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*The picture above is of those of our members who were presented with Long Service Awards on Thursday 9th March 2017, being for 20, 30, 40 and 50 years service to the Trust.
From left to right: Ian Smith, Derek Plummer, Fran Bailey, Tony Cowling, Jenny Cowling, Brian Hall, David Hebden, Steve Roberts, Ann Roberts, Ian Dobson, Chris Nicholson, Don Townsley, who presented the awards, Mike Jackson and Andrew Johnson. Thank you*

Introduction

The Old Run No. 233

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Editor: Jenny Cowling
2 College Street
Sheffield, S10 2PH
Email:

oldrun@middletonrailway.org.uk

Photo Editor: Andrew Johnson
Email:

middleton@amjohnson.co.uk

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The Editor welcomes contributions - photographs, articles, news items and letters - relating to the interests of the Trust and the operation of the Railway.

Items for publication, including images, are acceptable in any format and may be sent via CD, post or email.

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Front Cover:

Our first "Awards Ceremony", acknowledging those who have given long service to our railway. Is it your turn next?

On the Platform Jenny Cowling

Everyone has been extremely busy since the beginning of the season (well, they were before, but that was mostly "behind the scenes"). There is restoration and development work a-plenty going on as well as a great many visitors. We think visitor numbers have increased as a result of all the excellent publicity we have - a bright and shiny new website, updated very regularly; Twitter, Facebook, Instagram, you name it, we have a presence, and lots of people are 'following' and 'like'ing us.

It was, therefore, very upsetting that a thief visited us on his bicycle on a recent Schools Wednesday, and made off with the screen and associated computer which showed the four videos charting the progress of the Brookes No. 1 restoration and, despite the watchfulness of members present, he managed to return on the Saturday and stole a saw! He (we got good pictures of him on the CCTV) had obviously taken some time to scout around the Engine House and had prised open various doors etc. to see if he could find things worth stealing. We are very grateful to the generous person who gave us a donation to replace the stolen goods.

We have spent quite a lot of time in Council discussing how to prevent such thievery and all members of the railway are aware that we need to be alert and careful to ensure anything movable is safely fastened down and, where possible, all doors are locked. It isn't easy. One might open a cupboard and know someone else will want something from it in a minute or two so it is tempting to leave it open for them. But we must not do this as a thief might get in first. No-one at the railway is to blame for these thefts - the blighter just had a lucky day - but we must all be vigilant and ensure nothing else is stolen. We all work hard for our railway and give time, effort and money to keep it going and growing. Don't let anyone spoil it for us. *Editor*

Is this year, 2017, the year of the elections? By the time that this summer edition of *Old Run* is distributed many of the elections will have taken place. Early May saw some local council elections and from these results, the political parties of the UK and the press were attempting to forecast the result of the General election in June, for our members of parliament.

Then there was the presidential election in France. And, probably of more importance to the Members of The Middleton Railway, we will have had our Annual General Meeting with its elections for the posts of officers of the society and members of our council.

Discussions in the council of our railway have, over the past months, included the revision and restructuring of the management of our Trust. So the people that we will have elected will have, as always, a challenging year ahead. As the saying goes, 'Watch this space'.

It is gratifying to be able to report that our railway and its museum has been recognised as a suitable place to display both modern and historic artefacts. A lovely bench has been delivered which commemorates the Middleton colliery and our first steam engine, Salamanca. This has been donated by Leeds City Council. Dominating the central aisle of the

Engine House is a huge, double sided, clock which was made by Potts of Leeds well over a century ago and was for many years suspended below the canopy of Llandudno Junction Station.

This has been restored and presented to us by members of the Potts family. Some other historic items have arrived from Armley Mills Museum and discussions about an item commemorating the Isles (steam cranes) family are underway.

A review of our operating rules is also ongoing. This has proved to be a very time-consuming task. Once finalised, briefing sessions will be held for our train crews and guards.

Another area to be updated is our policy regarding Safeguarding of young people and vulnerable adults. This important matter is also the subject of a parliamentary review on which we have been invited to make our views known. Thus many of the people elected both for our railway and Westminster will be kept busy.

Malcolm R. Johnson



It is with great shock and sadness that we have to report the sudden passing of Mark Jenkins, son of Brian Jenkins, on 4th June 2017, following an operation.

Mark was well known and liked at the railway, always willing and eager to work; he will be greatly missed by his friends and colleagues.

Our prayers and sympathy go out to Brian and his wife at this very sad time.



'No. 6' Appeal: Progress report

To date the appeal has raised £1060.46 including Gift Aid, which has already been claimed,.

The appeal has been publicized in the heritage railway press and via the Industrial Railway Society's house magazine – The Industrial Railway Record.

In addition to seeking contributions from individual supporters, approaches have been made to four charitable Trusts to try to secure additional funding. and five commercial organizations with connections to the industrial and railway heritage of Leeds with the aim of securing sponsorship. Of the latter, one has declined to support the appeal citing difficult trading conditions, one has acknowledged our request for support and is giving it serious consideration and one, Virgin Trains East Coast, has expressed an interest in working with the Trust on less specific projects. The contact with Virgin Trains East Coast has led to them holding a Team Building Day at the railway on 18th May which, hopefully, will provide more publicity for the Trust and may lead to other forms of engagement.

The railway has agreed to set up an electronic fund raising platform and this should be up and running by the third quarter of 2017. Approaches will be made to other possible commercial sponsors and grant giving bodies in the next three months.

No work has been done on 'No. 6' this year and it is unlikely that any will be done until existing projects are completed - overhaul of 'Brookes No. 1' and Sentinel 'No. 54', both due for completion in 2017 - and more funds are raised.

Fund raising has started but there is a very long way to go. **Charles Milner**

Loco Notes

In the last few years we have been rather fortunate with the availability of steam locos at the start of the season, generally having four ready for use. This year, we have been far less fortunate. **HC 1544 Slough Estates No.3** started the year with a broken spring and thus was unserviceable until a new one arrived. **MW 1210 Sir Berkeley** had to be formally withdrawn at the beginning of January on the expiry of its boiler certificate but had, in reality been unavailable for the previous couple of months due to injector problems. It had originally been planned that **HE 2387 Brookes No.1** would be ready and take its place but, in the end, this proved to be too optimistic. Thus we started the year 2017 with just two serviceable locos and some crossed fingers.. It seems that we were not alone in being short of steam locos because, as Easter approached, we had requests from two other railways asking if we could lend them something for a short while. Normally, we would have obliged but this year felt that it would be too much of a risk to ourselves to do so.

1601 MATTHEW MURRAY

Manning Wardle 1601 successfully passed its annual boiler inspection in March and was available for the start of the season. The safety valves have come in for attention. Although they work sufficiently well to do their job of safeguarding any boiler over-pressure, they have always tended to start 'feathering' quite a bit below this safe working pressure. Whilst not unsafe, this does make it harder for loco crews to do their job efficiently without undue wastage of steam (and, thus, coal). The valves have been fully dismantled and the valves themselves re-

machined to give a new surface and then ground into their seats. This has proved to be successful and the valves are now fairly steam tight until just below the safe working pressure. Although there are some other jobs that need attention, we have not found time to do any over the winter period, other than the routine ones such as tightening hornstay bolts and taking up brake wear.

No. 6

No physical progress to report.

1210 SIR BERKELEY

Presently on display in the Engine House and likely to remain so until **Brookes No.1** is finished.

No.11

Nothing to report yet again.

No.1310 (NER H)

The loco successfully passed its annual boiler inspection in March and was available for the start of the season. It has since been used as required. The regulator is still leaking through quite noticeably, despite several attempts to cure it. There is no obvious sign as to why it is leaking. The valve faces have all been lapped in to be good mating surfaces with each other. One problem with this regulator, which is housed in the smokebox, is that when assembled you cannot inspect it to see what is happening as the cover plate forms the bearing and support for the regulator shaft. We may well have to make a false cover plate with a viewing port but this is no five minute job.

1544 SLOUGH ESTATES No.3

The loco's boiler didn't get washed out before it was necessary to dismantle the old washout pump arrangement and it had to wait until the pump was re-installed in the running shed and the diverted water supply to the tank was

completed and commissioned. Once the pipework and electrical works were done, it was possible to wash out the boiler and arrange for its annual examination by the boiler inspector. This was satisfactory, as was the subsequent steam test. On re-assembly, the ashpan bottom plate was found to be breaking up at its welds and becoming distorted. The welds have been ground off, the plates have been straightened and the whole re-welded.

