



Newsletter

Keeping Shareholders Informed



Issue 14

Autumn 2021

The 4253 Locomotive Company Limited, based in Rolvenden, Kent, is a non-profit, non-political organisation. Reproduction of photos by permission of The 4253 Locomotive Company.

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Plug the Gap!

WITH our boiler now '*steaming ahead*' towards completion in Liverpool, we seem to have a gap in our finances, as we have in our boiler, that requires a little bit of plugging.

In order to get the boiler passed by the boiler inspector, it needs first to be put under hydraulic pressure and then, if all is well, it's steamed up to one-and-a-half times the normal working pressure. This all takes place before it gets anywhere near the loco frames, so to facilitate this vital process you first need a boiler that is watertight and steam tight for these tests.

Among other various temporary plates to fill the gauge holes etc in the boiler, are the all-important wash-out and fusible plugs.

There are a large number of these plugs screwed into the boiler at strategic places to enable a 'wash out' to be performed when the boiler is in service. This helps get rid of much sludge and limescale that gradually builds up inside the boiler.

Unfortunately, along with everything else on the locomotive, they are not cheap. Also, a reserve number of plugs will be needed for maintenance.

*Each plug costs £45,
so for your chance to own one
or more of these gunmetal plugs,
together with a 'Plug the Gap'
certificate, please fill in the
application form on page 2.*



Fusible plug



Wash-out plug

So, once again, we are asking for your help in funding these vital (and very soon to be needed) plugs, to get your boiler's 10-year steam ticket.

The time is getting ever nearer to seeing your locomotive move under its own steam!

... these final elements will make certain that happens.

If you would like to buy one or more plugs, please complete the Plug the Gap form below.

Alternatively, you can also buy Washout and Fusible Plugs directly on our website. Please follow the link below:

<https://www.4253.co.uk/shop/fundraising/plugs/>



GWR 2-8-0T Locomotive No. 4253 **'Plug the Gap' Application Form**

Please complete the form below in **BLOCK CAPITALS** and return to:
The 4253 Locomotive Company Limited
Old Chilmington Oast, Chilmington Green, Ashford, Kent TN23 3DP

Full Name: _____

Address: _____

Telephone Number: _____

Email Address: _____

I hereby make an application for:

_____ Washout Plug(s) @ £45 each _____ Fusible Plug(s) @ £45 each = Total: £ _____

☐ I enclose a cheque made payable to: The 4253 Locomotive Company Limited.

☐ I will pay by BACS (*Bank details below*): Please use reference 'PLUGS'.

I am a member of The Kent and East Sussex Railway: Yes / No (*delete as appropriate*)

☐ I consent to being contacted by 4253 Locomotive Co. via email/post
for information updates about 4253 progress and activities.

Signed: _____ Date: _____

PLEASE MAKE PAYMENTS TO:

The 4253 Locomotive Company Limited

Account Number 47817011 • Sort Code 60-01-21

National Westminster Bank Plc.

20 High Street, Ashford, Kent. TN24 8SH.

The 4253 Locomotive Company Limited

25 Winsor Road, Rolvenden Layne, Tenterden, Kent. TN17 4NL Share

November 2021

4253 Dave Dee Commemoration Bench



On October 10th, friends, colleagues and family members paid a final tribute at Rolvenden Station to our long standing and much missed fellow 4253 volunteer and Kent & East Sussex Railway employee, Dave Dee. Dave sadly passed away in January 2020, but due to covid restrictions the ceremony has been delayed until now.

4253 Locomotive Company volunteers have completely renovated a beautiful station bench in Dave's memory, together with a splendid cast metal plaque bearing his name.

Dave was initially attended to at Rolvenden works by the Kent, Surrey and Sussex Air Ambulance and to mark their assistance and Dave's passing, the sum of £4,341.25 was presented by Dan Dickson to Richard de Coverly, Assistant Director of Operations for the Air Ambulance organisation.

Charlie Masterson addressed the large gathering on the platform, together with the Rev. John Emmet who dedicated the bench. The bench now takes pride of place on the platform together with two recycled cast iron Terrier loco domes, planted with pansies.



Dave Dee during the construction of a 4253 tank.



Some of the many friends and relatives that paid tribute to Dave on Rolvenden station platform.



Dan Dickson presents the cheque to Richard de Coverly, Assistant Operations Director of the Air Ambulance.

4253 Washout and Fusible Plugs

You will have just read the appeal notice for Plug That Gap and if you are not a steam engineer, you may be wondering what they are and why are they needed?

