Supporting Model Engineering since 1970

Federation of Model Engineering Societies

NEWSLETTER

November 2024

Editorial

So another year has flown by and it seems to me that this year has seen some further recovery from past restrictions. In particular the last few months since the last newsletter have been busy with the FMES Rally at Nottingham and then the Midlands Model Engineering Exhibition followed recently by the Lowestoft Model Engineering and Model Making Exhibition all of which had good numbers in attendance.

The Rally at Nottingham was very successful and a report is included together with reports of the two competitions held on the day ie. the Australian Association Live Steamers Trophy and the FMES Rally Competition. There is also a brief note on the Midland and Lowestoft exhibitions.

There are two requests for some feedback from clubs . The first request refers back to the workshop on insurance that was held at the last AGM. At the workshop it was made clear that only a collective response on insurance issues would have any impact on the underwriters. More details on the feedback required are later in this newsletter.

The second request relates to young engineers and a desire in FMES to ensure there is an up to date understanding of our clubs' approach to developing young engineers. Again, there is more information of the sort of feedback requested later in this newsletter.

I also have a request as editor of this newsletter. I receive some club newsletters via various roundabout, but not very consistent, ways. I will be very pleased if clubs that do issue a newsletter add me to their mailing list as they often include articles that will be of interest to a wider audience and technical articles that can usefully be added to the website library. Permission will always be sought from the club and author before publication in this newsletter or inclusion in the library. Please add my email (tony.lee@fmes.org.uk) to your mailing list.

Tony Lee

Volume 14 Issue 4: November 2024

Chairman's Chat

Now and again the question of what is model engineering pops-up. A lot of folk immediately think of locos and railways but if you looked round the club stands at the recent MMEE you would have seen a great mix of models. Although I have 1/4 mile of 7.25g track, a couple of locos, trucks and even a breakdown crane (with match truck) at my home, much of my modelling does not involve miniature railways. I have for instance built several scale working models of horse drawn farm implements, an 1/8 scale cutaway water mill and I'm currently building a tower wind mill to the same scale.

While I've had great pleasure from "playing trains" with my mates and their locos on my track I've had just as much satisfaction when I've been able to explain to the general public the workings of agricultural machines of a by-gone age or the intricacies of a corn mill using my models. Using the models to show how one part interacts with another to produce a movement, etc is easier than with the full size, especially in the case of the mills when the relationship between equipment on different floors is much easier to see.

So what am I trying to say, I think it's basically that if you feel able too, use your models (and I include locos) to explain to folk who are not necessarily engineering or machinery orientated how things work, you might just be surprised at the positive reaction you get. Also it might just spark the interest of someone who eventually takes up our hobby.

This is the last newsletter of 2024 so I'll take this opportunity of wishing you (a bit early) a Merry Xmas and also that you are keeping on enjoying your model engineering activities.

Bob Polley

STOP PRESS

We are pleased to advise that our AGM next year will be held on Saturday 1st March 2025, at The Whitewebbs Museum of Transport (https://www.whitewebbsmuseum.co.uk/) in Enfield, North London. Please make a note of this in your diaries: we will make more information available soon!

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The birth of the 'El Paso & Barton Hill Railroad'

By Bob Polley

I'm not sure if it was excess 2003 Christmas spirit or a rush of blood to the head after New Year 2004, but it was decided that we, the better half and I, would build a 7 ¼ gauge railway track. A two acre former pony paddock, complete with pond and mature trees, had become available as I had finally managed to remove 1,000 tonnes of pig muck which had been tipped there during the foot & mouth crisis. A laser level was bought, the old dumpy level being retired in favour of more modern technology, and the area was surveyed. It was found to be surprisingly level, with the necessity for only one cutting, and gradients in the order of 1 in 90.

The next task was to source materials. We already had a plentiful supply of polythene to lay under the track bed ballast, in the form of old pig food bags – good recycling and no cost! 'Chalk chippings', actually small stone chips, separated from sand extracted at a local sand pit, was deemed to make suitable 'scale' ballast and 13 tonnes was duly delivered.

The rail itself was obtained from a well known supplier 'down south'. We were told it was in 4metre lengths, so a van with a cargo space 4.1metres long was hired and we set off to collect 1 ½ tonnes of rail. On arrival, and as we commenced loading, it soon became apparent that southern tape measures differ from those 'up north' when the '4metre' lengths of rail wouldn't fit in the van (at least not if we wanted to close the rear doors!)