As reported in the last Old Run, the loco suffered from a broken spring. This was removed and sent away for repair in January but, because it was the top leaf, which is the most complicated part, the cost of a repair was not significantly cheaper than the new one and this was the option finally decided upon. We have waited patiently for the new spring, quoted as seven weeks delivery, but it was not until the middle of May that it finally arrived. Loco springs are not the cheapest of items and we have little change out of £1,500. It is not helped by the fact that there are only three suppliers of these semi-elliptic heavy leaf springs and only one of these has a hot buckling facility. The spring has now been fitted and the loco is available for traffic. It is expected to be used over the Spring Bank Holiday weekend.

SENTINEL No.54

The new exhaust steam pipe from the cylinders to the water pre-heater box was finally completed and fitted during March. Although only some ten feet long, this is a most complicated piece of pipe as it twists and turns its way along, avoiding parts of the loco frame, boiler and supporting steelwork. It also has two 'tees' in it where an anti-vacuum valve and a drain valve are fitted. The original was a one-piece construction but our skills were not up to this and we have made it out of several short lengths screwed together. Even with doing this, we have had a lot of complex pipe

bending to do.

Once the exhaust pipe was in position, we could consider installing the boiler. The old boiler was removed whilst the cab was off so it could be easily lifted out. The cab was replaced quite some time ago so the boiler had to be lifted in from underneath. Various dimensions had been carefully checked and, in theory, this was possible although we had never done it.. Indeed, with remarkable forethought, when the workshops pits had been designed and built back in 1995, their depth and width had been specified with this in mind! However, 1995 was a long time ago and the pit now had electrical conduit, lights and compressed air pipes adorning the walls which weren't originally considered. The boiler did fit into the pit but it was a bit tight and required some judicious manoeuvring to clear these obstacles. Before the boiler could be lifted up into the loco it was necessary to dismantle the front part of the brakegear. Another preparatory job was to lift the superheater coil up into the cab, not because it wouldn't go through the doors but because this would almost certainly have led to damage to the paintwork. In the end, lifting the boiler into position using the 3 tonne gantry was a relatively easy task although it had to be twisted and turned to avoid the various obstacles in the way of a simple straight lift. We also had to remove the boiler drain, which wasn't expected but this was a minor hiccup. Thanks to careful measurement by us and equally careful work by Israel Newton, the holes for the boiler holding down bolts all aligned perfectly and the six bolts could be inserted and tightened with no problem.

We are still trying to sort out the safety valve issue. Our original safety valve column was found to be in poor condition. This is of cast steel and has suffered badly from corrosion, not

uncommon with Sentinel fittings made of cast steel. We had a second hand spare but this was little better. A third column, without valves, was obtained from a fellow Sentinel owner. Outwardly, this looked to be in very good condition but when carefully looked at it was found to have considerable erosion internally and was wafer thin in one place. We have now obtained a fourth column, again without valves, from another kind-hearted Sentinel loco owner and this one looks to be in fair condition, suitable for re-use. The lack of valves was not a problem as our own valves were OK. However, it became apparent that the various columns were not identical and we actually had two each of two different designs. Sentinel seemingly changed the design at some point and, although they look almost identical, there are subtle differences. We are presently assessing whether our old valves will properly fit the replacement column. It is looking hopeful but we do need to make sure that all is satisfactory. If we cannot make a good set of valves, it will be necessary to buy some commercial safety valves and alter various things accordingly. This will work but will be quite inauthentic.

A minor but important job done in recent months has been the refurbishment and re-fitting of the driver's seat.

HE 2387 BROOKES No.1

As suggested in the last Old Run, the boiler was successfully craned onto the new ashpan and then into the frames at the end of March. Once this was done, the blank on the regulator valve was removed and the regulator valve refitted. The safety valves were screwed into the dome cover but it was discovered that the hole of one of them was outside specification and the valve would not screw in tightly. To

overcome this, the mounting on the dome cover has been modified to be a flange fitting and we have had two gunmetal flanges cast. These flanges have been machined up and the valves now screw into them. The assembly is then bolted to the dome cover. The rest of the boiler fittings were then all fitted to the boiler and we were in a position to carry out an initial steam test. This latter was rather disappointing as the safety valve did not 'pop' as it should and a few of the fittings were not steam tight, although there was nothing seriously amiss. The worst problem was the regulator valve which was passing steam quite significantly. After some re-fettling work we were able to present the boiler to the Inspector for its formal steam test, which was satisfactory. However, the regulator is still passing a significant amount of steam and will require more work.

Once the steam test was completed, we were able to start the task of lagging the boiler and cladding it. The old crinolines which support the lagging required some repairs but have generally been re-usable. Similarly the old cladding sheets and boiler bands have been repaired as necessary and re-used. Those who have done this work will know that it is never an easy task to get a good, neat job and it took several attempts before it was deemed satisfactory. The last thing that we want is for one of them to become loose once the saddletank is on as it will be a major dismantling job to rectify things.

The cab side sheets had been brought into the workshops and sanded down and primed. They are in good condition, requiring no remedial work and, once the boiler cladding was completed, it was possible to fit these. On doing so it became apparent that the number of holes for holding down

Loco Notes

bolts in the side sheets did not match the number in the footplate. It would appear that, at some time previously, the loco has had some new footplating welded in and nobody bothered to drill the necessary holes. This has now been rectified.

The saddle tank has been craned down from its long-time resting place on top of a container and sanded down and given a coat of primer. The inside has been cleaned out of the rust and detritus that inevitably accumulates over time. Two new flanges have been made for the outlet sieve pipes as the originals were in poor condition. The tank itself is in fairly good condition. Its age is not known but it is of all-welded construction so is almost certainly not original. There is some external corrosion where the nameplates were fitted. These have now been removed and the affected area thoroughly descaled and treated with a rust cure paint and primer.

By the time that you read these notes, the cab top and saddletank will have been re-fitted and the loco will be virtually complete once more. With only minor pipework runs still to fit, it will then be a question of how long it takes to finish painting it before it can, hopefully, enter traffic.

Fowler 42200033 HARRY

Available for traffic and used as required. We have had various problems with the loco's vacuum system, all unrelated. The exhaustor drive belts have stretched and gone slack, causing them to slip and not drive the exhaustor sufficiently. These have now been tightened but the belts really need replacing as they are becoming life expired. It was then found that the rear vacuum hose was split and this has had to be replaced. Fortunately, we have just taken delivery of a batch of

new hoses so this did not present any problem. Finally, the exhaustor has started to use a lot of oil. This appears to be being discharged through the oil separator and we may have to modify the system to give it a larger sump volume, which will hopefully overcome this.

Peckett 5003 Austin's No.1

In traffic and used as required.

D2999

In traffic and used as required.

D577 MARY

The new brake blocks have now been fitted to the loco. It was found necessary to modify the brake linkage from the vacuum brake cylinder to accommodate the new blocks. This is because the brake cylinder is a later addition and the geometry of the brake is not quite right, due to the limitation of travel of the piston and the limited space that was available for fitting the cylinder. A new gaiter has been fitted to the piston rod.

The loco is available for traffic and sees occasional use.

HE 6981

Although it progresses, little work has been done in recent times due to the need to deploy volunteer labour elsewhere. The Railway has now completed purchase of this loco from its previous owner.

D631 CARROLL

Available if required but generally on display in the Engine House.

L.M.S. 7051

Generally available if required.

OLIVE

After several delays, Olive left the Railway for repair at the Vintage Carriages Trust at Ingrow on 2nd May.

All other locos are stored, either on display in the Engine House or awaiting overhaul.

CARRIAGE & WAGON NOTES

LMS Brake Van No.158760

Work continues on this project with a regular Wednesday team undertaking the major body repairs. It was discovered that the west side cantrail was in worse condition than thought and part of it has been cut away and new timber has been spliced in. A new vertical pillar has also been found to be necessary on the west side.

Work progresses on the chassis as time and volunteer labour permit. The south end brakegear has been overhauled, including re-bushing and new pins, as necessary. The two corner gussets at the south end were badly corroded and these have been cut out and new pieces of steel welded in. Work is now being concentrated on the north end brakegear, which requires similar remedial work to the south end.

On the outside of the chassis, new running board brackets are being fabricated to replace those removed during the 1960s. These had been removed due to becoming bent and damaged through repeated minor bumps with steelwork left too close to the lineside in Claytons yard, something that was a regular fact of life back then.

Coaches

It would be good to post the fact that

we had solved the water ingress problems with **coach No.1074**. However, this is far from the case. Initially we thought that the water was coming in via the window seals. These have all been re-sealed and we have put flashing along the bottom of the windows, not very attractive but a possible solution. We have re-sealed the joint between the guttering and the roof, including the fitting of flashing. Although we have cured the majority of leaks, all this has not succeeded in curing two persistent ones, one on each side. On one occasion, the weather was coming from the west with a strong wind, and with no evidence of rain falling on the east side we were still getting water finding its way in on this side. This leads us to think that it is coming from the roof and still finding its way in at gutter level, despite all that we have done. Our next steps are presently being considered.

