

Expansion Link

Newsletter of the B&DMES

Editor John Taviner - Volume Number Two - Issue Number Four
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Editorial

This issue sees the end of my second year as Editor of "Expansion Link" the newsletter of the Basingstoke & District Model Engineering Society. During this time I have not had any complaints so I assume I must be doing things to your satisfaction.

However, I must once again stress the importance of input from members. I know that some members would like to read about different aspects of our hobby, apart from the railway side, but as I have said on several occasions in the past I can only use what is submitted. Having said that, this issue contains an article by new member Bob Dyer on casting in non ferrous metals. Back at the beginning of October we received an invitation to the Andover club for a talk and practical demonstration of these processes. This turned out to be a very interesting and informative evening and was well supported by about a dozen members from B&DMES along with members from other clubs in the area. As usual the Andover club made us all welcome and provided all those who attended with some very good refreshments.

Also in this issue Mike Lowe tells of more of his exploits during his days on the footplate. As those of you that attended the AGM on Nov. 26th will be aware I have stood down from my place on the committee after standing without a break for seven years. I will, however, continue to produce this mighty tome for a while longer.

Those members that attended the AGM will also be aware of the superb selection of prizes for the raffle. These were all donated

by new member Jon Poulter. Thank you Jon for this generous gesture.

John Taviner. Editor.

Forthcoming Events

January-2009

- 1 New Year Run (Thursday)
- 13 Meeting night
- 24/25 Maintenance weekend
- 27 Bits and Pieces evening

February

- 10 Meeting night
- 15 Members running day/driver training
- 21/22 Maintenance weekend
- 24 Meeting night

March

- 7/8 Maintenance weekend
- 10 Bits and pieces evening
- 14/15 Basingstoke Model Railway Show
- 22 Members running day/driver training
- 24 Meeting night

Subscriptions

Just a reminder to all members that subscriptions for 2009 will be due on March 1st 2009. As agreed at the 2008 AGM the subscriptions for 2009 will increase to £36. Details of the rationale behind this increase will be covered in the 2008 AGM minutes which are due out soon.

Graham Blissett
Treasurer.

Chairman's Chat.

Dear Members, By the time you read this our AGM will be over and you will know the outcome by now. About half the membership turned up and there were lengthy discussions on several subjects. Most of the voting was unanimous with the exception of the increase in subs where 3 members voted against. Our treasurer Graham Blisset did an excellent job with his presentation of all the subjects under discussion which helped everything along . Mike Lowe ran the draw in the interval with a super array of prizes donated by Jon Poulter.

It has also been brought to my notice that people are still helping themselves to the club library and removing issues of Model Engineer without telling Ken or filling in the borrowed book, so will the member that has taken the whole of the 1946 collection please bring them back or let Ken know he has them. Last of all I will take this opportunity to wish you all **A MERRY CHRISTMAS** and hopefully see you all in the new year.

Terry Hobbs Chairman .

An Anniversary trip to Weymouth on the Cathedrals

As mentioned in the previous addition of Expansion Link a small group of us went on the Cathedrals Express. As it was such a success we have decided to repeat it as another club trip in 2009. The original group have decided to do the 'Sunny South Special' to Weymouth on Thursday 9th July, an important date itself to Southern Railway buffs as the 42nd anniversary of the end of Southern Steam. The trip recreates Southern's final steam express with Bullied Pacific #35030 'Elder Depster Lines' run from Bournemouth to Waterloo, with a fast

run back from Southampton to London, to be hauled by unrebuilt Bullied Pacific #34067 'Tangmere'. 2009 will be the last year Tangmere will be out on the mainline network for a while as its seven year boiler ticket expires. Having been behind this loco before and seen it many times over the last seven years, in my opinion (and many others) it has been the most reliable, go anywhere and best performing mainline loco, knocking the spots of any of its close following Western or BR rivals!! (I imagine I'll get some stick for that down the club...) So, if you were tempted by last years trip but didn't come – now's your chance! We need to know the final numbers by mid-January to get the tickets at last years prices. Let me know if you are interested.

Steve Newell

A Merry Christmas

And A Happy New Year

To All Our Members

From The Editor

Low Cost Castings a Tutorial

Please note, casting metal can be dangerous. Do not do it unless you are sure you, and those around you, are safe. BDMES and I cannot be held responsible for any harm, however caused, should you decide to try anything in this article.

James Nasmyth, the inventor of the steam hammer, started metal casting on an open fire in his bedroom at a very young age. With a little time and patience most people could do their own castings at home saving a fortune on buying them from Reeves or the like. There is also the option to make castings that aren't commercially available or even knock out a few and sell the spares to fund your hobby.

