Sussex Miniature Locomotive Society

Wharfedale News. Issue 24
3rd Sept. 2020

Dear all,

Issue 24 this week and next week will be our Silver Jubilee edition. Have you got something special we could put in this edition?

I have started to get about again having been give the all clear to drive but have to resist the temptation to lift things for a few more weeks.

Lorema is having trouble keeping me from overdoing it but I still try and get my after dinner snooze if I can.

Stay safe

Mike

Brief club house NEWS

Very little to report this week other than we wait on the date the roofers will arrive. The rain has started to make the grass grow again to keep the gardeners busy.
Continued thanks go to Mike P, Graham Miller, Dave Mattingley Andrew S, Roy P, Mick Robinson, Sam Hope and John Green, for their visits to the club to keep it in good shape.
Thanks to Tom and Andrew S and Andrew B for continuing to maintain the security patrols.

Wharfedale Article 24

Early photo being fired by John Gange

Steve Steer & Graham Miller. 60th Re-enactment of the track opening.
10/05/2014

Mike P's musings No.22

The GWR "Bulldog" class 5" gauge "Swindon", that came my way, was a lovely little engine that required a minimum of work to sort it out.

When I got it, the weighshaft had shifted, upsetting fore and reverse gears and this required sorting, along with the regulator that did not shut off properly. The latter was correctly situated right at the back of quite a long smokebox! Great when you can't get your fingers to something! It had the tiniest little slide valve worked by a right angled end to the regulator rod, and overall movement barely was sufficient to ensure enough opening and complete closing. I also spent a day repacking the valve and piston rod glands! That was 2 hours to make a little short armed "c" spanner to fit the glands and the rest of the day, working from above and below to unwind the gland nuts and repack….one sixth of a turn on the spanner at a time, working around the slide bars! Who would have inside cylinders! The nuts turned out to be about half an inch long and tight right up to the last half turn! At 32 tpi , that was about 60 spanner movements for each nut…undoing…another 50 after packing to put them back! Fun, eh?

It was a lovely detailed model and went like the wind. Originally built by Lionel Woodhead, it passed through several club member's hands on its way to me. I believe it was owned by Bob Youldon at one time, and he changed the cylinder lubrication from displacement to mechanical, with a pump behind the front buffer beam, LBSC style. On the backhead , there was still the little regulator jockey valve from displacement days. The engine ran lively and very quietly, without much puffing, because the exhausting was so free and it had about a

3/8” exhaust nozzle. Everything was apparently to Swindon settings and formulae. Lionel was a devotee of Swindon practice.

I used to run it in passenger service at Beech Hurst and once or twice teamed up with another of Lionel’s engines, the 4700, for a little double heading.

I also used to double head with John West with his “City of Truro”.

To digress a little, in the early days of Beech Hurst, and pre: cell phones or computers, and when food used to come under the workshop door regularly, and dirty plates returned the same way, many members were prodigious builders. I already mentioned Alf Funnel, and Les Clarke in previous musings. Well, Lionel Woodhead was another such builder, turning out loco after loco, probably about 10 or so. I used to have a list of them, but I can’t find it at the moment, beautiful machines, and in Lionel’s case, mostly GWR. He built in 3.5” and 5” gauge. Along with the Bulldog, there was a 4700, 14XX, a Castle and

King, and a heavy GWR tank loco, I believe. One of his final locos saw him swop regions and he built a B4 southern engine. The last I heard, Lionel's grandson had discovered and tracked down and bought back most of his grandfather's locos. The Bulldog is still with one of our club members. I found a picture of the B4, just for interest to you SR men, pictured outside Lionel's workshop.(dated December 20th 1986).