Whilst all this was happening, new panelling was being made to replace the apparently poor quality plywood, which has not survived being wet. We urgently need this coach back in service to enable us to withdraw the others in turn for maintenance.

Brake coach No.2084 recently started to suffer from a failure of the timber backing pad to one of the buffers. We knew from previous experience that this wasn't going to be a five minute job but, with trains running on Wednesdays, Saturdays and Sundays during April we had to just keep a close eye on things. Once we had a train free Wednesday we set about doing the necessary remedial works. In the end, the job went far more easily than we had expected and having started at 09.30, everything was completed by 16.30 so there was no need to burn any midnight oil for trains to run.

Cranes

Smith 5 ton Crane

In regular use. It recently had its annual inspection by the Insurance company.

Smith 10 ton Crane

This is currently stored out of use pending overhaul of the drive system. There is a desire to start this work but we really need undercover space to undertake it and that is presently unavailable. The first job will be to remove the jib and ropes, following which the cab can be removed and all this is just preparatory work to get at the problems that require rectification.

Isles Crane

More painting has been carried out as the weather permits and it is now looking quite respectable. However, we have yet to find the time to make and fit the chassis top plates.

Booth 2 Ton Crane

The old boiler has been cleaned down and painted to make it look respectable. The bottom six inches, which forms the ashpan, was badly corroded and what was left has been cut off and a replacement steel ring welded in. Some supporting angles have been welded to this ring and these will be used to bolt the boiler onto the crane carriage when it is eventually fitted. A start has been made on re-painting the carriage and chassis but this is weather dependent. *(You can read more about this work in the next column.)*

The crane jib has been moved to the Picton shelter to bring it nearer to power supplies so that it can be cleaned down and painted. However, before the jib can be re-fitted it will probably be necessary to move the

crane and the track it sits on as it has so far proved impossible to turn the carriage slightly and this is needed to eliminate a clash between this jib and that on the Isles crane.

Steve Roberts
Chief Mechanical Engineer

Brown Crane (now red) story part one

(the one near the roundabout)

One thing I should have learnt by now is that even the "easy" jobs turn out to be a lot more work than you think.

While looking at the job sheet one day, I noticed the Booths steam crane needed its boiler cleaning up and Rustcon applying to it. The boiler at this point had been laid on its side and left just outside the workshop. Having used the Rustcon on the brakevan chassis I knew it was good stuff although very runny. It turns rusty steel back to a nice black ready to be painted. It had been applied to the Isles crane and made it a nice black, but it needs a topcoat on it to protect it from the rain. As you may have noticed the boiler on the Isles crane has started to rust through again now.

As it was a nice day I made a start on rubbing the Booths boiler down with a wire brush then applying the Rustcon. However, where it had been put on display in the car park it had been cemented in and the last bits that were on the boiler needed to be removed, which involved cleaning it up with a needlegun. So I went and got my favourite one and made a start on it. Although after making a start I did notice that about half of the boiler still had paint remains on it which I couldn't remove with a wire brush or just paint over with Rustcon.

With a sigh I realised that I would have

to needle gun those areas down and paint over as normal. So after a few weekends the boiler was cleaned up, a new bottom piece welded on by David Hector, painted and turned over until it was all a nice black gloss. Being slightly pleased with how well the boiler turned out I then turned to look at the frames with David Hector, with the aim of placing the boiler back onto them.

Years ago the boiler had been cut off the frames and the remains of the boiler ring had corroded into such a bad state we would be unable to use it for refitting the boiler, so David Gittos later removed it.

Walking around the frames I decided that the paint hadn't fared very well and was several different shades of brown where the sun and undergrowth had done their work on it. With all the work done on the boiler I thought the frames and jib deserved the same level of effort on them.

Thinking about the location of the crane and the colours of the other four cranes, after a talk with David Hector

and Steve Roberts it was agreed to paint it red and black in the hopes that once the red jib had been put back on it would be visible from the roundabout.

After tracking every last bit of airline in the workshop I was able to get air all the way across the carpark and started the long process of needle gunning and sanding down the old paint and repainting. As a gift to John Linkins I put a white wall on the tyres and the subject of go faster stripes was mentioned.

At the time of writing the frames are mostly done although they will need a second coat of paint and the jib has yet to be started.

Doesn't sound much the way Steve reports it, does it?

Robert Taggart

(Not a bad shot of the Saxby and Farmer gate post of 1903 either - perhaps that could do with a spot of Rustcon tender loving care too!)

Photograph courtesy of
Robert Taggart



Anatomy of a small steam crane

Small Steam Cranes

Stand by the doorway to the Engine House and look back across the carpark toward Leeds - your view encompasses both modern and ancient structures. Piercing the skyline, like the upright jib of a crane, is the support of a modern motorway bridge dominating the view. Attempting to bridge the age gap of more than a century, the jib of an Isles crane reaches out towards the apex of the modern structure whilst, to the left, another steam crane awaits the reinstatement of its jib. One day these two 19th century jibs will both reach out towards the peak of the 20th century structure.

These days we are amazed at the myriad of uses to which the computer is harnessed but for our ancestors of four generations ago the wonder of their age was the power of steam which was being employed in many new applications. Levers and gearing have for thousands of years been used to move heavy objects. Many early cranes had handles which were rotated by one or more men who by the magic

were also being developed. Crane makers were also experimenting with electricity as their product catalogues testify.

Traditional horizontal boilers with their fireboxes tend to be long, and mounting one on a revolving platform would create clearance difficulties and restrict the angle through which the jib could be rotated. So how was this problem to be overcome? The solution was to turn the boiler through 90 degrees and point it to the sky. Another benefit of a vertically mounted boiler is that it can be mounted diagonally opposite the jib and used as a counterweight to the load. Cosmetically restoring the two small steam cranes on our railway offered the unique chance to inspect their boilers. Both comprise a cylinder which rises from the footplate of the crane. At the upper end is a dome



© Malcolm Johnson

of gearing lifted the load. Large or small the power of steam replaced the strong muscles of the labourer. As railway enthusiasts the smoke and steam can cloud our vision as other means of replacing the energy of men

resembling half a ball. This shape, like the cylinder, is strong and needs to retain the pressure of the steam. Inside the outer cylinder of the boiler is another, shorter, cylinder which starts part way up and ends before the outer dome. Water is fed into the gap between these cylinders which are riveted or welded together. The fire is lit in the space below the inner cylinder and the hot gases transfer their heat to the water retained between these two cylinders. Across the inner cylinder are

two or three horizontal tubes which enlarge the surface available to boil the water into steam. From the top of the inner cylinder a tall chimney takes the smoke through the steam dome.

Live steam is fed through a series of valves to the two operating cylinders which flank the drums to which the lifting ropes are secured. A series of gears and clutches enable a number of functions to be carried out. The crane may travel under its own power. The platform may be revolved in order that the jib can be aligned with the load. The jib can be raised or lowered so that the lifting hook is above the load and the lifting hook can be raised or lowered. The marvel of steam is thus put to many uses.

One thing that I never thought about until recently was where the water to replenish the boiler was stored. Our forebears were marvellous engineers and the answer was to use the water as part of the ballast to the load. In short it was stored as far away from the jib as possible.

But where?

Their answer

was to have a

substantial cast iron

trough

bolted to

the base of

the

footplate

beneath

the boiler.

Glance at

the parts

drawing

overleaf for

the Booths

crane and

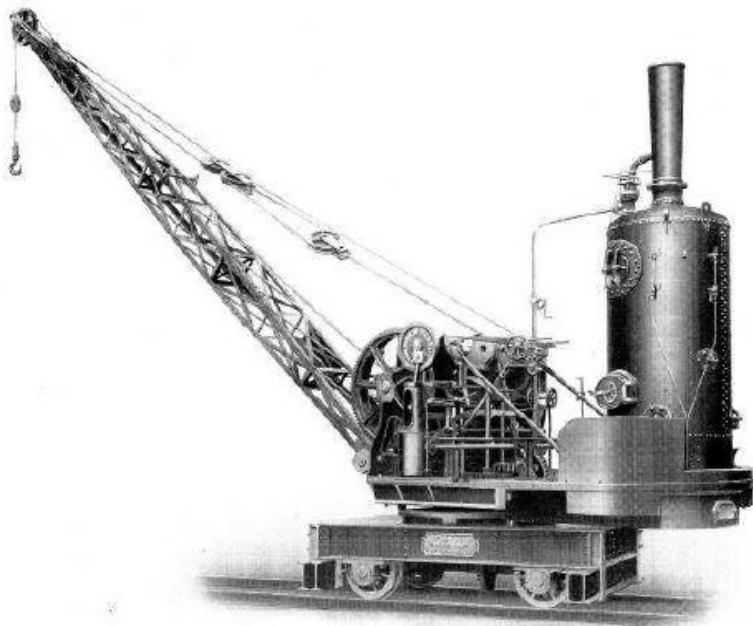
you will

see that item 12 is described as a 'tank'. To fill this with water a hole is provided in the footplate and a filling funnel, item 25, is provided. Coal for the cranes was stored in a bunker (21), presently missing, to one side of the boiler.