The basics of metal casting involves melting some metal and pouring it into a mould. Yes it is that simple! The lower melting point metals like lead and pewter (aprox 300'c melting point) can be melted on the kitchen stove and pored into a mould made from plaster of paris as shown in Figure 1.



Figure 1, Casting pewter on the stove

These metals are soft so have limited use in construction however they can easily be used to add fine details to a model. Polished pewter can shine like silver or chrome and it is easily cast and easy to clean up including being trimmed with a good knife if need be.

Zinc is a very useful metal that has a casting

temperature around 450'c. It melts fairly easily given a well contained gas burner, a good bonfire or a blowtorch for smaller quantities. It is fairly strong and cuts well so can hold a thread easily and be machined to finish it off. Zinc is also fairly heavy so makes for a good flywheel and other non bearing non heated items. It can start to lose it's strength when subjected to heat in excess of 100'c, so no fireboxes, and would wear too quick for stressed parts like wheels or conrods. Like pewter it can be cast into well dried plaster of paris moulds.



Figure 2, Zinc flywheel rough casting

The casting of harder metals such as bronze (gun metal), brass or iron requires more heat and a different mould material. The bronze and brass's require around 1200'c and iron around 1500'c. The process for casting them is exactly the same as lead etc. but the higher temperatures required need the use of an assisted fire or furnace, a crucible (graphite clay pot) and although they 'could' be cast into plaster of paris it is much safer to use sand or a refractory material.

For these metals I use a metal bucket lined with fire cement and force in air from a children's bouncy castle pump for the furnace as per Figure 3, the charcoal furnace.



Figure 3, the charcoal furnace

The pump speed is controlled by a ceiling fan speed control, not shown, that I got from B+Q. I believe a light dimmer would also do but might not last as long, a drill speed controller should work well. Put a bit of old copper water pipe into the bottom of the bucket to allow access for the forced air at the base of the fire. The bucket is then lined with fire cement from Wickes or the like. Light a charcoal fire in the bucket, turn on the air pump and you have a furnace capable of melting bronze and, with a bit of



time, iron.

Figure 4, the furnace with molten bronze

A ladle might now melt so you will need a crucible. If you're really good with clay then you could make your own I however buy mine. A crucible that will hold around 3kg of bronze is between £20 and £30 but treated well will last a long time. I've only killed two crucibles in 4 years, both by treating them very badly. You'll want tongs to get the crucible out of the fire; I got some blacksmiths ones from eBay for £10 or so and adapted them to fit my crucibles. Plaster of Paris can't really cope with the temperatures of bronze and Iron so sand or a refractory material is used for the moulds. I've not used refractory due to cost and availability but sand works very well if the mould is made carefully.

The masters and moulds are key to a good casting. There are many books on the subject and as space here is limited I'll just cover the main principles of sand moulds.

Get yourself a mould box; I make mine from timber to the size I feel would be useful. These are in two parts, a cope and a drag. The boxes key together so they can be taken apart and, when re-assembled, they re-align accurately.

Get a master of the item you want to mould in wood, metal or whatever firm substance you want, ensuring the master is a little bigger to allow for shrinkage in the metal and machining. Start by placing your master on a flat surface and put the cope half of the moulding box over it as per 'Figure 5, starting a bell mould'. Lightly dust it with parting powder (French chalk or the like) so the master will come out cleanly later.

the master will come out cleanly later.



Figure 5, starting a bell mould

Cover this in Mansfield red sand or some other moulding sand. Moulding sand is a fine sand mixed with a binding agent like clay or oil. Pack the sand in firmly and, as required, insert a sprue (cone shaped bit of wood or the like) that will become the hole into which you'll pour the molten metal. When done turn the box half over and attach the other box half, the drag.



Figure 6, filling the drag

Dust this with parting powder and fill with well-packed moulding sand.

Now we disassemble the two box halves, carefully remove the master and the sprue and re-assemble the box. This leaves a void where the master was.

Pour your molten metal into the gap left by

the sprue and allow to cool. For a 1kg bronze casting you should leave it all for around 2 hours to cool slowly. When cool knock out the sand and the rough casting ready for cleaning up.



Figure 7, the rough casting

The pictures show a bell, as that is what I was casting at the time, but the principle is the same for all castings. Please note that due to limited space this is a very quick and rough guide to casting with the safety aspects skipped over along with some of the niceties of mould making etc.

More detailed information and links to suppliers can be found at my rough and ready web site <http://www.foads.com>.

