

THE MIKADO MESSENGER



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

Welcome to edition No. 48 of *The Mikado Messenger*. The *Messenger* aims to provide a regular bulletin of news about the construction of No. 2007 *Prince of Wales*.

Following No. 2007 *Prince of Wales* becoming a 'Mikado' in September, we have seen an increase in supporters contributing to our 'P2 for the price of a pint of beer a week', monthly donation scheme. Work at Darlington Locomotive Works has continued, with some of the bigger design tasks nearing completion. Our 2018 Annual Convention was a success with a full story in *TCC 51* (coming soon!).

NEWS BRIEFS

FIRST CYLINDER COMPONENTS RECEIVED - The first components for the cylinder block for No. 2007 *Prince of Wales* have been delivered. The three cylinder cover castings which were made from Spheriodal Graphite Iron were produced by H. Downs & Sons foundry in Huddersfield from a pattern produced by John Hazlehurst of Swineshead near Boston. In the meantime, work continues on the redesign of the original Gresley class P2 No. 2001 *Cock O'The North's* monobloc cylinder casting to a welded fabrication incorporating the improved version of the Lentz rotary cam poppet valve gear developed by the Franklin Company in the USA in the mid-1940s. No. 2007's cylinder block design will also include improvements along the lines of famous French railway engineer André Chapelon to increase maximum power and improve economy.

You can read more of this story [here](#).



Cylinder cover castings delivered - *Gemma Braithwaite/A1SLT*

SILVER WHEELS! - At Darlington Locomotive Works, work continues on preparing the wheelsets for balancing. The wheelsets are currently being prepared for filling and then painting.



Wheel preparation underway - David Elliott/A1SLT

- **DESIGN WORK THROUGHOUT OCTOBER** - Final machining drawings for the left and right hand motion brackets (which support the outside slide bars and the intermediate bearings for the valve gear cardan shafts) have been produced along with additional drawings for the flame cut profiles which form the kits for the motion brackets.

The detailed design for the modified spring side control pony truck is progressing well. The pony truck crosshead has been converted from a casting to a fabrication. Other details such as the side control spring support assemblies including spring cups have been drawn. The final configuration of the side control springs has yet to be confirmed as the original V2 class design uses springs with a shallow rectangular wire section which is proving problematical to source at the moment. Investigations are taking place to see if a round wire spring could be made with similar characteristics.

- **2019 TARGETS** - At our 2018 Annual Convention, we set the following targets for the project over the coming 12 months:

- Complete the pony truck
- Select the manufacturer and place the order for the boiler
- Make substantial progress on the tender tank and frames
- Finish the detailed design of the electrical system
- Complete the overhaul of and fit two steam driven air pumps
- Manufacture and take delivery of most of the coupling and connecting rods
- Complete the cylinder block design with construction nearing completion
- Start manufacture of the valve gear.

- **TORNADO TEAM MEETS PRINCE OF WALES** - Following on from the issues we have had with No. 60163 *Tornado*, the annual *Tornado Team Day* was cancelled. We took this opportunity to introduce the members of *Tornado Team* to No. 2007 *Prince of Wales*. On Sunday 14th October 2018, the children and their parents visited Darlington Locomotive Works (DLW), to take part in a number of activities including a quiz and a demonstration by local artist Stephen Bainbridge. The children then had an opportunity to sketch their own P2, based on the techniques Stephen had shown them!

For more information about our children's club, the *Tornado Team*, please click [here](#).



Tornado Team meets No. 2007 Prince of Wales - Sheila Seabrook/A1SLT

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.

FUNDRAISING

'P2 FOR THE PRICE OF A PINT OF BEER A WEEK' - Stemming from No. 2007 *Prince of Wales* becoming a 'Mikado', we have seen quite an increase in the number of people signing up to our 'P2 for the price of a pint of beer a week', monthly Covenantor scheme. We now have almost 900 regular, monthly supporters, donating from £10.00 each month. If you haven't joined yet as a monthly Covenantor, now is the time to get on board - let's step into 2019 with 1,000 Covenantors!

THE MOTION CLUB AND THE BOILER CLUB - The Motion Club has welcomed almost 100 members, meaning we are over half way to our 175 member target. The Boiler Club is now approaching the 170 member mark, leaving just over 130 spaces available. With a decision being made on the boiler manufacturer towards the end of 2019, we would urge those who haven't yet contributed towards the purchase of No. 2007 *Prince of Wales*' boiler to join us.

DEDICATED DONATIONS - With Christmas fast approaching, why not buy a truly unique gift? 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 £265,000. 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*

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:

ROADSHOW DATES FOR 2018:

- Saturday 3rd November 2018 - Manchester Conference Centre, Manchester
- Saturday 8th December 2018 - Hilton Leeds City Hotel, Leeds.

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

Now is the time of year when many people start thinking about Christmas shopping. 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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