it made a difference. The ceramic burner plate was cut from an old gas fire element and glued in again with the Aster white silicone. The photo below shows the burner alight with the gas valve set to minimum. Every peak on the burner is glowing bright orange and I couldn't hold my hand 500 mm above the burner for long.

When I turned the gas up high I couldn't hold my hand 1 metre above the burner!!

I am really pleased that it has an even flame distribution (clever these Chinese) and it should boil water if nothing else. A little bit more work and the engine should be ready for a test steaming. That part of the project will have to wait to next season's news letter in spring.



Burner glowing bright.

To be continued

Scariest stuff from the Halloween night run.....



Wonder if the skeleton has a drivers ticket???????

What a combination!!!!!!!!!!!!!!!



Ron Salisbury with Son in Law came down for a ride on the Halloween Run, Was great to see him again.

Town and Around :



Halloween night run. Even the public got into the mood. Jason and Ashley respectfully place a tombstone over the grave of a resistance fighter one of many trackside in the prairie..

Upcoming Events :

Hamilton Model Engineers **“Steam and Steel”** Convention 9th to 13th January 2020

TMMEC Christmas Parade Float 30th November. Float discussion will be on Tuesday 12 Nov at 7.30pm at the Clubrooms. Please attend if you have an interest in the float’s design. Float construction will take place 29th November at Robert Page Engineering ready to roll out on the 30th Nov.



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