As you leave the Engine House visitor centre, pause for a moment and look beyond the parked cars at the two small steam cranes. Consider what work they have done. Where did they work? When were they built? Imagine the date as being a hundred years ago. And marvel again about the use of steam to lift heavy items. What stories have these two small steam cranes to tell? Now, with the central support of the motorway bridge rising beyond them, they face each other in their retirement.

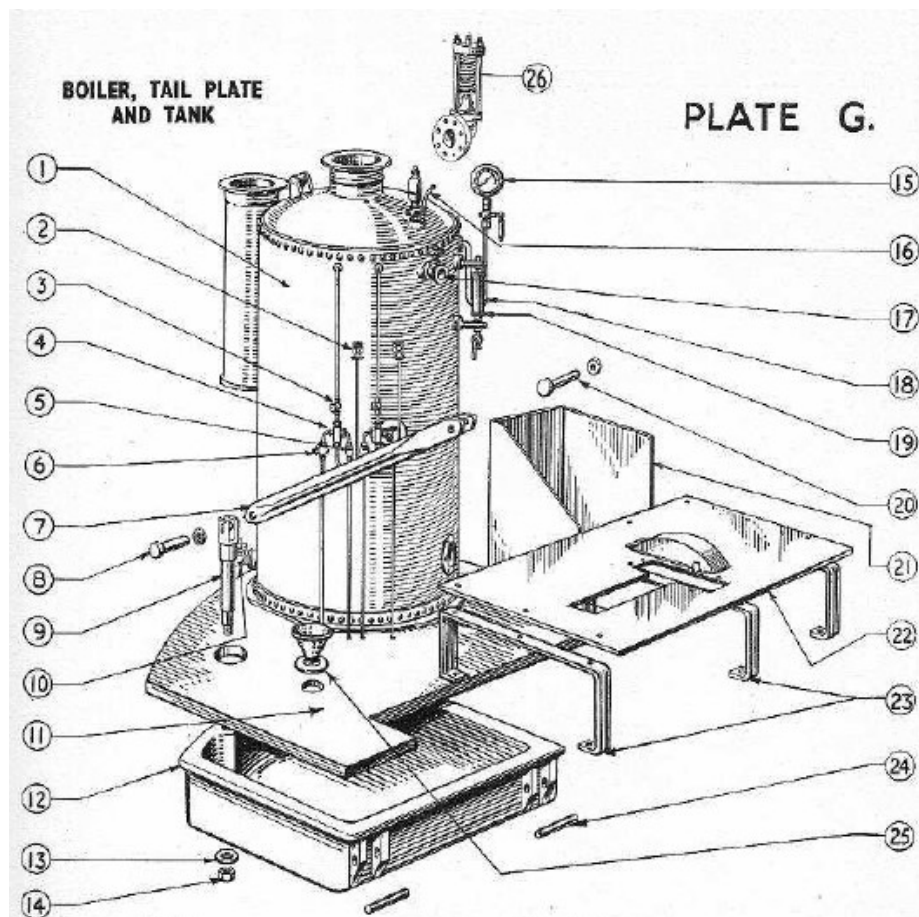
References: Booths and Isles sales catalogues which can be viewed online at the Leeds Engine website.

Malcolm R. Johnson



All the bits you need to build a steam crane ...

Parts list of a Booths Steam Crane



Part Number	Number off	Description
1	1	Boiler complete
2	2	Injector water delivery valves
3	2	Injector steam valve
4	2	Injectors
5	2	Injector overflow funnels
6	2	Injector water suction valves
7	2	Tail tie rods
8	2	Pins and collars for number 9
9	2	Anchor pin for tail
10	1	Blow down valve
11	1	Tail plate
12	1	Tank
13	2	Washer for number 9
14	2	Nut for number 9

Part Number	Number off	Description
15	1	Pressure gauge complete
16	1	Whistle
17	1	Main steam stop valve
18	2	Water gauge complete
19	2	Water gauge glasses
20	2	Pins and collars for top end of number 7
21	1	Coal bunker
22	1	Foot plate complete
23	3	Foot plate brackets
24	2	Pins for tank lugs
25	1	Filling funnel
26	1	Safety valve

Our wonderful new/historic railway clock



The restoration of the clock mechanism itself was done by Mr Eric Robinson and Mr Tom Precious, both formerly of William Potts and Sons, while the restoration of the drum was done by the Cumbria Clock Company Ltd of Penrith.

Installation of the clock in the Engine House was carried out by Eric and Tom, together with colleagues from the Cumbria Clock Company Ltd.

The large clock you see in the Engine House was made by William Potts and Sons in 1898, at their Turret Clock Works in Cookridge Street, Leeds.

They were the main firm of clock makers in Leeds at the time. Two of these clocks were made for the London & North Western Railway, and installed at Llandudno Junction station. They were both replaced in the 1960s, and sold. One is now installed as a static exhibit in a pub in London which has been converted from the Denmark Hill station buildings.

This one was acquired in 2015 by Mr Michael Potts, who is the sixth generation of the family to have been part of the firm, and the author of the definitive history of the company. The firm had become part of the Smiths of Derby group in 1935, but continued to trade under its own name. Smiths of Derby made the clock on the front of our Engine House.

Mr Potts arranged for the clock to be restored, and very kindly donated it to the Middleton Railway to be displayed as a working exhibit in the Engine House.



A Pictorial Update on just a few of the activities



**Brookes No. 1 undergoing its
steam test.**
© Tony Cowling



**The
height
© To**



**John Blenkinsop,
Peckett 2003, wearing
a coat of primer at
Ribble Steam Railway
where it is being
cosmetically restored**

© Andrew Johnson



**A Walk in the Blue
woods of Middleton
Park.**

© Kris Ward

es at the railway over the past three months.



**new clock being raised to the
ghts. (See page 15 for details)
ony Cowling**



**Tom Precious (left) and Eric Robinson (right)
after regulating the clock.
© Tony Cowling**

ring
the
way
red.

bell
on



Part 3: Holbeck Lodge, Matthew Murray's Home and Steam Hall.

The main reference from the extensive research I have done trying to find evidence of Matthew Murray living at Holbeck Lodge and to prove that this was "Steam Hall", comes from Mr. E. Kilburn Scott's book and series of slides shown by him at this centenary event:

MATTHEW MURRAY A CENTENARY APPRECIATION

by
G.F. TYAS
*Read at the Science Museum,
South Kensington,
February 24th, 1926,
and reprinted by permission
of the Newcomen Society.*

A series of slides was then shown by Mr. Kilburn Scott, comprising:- Portrait of Matthew Murray; View and plan of the Round Foundry premises as shown in Plates 1 and 2 of this paper; Heckling machine for use in flax spinning. This was the machine for which Murray was awarded a Gold Medal by the Society of Arts; Engine with straight line motion; Engine built for Francis B. Ogden, of U.S.A.; Side lever engine; Locomotive of 1812 - Murray carried out experiments on a locomotive at his works, and he had built one by 1811; Yorkshire collier of the period; Rack rail six feet long; Diagram of engine with rack-rail and cogwheels; Articulated locomotive, which showed that Murray knew about engines running on smooth rails; "Steam Hall" or Holbeck Lodge; Monument in Holbeck Churchyard, the inscription on which refers to Murray as a Civil Engineer.

Middleton Railway's own Historian,

Sheila Bye, told me "Mr Kilburn Scott wrote his book, a sort of hotchpotch of historical information coupled with contemporary eulogies about Murray which were given at or written for the various centenary events, list of items which appeared at the exhibition, etc.. I think it's still quite sought after, and someone did a replica edition of it a decade or so ago. So he did greatly raise Matthew Murray's profile but, unfortunately, put out a load of 'myths and legends' disguised as hard facts which everybody copied into their own books and articles, because they looked so genuine at first glance."

I find it difficult to believe that the landlord or owner of Holbeck Lodge would allow a tenant, Matthew Murray to build and install a unique Steam Heating system in his property. Likewise why would Matthew Murray go to all that time and effort installing a Steam Heating system in a home he didn't own?

I have put together a comprehensive list of recorded tenants of Holbeck Lodge (article Part 2 - March 2017) and not one mentions the fact that the renowned Leeds Engineer Matthew Murray lived there, or that the property was heated by steam, neither does the Owner/Landlord make any such claims.