We measured them at 4.15 metres and so the return trip was made with the back doors tied nearly shut with 'farmers friend' i.e. baler twine (we never travel without it!).

Sleepers were to be another recycled product, using wood from redundant pallets, soaked in waste engine oil as a preservative, which also gives a good authentic colour. Flange headed 6x25mm coach screws, 10,000 of them, duly arrived to hold the rail to the sleepers.

Now that we had assembled most of the materials we would need for our model 'civil engineering project', the initial work could begin, but no, work is the wrong word, as this was to be a hobby project, not something with deadlines and schedules to be met, the day job has enough of these.

So we start again. The initial task was to build a treatment unit for the application of preservative to the sleepers. This sounds grand but in fact it was crude, simple, but effective putting clutter laid around to good use. A five gallon drum had one end cut out so that sleepers could be packed upright into it, then covered in waste oil, topped with an old brake disc to keep them down. The second

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stage was an old enamel sink into which the suitably soaked sleepers were placed to drain off surplus oil, which then drained via the waste hole into a second topless five gallon drum.

The initial cutting of the sleepers to a uniform shape and size was done using a 10” bench saw, part of the farm workshop. A simple jig was made, which in conjunction with the pillar drill allowed 4 holes to be accurately drilled in each sleeper to accept the coach screws thus ensuring an exact and reproducible 7 ¼” gauge. Another rather larger jig was now constructed from an old scaffold plank and offcuts from sleeper production so that the drilled sleepers could be located at the correct spacing. A third jig was next made to allow correct drilling of the ends of the rails to accept the fishplate bolts, this being held in place when in use by molegrips and drilled using a handheld electric drill. Now we were ready to start (mass) production of lengths of track.

Track production now started by placing 23 predrilled sleepers in the aforementioned jig and then setting by hand the first line of coach screws into the pilot holes. A length of rail (with its fishplate holes already drilled) was then laid in place, a further line of coach screws being added to hold the rail loosely in place. This procedure was repeated putting the second line (correctly spaced at 7¼”) alongside the first and finally, with all items roughly in place, the rails were lined up at the ends and spacing checked along the line, the coach screws were all tightened up - we had our first section of railway line!

The second length of track was produced in a similar manner and at this point we realised how time-consuming track production would be, each length of track taking about 90 minutes to assemble.

Analysis of the assembly procedure showed scope for time saving in tightening the coach screws.

Assembly of track sections 3,4 & 5 were speeded up by using sockets (once the tool chest and workshop had been scoured to find the right size) to tighten the 92 screws per length and cut assembly time per length to 70 minutes. Progress!

At this point it was noticed that there was a variation in the lengths of the rail and also that some of the ends were not cut cleanly - so far we had, by luck, selected two equal lengths of rail per track assembly, but this wasn’t going to happen every time. So from now on, each pair of rails was clamped together and their ends trimmed using the bandsaw.

Before work started on track length number 6, there was a flash of insight in the ‘old grey matter’,

use a cordless drill/driver with a magnetic socket to both initially put in and finally tighten the coach screws. The only problem was that the battery pack to our drill/driver had passed retirement age (but doesn’t that always happen - you think you’ll replace some piece of equipment that is on it’s last legs before it’s next needed, but don’t quite get around to it - then suddenly the next job appears).

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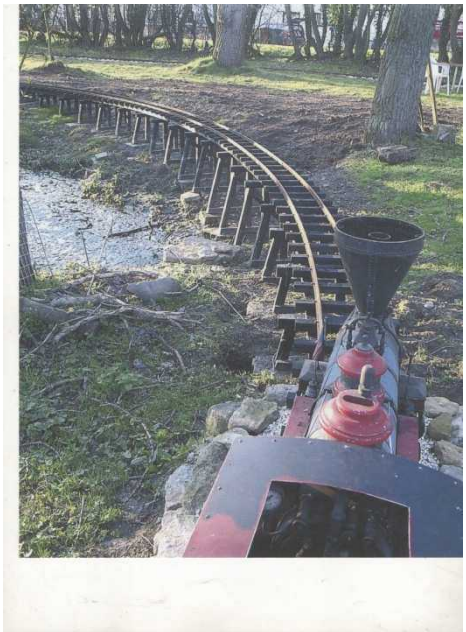
Bodge required! So a length of cable was fixed to the battery connection on the drill/driver and the other end to the vehicle battery charger, trigger switch pulled and back in business. Even though we were putting at least 12 volts into a 7.2 volt unit (well, it gives it a bit more grunt) the ammeter on the charger was reading a steady 5 amps as the coach screws fairly rocketed into place. Construction time per rail section was now down to 50 minutes and no aching wrists.