Bob Dyer

Santa Returns to Viabes

I would like to take this opportunity to say thank you to our Treasurer Graham and his wife Lois for the organization of this years Santa Special. (See full report on this event on the next two pages). Thanks are also due to all those that helped on the day including those indoors helping Santa to give presents to the children, serving mince pies and wine to the adult visitors and keeping the outside helpers served with most welcome warm drinks on a bright but cold day.

Editor

All Aboard for the Santa Special St Nick Returns by Popular Demand

After many months of planning and persuading unsuspecting parents to purchase Santa Special tickets, the B&DMES Santa Special returned to Viabes for its second outing. Under a clear sky on a bitterly cold day, B&DMES members turned out in force to set up Santa's Grotto in the clubhouse and to set up the locos, rolling stock and signalling. Unfortunately, the cold start to the day had also brought with it a heavy frost, which created slippery surfaces underfoot and also managed to freeze the track, padlocks and water system. With many kettles of hot water, the padlocks and watering systems were defrosted. After setting up the Class 66, the cold temperature affected the batteries, which limited the amount of traction that could be placed down on to the ice covered track. To start off with the Class 66 could only manage to pull one laden passenger trolley rather than the normal two.

Having learnt from last year's event, we covered the far end of the clubhouse with black drapes to hide the notice boards and magazines. In front of the drapes we then placed a mass of coloured fairy lights. With the clubhouse lights off and the fairy lights on, the effect was pretty good. With the addition of some tinsel the grotto was finished. At this point I need to say a big thank you to Tom Burgess's wife for letting Tom borrow from her the black drapes from the Orchid society.

Despite carefully planning this year's event, all good plans had to come to an end. The weekend before the Santa Special, we closed ticket sales, after selling the same number of

tickets as last year. The following week my phone was ringing off the hook, with people responding to a Santa Special advert placed in the local community newspaper for Harrow Way. This was somewhat confusing and embarrassing, as B&DMES had not placed the advert. Although inconvenient, the unannounced advert brought in another 35 ticket sales, which thankfully we were able to cater for, but only just. If anyone has a copy of the advert or knows anything about it, I would be



grateful to find out who placed it.

As with last year's Santa Special, we wanted to give good value for money, whilst at the same time having happy children and happy parents. Due to increased costs this year we had to increase the ticket cost to £5, up £1 on last year's charge. This increase was primarily to cover the cost of hiring Santa's suite, purchasing mulled wine at retail price and to give us more flexibility in purchasing the presents, as the main supplier had decided to discontinue much of the range we wanted. At a ticket cost of £5 we were still able to provide each child with two presents (Toy/Game and a book), a

carton of squash, a small chocolate bar, a chat with Santa, and the obligatory two laps of the track. Each fare-paying adult received a large mince pie, a cup of mulled wine or a carton of squash, two laps of the track and a happy child or children.

At 11am we had our first customers, and continued with a steady stream, with the usual lull around lunchtime. By 3:30pm all but two ticket holders had turned up, both of who forgot the Santa Special was on. We also took the opportunity to publicise our Public Running for next year and were also lucky enough that some of our visitors wanted an additional train ride, charged at the usual rate.



Judging by the smiling faces on the children and happy parents, the day was very successful. On the day and subsequently since, we have had a fair number of parents saying how much they and their children had enjoyed themselves and were especially pleased that the children had received decent presents suitable for their age group and gender. Unfortunately, unless we are able to resolve the problem of where we can get reasonable quality toys and maintain a viable ticket cost, this year's event may be the last outing for the Santa Special.

Thanks go to Santa (Nick Taviner), his two

helpers (Thomas and Alex Blissett), the ladies serving the mince pies, mulled wine and copious amounts of hot drinks to B&DMES members (Lois Blissett and Pat Lowe) and Erica Taviner for helping to keep Santa under control and general help in The Grotto. However, the real heroes on the day were those members out in the cold who provided two trains, which were certainly appreciated by the passengers.

As an aside the funniest moment of the day was when one little girl asked Santa how he was going to get down the chimney of her house, when he was so "Fat". Nick took it in good heart, but the look of horror on the face of the girl's mother was priceless. Nick pointed out that Santa used a magic key, so he did not need to use chimneys any more. One happy child, one very embarrassed mother.

*Graham Blissett
Treasurer and Santa Special organiser*

As an addition to this years calendar, Bob Dyer has volunteered to follow up his article with a talk and practical demonstration of non ferrous casting. The date of this is yet to be decided but will probably be at a normal club meeting night. As the demo. Involves fire and high temperatures it will, of necessity, be outside and therefore subject to the weather.