Matthew Murray and his wife Mary lived before the time of the National Census, but I have obtained references to where they lived in Holbeck from local Baptism and Burial records.

When their daughter Ann was born, 23rd February 1791 and was baptised on the 10th April 1791, they were living at "Water Lane" - but that could be anywhere along Water Lane. Then on 23rd March 1793 their son Matthew was born and baptised 12th May 1793, address again given as "Water Lane Holbeck".

In December 1796, when their daughter Mary, (the first, he had 2 daughters of that name) was buried, the address had changed to "Holbeck Lane". This is the road running past the eastern end of Water Lane.

Anyway, by the time Mary (the second daughter with this name) was baptised, in October 1797, they were back in "Water Lane Holbeck", and Mary was the last child they had. From these official records I have to conclude that Matthew Murray and his family lived on Water Lane and not at the more prestigious address of Holbeck Lodge.

Sheila Bye writes, *"The new Fenton Murray and Wood works at Water Lane only started up in 1796, and before that Murray was just another worker at Marshall's Mill, even though he was devising new machinery etc. It would only be after he started up his own Works that it might become important to have somewhere a bit better than a workman's cottage to take visitors to for a cuppa and a bit o' cake after they'd seen the works and the products"*.

There is contemporary evidence that Murray was having a house built in 1802, mentioned in the James Watt junior letters - "Fenton Murray and Wood were believe to be making a great deal of money and these profits were funding new buildings at the works and a superb house for Matthew Murray."

The actual quote from the Watt letters is:

"It is generally believed that Fenton Murray & Wood Co. are making a great deal of Money & that the new works are constructing from their profits, as also a superb house which Murray is building for himself."

David Hector
Part 4 to follow

The railway scene in Leeds in 1967

as recalled by member, Paul Barrett

50 years ago saw a number of changes in the railway scene in Leeds.

As well as organising occasional open days, with 1310 giving brake van trips, the Middleton Railway Trust also organised a main-line railtour, the Derbyshire Dawdler, which ran on 22nd April. This used 45593 Kolhapur from Leeds to Chinley, via the Garforth-Castleford branch, then 3442 The Great Marquess on to Derby, and back to Leeds. The tour is described in detail in the January 1968 Old Run.

A week later, 29th April saw the closure of Leeds Central station, the final train being the 18.10 eight car DMU to Harrogate. There were still some steam workings to Bradford Exchange on the final day, with 42235 on the last steam working from Bradford Exchange. The final pacific climbing the gradient out of Leeds Central was on 16th April 1967, when 3442 worked a railtour from Stockport to Leeds Central, where 4472 Flying Scotsman took over for the return to Kings Cross.

Regular steam working in Leeds came to an end in October 1967, although a number continued to work in from Manchester into early 1968. A number of railtours also ran in late 1967, most memorably on 17th September, when 7029 Clun Castle worked from Kings Cross to Leeds, where passengers were then taken to Middleton Railway for brake van trips with Bagnall 2702 and John Alcock.

On 22nd July I spent a 9 hour spell at Leeds City recording the workings on one of the final Saturdays of steam.

The first three steam workings were all 2-6-4 tanks working in from Bradford Exchange - 42689 on a Bradford-Kings Cross, 42145 on a Bradford-St

1967 railways continued

Pancras, and 42073 on the Devonian.

The celebrities at the time were of course the Holbeck Jubilees 45593 Kolhapur and 45562 Alberta which were used on Saturday extras to Carlisle. 45593 duly arrived from Holbeck to take over the 10.17 to Glasgow. This was a through train from Birmingham, which eventually arrived behind D77 at 11.32, having suffered a brake failure. After simmering in Leeds station for nearly 2 hours, 45593 finally left 84 minutes late at 11.41. The 10.25 Leeds - Glasgow had left 3 minutes late behind D34.

An earlier failure had been a Trans-Pennine unit working the Liverpool-Hull service due at 9.54. This was eventually dragged into Leeds at 11.01 by D6734, where it was terminated. D6734 then took over the Manchester-Newcastle, which arrived in Leeds 58 minutes late at 11.46 behind 73053. 73053 returned to Manchester, relieving D6781 on a Filey-Manchester, at 12.51, 21 minutes late.

Other steam workings included 45139, which was replaced by D188 on the Saturdays-only Llandudno-Newcastle. I had memories of the chaotic scenes in 1963 while I had a summer job as a platform trolley attendant, trying to cope with the crowds pouring off this train, which had no buffet car, to grab a quick cuppa.

Meanwhile, the relief Thames-Clyde, which did not call at Leeds, would be changing engines at Whitehall Junction, with 45562 probably taking over from a class 45 for its trip to Carlisle.

The remaining steam workings to be seen were 44943 arriving 35 minutes late from Morecambe, 45392 and 45219 on Manchester trains, and 42066, 42616 and 42689 on Bradford workings.

For the record, 10 steam locos were to be seen on passenger workings,

comprising 4 black 5s, 4 Fairburn 2-6-4 tanks, 1 standard 5 and 1 Jubilee. Diesel locos comprised 4 class 25, 4 class 37, 6 class 40, 18 class 45, 8 class 46 and 2 Deltics.

Steam continued in Leeds into 1968 at Waterloo Main Colliery, but railway workings from Middleton Colliery, operated by BR, finished in 1967.

Cartoon Corner

MATT



'We need migrants to do the jobs Brits won't or can't do.

*Like Prime Minister or
Leader of the Opposition'*



Cuppa tea time with Ian and friends



Ian Dobson's Famous Social Evenings

take place on the first **Tuesday** of each month, at Moor Road, starting at **7.30 pm.** It has been scientifically proven that there is nothing better to do on a Tuesday evening and, if you're lucky and ask nicely, Mr Dobson might even make you a cup of tea! Usual rules apply, all welcome, tea-break provided and no membership of any organisation is

required, so bring your friends.

The programme for the rest of 2017 is as below.

4th July - Mystery 16mm film show (Railways!) (Malcolm Hindes)

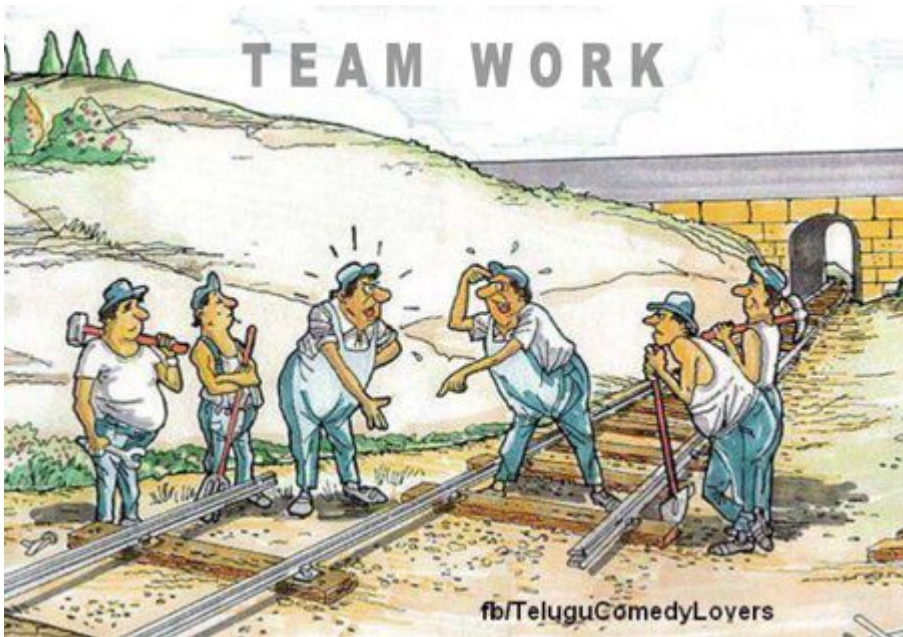
AUGUST—NO MEETING

5th September - Leeds City station – then and now (Ian Smith)

3rd October - Was it really 20 years ago? – A look back at 1997 (Richard Senior)

7th November - Tren Italia, some recent travels in northern Italy (Kevin Tattersley)

5th December **CHRISTMAS QUIZ!!!**



Obituary - Joe Lee

Joseph K Lee BEM, 1931-2017



© David Hebden

Joe, as he was known to everybody, was born in 1931 in Yeadon, where his parents kept a grocery shop. He attended school in Yeadon, and then did National Service in the RAF as a technician. On leaving the RAF he joined the Leeds City Police (as they were then), where he served for 30 years.

In 1967 he became involved in the Middleton Railway, and soon took on the role of Traffic Manager, where one of his first jobs was to manage the arrival of a large consignment of acid tank wagons that were being disposed of by Laporte Acids, and which had been acquired for scrapping by Robinson and Birdsell. A few plates from these wagons are now on display in our Engine House, and the one surviving tank forms the top of our water tower.

