DECEMBER 2022 NWMES NEWSLETTER.

OUR ANNUAL CHRISTMAS DINNER.

Our members enjoyed a lovely meal at Conwy Golf Club on the 25th November. Frank did all the hard work organizing this event, a great shame both he and Barbara were missing having tested positive for Covid. It was great to see so many friends there.

WEST SHORE TRACK ISSUES.

We have an ingress of moisture on our clubhouse roof. This is one of our urgent tasks. We keep praying for a dry day in order to go up onto the roof to apply some waterproofing material.

As we all get older, the movement of locomotives in and out of our "engine shed" becomes a major task. If you conduct a manual handling risk assessment for this operation it would require some kind of mechanical handling method or extend the trackwork from the turntable up to the steel container door.

We're blessed with one or two members that are real whizz kids with CAD on their laptops. To design this track extension is not impossible, in fact it is achievable so we're getting on with it. We're still in the planning stage now so when we get started this will be a very interesting project

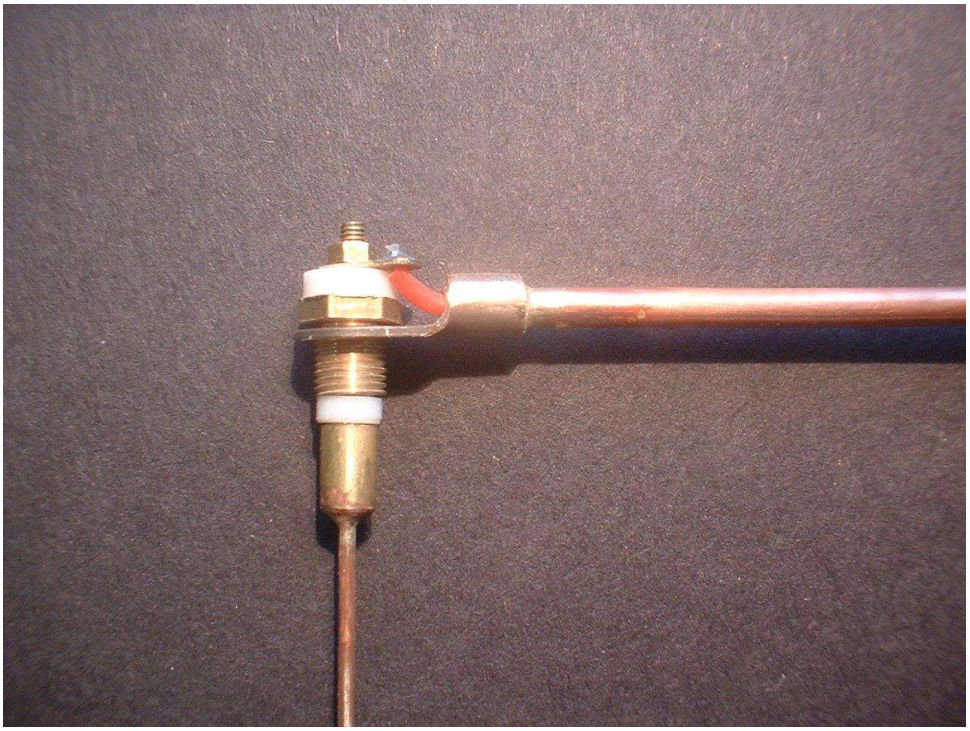
ELECTRONIC CONTROL FOR BOILER FEED PUMP.