Editor.

The Footplate Career of Mick Lowe
(spanning 50 years) continued

Well here we go again, back to work, the railway being much the same as any other job in as much you work together to make the most of what is often hard and dirty work.

Work on the footplate is no different with hard days being forgotten and lighter days being remembered, we were always on the look out for an easy way of earning a 'crust'.

I said in the earlier part of my story that my first driving turn on the main line was with a Halls class loco to Oxford with the 00.30 freight ex Bristol, this was not quite true in fact it was my second.

Actually I was in our loco mess room as a fireman with my driver when the Foreman came in and said Mr. Lowe I understand you have now signed up (route cards) and can perform driving duties, so I am giving you your first driving turn as I am making you up to driver for the day. Great I thought this must be a conducting job, but no, his next words a blow to my dream of a main line 'blast' he said that in number 3 road there was a stopped Charlie (Q1) which had come off with all the bearings running hot, so to renew all trimmings – plug – plug and tail and mop, all of which had to be made by hand, a really dirty messy job but at least a step up the ladder plus being paid at drivers rate for the day.

On another occasion when as a fireman with my regular driver (Charlie Hayward) we had a turn (19.30) in the evening where we prepared a King Arthur Class loco and went light to Salisbury Depot, we turned, watered

and always worked up with 49 wagons + brake van to Feltham yard and back 'light' to Basingstoke.

We found after a couple of nights when preparing the loco we could do with a tub or two (10cwt) of extra coal, but the coalman had gone off duty – so no joy.

I left a message with the loco foreman to request more coal than we had been given on previous days. Booking on the next night we found we had the 'extra' coal we had asked for!

The coalman and shed engineman had stacked coal on the seats in the cab corners, over the top of the boiler, top of the reverser and also stacked neatly on the floor like a brick wall – with a note IS THIS ENOUGH COAL FOR YOU? We had to laugh at the light-hearted footplate type of humour that was always present in those days.

Another trip with Charlie was when we worked the 17.09 ex Waterloo to Basingstoke (one of our better turns as regards to work content) this turn was always a King Arthur class engine with a load of 10 coaches. First stop was Woking with this train, and by the time you got to Oatlands with a slight drop down through Weybridge you were going at quite a speed (no Speedos on the King Arthur class). If there was any loose play between engine and tender the motion would gradually shake the coal about thus filling the cab with coal dust so you had to use the prep pipe a lot (this only worked when the right hand injector was on)

As we ran through Weybridge – a loud bang – loads of steam – and no prep pipe. So the steam valve shut – looking down we could see the injector body fractured away from the pipe work. We shut water valve and we will have a look when we reach Woking.

In the meantime we had to use the drivers side injector but of course this does not allow the use of the prep pipe. Looking at it at Woking, Charlie who was never a one to give up on an engine unless it was really necessary said “ carry on lad with one injector and lets hope it doesn’t pack up altogether” thankfully all went well. We arrived back in Basingstoke as black as rooks as it was not possible to keep the dust down.
Another day ‘dusted ‘off!!!

Animals on the line are always a potential hazard, I have had several incidents, and three were in the same area of the Leamington Spa and Fosse Road. The first time a few sheep ran across in front of me causing me to brake when working the X Country service with a 47 Class loco and 7 coaches. No fatalities here (so no roast lamb for the weekend!!!!) The second incident was a couple of weeks later half a mile near the same place I ploughed through a flock of sheep, this time killing several. The shock of even hitting animals is not very pleasant as it’s a really sickening thud with lots of bits of sheep everywhere!! Fortunately no damage to the Loco as often a brake pipe can be severed then assistance from another loco would be required. The third incident was in the same area I was able to stop as it was a straight stretch of track and I could see a flock of sheep approaching me. I informed the area signalman of the incidents. The fact that they were not wearing high visibility jackets (the sheep that is) was a definite crime to be on the track without wearing one!!!! Ewe never know what you are likely to meat!!!