Mike P

Andrew Ellis

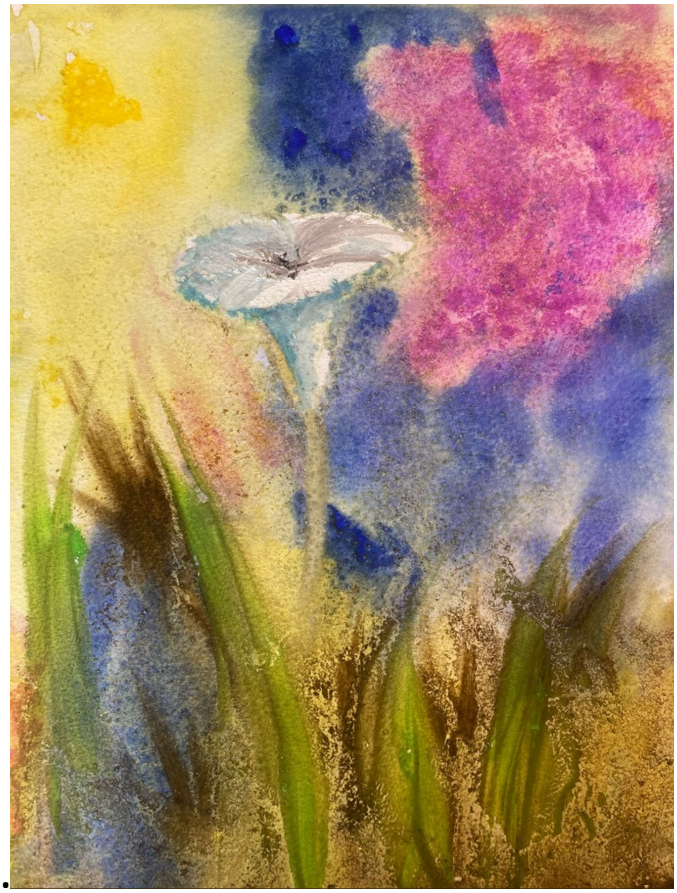
I did art O level to fill a gap on my schedule in sixth form and my exam piece, a portrait of my sister, although probably human, certainly didn't resemble anyone I had seen, even in the sci fi movies I enjoyed. I think that if the examiner had seen her, I might not have received a C grade. I never did any painting again until years later. It came about when I tried to get my parents back into painting. During a visit while taking them to Oldlands Mill I bought some postcards and proposed a painting competition.

The first picture is of my attempt and what built my enthusiasm to keep trying.

The second followed an exercise from a book.

I have always enjoyed the colours despite lots of errors.

I have included an experimental picture using inks and some salt.



Those artists who really know what they are doing say that we all know how to draw but as we get older we tell ourselves that we can't and need a little push. Maybe we just need to find our creative medium. I see a club full of mechanical artists at Beech Hurst. **Andrew E. To be continued.**

News From Afar - 2 Sept.

Expensive Parka

Near Fairbanks - Alaska

Public Running Day - Sunday 30 August 2020 - Crazy Stuff.

A terrible late winters day as you can see also - 18C.

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The picture only tells part of the story. The club probably had one, if not the best, public running day ever. Considering we are still limited on numbers, the day was very successful. The club designated three areas, limit per area being 100. I think five birthday party bookings took up two of the designated areas. We had it just at the limit all day with the public coming and going. The Kiosk did very well with the reinstated doughnut making machine in operation being a big hit.

I think every loco was in action at some point on both tracks 5” and 7.25”. The public was lined up at times in queues over 50 m long. They were very good though as I didn’t hear of one complaint.

The picture below shows Craig driving ‘Jumbuck’. It must have been a quiet time as I have time to take a picture and the line up is short.

One of our designated party areas is shown under.

Along with us for the day, as they usually are on the last Sunday, are some members from the Historic Engine Club with some of their collection. Not as many as usual, as they had more than one activity booked for the day. The figures below right are all in motion being driven by electric motors. A children's favourite.

Eric with ‘George’ taking a couple for a spin.