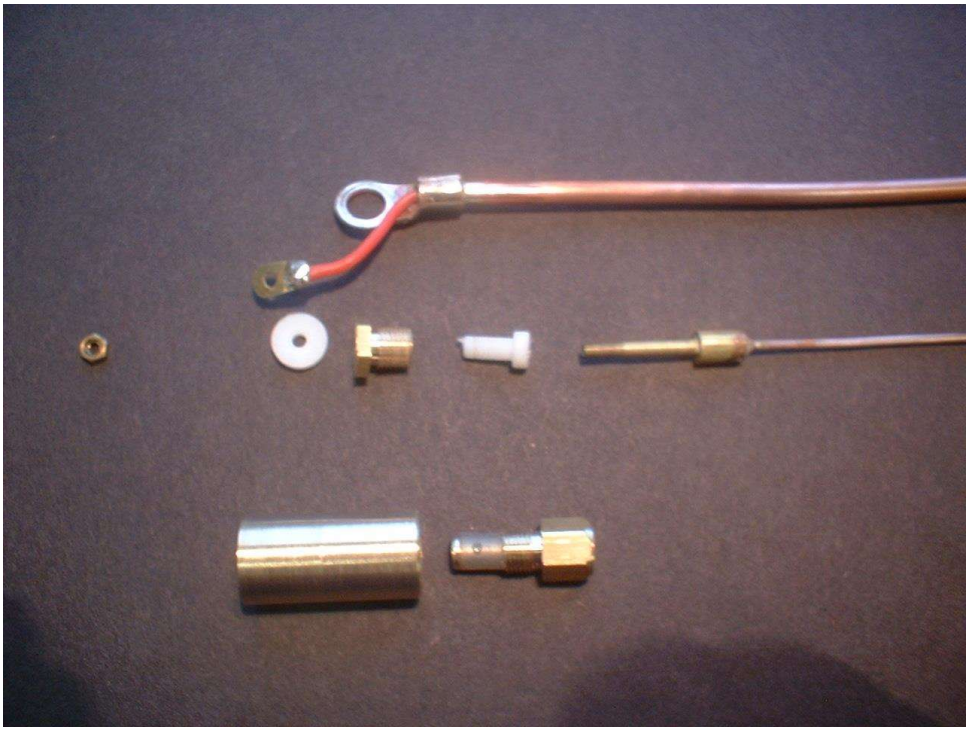
Having written a few words on Peter Etchells' vertical boilered locomotive last month, I was intrigued by the feed pump control on this locomotive. Knowing other members were constructing test boilers I thought this application could also be applied to other boilers.

Sure enough, Bill Winter has sent me details and I'm sure it will be of interest to all of us. Many thanks Bill.

The article for the pump control unit is here
https://www.modelboats.co.uk/news/article/boiler-pump-contro-unit/496/

The attached photos are of the probe that I have just made for my steamboat boiler. The lower fitting is an alternative to a clack for putting water into the boiler with a spray bottle. My probe fits into a spare bush on the top of a vertical boiler, Pete's fits through the top fitting of the sight glass. I am using a commercial pump for my little boiler the one Pete has made is similar but larger and uses an MFA gear motor, I am not sure what the gear ratio is - Bill Winter.





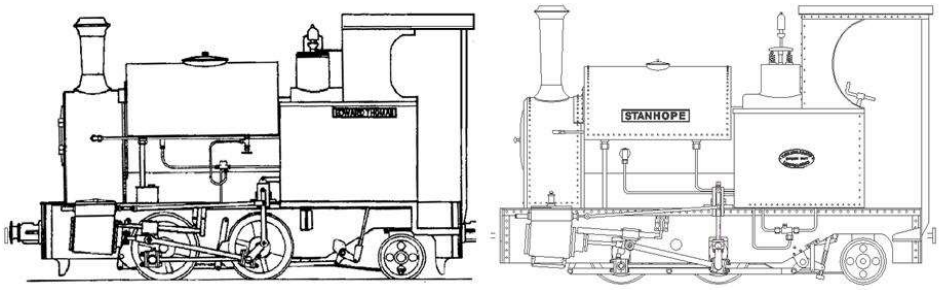
The story of Penrhyn Quarry locomotive Stanhope in 5" Gauge

By Martin Hebenstreit

My first encounter with the Penrhyn Quarry loco Stanhope was in Dr Susan Turner's Book the Padarn and Penrhyn Railways that I purchased in 1975. A picture of the loco on Page 142 of Stanhope appealed to me as I always thought that the Talyllyn loco Edward Thomas looked too tall and thin. Here was a loco of the same class with the boiler apparently lower down in the frames and a more stable outline that I thought was more pleasing to the eye. Nothing more was thought about the loco until 1986 when a good friend of mine said he was going to make a 5" gauge model of Edward Thomas to Ross Harrison's design and what did I think. My answer was if I was going to build it, I would make it as Stanhope as it looked better to me.

