

THE MIKADO MESSENGER



2007 PRINCE OF WALES
Building Britain's Most Powerful Steam Locomotive

Welcome to edition No. 52 of *The Mikado Messenger*. The *Messenger* aims to provide a regular bulletin of news about the construction of No. 2007 *Prince of Wales*.

Design and manufacturing resources have continued to be diverted from time to time to support *Tornado's* return to the main line, however some good progress has been made on *Prince of Wales*.

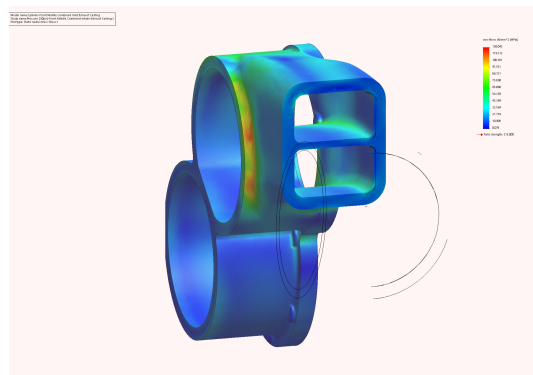
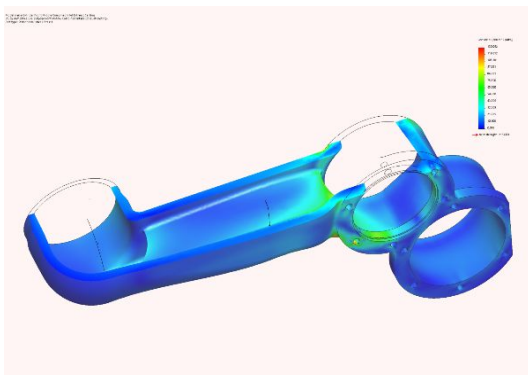
There was an error in *The Mikado Messenger* No. 51. We stated that the boiler manufacturer would be chosen towards the end of 2019 when in fact it should have read in quarter one of 2019! We still have space in The Boiler Club if you would like to get on board from £50 per month. You can download The Boiler Club forms [here](#).

NEWS BRIEFS

Frames - Daniela has completed the FEA study of the pony truck crosshead which has emphasised that it is satisfyingly over engineered! She is presently working on the completing the study for the pony truck frame.

Wheels - Ian has got as far as he can with preparing and painting the wheel centres and spokes of the coupled wheelsets. We have had to leave the areas around the built-up balance weights until the lead/antimony alloy is poured into the spaces between the balance weight plates and the spokes to provide the desired level of rotary and reciprocating mass balance. These areas will be painted once the balancing is complete which can be concluded when the motion parts are weighed.

Cylinders - With Daniela having produced detailed models of external steam pipes and elbows for the cylinder block, she has refined the design using Finite Element Analysis and created manufacturing drawings. This has enabled us to seek pattern and casting costs for these items. In the meantime, David Elliott has been developing the Lentz/Franklin valve gear and detailing the cylinder block design.



Cab - The first attempt to fit the cab spectacle windows was not successful due to the sloping front plates of the cab not being sufficiently flat. Ian has partially dismantled this area and applied much heat and controlled percussion to rectify this problem and both spectacle windows are installed and fit properly. Daniela has modified the window catch design to suit the thicker frames which are required to hold the 21mm thick glazings required to meet current Railway Group Standards.



Trial fit of right-hand cab spectacle window frame - *David Elliott/A1LST*

Tender - Ian Howitt is making good progress with the tender frames at his Crofton works. Castings are being machined and bolted to the frame plates and several other components have been manufactured.

PROGRESS TO DATE

- Frame plates for engine and tender rolled and profiled; engine's frames erected at Darlington Locomotive Works; all major engine frame stays, brackets, horn blocks, axleboxes and buffers

cast (44 in total); over 1,000 fitted and driven bolts ordered and delivered, approximately 800 now fitted to the frames

- All 20 wheels for engine and tender cast and proof machined; engine wheelset assembly complete, balance weights manufactured and fitted, tender axles delivered
- Preliminary discussions held with boiler manufacturers and forged foundation ring corners manufactured and machined; start made on boiler fittings with castings for combined injector steam and delivery valves; order placed with DB Dampflokwerk Meiningen to update the design to incorporate modifications and improvements fitted to *Tornado's* boiler over the last 10 years
- Study into ride and suspension completed using rail industry standard Vampire® software; Finite Element Analysis completed on re-designed crank axle to ensure it complies with modern standards; assessment and notified body appointed to oversee certification - first site visit made
- Cab erected and cab side window frames fitted; engine footplating and splasher kits delivered and permanently fitted to frames
- Smokebox door pressed, details made and door completed; door frame manufactured, smokebox delivered and erected; chimney cast and fitted
- Crosshead castings delivered; connecting and coupling rods ordered and manufacture started
- Boiler cladding assembly jig built, cladding crinolines and hoops rolled and fitted to jig, cladding sheets made and trial fitted to the engine's frame
- Tender frame construction under way, axleboxes and other tender castings delivered from William Cook Cast Products; tender tank procurement process underway
- Nameplates and chime whistle delivered
- Over £2m spent, £2.5m donated and over £3.1m pledged.