Well in simple terms, the boiler requires draining of water after 28 days in steam, to allow all the build up of sediment in the boiler to be removed. Just like descaling your electric kettle or, if you have had an old (sorry, classic) car, the radiator needed periodic draining and wash out to get rid of the rust, pre-anti-corrosion inhibitor days! The same applies to the locomotive boiler only bigger!

The procedure involves the aptly named washout plugs (made from gun-metal) and the mudhole doors being systematically removed and marked to ensure they are returned to the same positions from which they came. Water at high pressure is then methodically hosed through the washout plug holes to thoroughly rinse out the inside of the boiler, with the water draining through the mud holes. This cleans sediment from the inside surfaces - the boiler barrel, tubes, stays, thermic siphons, tube plates, the water space between inner and outer firebox and the foundation ring.

While the washout is being undertaken, the washout plugs are cleaned and inspected and, if there is any doubt about any of them, they are replaced. These washout plugs have to have the same tensile strength as the rest of the boiler, able to take up to 200psi pressure, otherwise the boiler is compromised.

In addition to the wash out plugs there are also the fusible plugs, (also made from gunmetal, or bronze or brass). These are a vital safety feature,

and are removed and inspected during wash out, as well as on a predetermined schedule. Screwed into the firebox crown, they have a tapered hole drilled through their entire length. That hole is then sealed with a core of low melting point metal.

Their purpose is to act as a last-resort safety device in the event of the water level falling dangerously low and they become uncovered. When this happens, the core melts and the resulting noisy release of steam into the firebox serves to warn the operators of the danger before the top of the firebox itself runs completely dry, which could result in catastrophic failure of the boiler.

According to a couple of our drivers, the failure of a fusible plug with steam entering the firebox can sometimes be very dramatic, to say the least, and thankfully a rare event that is not easily missed!



A BR washout plug, partially screwed into a loco boiler.

Bonus Paragraph if you have read this far!

Gun metal, also known as red brass in the United States, is a type of bronze; an alloy of copper, tin and zinc. Proportions vary but 88% copper, 8–10% tin, and 2–4% zinc is an approximation. Originally used chiefly for making guns (hence the name), it has largely been replaced by steel for that purpose. Gun metal, which casts and machines well and is resistant to corrosion from steam and salt water, is used to make steam and hydraulic castings, valves, gears, statues and various small objects, such as buttons. It has a tensile strength of 221 to 310 MPa, a specific gravity of 8.7, a Brinell hardness of 65 to 74, and a melting point of around 1,000 degrees Celsius.

... phew!

4253 Locomotive Update

New 4253 signwriting

Our local K&ESR signwriting expert, Meg Gooch, has recently been enlisted to sign write the loco's rear number after the buffer beam had been given a final coat of red paint.



The rear buffer beam of the loco, now resplendent in its new livery.



Meg half way through freshening up the front number.

Meg does all the signwriting for the railway and her initials can be seen on most of the railway stock, including carriages.

While we had Meg with her paint pots and brushes out, we got her to freshen up the front numbers, which after about 5 years had begun to fade a little.

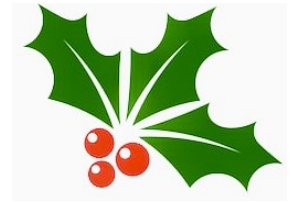
5668 Locomotive Tank Rebuild Update

The second fireman's side tank, of the two-tank build for 5668, continues apace. All the platework is now being drilled, riveted and assembled with much rustproof painting taking place.

An additional item that has had to be made from scratch for this tank, is the water gauge mechanism, which sits completely inside the rear of the tank. This consists of a long float arm pivoted at the cab end of the tank (which obviously carries the float), with rods pivoted about a foot along the float arm. These go vertically up through the top of the tank to the gauge. As the float rises with the water level, the vertical rods are pushed up and the water level is indicated on a large gauge inside the cab. A very simple arrangement, but very effective and reliable.



This is 4253's water gauge which is very similar to that of 5668.



A 4253 Christmas is just around the corner!



We have an extensive range of merchandise, such as clocks, beanie hats, pens, mugs, egg timers, note pads etc.

Also in stock are Fleece, Polo shirts, Teeshirts, Sweatshirts, all with the 4253 embroidered logo.

Go to our website, where you will find our online shop:

www.4253.co.uk



4253 Boiler Report

All pictures in our Boiler Reports are kindly supplied by Heritage Boiler Steam Services, Liverpool.

A sure sign that things are now finally moving towards completion, is that (hopefully, by the time you read this!), we will have sent all the internal parts for the boiler to Liverpool. HBSS are now rapidly getting to a position where they will need all the bits and pieces that go inside.