By the time track length number 15 was completed, we hadn't started laying any track bed, but it was after all still just April, the rain was slightly warmer than in winter but not much, and evening daylight was still limited. But we were itching to run our loco on our own line and so heads were scratched and the idea came to lay a temporary track up the middle of the house drive one (fine) weekend. So it came to pass that 10 lengths of track (135ft) were laid, suitably levelled by slithers of wood, buckets of sand etc under the track at strategic places, denying vehicles access to the house for the weekend.

The loco was wheeled out on its trolley (which had been constructed so as to connect to, and thus form a temporary extension to, the track so that the loco can be pushed with minimum effort from trolley to track and vice versa) and placed on the track.

Normal pre-steaming procedures were carried out and then steam raised. The bell was rung, the whistle blown and the regulator inched open, we glided forward. A good two hours of enjoyment followed, even though we were just running backwards and forwards. Photos were taken, it was recorded on video, cups of tea were drunk (in hindsight maybe we should have had some of that bubbly liquid). Live steam had arrived at El Paso & Barton Hill!!!

The clocks changed and although there was the usual annual moan about getting up an hour earlier, it at least meant that there was no longer the excuse of dark evenings to stop outside working. Thus work started on the track bed. Using simple manual tools – spade, shovel, pickaxe, wheelbarrow etc – about 150ft of track base was levelled to a width of 2ft. This length had been 'pegged out' with level marker pegs set with aid of the laser level. The next step was to lay plastic pig food bags (nice bit of recycling!), slightly overlapped with one another on the prepared surface. Within a few seconds of the sixty or so bags being put in place we were rushing about the site retrieving them, yes, there had been a sudden gust of wind. Lesson learnt, we started again and this time each bag had a shovel full of chalk chippings (ballast) placed in the centre as we worked our way along. Barrow loads of chippings were now tipped along the bed and these were then levelled over a width of about 18" to 21" so that about 2" or so of feed bag was left at each side onto which soil was backfilled.The ten lengths of track that we had temporally laid on the house drive and then put in store were soon laid on the



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prepared track bed. In theory at least, we could now run the loco at any time we wished.

But back to reality, the track would have to go around corners, we would need turnouts, and larger quantities of soil would need to be moved to prepare further level track bed, as well as the fact that we were moving further from where the chalk chippings had been tipped (and the gate where all other materials entered the site!). The last problem, the transport of both soil and chalk chippings, was the first to be addressed. The farm scrap head was raided and produced an axle from a hand trolley, lengths of rusty but sound box section and angle iron and 2 leaky hydraulic rams. From these materials and the obligatory pallet wood, a small tipping trailer (5'x3') was, with about a fortnight's spare time, produced. It was hitched behind the small Kubitza tractor, (the Kubitza started life as a Kubota but as parts broke or wore out they were replaced with whatever was cheaply to hand, ie Nissan Micra front wheels, Ford Escort clutch etc) and loaded with soil to test it. Two problems, the axle buckled and the buck would not tip. The axle problem was sorted by welding some heavy steel strip back and front of it and the non tipping was addressed by repositioning the rams. A second test was conducted, this time successfully and so we now had transport for bulk material.

To produce curved track we obviously needed a means of bending individual lengths of rail and so thoughts turned to an elaborate rail bender, powered by a redundant motor/gearbox from a (deceased) MIG welder (having carefully studied items available at model engineering exhibitions). Common sense, however, prevailed and a simple bender was made by having two ball bearings fixed in a simple angle iron frame, with a third bearing able to slide toward and away from them, this being controlled by a 12mm bolt. Lengths of rail are entered into the contraption, the bolt tightened until the rail is tightly trapped between the bearings. The rail is then forced backwards and forwards (brute force and muscle power), with appropriate retightening of the bolt, until the required radius of rail is achieved. We had decided that most of the track curves should be to a radius of 45ft and thus a jig was made in a similar manner to that for the straight lengths of track, the base in this case consisting of 2 sheets of chipboard nailed to some 6"x2" timber (rather than scaffold plank). The 45ft radius was generated using a piece of chalk tied to the appropriate length of baler twine (well, why make things complicated - who needs modern technology - the original railways didn't).