At the AGM in March 1969 Joe was appointed as deputy Chairman, and when Fred Youell, the founder of our heritage railway, resigned as Chairman at the AGM a year later Joe was the obvious person to succeed him. Fred was a hard act to follow, as for those first ten years he had been the very obvious figurehead of the railway, but it was growing fast as an organisation, and so needed a co-ordinator as much

as a figurehead. Joe was well equipped to combine both of these roles, and he did so very effectively.

While the main threat to the existence of the railway had been overcome with the decision to build a tunnel to carry what is now the M621 over the railway line, rather than just bulldozing it out of existence, the railway was still not in a strong position. It was running a passenger service between platforms at what we now call Moor Road and Park Halt (but were then known respectively as Tunstall Road and Middleton Park Gates), but these platforms were just simple, sleeper-built structures, and the train simply consisted of the LMS brake van (the one which is now being laboriously restored in our workshops), which was propelled up the hill by the locomotive. Passenger numbers were growing very slowly, and there were plenty of days in those early years when the fares paid did not cover the cost of the coal burnt.

Gradually facilities were improved, and a wooden container was converted to act as shop building at Moor Road, which meant that the range of souvenirs was no longer restricted to what could be carried in a rack in the brake van. An open wagon was converted for passenger use, and on a day when the weather was good this made an interesting alternative to riding in the brake van. Soon after this some dealing on Joe's part led to the arrival of the ex-LNER ballast brake, which was a lot lighter than the LMS van, and so needed less coal to propel it up the hill.

Meanwhile the railway was developing as an organisation under his guidance, achieving registration as a charity in October 1971, and incorporation as a limited company in April 1974, when Joe became the first Chairman of the

company. This was not the only role that he held within the city, though, and in particular since 1964 he had been the Commanding Officer of the 168 (City of Leeds) Squadron of the Air Training Corps. Joe was a great believer in the organisations with which he was involved helping each other, and so for a number of years meetings of the railway's committee, and subsequently its council, were held at the ATC headquarters. Similarly, over the years the railway staged various events with a police theme - including one for which Henry de Lacy was painted up in a similar livery to a police car - and it was not uncommon for Joe to call in on the railway's train services while still in uniform. Later on there was a period of a number of years when council meetings were held in the Holbeck Police Station, on Burton Road.

Joe continued as Chairman until 1987, which was by some way the longest period of service by any of the railway's Chairmen. By the time that he handed the role over to Vernon Smith the railway was almost unrecognisable from what it had been when he first took on the job. The headquarters had been transferred from Clayton's Dartmouth Yard to Moor Road, where a stone platform had been built, followed by a ticket office and a workshop. The line now had a run-round loop at each end, and the first of our vacuum-braked passenger coaches had been in service for nearly two years.

To help provide some continuity Joe remained as a member of the council until 1990, by which time he had been awarded the British Empire Medal (BEM) in 1989 for service to the community, reflecting in particular his work with the police as a Juvenile Liaison Officer. This was then followed in 1991 by the award of the Leeds Silver Medallion in 1991, for services to the City of Leeds. This reflected not

only his involvement with the railway and with the ATC (where he had finally retired as OC in 1988), but also service in various other capacities in the city: as a governor of Hugh Gaitskell Primary School; at St Mary's Church, Beeston; and as a bell ringer at what is now Leeds Minster.

Joe continued to have the railway's interests at heart, and in particular he made a point of attending each AGM, offering words of encouragement and asking questions about possible future developments. For instance, at the AGM in 2016 he noted with pleasure the number of long-serving members, and asked whether the council were considering introducing any long-service awards. At that time this was still under discussion: had he survived until this year's AGM we would have been able to make a presentation to him to mark 50 years service. As it is, we heard of his death on 1st March, and his funeral was at the Minster on 27th March. He is survived by his daughter Heather, his son David, six grandchildren and five great grandchildren.

Tony Cowling



Henry de Lacy II - in "disguise" for a Police themed event at some time in the 1970s

FORST, Explosives, Haifa Harbour Works and Paving Slabs.

Part 1. A History of the Locomotives.

The year 2017 marks the return to steam after an extensive overhaul of 'Brookes No. 1' the only surviving Hunslet Engine Company 14 inch inside cylinder saddle tank – telegraphic code **FORST**.

This article is aimed at providing a brief history of this design of locomotive and how it became entwined with the construction of a harbour at Haifa in the 1930s, the manufacture of munitions during the Second World war, the North African campaign of the same war, the building of homes for heroes, and the firm which produced the world's first successful concrete paving stone – Brookes Ltd of Lightcliffe.

In 1923 the Hunslet Engine Company introduced an integrated series of new designs covering 12, 14, 15 and 16 inch inside cylindered six coupled saddle tanks which were intended for the British market, and a parallel range, excepting the 12 inch cylinder size, of outside cylindered saddle and side tanks which were primarily aimed at export markets. Both the inside and outside cylindered locomotives had the characteristic Hunslet cab design which first appeared at the turn of the century and in all cases where saddle tanks were fitted they only covered the boiler and firebox. Unusually for British designed industrial locomotives the outside cylindered locomotives featured Walschaerts valve gear – for ease of maintenance.

A number of the outside cylindered locomotives were built for the United Kingdom market – the most numerous being the eight 14 inch six coupled saddle tanks which first found employment with John Mowlem on the

Southampton Docks contract and then went to a range of different owners in the mining and quarrying industries. the most notable were the two big 18 inch side tanks built for Manchester Collieries – 'Bridgewater' and 'Joseph'. Just two of the outside cylindered locomotives are known to survive in the United Kingdom, namely:-

HE 1690, 'Cunarder', a 14 inch 0-6-0 saddle tank which latterly worked at APCM's Harbury Cement Works in Warwickshire and is now under restoration by Somerset & Dorset Steam., and

HE 1684, 'No. 6', a 12 inch 0-4-0 Side Tank which was supplied to Hall & Company's Coulsdon Quarry in Surrey and later worked in smokeless fuel plants in South Wales and then at Norton and Kilmersdon collieries in Somerset and is now stored on the Middleton Railway.

The inside cylindered locomotives were well proportioned and of a neat and elegant appearance, were rugged, easy to build and simple to operate. In 1937 the range of inside cylindered saddle tanks was augmented by an 18 inch saddle tank design known as the 48150 class which was developed from a solitary 18 inch inside cylinder side tank, **HE1506 'No. 15'**, supplied to John Bowes and Partners Ltd's Pontop and Jarrow railway in 1930. In 1943 the 48150 class was further developed to become the well-known and very successful Austerity class – the principle visual change being the adoption of a full length saddle tank which was introduced with the 8 locomotives of Hunslet's 50550 class built specially for Stewarts and Lloyds Ltd's Islip quarry scheme in 1941 and 1942.

Whilst showing a very distinct family resemblance each of the post 1923 Hunslet Engine Company six coupled

inside cylindered saddle tanks had one or more features which enabled the different types to be easily distinguished from each other. Excluding the Austerity class but including the 50550 class, a total of 110 Hunslet six coupled inside cylindered saddle tanks were supplied to the British market between the launch of the new designs in 1923 and the building of the last example in 1958 which illustrates the fundamental soundness of these designs.

By way of comparison in the same period and excluding production of Austerity class locomotives:

Andrew Barclay Sons and Co Ltd built seven six-coupled inside cylinder locomotives - all 18 inch cylindered side tanks, five of which were for the Wemyss Private railway.

Hudswell Clarke and Co. Ltd built 61 six coupled inside cylinder locomotives of which 51 were 12 inch and 13 inch cylindered contractors locomotives built almost exclusively for Sir Robert McAlpine & Sons and Sir Lindsey Parkinson & Co

R. & W. Hawthorn, Leslie & Co Ltd / Robert Stephenson & Hawthorns Ltd. built 31 six coupled inside cylindered locomotives of which seven were Consett Iron Company A class long boiler panier tanks and five were Manning Wardle design 16 inch saddle tanks produced for use in Stewarts and Lloyds Ltd's Ironstone quarries.

Whilst the basic design of the Hunslet inside cylindered six coupled saddle tanks remained fundamentally unchanged except for constructional details such as replacement of saddle tanks of riveted construction by saddle tanks of all welded construction, a number of the 15 inch and 16 inch locomotives operated by the National Coal Board in Yorkshire were

upgraded in what was the last significant attempt in the United Kingdom to improve the performance of the conventional steam locomotive. This involved the fitting of mechanical stokers, Kylpor blast pipes and improved drafting to reduce smoke, increase availability and increase power.

