

N.W.M.E.S.



**SPRING 2001 NEWSLETTER**



Big Boy 4-8-8-4 built in 1942 by Mr Adams Now in the ownership of Mike Adams and under the stern custodial eye of the Boiler inspector ( alias Ted street ) with whose tender ministrations it is hoped this lovely loco and outstanding example of workmanship will once again be seen running under its own steam.

## **Union Pacific 4-8-8-4.**

As some of you know Mike Adams, a member of our society has a 2 1/2" gauge model of the Union Pacific 4-8-8-4 made by his father Mr Edward Adams.

Following a request by Mike for assistance in refurbishing this model and returning it to running order it is now in the tender care of our esteemed boiler inspector Ted Street. The following article has been made possible by the assistance of Mike, who has loaned me his fathers notebook on the building of this masterpiece, Ted who has made the loco available for photographing and has given more details, and articles published in M.E at the time.

Mr Adams' notebook starts with Railway Gazette Jan 30th '42 and LBSC's article tells us that this is what prompted the original idea and general drawings and the notebook shows that working drawings were made in Oct '43 and that Mr Adams and LBSC corresponded on details of the model.

The frames of the loco are cut from 3/16 MS and the axles run in bronze axleboxes with coil springs above. The front engine assembly of cylinders, wheelsets and leading truck are on their own independent frame which is pivoted to a separate king pin situated between the rear set of cylinders and with the front end of the frame sliding on a bearer plate beneath the smokebox. Springs have been fitted at both these points to equalise the load on both sets of driving wheels. The steam to the front cylinders is fed through articulated joints



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designed by Mr Adams and the exhaust are led out via armoured gas tube.

The front engine can be completely removed for access as can the upper section of the smokebox & chimney to give access to the superheaters, blast nozzle etc. and gives easy access for cleaning of the tubes & smokebox. The boiler is 4" dia with a grate  $9 \frac{1}{2}$  by  $3 \frac{3}{4}$  and with removable sections to allow easy replacement for sections found to have burnt out prematurely.

Water is fed by one pump and one injector.

The cylinders are 1" bore by  $1 \frac{1}{2}$  stroke with  $\frac{3}{8}$ " piston valves. The lubrication is provided by a mechanical ratchet lubricator with a  $\frac{5}{32}$ " X  $\frac{1}{4}$ " ram.

The coupled drivers are  $2 \frac{7}{8}$  dia and the overall length of the engine is 3ft 7" and tender length 1ft 10".

Returning to Mr Adams brief notes these show that in Sept 1947 the loco ran for about 20 miles. That means just 4 years to build, also in wartime when materials must have been difficult to find at the best of times!!

In October the model was taken apart for minor changes and painting and the fitting of new grate inserts. The entry for Nov 9<sup>th</sup> reads "1<sup>st</sup> run on track after painting pulled From 80 to 90 psi with brake on. Photographed. " These are possibly the photographs which appear in the ME article of 15 Jan 1948.

In previous article in July 47, LBSC discusses the innovative tender which is fitted with a mileometer,

pressure gauge, water level gauge and drawbar recorder.

The mileometer is of the bicycle type driven by worm & wheel from the tender wheels. The drawbar effort is measured by a spring loaded extension of the drawbar hook and was calibrated with a spring balance and the water level is measured by a float system driving the indicator needle through a crown wheel & pinion assembly. B.K.

So forward to the present. Ted has taken the loco in hand and these are his comments.

The Biggest 2 ½ gauge Loco Yet . This was the heading on an article by L.B.S.C. in M.E. Jan 15 1948.

I didn't realise just how "BIG!" until I was asked to examine the model with a view to seeing if it was possible to put it in running order.

To give you an indication of "biggest" the Loco with its tender is 5' 5" long, the boiler is 4" diameter and the fire grate is 9 ½ X 3 ¾ the whole thing runs on 38 wheels. The model is of a Union Pacific 4-8-8-4 and is complete with cowcatcher & electric headlight.

The first priority was the condition of the boiler. A hydraulic test was put in hand, having no previous records it was assumed that the working pressure was 80 p.s.i. and the test pressure 160 p.s.i. To keep a record of this the loco was put on the register of N.W.M.E.S. and given register number 641/91.

Two small leaks were evident under the boiler cladding, the boiler was removed from the chassis; this proved not too difficult provided you have very small fingers!



The cladding was removed and the small leaks were lightly soldered using Comsol. The hydraulic pressure test of 160 psi was then held satisfactorily. The small pressure gauge on the backhead was found to be inaccurate by about 20 p.s.i. The safety valves were found to be corroded and two new ones have been made but still need to be calibrated.

The axle driven feed pump was dismantled, cleaned and new S.S balls fitted . The many fixing screws in the chassis were tightened and some damaged ones replaced.

The boiler has now been replaced on the chassis and the following fittings and and piping have been renewed. Steam pipe to injector; Pressure gauge pipe to tender; Injector pipe to boiler: top water fitting to boiler from injector; the telescopic pipe from the lubricator to the cylinders.

Work still outstanding is to fit the steam & exhaust pipes to the cylinders, the pressure gauge in the tender to be calibrated, and the tender handpump & pipework to be inspected & cleaned.

It is hoped that the loco will be ready for a test run about Easter 2001.

P.S. Has anybody got a shovel with a blade 9" long and 1 ¼ wide please ????? E.A.S.

Comment from one club member on seeing the loco" It would take me three lifetimes to produce one of these"" I can but wholeheartedly agree!!