

Marlow & District
Railway Society

THE MARLOW DONKEY NO.25

Please reply to:

DECEMBER 1982

CHAIRMAN'S NOTES

In January our Society will have reached its sixth birthday. Looking through my 24 copies of our newsletter I realize how many journeys and talks members have enjoyed. Articles for "The Marlow Donkey" are always welcome and our Editor is constantly reminding members to contribute more frequently.

I note that another preservation group has been formed in our area. The Cholsey and Wallingford RPS plan to reopen the branch line to Wallingford or at least 2½ miles of what remains. You will remember that the line closed to passengers in June, 1959, lost its station at the Wallingford end, but then remained open in part to supply materials to a maltsters company. This BR contract has been terminated. Would this venture be viable? As a line operated by the GWS at Didcot possibly it would. As a small independent group I am doubtful. Assuming the bay at Cholsey and Moulsoford station were made available to them by BR, a new station at the other end of the line would be necessary. Without BR's co-operation the Totnes situation would be repeated.

I have just enjoyed reading a recent David and Charles publication, Brian Hollingsworth's Great Western Adventure. Preservation of former GWR artifacts outstrips considerably collections by supporters of the other three pre-1948 companies. 107 examples of ex-GWR locomotives exist, 69 LMS (out of a fleet nearly double the size), 52 SR, 32 LNER and 29 BR. In addition 104 carriages from the old GWR are in existence as well as 202 freight vehicles.

Plans for the future of the Southern Region have just been outlined. Further singling of lines to reduce costs is forecast. One suggestion cites the track between Bournemouth and Weymouth. Present services would continue but overheads in track maintenance could be halved. Also in view are 300 specially-designed one-man operated trains. Initially they would have guards, but eventually radio contact and closed circuit tv are to be added thus making the guards unnecessary. Let us hope there will not be a repeat of the situation on the London - Bedford line where NUR misgivings have kept new trains idling in the sidings.

I have just read in my current copy of Railway World a fascinating account by Richard Elliott, Chairman of the Dumbleton Hall Preservation Society. The purchase of a derelict Hall locomotive from Barry reflects the dedication and often personal sacrifice of some preservationists. One member even obtained a huge bank loan by mortgaging his house to help fund the asking price of £6000. On top of that exorbitant price they had to pay VAT - with the possibility of a refund when the new company was eventually established.

We shall wish all our members a very Happy Christmas at the Blue Flag on the 11th December - and a Happy New Year at our AGM in January.

SIXTH ANNUAL GENERAL MEETING

The Sixth annual general meeting will be held at the Marlow Donkey on Thursday the 20th January 1983.

The Members of the committee who will be standing down in accordance with the rules and will be eligible for re-election are Bas Woodward, Roger Bowen and Roger Woodham. Any other paid up member who would like to serve on the Committee should send his nomination in writing to the Secretary, Roger Bowen, not later than the 1st January 1983. Should there be more Nominations than Vacancies an election will be held at the A.G.M. The new Committee will meet after the A.G.M. to elect the Society's Officers for 1983.

If you have a subject for general discussion please give the Secretary prior notice so that time may be allocated.

The Agenda for the Meeting is as follows:-

1. Apologies for absence.
2. Minutes of the fifth A.G.M. held on 21st January 1982.
3. Matters arising.
4. Chairmans Report.
5. Treasurers Report.
6. Norman Aston Smith Trophy.
7. Announcement of Events in 1983 by the Secretary.
8. Items for General discussion.
9. Election of three Committee members.

The present Committee is Bas Woodward (Chairman). Roger Bowen (Secretary), Stan Verrinder (Treasurer), Roy Mee, Mike Norris, Roger Woodham, and Mike Walker.

If time permits the A.G.M. will be followed by a showing of Members slides. The Secretary will be pleased to receive offers in advance so that he can arrange a programme.

The Norman Aston-Smith Trophy is an annual award for the best article in the Marlow Donkey in the previous year so please read this one and the others so that you can cast your vote at the A.G.M. If you have no copy of either the Minutes of the last A.G.M. or Rules of the Society please ask either Roger Bowen or Stan Verrinder for a copy.