The first 16 inch inside cylinder locomotive delivered was **HE 1438 'Fitzwilliam'** which was supplied in 1923 to South Kirby Featherstone & Hemsworth Collieries Ltd and the last built was **HE 3872 'Frank'** which was supplied to the Oxfordshire Iron Stone Co. in 1958. The majority of the 38 locomotives of this type were supplied to customers in the Yorkshire Coalfield though six were supplied to ironstone quarry operators in the East Midlands and three to the Hilton Main & Holly Bank Coal Co. Ltd. in Staffordshire.

The first of the standard design of 15 inch cylindered locomotives was **HE 1440 'Airedale'** supplied to Airedale Collieries Ltd. This was followed by another 26 locomotives giving a class total of 27. Whilst the majority of these locomotives were to be found in the North Yorkshire coal field, including the last built, **HE 3509 'Astley'** which was supplied new to the National Coal Board's Primrose Hill Colliery in 1947, six were operated by the Mersey Docks and Harbour Board, four worked for Lancashire Coal owners - most notably Bickershaw Collieries Ltd - and three for Coal owners in the East Midlands.

The 12 inch cylindered locomotives were the least successful commercially of the standard range; the first two were supplied in 1932 to the Manchester Ship Canal Co. and the remaining four were supplied to Sir Lindsey Parkinson & Co Ltd for use on the Royal Ordnance Factory, Chorley,

History continued

contract where they worked alongside nine new built Hudswell Clarke & Co Ltd 13 inch contractors locomotives. Despite there being a significant market for this type of small contractor's locomotive throughout the thirties, the main contractors appeared to prefer to use the well-established Hudswell Clarke design rather than switch to the newer Hunslet design. However whilst not in themselves a very successful class, the 12 inch cylindered locomotives have an important role in the history of the diesel locomotive – the frame, running gear and wheels of this class being incorporated in **HE 1697** – the pioneering Hunslet diesel better known as '**John Alcock**'.

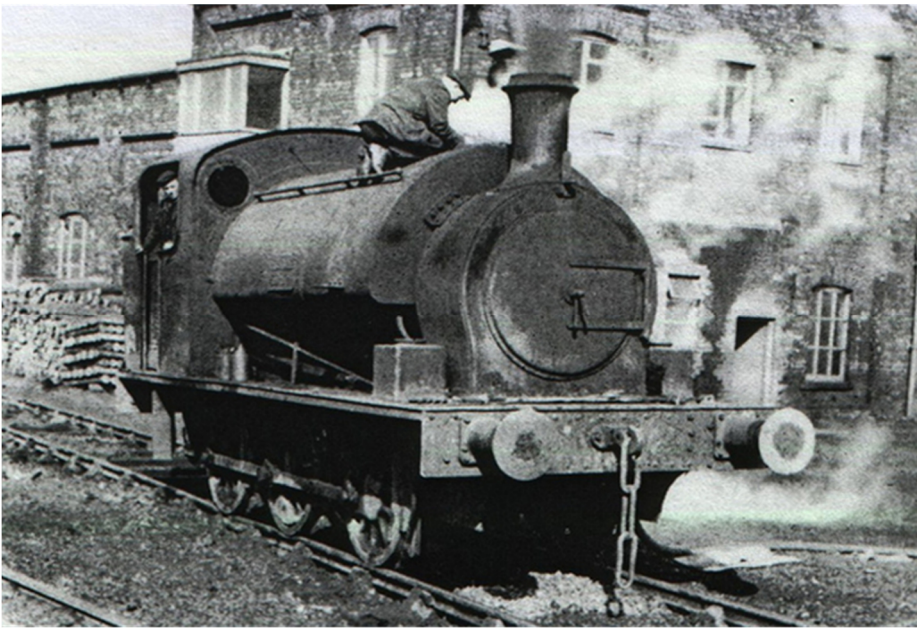
Finally a total of 16 48150 class locomotives were built between 1937 and 1953 – all for Guest Keen & Baldwin/Richard Thomas & Co/ Richard Thomas & Baldwin Ltd for use in their steel works in Cardiff, Scunthorpe and Ebbw Vale.

This leaves the 14 inch class of inside cylindered saddle tanks. The first, **HE 1482 'Edith'** was delivered in 1925 to J & J Charlesworth's Rothwell Railways which served Robin Hood Coking Plant. The locomotive was built with a cab with rounded eaves, similar to some of the cabs employed on the Lambton Railway, to enable it to work in the reduced clearance of the retort house at the Coking Plant. It was in this guise that Edith worked at Middleton Broom Pit between 1953 and 1959 – the only Hunslet 14 inch class locomotive to work on the Middleton Railway prior to preservation. After working at Middleton Broom Pit 'Edith' was at the Hunslet Engine Co. Works for repair between November 1959 and January 1960 and was then sent to Old Roundwood Colliery, Ossett (formerly owned by Terry, Greaves & Co Ltd.) where it was scrapped sometime between

September 1965 and January 1966. **HE 1678 'Joe'**, a Hunslet 15 inch cylindered locomotive supplied to J & J Charlesworth's Rothwell Railway in 1931, was also fitted with the same design of cab as 'Edith'.

The picture opposite shows '**Edith at Work at Middleton Broom Pitt, 26th March 1959. J. A. Peden. Collection M.R.T.**

The next two 14 inch class locomotives to be built were HE 1499 'Cecil Levita' and HE 1500 'Lionheart'. They were supplied to the contractor C. J. Wills in 1926 and 1928 respectively and were employed on two of the huge LCC housing projects of the 1920s & 30's – '**Cecil Levita**' at Becontree Housing Estate Contract and '**Lionheart**' at first the Watling Housing Estate Contract, Hendon, and then the St. Helier Estate Contract, Morden. These Projects were built in response to the 'Homes for Heroes' campaign of 1919 to house people from decaying inner city slums and the cottage style houses included indoor toilets and mains water. The scale of these projects was extraordinary by current standards: for example the St Helier Estate, largely built between 1928 and 1934, comprised 8523 houses and 545 flats. At its peak the standard gauge railway serving the works employed eight steam locomotives to move materials from the mainline railway interchange to the work sites. The Becontree contract was even larger, over 25,000 dwellings were built and at its peak 13 steam locomotives were employed to move materials from a wharf on the River Thames to the various work sites. Once these contracts were complete '**Cecil Levita**' found its way via George Cohen Sons & Co Ltd, dealers, to Old Silkstone Collieries Ltd. Dodworth Colliery in 1934 where it worked until being scrapped in 1961 whilst



'Lionheart' had a more adventurous life and after sale to Joseph Pugsley & Sons of Bristol (dealers) moved to Shipbreaking Industries Rosyth then to MOD Royal Naval Dockyard Rosyth where it was renamed '**Rosyth No. 3**' and finally moved to the R.N. Victualling Yard at Dalmeny, Kirkliston, West Lothian before being scrapped by Campbell, Newmains, Lanark in 1961. It was one of these two locomotives which provided the class illustration in the Hunslet Engine Company's catalogues rather than '**Edith**' because of the latter locomotive's non standard cab.

By 1930 just three 14 inch locos had been sold – though this does not compare too unfavourably with sales of the 16 and 15 inch locomotives to the home market – 5 and 4 locomotives respectively. And then events on the far shores of the Mediterranean conspired to radically change the order pattern for this design.

Haifa Bay in the lee of Mount Carmel on the Eastern shores of the Mediterranean, and in present day Israel, has sheltered ships from the dawn of navigation and there has been a harbour at Haifa since at least 100 BC. However it was not until the British Mandate of Palestine after the First World War that designs were prepared for a large commercial port at Haifa. Authority to raise money for the construction of the harbour was granted by Act of Parliament in 1926, Rendel, Palmer and Tritton were appointed consulting engineers with responsibility for design and construction and the actual work was carried out by a government department – the Haifa Harbour Works Department or HHWD. Construction of the harbour breakwaters and wharfs required huge quantities of stone. After much investigation two quarries were opened on the coastal ridge about 2 kilometres north of Atlit and adjacent to the Palestine Railways mainline to

History continued

Haifa to supply this stone. To move the stone from quarry face to the harbour an extensive railway system was constructed in the two quarries with a locomotive shed, store and maintenance facilities plus interchange sidings with the Palestine Railways mainline. A second railway system was constructed at the harbour which connected to the Palestine Railways mainline, which extended along the two breakwaters and the wharves and which served a concrete block-making plant. The harbour system was provided with a two-road shed and ancillaries.

Stone trains moved between the quarries and the harbour on the Palestine Railways Mainline. Circumstantial evidence indicates that HHWD locomotives were used to move these trains – for example the disciplining of an HHWD driver for excessive speed whilst on the Palestine railways line. By 1930 five trains of quarried stone were running to the harbour per day and in the following year traffic doubled. In total 1.3 million cubic metres of stone were employed in the harbour works to the end of 1932 when the quarries were largely closed except for the retention of one face to provide stone for maintenance purposes. A detailed account of the building of the harbour at Haifa was written by Paul Cotterell and was published in Industrial Railway Record No. 130.