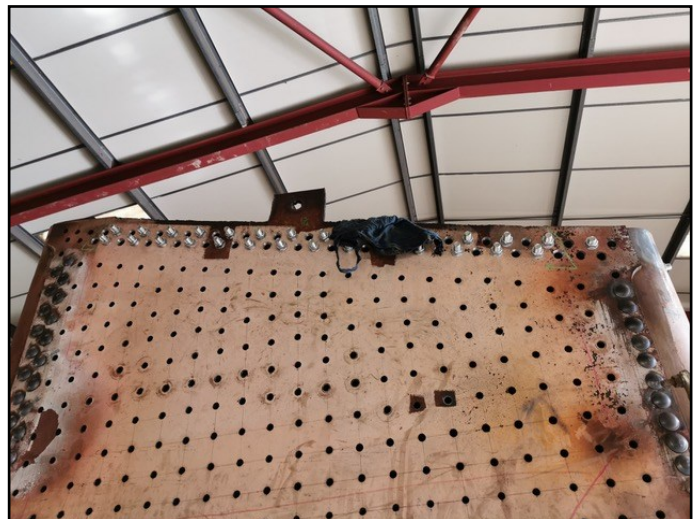
Wrapped up on two very large pallets are 250 smoke tubes, boiler expansion brackets, a complete set of blanking plates for hydraulic testing, the injector water trays and brackets, the steam pipe from the steam collector to backhead, a measuring gauge for foundation ring to brackets and lastly the 'mud hole' doors with seals. Along with all that, the fixing studs for the backhead and boiler expansion brackets (now being made at the Romney, Hythe and Dymchurch Railway), will also arrive there soon.



Awaiting collection for a long trip 'up North'. Although these two large pallets may not look much, they contain all the vital internal components for our boiler, which are now required by our boilermakers at Liverpool.



The foundation ring now fully installed and temporarily bolted into place before being finally riveted into position. The work done to the firebox internal copper stay holes can be seen at the far end.



An outside view of the many foundation ring rivet holes and bolts.

Apart from news on the internal bits and pieces, the foundation ring is in place, bolted together and all necessary work completed before riveting starts. HBSS initially had some reservations about the quality of the foundation ring's surfaces, but after a lot more work they were happy enough to bolt it in place.

Other work completed is some remedial work to the internal copper firebox stay holes which required attention. You may be able to see where this has been undertaken in the top picture above.



Once the longitudinal stay alignment has been achieved, the template will be removed.

Another exciting step forward and proof of progress, can be seen in the picture above with a longitudinal stay template secured in the mouth of the boiler.

There are six large 'logitudinal' stays which run the entire length of our boiler. They ensure the integrity of the boiler in a lengthways direction and run from the backhead all the way to the front tube plate.

The temporary template that the guys at HBSS have installed, ensures the correct alignment and positioning of these major stays within the top of boiler (bearing in

mind the boiler is being worked on up-side-down).

Where the template is currently positioned will be the 'tube plate' which carries all the 250 smoke tubes along with the superheater tubes and the longitudinal stays. The tube plate was sent to Liverpool with the boiler back in January 2020 but can only be fitted when all the other components have been fitted in strict order of assembly. Only once the tube plate is rivetted can the smoke tubes and superheater tubes be inserted and fitted.

4253 Boiler Report *Continued*



Latest pictures, just arrived

We've included here the latest pictures sent to us from HBSS. The mammoth task of reaming out hundreds of stay holes to the correct size is almost complete. The next job is to thread each hole and screw in the stays!



You may be able to see in this picture, where each reamed hole has been circled. There's enough to do without doing them twice!

Covid-19 arrangements at Rolvenden and future post-lockdown 4253 visits to Rolvenden

Rolvenden Station is once again open to the public. Rolvenden Works is currently under usual restricted access.

We would be happy to see you at 4253! But it is essential you please make prior arrangements by emailing: gwr4253@gmail.com



4253

pecially commissioned Face Masks



These can be used as general face coverings for dust/allergies and also to aid with current Covid-19 measures.

Made to last from triple layered cotton for easy care and hand-made in Kent.

*Available in: **4253 Red**, **4253 Black**, **4253 Blue** and **4253 Green***

All individually packed. Availability subject to stock.

Priced at £5.25 + 75p postage each.

Order yours today from our online shop at www.4253.co.uk

Colours may appear slightly different from images above, due to photographic limitations.



An ideal stocking filler...

4253 pen and torch set



This superb gift set comes in a presentation box and includes a 4253 pen and LED torch with key ring.

**Priced at just £6.00
including FREE p&p**



**Order yours today from our online shop at
www.4253.co.uk**