Another rather funny occasion I was working a Freight Liner train from Didcot via Basingstoke to Southampton Freight Liner Terminal via Basingstoke/Laverstoke loop (Salisbury) and Romsey. Approaching Basingstoke the signalman called on the cab radio to ask me to pick up a station shunter and take him with me as sheep had been reported on the line near Overton Station. Well the station shunter is a bit of a wag so we approached Overton at caution, sure enough there were about half a dozen sheep wandering about on the track near the footbridge. We rounded them up, and put them back in the field through a hole in the fence, all except one which had no intention of going back to the field, after many attempts the shunter managed to grab the sheep by its hindquarters having dug his fingers into its fleece. He shouted at me “ Mick I have always wanted to shag a sheep” (joke) at which there was a loud cheering, clapping and whistling from a crowd of onlookers on the footbridge who had been watching our antics at sheep herding. I dropped him off at Overton Station to catch a train back to Basingstoke and I carried on with my trip without further fun and games!! Basingstoke was until electrification in 1967 an extremely busy station with three signal boxes.
A Box at the London end of the station (downside)
B Box at the country end (downside)
C Box, which controlled the Western Region

side of the station, this was immediately behind where the Panel box is (was) situated The goods yards were down yard 24 hours a day shunting

Up yard also 24 hours a day shunting

The North yard (now a station car park) was about 16 – 18 hours a day shunting until about 04.00

The East end (behind A Box) was served by various locos that shunted coaching stock as required and then worked their own service train, quite a bit of the movements were to detach and attach coaches or vans to down main line services

Also in the early 1960's an extra loco was provided on the upside opposite B Box to attach and detach coaches and vans as well to up main line trains as required before working at one time a van train to Reading. The early 1960's saw most of the shunting duties consolidated so that the now 350 HP Diesel shunters covered the local movements also, again with freight tailing off the removal of one of the shunting locos meant that one shunted both up and down yards making the turns of duty very busy.

One other bit of history, at one time until the late 1940's – early 1950's a GWR shed was situated in the North Yard with an establishment of Drivers and Firemen who worked mainly freight to the Tysley/ Birmingham and Wolverhampton areas. The shed had a water column but no turntable so locos always went to the SR shed for turning.

That's all for now, more next time

Mick Lowe

If it ain't broke don't fix it.

The bypass hand wheel on the Bantam Cock was low down on the footplate and always a bit of a fiddle to when it needed a bit of a 'tweak'. So I decided to raise it up. I bought

a length of 5/32" dia. stainless steel at the Guildford show and set to, to making a new spindle that was an inch longer. No trouble. Over at the club for run to show off Dad's pride and joy to his daughter and grand daughter. Ian (Roberts) was there as well to see that I behaved myself. On to the track and off we went, everything working well with the sight glass showing that the axle pump was doing it's job and filling the boiler nicely. Time to crack the bypass, easy to do now that it more 'get at able'. Engine going well but the boiler is slowly filling; bypass is not by passing! Hand wheel knob is turning so why isn't the valve passing? Stopped at the station "Ian the bypass valve isn't working. The hand wheel's turning but nothing is passing". "Is the hand wheel loose on the spindle?" says Ian. A close inspection confirmed his fears. The hand wheel is screwed to the spindle and has a locknut to lock it in position. On the original it worked a treat, never came undone but on the new one I was not so lucky. Back home a square was milled on the spindle and a square hole filed in the hand wheel. "Come loose now if you dare". So the old expression is a lesson to be learned. It wasn't broke so I should have left the darned thing well alone!

Dave Mattingley.

For sale and help.

3/16" dia. Taper pins X 1 1/2" long. 50p each.

Has anyone got a Taskmaster compressor? I have just bought a secondhand one but the regulator control knob is missing. If you have a spare regulator that you want to sell or a knob that I can measure to allow me to make one then I'd love to hear from you.

Dave Mattingley

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Email Addresses

If you have received a copy of the newsletter by post, it is because we don't have your Email address. Each newsletter costs us about 60p to print and post, where as Email is effectively free. Currently, we do not have an Email address for nearly half the membership. If you do have an Email address, which we can use, could you please Email me with your details.

Graham Blissett
Treasurer

Who's Who.

Chairman	Terry Hobbs
Vice Chairman	John Croker
Secretary	Brian Hogg
Treasurer	Graham Blissett

Committee Members.

John Taviner	Newsletter
Tom Burgess	Member
Bob Lovett	Member

Project Leaders.

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Electrical Work	Simon Hutson
Library	Ken Jones
Painting/Decorating	Vacant
Publicity	John Dixon/ Assistant required
Signalling	Graham Blissett
Station Building/Contents	Vacant
Track/Site/Ground Maint.	Dave Blaza/ Mick Lowe
Traction Engine Track	Vacant
Webmaster	Stephen Newell
Newsletter	John Taviner

As from March 1st 2009 the committee will be as follows.

Tom Burgess replaces retiring John Croker as Vice Chairman. John Taviner retires but remains as Editor of "Expansion Link". New members to the committee, as elected at the AGM, are Barry Spender and Jon Evans. All others remain unchanged.