The name Stanhope was given to the engine during its time on the Burnhope reservoir scheme for Durham County Water Board.

It was not until 1992 that I was looking for a new project to do that I decided to have a go at doing the model myself. Stanhope was the first built of a new Tattoo design by Kerr Stuart using simpler Hackworth valve gear instead of inside Stephenson valve gear. It was no 2395 of 1917.



Edward Thomas GA Stanhope GA

A set of Edward Thomas drawings were purchased and a general arrangement drawing laid out on the CAD and result shown on the right view above, this being as it was originally built. Progress at this time was slow due to work commitment but in 1999 the full-size Stanhope had been restored to working order and was running on the West Lancashire Light Railway at Hesketh Bank. A trip up there with my current GA drawings a measuring up of the loco was carried out filling in some of the details not on the Edward Thomas drawings.

On returning home the full-size dimensions were scaled down and to my horror this locomotive was quite different to Edward Thomas. I knew that the Talyllyn loco was described as a modified Tattoo class but it was only after this exercise, I realised how different it was to the original design. This left me with correcting the drawings that I had made. When Stanhope arrived at Penrhyn Quarry it was given a full overhaul and the boiler and tank lowered by six and a half inches to make it more stable for quarry work.

The drawings were altered to the new information that I had and this included the modifications carried out by Penrhyn. I was now ready to cut metal and here started a model engineering project that I referred to as skiing off piste. Unbeknown there many unknown hurdles had to be dealt with as my knowledge of the loco increased.

Construction started as with all steam locos with the frames and buffer beams followed by the driving wheels and axle boxes, Here I hit my first hurdle, I had been drawing the loco to scale on the computer and making up the wheel sets to the model standards for running on club tracks. When I tried the wheels in, they were too wide for the frames. This meant that I had to make new wider buffer beams and stays in order to accommodate the standard wheelsets.

As can be seen from the Photo above the only bits left from the original assembly are the side frames. Drawings were completed for the rest of the chassis detailing all the parts needed.

During the build I had collected pictures of the loco in its working days at Penrhyn and when drawing the detail for the cab and tanks I discovered what I thought would be a straight forward layout proved not to be the case. Photos taken at Penrhyn differed between its first rebuild to the ones taken on the scrap line. When first rebuilt it had its nameplate sitting on the bottom row of rivets on the saddle tank, it still had the foot brake fitted at Burnhope (its previous owner), the hand brake on the left bunker, hand rails to the cab entrance and wheel wetting equipment.

This is from a postcard that I purchased off ebay (Hatherill collection)

Later photos show the nameplate lifted up higher on the tank to allow the lining to pass underneath, brake column moved to the back of the cab with two extended pull rods across the rear pony wheels, no wheel wetting equipment, hand rails removed.

Stanhope at the end of its working life at Penrhyn (Unknown)

This is from another ebay photo. The problem now was what version do I make? I did not like the version with the moved brake gear as this might restrict the movement of the pony truck on curves at our local track in Llandudno. On the other hand, I did like the lifted nameplate as the lining looked better. In the end I made a compromise including the details that I liked and were practical for a working loco.

Most of the platework went together fairly well with the exception of the saddle tank that always seemed to demand and extra hand from me to hold certain parts together while they were riveted. On the subject of rivets I set them out on the miller in the flat using the digital readout to pitch the evenly before rolling the tank to shape. The manufacture of the platework brought me to a point where I could now see the final look of the engine and it was taken to a number of shows like this, including one at Felin Fawr and the opportunity taken to photograph it with the full size loco.

There were quite a few changes made to the internals of the cylinder and the valve gear and as time went by it was less and less like the original Edward Thomas drawings that I had. Once everything had been drawn, the build went well without too much trouble. A test on compressed air confirmed that all was well and I had a working chassis, Hooray!

I now had a model that looked like the picture above and the task of providing a boiler now became the priority. A look at the drawings for the Edward Thomas confirmed that the design was useable but would have to be upgraded to current boiler requirements plus a few back head modifications to suit Stanhope. This work was done and discussed with the club boiler inspector and all details and changes accepted.