Production of curved lengths of track is basically similar to that of straight lengths, except a shorter rail is selected for the inner rail (we discovered that the lot we bought in differed slightly in length) and only one end of each rail is predrilled to accept fishplates. With all components in the jig and the rails secured to the sleepers the undrilled ends of the rail are cut using a 9" angle grinder so that they are 'square' and then the fishplate holes are drilled - we can now go round corners (or should that be the bend).

(still more to come – if you're not too bored!)

Bob Polley

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Report: FMES Autumn Rally at Nottingham SMEE

On Saturday, August 31st, following months of careful planning, the Nottingham Society of Model and Experimental Engineers (NSMEE) hosted the Federation of Model Engineering Societies (FMES) rally at their Ruddington, Nottinghamshire headquarters. The event was blessed with ideal weather, as blue skies and sunshine prevailed throughout much of the day.

As the unloading commenced, visitors and host club members buzzed with excitement, eager to see the impressive display of locomotives and road vehicles.

The rally featured an impressive array of 33 model locomotives and vehicles for visitors to admire, including two 7¼-inch gauge steam locomotives, twenty-four 5-inch gauge steam battery-powered locomotives, four 3½-inch gauge steam locomotives, two traction engines in 4½-inch and 3-inch scales, and an AEC Matador towing an RNLI lifeboat.

During the event, 57 FMES members received wristbands to access the host club's hospitality, and each visitor was given an NSMEE-branded mug for their tea.

Maidstone MES member Sue Parham deftly manoeuvred her 3.5-inch gauge Juliette locomotive along the extensive track at the NSMEE. Notably, Sue disclosed that she transports her locomotive in an oversized bag resembling a large handbag.

Visitors were greeted with an abundance of tea and coffee upon arrival. At lunchtime, the ladies of the NSMEE had prepared a superb buffet. Thank you, ladies.

In the afternoon, visiting members occupied both the raised and ground-level tracks at the Great Central Railway complex. To engage the public, the NSMEE offered rides on the ground-level tracks, allowing locomotive owners to share their hobby with the eager families in attendance.

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Martin Parham, a member of the Maidstone Model Engineering Society, was enjoying a run on the ground-level track of the NSMEE with his 7 ¼-inch Stirling Single locomotive.
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Tim Carr travelled from Wakefield to run his Sweet Pea at the Ruddington track. Thank you, Tim, for making the long journey - we appreciate you visiting and hope the trip was worthwhile.

John Richardson, a member of the Brighouse and Halifax Model Engineering Society, brought two impressive model locomotives to the event - his beautiful 5-inch gauge Royal Scot and a 5-inch gauge Midland 990 Class locomotive.

Model railroading encompasses a diverse range of interests, from traditional steam locomotives to modern diesel and battery-powered engines. Female enthusiasts are expertly piloting these advanced locomotives with skill and passion.

Jennifer Stevens, a member of the Harlington Model Engineering Society, is seen here driving her father's 5-inch gauge Class 37 locomotive.

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Nigel Smalley is pictured here operating Tony Lee's 3-inch Burrell Traction Engine. Tony was unable to drive the delightful model from Banbury all the way to Ruddington, as the journey would have taken several days and required a substantial amount of coal.

The NSMEE hosted an impressive rally and concluded the event by serving a BBQ for visiting members and supporters.

The members of the Nottingham Society of Model and Experimental Engineers, as well as their supporters, deserve our sincere gratitude for their contributions. Additionally, we must acknowledge Tony Knowles, who collaborated with Peter Harrison of the FMES to bring this rally to a successful conclusion.