Eric, or more likely, ‘George’, was popular on the day as always, with the public able to get up close and personal with a live steamer. ‘George’ was unfortunately the only steamer in action on the day.
I visited *‘Baxter's Engineering’* on the way home Monday to see if our little job had progressed. It had not, but the picture shows that they have bigger items on their

current program. This is a loader I believe. The tyre was over my head, not that that is difficult, but was over 6 feet in diameter. Asking the ‘tradie’ (mid right) how much he thought each tyre was worth, he answered probably over $7,000.00. Ouch!

Other ‘stuff’ being worked on in their yard. The bucket for the loader?

Minor Works - Wednesday.

Three of us, Darryl on his knees, Larry and myself continued to bury this colourful 100mm conduit, gifted from a Christmas event at some stage. It carries power to our rejuvenated ticket office shown right top centre. The power was just an extension cord, or rather several extension cords laying on the surface, so we thought we had better do the job properly, well, nearly so. The conduit will soon go all the way to the ticket office. On the other side of the fence, in the middle ground, the conduit will be laid on the surface on the low side, then buried with soil using the tractor.

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For more information on the Parka shown at the start, and from Chena Village near Fairbanks, Alaska, go from 9' in this clip to 10'30"
I believe it has more that 20 different types of skins and is valued at around $25,000. Pam and were there in late August 2014. Not a place to be in winter. The Alaskan winter is from September to May. Spring, Summer and Autumn are June, July and August. Rather cool.
https://www.bing.com/videos/search?q=youtube+chena+village+alaska&docid=607998598504055607&mid=E50AF4E9CF2CD7C0CDF2E50AF4E9CF2CD7C0CDF2&view=detail&FORM=VIRE

If the link does not work, look for Chena Village , Alaska.

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Stay well.
David - Canberra - 2 September 2020
Our 53rd Wedding Anniversary

The picture taken on our 50th.

Congratulations from us all at SMLS.

Injector Test and Evaluation Rig

When we have tested injectors at the Club, the only aspect we can determine is 'Does it work'. Since reading D. A. G. Brown's book on injectors, I thought it would be nice to try to determine other operating characteristics such as:

Delivery pressure capability;
Ability to lift water;
Delivery flow rate;
Temperature of the delivered water.

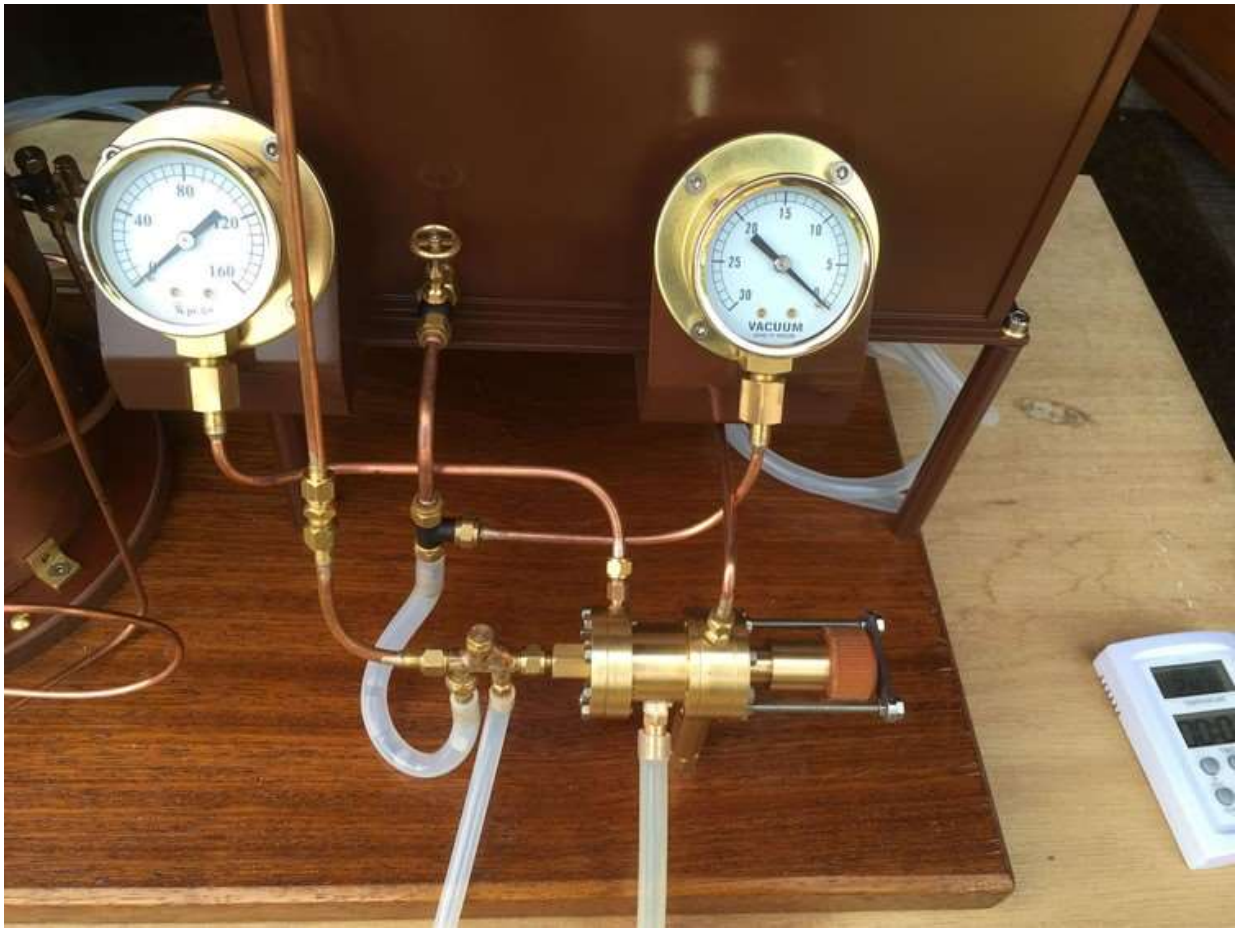
The aim being to determine these characteristics at different steam pressures.