So started the cutting out of Tufnol formers and copper for the flanged plates involving much heat work and sweat. Until I had a set of five flanged plate ready to start the build. In total with work interfering with progress it took about nine months to complete a successful build resulting in a hydraulic test of 200 PSI.

I had now reached the point where all parts needed to be put together for final assembly. This point of a locomotive build involves all sorts of small parts that to the casual observer looks like little progress. There were still gremlins hiding in the corners and one raised its head when I fitted the water gauge purchased. When fitted it fouled the lever for opening the Firehole door. The result was the manufacture of a different design gauge that solved the problem.

When drawing up the cab I used the current cab on the preserved locomotive only to find after making it, the front of the cab did not look the same as the cab fitted in the quarry. I eventually realised the windows were too low.
Another modification and I was happy with the result and the loco now looked like the full sized loco when in Penrhyn Quarry.

The loco just before the first steaming.

A first steam test was successful and it was given its first run which went well and it was really nice to finally drive it.

The loco is now ready to be painted, and again I thought that this should be straight forward. On studying the photos that I have I noticed that one seemed to have a different lining pattern. A play around with the editing in windows revealed that after one overhaul the tank had been paneled out like the Hunslet locos, so the loco could be finished in two ways as shown below.

The question then and now was how do I finish the loco, I like the paneled finish but will people think I lined it incorrectly, who knows. As some of you Know I went for the paneled version.

Building this model has been a long and sometimes frustrating journey but it has been enjoyable and it is nice to have something that is unique as far as I know there isn't another one.

SANTA'S WISH LIST !!!

How many of you sent Santa a letter asking for a Hornby Dublo Stanier Black 5 for Christmas when you were young? I didn't as we couldn't afford a Hornby Dublo.

Any member that answered yes to that question is a lying so and so. Hornby Dublo never made a Black 5, but they did make a fine Stanier 8F.

In recent years, Martin has started collecting 00-gauge models and associated equipment. When he sent a letter to Santa asking for a HD Black 5, he got a reply saying "not available, make one yourself".

As you can see, he has made one himself. A Denbigh Castle chassis, (this model did not have a ringfield motor and therefore had a different chassis to the other Castle class locos). This chassis was modified to accept the valve gear off an 8F.

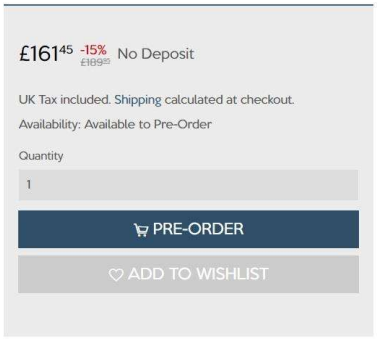
The boiler required modifying, in order to make the body fit the chassis. As the 8F tender was similar to a Black 5 this was not a problem.

There is a lesson here. If any of you were intending to write to Santa for a HD Black 5 this year. Don't bother!!

BACHMANN ARE AT IT AGAIN.

Anyone out there thinking of modelling the Penrhyn Quarry Railway system, (come to think of it even the FR) there can't be a better time to start than now. With quarry Hunslets, wagons and buildings being produced by various companies in 009 scale. This is the latest addition.

BLACK (EARLY)
391-125 | Bachmann | 009 Scale



This is early black livery, lined in red and grey. No doubt they will produce the later lining of red and blue. This is not a very large locomotive in 009, but as a bonus it does have a flickering fire in the firebox.

BRITANNIA CLASS, WILLIAM SHAKESPEARE.

I was over in Owen Francis's house a few weeks ago, looking through one of his magazines and this photo caught my eye.

This photo was on the cover of the Gauge 1 Society quarterly magazine.

If my memory serves me right, the loco was built in 1951, just look at this detail. Anyone who doesn't know about Gauge 1, this is 1¾" gauge. Just superb.

Don't forget about next Tuesday's monthly lecture at Craig y Don. Tony will be in charge talking about Gauge 1 boiler making. Be there for 19:00. This is also our mince pies and anything else evening.

Apologies from me as I will be in Cardiff.

If I don't see you before the big day, can I wish you all a Merry Christmas.

Regards,

Harold.