Progress on No. 2007 *Prince of Wales* - Mandy Grant

FUNDRAISING

'P2 FOR THE PRICE OF A PINT OF BEER A WEEK' - We have now passed the 900 mark for monthly Covenantors for No. 2007 *Prince of Wales*. We aim to reach 1,000 regular donors by the summer. If you haven't yet signed up to our monthly donation scheme we would encourage you to get on board - you can find more information [here](#).

THE MOTION CLUB - The Motion Club has now welcomed over 110 members, with less than 65 members remaining of our 175 member target. Our aim is to have recruited 175 supporters and closed the club by April 2019. You can find more information about The Motion Club [here](#) - help us to fund the manufacture of No. 2007's motion!

THE BOILER CLUB - The Boiler Club is now approaching the 180 member mark, leaving just over 120 spaces available. With a decision being made on the boiler manufacturer in quarter one of 2019, we would urge those who haven't yet contributed towards the purchase of No. 2007 *Prince of Wales*' boiler to join us. This is the single most expensive component on the locomotive, meaning it is vital to increase the donations towards the boiler so we can place the order with confidence. More information about The Boiler Club can be found [here](#).

DEDICATED DONATIONS - You can sponsor components on No. 2007 *Prince of Wales* from as little as £25.00 ranging up to £15,000! This scheme has already raised in excess of £315,000. If you would like to sponsor a component, please email dedicated.donations@p2steam.com, detailing the amount you would like to donate and/or if you had a specific part of the engine in mind, we will then send you some component recommendations to suit your donation.

For more information on how you can help to build Britain's most powerful steam locomotive visit www.p2steam.com, email enquiries@p2steam.com or call 01325 460163.

AN AUDIENCE WITH THE *PRINCE OF WALES*

Following on from the success of our 2018 Roadshow programme, we will be continuing the Roadshows in 2019. We will be holding a series of presentations on the project to build new Gresley class P2 No. 2007 *Prince of Wales*. Each presentation will feature key team members including Mark Allatt and/or David Elliott and will cover the background to the project, progress to-date, future plans and details of how to get involved. We would encourage you to attend one of these Roadshows and bring along some friends and family members who would be interested in hearing about the project. The two hour presentation will start promptly at 11:00hrs and run until 13:00hrs on each of the days listed below and are open to existing supporters and interested members of the public:

NEW 2019 ROADSHOW PROGRAMME:

- Saturday 2nd March 2019 - Darlington Locomotive Works, Darlington
- Saturday 6th April 2019 - Principal Hotel, York
- **AMENDED DATE** Saturday 1st June 2019 - Dundee Heritage Trust, Dundee
- Saturday 8th June 2019 - Royal Station Hotel, Newcastle
- Saturday 6th July 2019 - Darlington Locomotive Works, Darlington
- Saturday 14th September 2019 - Hilton Hotel, Leeds
- Saturday 2nd November 2019 - Darlington Locomotive Works, Darlington
- Saturday 7th December 2019 - Pendulum Hotel (Manchester Conference Centre), Manchester.

For more information on the P2 Roadshows visit www.p2steam.com, email enquiries@p2steam.com or call 01325 460163.

PRESENTATIONS

If any railway society - or indeed other interested groups - would like a presentation on the project they should contact us by emailing enquiries@p2steam.com

EASYFUNDRAISING

Why not help the Trust at the same time by doing your online searches through EasyFundRaising, painlessly raising cash for The A1 Steam Locomotive Trust every time you spend online? You can find details of how to do this [here](#).

VOLUNTEER

As ever we are looking for more volunteers. It takes a lot of people to both keep *Tornado* on the main line and also to build *Prince of Wales*. There is always so much more that we can achieve with the right volunteers, with the right skills and can-do attitude. If you have a passion for raising money or engineering please do get in contact. For more information, please [email us](#).

TRAVEL WITH *TORNADO*

For more information on *Tornado's* tours and where you can see her, click [here](#).

The Trust respectfully requests that anyone wanting to see *Tornado* follows the rules of the railway and only goes where permitted.

OPEN DAYS AT DARLINGTON

We hold public open days at Darlington Locomotive Works on the first and third Saturday of every month from 11:00hrs to 16:00hrs. Come and see the progress of No. 2007 *Prince of Wales*.



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Our mailing address is:

The A1 Steam Locomotive Trust, Darlington Locomotive Works, Hopetown Lane, Darlington. DL3 6RQ