Peter Harrison

The 2024 Australian Association of Live Steamers trophy

The 'AALS' trophy competition is a well-established annual event mirroring a similar event put on by our Australian cousins 'down under'. It sets out to select the best working model of a steam locomotive built to Commonwealth designs of any scale but running on gauges between 2.5 and 7.25". This year the competition was part of the FMES Rally, kindly hosted by Nottingham SME on 31st August.

As is somewhat nervously becoming routine, weather for the rally was excellent and the host club laid on an excellent day for all visitors. We were very pleased to see a good line up of eligible locomotives…and the excellence of this line up was to prove to be a major headache for our judges. In the end, and by the slenderest of margins, the worthy winner was chosen. Les Brimson, from the North London club brought his faithfully reproduced

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SE&CR Class L on 5” gauge and showed it off with impeccable results. He was awarded the AALS trophy, a modest award for a model that took – wait for it – 45 years from start to finish.

Les has provided us with some details that I am sure will be of interest to others:

As per prototype the main frames taper inwards from ahead of the leading coupled wheels and taper again ahead of the cylinder block. This provides side movement clearances to the bogie wheels which allows wheels of the correct diameter to be used without fouling the main frames.

The bogie has leaf springs with equalizing beams and brass oil boxes for axle lubrication. Leading coupled wheels have coil springs and the trailing wheels have leaf springs as did the originals.

The vertically mounted steam reverser requires the weighshaft to be located below the gear center line. None of the Maid of Kent published valve gear designs (by Curly, KN Harris or Don Young) have this configuration, nor are they close to the actual layout of the Stephensons gear used on the L’s, or L1’s for that matter. I had a works drawing of the gear showing the motion plate with its pivot support for unequal length rocking arms, suspension levers for the intermediate valve rods and locomotive type expansion links supported by the forward, upper, eccentric rod pins. As the weighshaft is below the gear centre line the expansion link supports prop up the links unlike most Stephensons gear designs where the links hang from the weighshaft arms. Applying the principals outlined by Don Ashton I was able to obtain equal valve events whilst maintaining the prototypical gear layout. I made a pattern for the motion plate incorporating all features of the original including lugs to support the rear end of the crosshead guide bars, four per cylinder.

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Details of the steam reverser were taken from drawings by C Roach. However, its small size caused some concern that it would not be sufficiently reliable to do its job. I therefore fitted a second one, much larger and located beneath the footplate, operated in parallel with the scale reverser on the right-hand running board. Both are operated simultaneously from the correct controls in the cab. This required head scratching to get the linkages to both without spoiling the external appearance of the visible controls. The cut off is indicated by a quadrant plate and pointer in the cab.

The boiler is to Maid of Kent design, though with a more representative backhead. There is no turret, steam is taken to injectors, blower and steam reverser from internal pipes commencing in the dome. Several layers of lagging were added to bring the barrel cladding up to the correct diameter.

Running boards, sand boxes, steps, splashers, cab platework, windows and buffer stocks were scaled from the works GA. The splashers and cab give the engine its characteristic lines, consequently I took a lot of time to get these looking right.

Tender is straight forward, also scaled from the works GA with flared tops and coal raves. It has quarter turn injector water valves located as prototype, correct compensated brake gear and tool boxes.

Les was presented with his award by Bob Polley. We hope to give the judges an equally tough time at our next rally and competition!

Paul Naylor

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The 2024 FMES Autumn Rally Competition

This competition, in it's second year, took place at the FMES Rally kindly hosted by Nottingham SME on the 31st August 2024 at their facilities in Ruddington. It was inaugurated to provide an informal competition to complement the well-established Australian Association of Live Steamers competition (AALS) held at the same event but that is restricted to steam locomotives of commonwealth design. Indeed, the new competition includes all model types able to be displayed at the host club's facility that fall into the remit of 'model engineering'. The rules are wide, but essentially judges are looking for examples of amateur skill in producing working models using any technology and of any representation. Nottingham club was able to host a number of models that were not 'just' steam locomotives and so this competition was wide ranging. Whilst the steam locomotives were excellent (a point made by the judges for the AALS competition), there was some novelty on display with traction engines, non-steam locomotives and our eventual winner, Stephen Bennett - of the 'home' club - with his working 'combo' of a model lifeboat towed by an AEC truck.