Locomotives were required to work this railway system and the Hunslet Engine Company was successful in winning the tender for their supply. An order for twelve 14 inch outside cylindered 0-6-0 Saddle Tanks, Telegraphic Code FOROT, a design aimed at the export market, was placed by the Crown Agents for delivery to Haifa. Because Hunslet were unable to supply all the ordered engines for the start of the

contract, to make up the shortfall they offered to supply two 14 inch inside cylinder saddle tanks, Telegraphic Code FORST, which had been built for stock. This was common practice at the time when locomotives would be laid down to stock to provide a balancing load on the work floor and provide a competitive edge when invited to bid for an urgent requirement. These two locomotives, works numbers 1585 and 1586 were delivered to Haifa in August 1929 and then Hunslet continued with the construction of the 14 inch outside cylindered locomotives and the first four of these, works numbers 1643 – 6, were delivered to Haifa between October and November 1929. The inside cylindered locomotives did everything that was expected of them and were significantly cheaper than the outside cylindered locomotives. It also appears that the contractors had underestimated the number of locomotives needed to complete the harbour works contract within the agreed time frame. The consequence was that the order for the remaining eight outside cylinder locomotives was cancelled and an order placed for a further ten inside cylindered locomotives which were delivered between January 1930 and June 1931.

The eight outside cylinder locomotives were eventually completed and delivered during June and July 1931 to John Mowlem for use on the Southern Railway's Southampton Graving Dock contract. Once this contract was complete the locomotives were sold on for use in cement works, coal mines and ironstone quarries in the United Kingdom.

As a consequence of the change in policy by the contractors building the new Haifa Harbour, by the end of 1931 a total of fifteen 14 inch inside cylindered saddle tanks had been built – more than the combined production

total for all the other standard designs of inside cylindered tanks including production for export.

As was common practice for locomotives supplied for use in hot climates the locomotives supplied to HHWD had open backed cabs and a double skinned cab roof with a teak inner lining. The rear and upper sections of the cabs originally fitted to HE 1585 and 1586 were removed and the cabs reconfigured with open backs and a double skinned roof before despatch; the replaced parts were placed in store for future use. The cabs fitted to the latter HHWD locomotives had a more rounded side opening than the normal Hunslet cab and the locomotives retained this feature until withdrawal. Whilst exact details of the livery of the HHWD locomotives have not survived it is believed that they were painted in a medium green with single black lining. All of these locomotives had riveted saddle tanks and brass name plates titled 'HHWD No. 1', 'HHWD No. 2' etc. were fitted.

Once the construction of the Harbour was completed in 1932 the need for this large fleet of locomotives disappeared. At least one, HE 1586 appears to have been lent to the Palestine Railways for a short period and two others were employed as stationary boilers. Eventually the HHWD locomotives were dispersed, six were returned to the UK, some after a period of storage with the contractor Epstein Strykowski in Haifa, and others were stored in Palestine to be taken over by the allied military forces in 1941.

The six locomotives which remained in Palestine at the start of the Second World War were overhauled by units of the Railway Operating Company of the Royal Engineers. They were used as

shunters at various locations in Palestine and four of them also found employment in Egypt aiding the North Africa campaign. All but three of the locomotives were withdrawn by July 1944; two of the remaining three were taken over by Israel Railways in May 1948 but saw little if any use and were scrapped by 1956. The final locomotive of the six survived transfer to Egypt, was overhauled by the military at the end of 1945 and was returned to the United Kingdom in February 1948. It was on the Melbourne Military Railway in Derbyshire for a brief period and then went to the Hunslet Engine Company for overhaul before being despatched to APCM's Oxford Cement Works at Shipton on Cherwell. It was eventually scrapped, as 'No. 4' in the Shipton on Cherwell Fleet, in January 1967. This locomotive was fitted with dumb buffers by Hunslet – matching the rest of the Oxford Cement Work's fleet - and a cab back with round spectacle plates was fitted though the original double skinned cab roof was retained and rounded front cab side cut out.

All of the locomotives which returned to the United Kingdom before the war were sent to the Hunslet Engine Company for overhaul. The first to be overhauled was **HE 1672** which was supplied to Carlton Main Collieries' Frickley Colliery as '**Frickley No. 4**' in June 1938 and apart from a period working at New Monckton Colliery between October 1955 and April 1957 remained at Frickley Colliery until scrapped in July 1969. When overhauled by Hunslet this locomotive retained its double skinned cab roof and gained a distinctly non-standard cab rear section with rectangular windows.

The next locomotive to be rebuilt was HE 1659 which was despatched to the

History continued

Royal Navy Cordite Factory, Holton Heath, Dorset. This factory was established in 1916, at the instigation of Sir Winston Churchill, to produce Cordite, a mixture of Nitro-glycerine, Gun Cotton and Petroleum Jelly, for the Royal Navy from base materials and was notable for producing Acetone by a fermentation process from corn starch – one of the first significant applications of biotechnology. The factory was extensively reconstructed and extended in the interwar period and was an important producer of Cordite during the Second World War. In 1945 explosive production was transferred to the Royal Naval Propellant Factory Caerwent in South Wales which had been built during the Second World War and was closely modelled on Holton Heath. The Holton Heath site remained open as the Admiralty Materials Laboratory until 1977 when it became part of the Admiralty Marine Technology Establishment (AMTE) and later became the Admiralty Research Establishment and finally part of the Defence Research Agency, remaining operational until 1997.

Because of its historic importance large parts of the site including a number of buildings have been scheduled under the Ancient Monuments and Archaeological Areas Act 1979 but unfortunately the site is not open to the public nor is it being effectively protected against vandalism and metal thieves. HE1659 was urgently needed to supplement the two existing locomotives employed at Holton Heath as production built up before the start of the Second World War and whilst there carried the name 'Reliance'. It's rebuild at Hunslet was very similar to that of 'Frickley No. 4': it retained its double skinned cab roof and gained a non-standard cab rear section with rectangular windows. At some stage in its career it also gained a wheel type

smoke box door lock. HE 1659 was the last locomotive to be retained at the site and remained in intermittent use until 1961 and was scrapped on site in March 1963.

The next three of the six returned locomotives to be rebuilt by the Hunslet Engine Company were HE 1650, HE 1660 and HE 1673. They were overhauled for use at the Royal Naval Propellant Factory which was then being built at Caerwent in South Wales and were delivered to the Factory in June 1940. Unlike the first two of the ex HHWD locomotives rebuilt by Hunslet, these three engines were rebuilt with standard Hunslet Cabs with round rear spectacles and after rebuilding were very similar in appearance to the second two locomotives of this class – HE 1499 and HE1500. The locomotives were named '**RNPF No.1**', '**RNPF No. 2**' and '**RNPF No. 3**' respectively and were painted in an olive green livery with a single red line unlike HE 1659 which appears to have been painted in an unlined green livery. The three locomotives were the sole motive power at Caerwent until 1959 when they were replaced by three diesel locomotives bought in from other MOD sites. They were despatched to John Cashmore Ltd of Newport Docks for scrap in June 1965 and, with the exception of '**RNPF No. 2**', were scrapped between August and September 1965. '**RNPF No. 2**' was employed for a couple of years as the work's shunter at John Cashmore's Newport yard but was eventually scrapped in February 1968.

There will be more of this interesting article by Charles Milner in the next edition of the Old Run. I'm sorry it was not possible to print the complete article in this issue but space is limited.

Editor



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Registered Office: The Station, Moor Road, Leeds LS10 2JQ

Registered Company No. 1165589 Registered Charity No. 230387

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Telephone 0113 271 0320 (Office) & 0113 270 6162 (Workshop)

Email: info@middletonrailway.org.uk Website: www.middletonrailway.org.uk

President

(Currently Vacant)

Vice Presidents

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Malcolm Johnson, email: m.johnson324@btinternet.com

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Useful Email Addresses

Administration (Chairman/Secretary)

Education (Schools Programme)

Engineering (Chief Mechanical Engineer)

Finance (Treasurer)

General Enquiries

Medical Officer

Membership (Membership Secretary)

Old Run (Editor)

Staff Rosters (Roster Clerk)

Traffic Manager

admin@middletonrailway.org.uk

education@middletonrailway.org.uk

engineer@middletonrailway.org.uk

finance@middletonrailway.org.uk

info@middletonrailway.org.uk

medicalofficer@middletonrailway.org.uk

membership@middletonrailway.org.uk

oldrun@middletonrailway.org.uk

roster@middletonrailway.org.uk

trafficmanager@middletonrailway.org.uk

A well-tended platform