Bill Carter back in 1975 described a test rig which was aimed at determining most of these characteristics. Essentially, the principle of the test is for the injector to deliver the water to atmosphere by using a dummy load, not letting the water go back into the boiler. In his book, Brown describes the dummy load in the form of a piston which has the boiler pressure applied on one side and the injector output on the other side. Once the injector develops a delivery pressure greater than the boiler pressure, the delivered water escapes and is collected in a container. I have modified the design so a spring plunger can increase the force on the piston, so the actual delivery pressure capability of the injector can be determined.

For some weeks I have been constructing the test rig in between work on the Class 3 2-6-2 tank loco. The components of the dummy load are shown below prior to assembly. The piston is the small item with the O'ring in the centre and the spring-loaded assembly and screw adjustment is on the right. The O'ring on the piston serves to isolate the delivered water from the steam chamber which is connected to the boiler. The injector output would be attached to the left-hand end of the assembly.

Initially, I used a 4” GLR vertical boiler as the steam plant but found it could not maintain boiler pressure for long enough. So, I had a 6” diameter gas-fired boiler built by Chris Lyall in Yorkshire to a design similar to that shown in K. N. Harris’s book on model boilers. It has 101 5/16” diameter flue tubes and no water jacket around the firebox because it is gas fired. A 4.5” diameter ceramic burner is used fed from a propane cylinder. It has ceramic fibre lagging and wooden slats held in place with boiler bands. I calculate this boiler will produce 6 times the steam that the smaller boiler did, so it will be useful for testing larger capacity injectors. The overall test facility is shown below.

The photo below shows the dummy load attached to an injector under test with the adjustment knob on the right of the dummy load which allows the load to be increased above boiler pressure. Two gauges are shown. On the left is the pressure gauge measuring the output pressure from the injector and the one on the right measures the ability of the injector to ‘lift’ by measuring the inlet water pressure when the water flow is restricted.



I am sure Val would be pleased to know that I made the brown water tank and lid from some of John's brass sheet.