Stephen described his journey: "My build of the 1/12 scale Clyde Class Lifeboat took me 1500hrs and along the way I came across some, let's just say 'challenges' here and there. The mast which is all made from brass and soldered together along with the hand rails was interesting to solder together. I found that you cannot get fittings off the shelf so the majority of these are scratch built and some were made more than once to get it right. The painting was a big concern and I really wanted to get it 'right-first-time'. In the end, the spraying turned out better than I could have hoped for.

All in all, I am very happy with the end result and the model sails very well. It is fitted with 2 electric motors, 2 car batteries and has a weight of 70kg. The overall length

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is 70 inches (1.78m in new money), and the beam is 18 inches (457mm), altogether it makes an impressive model on the water.

The prototype was also impressive, with only 3 of these built for the RNLI. They were in service for 33 years from 1965 to retirement in 1988 and were fitted with two Gardner 8-cylinder diesels. At 70 feet in length (21.4m) they were the biggest built for the RNLI.

Having made the boat, I wanted something to move it and the concept of the AEC Matador truck was really an idea for something different and a bit of fun. It is based on a mobility scooter that was stripped to the chassis. It was then cut and extended 6 inches (150mm) to get the correct wheel base. The body is made from plywood and built onto the chassis. I used the original wiring for the lights. It is road legal, 1/4 scale and took me 3 months to build." The eagle eyed will note that the boat scale is approximately a third that of the truck, so the proportionate sizes are misleading!

Stephen receiving his award from Bob Polley, Chairman of FMES. We look forward to seeing more examples of all types of model engineering at our next rally!

Paul Naylor

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2024 FMES Trophy and Polly Model Engineering Prize

Autumn is coming and that means an encouragement for all youngsters engaged in the hobby to sharpen their pencils (or computers etc) and enter the annual competition. It's not just the youngsters though as they may well need firstly to be told about it, and then encouraged to enter, so *all* club members should consider whether they know someone who should enter and provide encouragement and maybe support. It would be good if all clubs with a 'young engineers' section could provide at least one entrant each to make for a thriving competition (so maybe leaders of these clubs could ensure that this message gets around?!). Don't think that only museum standard engineering wins either: we are especially interested in seeing young engineers who have produced their projects in spite of all sorts of challenges and maybe using basic tools and materials, as well as what they have done to support their club and get involved in model engineering in general.

I suppose I should now wear sack cloth and ashes as we had hoped to modernise the entry process by going 'online'. Well, the best laid plans of mice etc meant that we failed – for this year – and so we are asking you to accept the same process as last year. The entry forms to download, frequently asked questions and other relevant material is all available on the young engineers page of the website…and the closing date for the forms to reach us is **31st December 2024**. That sounds ages away, but isn't, so please get involved ASAP! There are cash prizes, vouchers and a glass trophy for the winner.

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Insurance matters….

At the AGM, we held a workshop on the subject of insurance, and were pleased to welcome Martin Levers from Walker Midgeley (WM) to hear your comments. Developing a suitable insurance policy to match the somewhat unusual requirements of a Model Engineering Club is not a straightforward task and the WM policy and its options that many clubs participate in has been developed over the years (not without help from organisations such as FMES) to try to address this sensibly. As you might imagine, this is very much a niche area of insurance and we are thankful that a company like Walker Midgeley is able to offer something relevant…but this does not mean that it could not be developed as priorities change in the Model Engineering world.

It is not sensible for WM to offer exactly tailored policies for each club and so any solution has elements of standardisation. What we would like to do is collect the views of clubs that require insurance for their model engineering activities, to try to hone the policy offering and its options for present and future needs. To start this ball rolling, we would like to collect the views of clubs to see if there are common threads that should be collated and used to see if the policy and options on offer could be improved. Your help with this is paramount of course: we will not be recommending any change to the policy to WM if there is not enough of a voiced need for it by the users!

Consequently, if your club has insurance needs that are not apparently met by the current WM policy and its options, or where you feel that you need further or redefined options, we would like to hear from you. Please try to respond (even a response saying that you have no need for change is useful) by 31st December 24 to this via email, entitled ‘insurance’ to info@fmes.org.uk with your thoughts. Our intention is then to see if there are potentially common areas for proposing development to WM.

Over to you…

Paul Naylor

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Young Engineers & FMES

It is a major aim of FMES is to promote our hobby, in particular to seek ways to attract the younger generation and pass engineering skills on to them and the ability to make things. To assist us in that aim, FMES needs your help to make sure we are up to date with our understanding of your club's involvement with young engineers.

This is not a formal questionnaire, but we will really welcome some brief notes on your club's experiences – the following questions are just some examples of the sort of information that will be useful feedback:

How many junior members do you have?
Do you organise specific activities, training, etc for them?
How do you attract them to your club?
Any challenges, problems, successes?

Please don't assume that we already know about your club. We may do but be out of date in our understanding, or we may just not be aware.

We are particularly interested in creating a 'group' of clubs with active and enthusiastic 'young engineer' members that are supported by the club. This will help us understand how we might support Young Engineers, create 'good practice' material and provide more focussed help and information.

If your club fits this and wants to support us we will need the name and email address of the adult club member who acts or can act as the 'young engineer co-ordinator'. Please join us in this endeavour by mailing us at info@fmes.org.uk , with the heading 'Young Engineers'.

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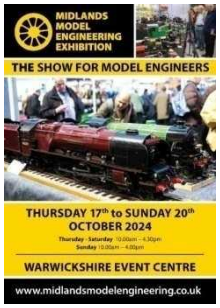
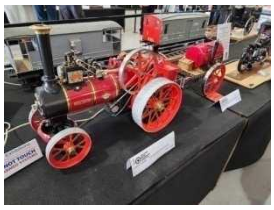
FMES at the Exhibitions

It's been a couple of busy months following on from the Rally and AALS and FMES competitions with the FMES stand present at the Midlands Model Engineering Exhibition in October and at the Lowestoft Model Engineering and Model Making Exhibition (LowMex) in early November.



The **Midlands Model Engineering Exhibition** was held over four days in October. Our experience on the FMES stand was that attendance was good over all four days. We had the opportunity to talk to a wide range of visitors and demonstrated the developments of the FMES website including the recently introduced library and suppliers list. There were many fine models on display with competition entries and 32 club displays. Hereford are congratulated for winning the trophy for the best club display. Over 30 suppliers attended so although the MMEE has perhaps changed a little over recent years, there was still plenty of opportunity to spend money!



The **Lowestoft Model Engineering and Model Making Exhibition** has just taken place over the first weekend in November and Halesworth & District MES are to be congratulated for again putting on a friendly exhibition with the widest range of model making and model engineering exhibits on show. In fact it's difficult to think of a model making activity that wasn't on show. From the smallest gauge rail layouts that would fit in a small suitcase, through plastic model dioramas, boats, planes, clocks to the swarf creating results of model engineering, the quality of all the exhibits was very high. It was also good to see working models including 16mm scale and G1 railways, stirling and stationary engines, radio control trucks, tank, droids and a dalek which certainly caught the attention of younger visitors. The College also made their very realistic boat bridge simulator available for visitors to try and bring a boat home to port.

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Launch of new library facility

We recently launched a new web site Search facility to assist users looking for information on our website. However, this is only half the story. We have now created a comprehensive new library facility with over 100 documents covering a wide range of articles of interest to model engineers.

We have developed this facility for the interest and enthusiasm of model engineers and other interested people seeking specific information for use in their hobbies, or simply to browse. The articles presented have all been published in club or FMES newsletters or produced for support and clarification purposes by and for those engaged in some capacity in the hobby. They are reproduced by kind permission of the original publishers, with the authors name where known.

Articles cover Design and construction, in the workshop, operation, models and general interest. Go to the FMES website and look under services. Browse the topics or use our 'search' function to find relevant articles.

We will continue to expand this important new facility so look out for future announcements. We are keen to add more articles to the library so if you or your club can contribute material please contact us.

The following article from Colchester SMEE about their automatic motorised track cleaner is shown as it appears in the library.