In addition to the two gauges shown above, there is one on the boiler giving the steam delivery pressure. The output of the injector under test is directed to a measuring cylinder for flow volumetric flow measurement and the output water temperature measurement.

To enable measurements to be made at different steam pressures, the boiler pressure needs to be able to be varied. My idea was to use a diaphragm pressure regulator between the propane gas supply and the burner, the small cylindrical component shown in the gas line. So far, the response time of this system seems to be too slow to be useful. I need to test this further and maybe abandon its use. Top-up water is delivered to the boiler using either a hand pump or injector.

My first tests have been on two of my spare 'Europa' injectors. The first finding was that both will pull a vacuum of up to 16"mercury and still deliver at

between 8” and 12” mercury, some 9 ft to 13 ft column of water, quite surprising. Both injectors work but the first produced slightly less volumetric flow of typically 0.6 litre in 2 minutes at 70-75°C and was only happy between 60 psi and 30 psi steam delivery pressure. Whereas the second operated from 80 psi down to 22 psi, producing about 0.7 litre at a lower temperature of 65-70°C. Both injectors should be 12 oz/min which is 0.72 litres in 2 minutes. So, the second one performs better than the first and is probably as close to the design specification as can be achieved. I next need to do more measurements to confirm these findings. If they are confirmed, I plan to increase the gap between the steam cone and the combination cone on the first injector which should allow more water to flow and hence reduce the delivery temperature.

I am pleased that already the test facility has given me valuable information about these two injector performances, and I hope that this will lead to being able to improve the performance in some cases but inevitably not all, as some problems can only be solved by re-making the injector!

So that is as far as I have got at the moment. These tests have to be done outside because the boiler is gas fired and this means I also need dry weather. I hope the next weeks will be suitable for more measurements and experimentation before the colder weather sets in!

Roy Preston

Puzzle Corner.

Lorema's last week's Challenge:-

Ladies First. Who was the first lady to:-

Question	Answer
To win a Nobel Prize	Marie Curie
To travel in space	Valentina Teraschkova
Be a celebrity winner of "Strictly Come Dancing"	Natasha Kaplinsky
Be President of the European Commission	Ursula von der Leyen
Appear on a postage stamp	Queen Victoria
Present BBC's "Blue Peter"	Leila Williams
Have a UK solo number 1 hit record on the uk singles chart.	Jo Stafford
Be a test tube baby	Louise Brown
Ride in the Grand National	Charlotte Brew
Be US Secretary of State	Madeleine Albright
Win "X-Factor" in the UK	Leona Lewis
Win Best Director Oscar	Kathryn Bigelow
Be Poet Laureate in the UK	Carol Ann Duffy
Be Metropolitan Police Commissioner	Cressida Dick
Be Queen of England	Queen Mary 1
Fly solo across the Atlantic Ocean	Amelia Earhart
Inducted into the Rock and Roll Hall of Fame	Aretha Franklin
Be Prime Minister of a sovereign European State	Margaret Thatcher
Be consecrated as a Bishop in the Church of England	Libby Lane
Marry King Henry V111	Catherine of Aragon
Be head of MI5	Stella Remington
Take her seat in the House of Commons	Nancy Astor
Train a Grand National winner	Jenny Pitman
Win a Pulitzer Prize for Fiction	Edith Wharton
Be Chancellor of Germany	Angel Merkel

Lorema's this week challenge.

Name these imperial units from the description given:-

EG. 12 inches	1 Foot.
Question	**Answer**
12 inches	
112 pounds	
5 fluid ounces	
4 inches	
6 feet	
8 gallons	
10 cables	
3 miles	
8 pints	
16 ounces	
120 acres	
22 yards	
16 drams	
2 gallons	
3 feet	
2240 pounds	
20 fluid ounces	
5 ½ yards	
9 gallons	
14 pounds	
2 pints	
1210 square yards	
5280 feet	
0.05 ounce 640 acres	

My thanks go to all who keep sending me the material.

If you have something for the NEWS please contact me

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