NB. The downloads section has been renamed Reports and Newsletters. The suppliers list and the speakers list have been moved to the new library

Jim Hollom

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Track Cleaner

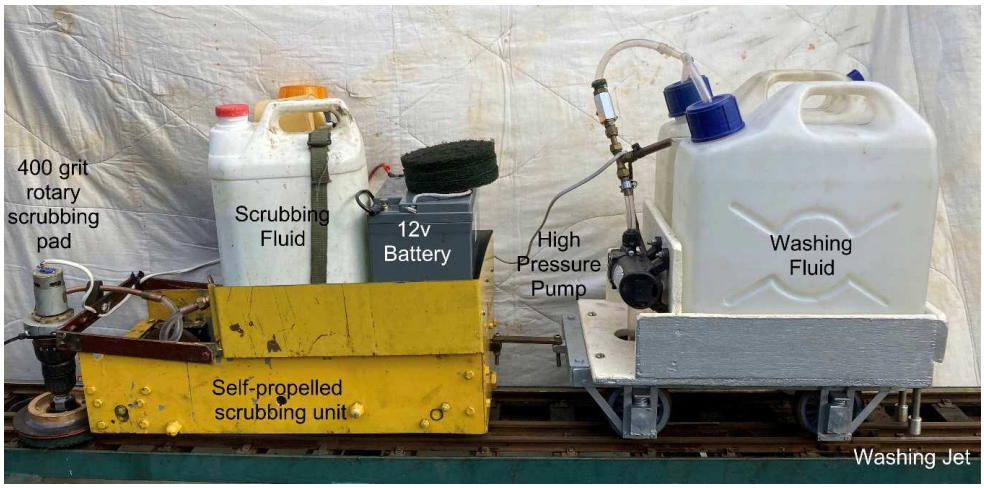
This document was written by Paul Purser and was originally published by the Colchester Society of Model and Experimental Engineers in October 2024

Does your railway track accumulate oil on the railhead? Do your loco's lose traction when hauling more than the driver, or when negotiating gradients? Well, the chaps at Colchester SMEE have suffered with these problems for some time and have now established a method of cleaning that avoids members bending over the track with rags soaked in a degreasant.

Developed from an initial concept of just a rotating wire brush mounted on a carriage, the present (2024) 'Proof-of-Concept' vehicle now incorporates: degreasant application; abrasive cleaning; and high-pressure washing, which is proving to certainly be heading in the right direction to a long-term solution to our problems.

This all sounds jolly sophisticated (and expensive), but the degreasant is washing-up liquid; the abrasive is a 120mm diameter 'scotchbrite' pad of 400 grit, attached to a 12v cordless drill head and rotating at 500rpm; and the high-pressure washing is from a 12v 70w High-pressure Water Pump rated at 8litres/minute, and designed for use in caravans (purchased from eBay at around £50).

Pictures speak a thousand words, so hopefully the concept is self-explanatory, below.



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To demonstrate how the unit currently works, a CSMEE member has uploaded a video to YouTube, here: https://youtu.be/Cgcr94wR23I

Results through 2024 seem to indicate that with the track being cleaned regularly (depending on frequency of track days), locomotives are easily able to negotiate the gradients of up to 1 in 66 whilst hauling loads appropriate to their available power.

A couple of YouTube videos that you may have missed. They were issued after the passing of Clive Groome earlier this year who was an experienced fireman and driver on the Southern Region and latterly with the Bluebell Railway.

Driving & Firing - The Art of Driving
https://www.youtube.com/watch?v=SXI1OT75qf8

Driving & Firing - The Big Four
https://www.youtube.com/watch?v=PPbUGA0xJ1M

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Committee members' contact details can be found on the Federation MES web site

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Publications Available from FMES

The FMES publications listed below are available from our stand at rallies and exhibitions or by post from David Mayall. Please make contact first by phone or email to get combined postage costs when ordering more than one item. (See note below). The figures shown here are for single items only. Please make cheques payable to 'Federation MES' or use BACS to Sort Code 20-71-82 Acct 43755967.

	From Our Stand
Examination & Testing of Miniature Steam Boilers BTC 2018 - Orange Book Vol 1: 3 bar litres to 1100 bar litres; Vol 2: under 3 bar litres; Vol 3: LPG tanks under 250 ml.	Free
Boiler Test Certificates - Pad of 50	FREE*
Written Scheme of Examination - Pad of 50	FREE*
Small Boiler Test Certificate - Pad of 50	FREE*
Boiler History Record Card - Pack of 10	£3.50
Plastic wallets to hold certificates size A5	£0.75
HS 2020 Passenger-carrying min railways 'Guidance' post included	£4.00

David Mayall Tel:+ 44 1252 684 688 Email: david.mayall@fmes.org.uk

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