THURSDAY NIGHT PROGRAMME AT 19.45 HOURS FOR 20.00 HOURS

- 20th January 1983 Annual General Meeting
followed by Members slides
- 17th February 1983 "Indian Railways"
A talk with slides by Pete Greatorex -
his experiences of Indian Railways
- 17th March 1983 To be arranged

EVENING CLASS

Your Secretary will again be tutoring an evening class after Christmas.

This time the subject is "History of the Southern Railway".

The Course is at the Raans County Secondary School, Amersham - and commences at 19.30 hours on Wednesday 12th January 1983.

GREAT CENTRAL RAIL TRAILS

These Tours conducted by your Secretary will again operate in 1983.

Provisional dates are 21st May, 11th June, 9th July and 20th August.

Details from BR London Midland Region or Keith's coaches, Aylesbury.

CHILTERN TRAINS

A full programme is being planned for 1983.

Details from:- Chiltern Trains,
13, Golden Hills,
Chiltern,
Oxford,
OX9 4PT.

The end of 1957 saw the progress of the modernisation plan more further forward. On 31st October No.D5500 with an A1A - A1A wheel arrangement and of 1250h.p. was handed over to the Eastern Region at the Loughborough Works of Brush Traction Ltd. On 18th November No.D8200 an 800h.p. Bo-Bo was taken over at a ceremony at Euston Station by the London Midland Region from the British Thomson-Houston Co.Ltd.

Twenty of the 1250h.p. locos were on order from Brush for the Eastern Region and were based on a batch of 25 5ft 6in gauge locos of a similar power and wheel arrangement supplied by Brush to the Ceylon Government Railways in 1953. Ten of the 800 h.p. locos were on order from B.T.H. for exchange traffic in the Poplar, Temple Mills, Acton and Willesden areas of the London Midland Region.

On 25th November 1957 the first diesel- hydraulic loco for main line service in Britain was completed by the North British Locomotive Co.Ltd. at Queens Park, Glasgow. The 2,000h.p. loco was of the A1A - A1A wheel arrangement and was numbered D600, destined for the Western Region after trials in the Glasgow area.

Of local interest a plan that was only ever to be part completed was announced. This was the "bypass" route for freight from Cambridge via Sandy, Bedford, Bletchley and Calvert and Oxford. The principal works proposed included a new double junction at Bedford, a flyover at Bletchley, a new curve at Claydon to the Rugby direction of the Aylesbury - Rugby line, and remodelling at Oxford. A new marshalling yard was proposed at Swanbourne, West of Bletchley.

In October London Transport electric trains took over the operation of the former G.E.R. Epping to Ongar branch, previously operated as a steam shuttle service. At the end of November passenger services were withdrawn between Blackburn and Rose Grove, London Midland Region via Great Harwood, Simonstone and Padiham.

Unfortunately, the end of 1957 brought one of the worst accidents in the history of railways in this country. At 6.20 pm on 4th December in dense fog at St Johns, Southern Region the 4.56 pm Cannon Street to Ramsgate headed by 34066 "Spitfire" collided with the rear of the 5.18 pm Charing Cross to Hayes electric which had stopped at signals. The accident resulted in a death roll of 89 and nearly 200 injured, many seriously.

December 1957 saw the following new engines taken into B.R. Stock -
4 Diesel Mechanical 0-6-0, 17 Diesel Electric 0-6-0, 2 1250 h.p. Diesel Electric A1A-A1A, 2 1,000 h.p. Diesel Electric Bo-Bo, 1 class 4 2-6-0, 8 class 9F 2-10.0.

RAILWAY EXHIBITION AT BOURNE END

The Marlow/Maidenhead Passenger's Association (MMPA) is ten years old this year. To mark the event they are staging an exhibition at the Community Centre, Bourne End on Saturday 19th February 1983, and they have asked us if we want a stand. We have said yes and as a result the following plea is made for;

- a) Photographs, black and white or colour of any part of the Marlow/Bourne End, Maidenhead/Loudwater/High Wycombe line. If you have negatives so much the better as large prints can be made.
- b) Relics or similar, of any railway, any condition. Details only required at this stage.

Alan Wheeler, who has kindly volunteered to mount our stand has spoken with the HON Secretary of the MMPA and has been told that several local model railway societies and preservation groups will be there. Alan's ideas on our own stand have been outlined to the MMPA and it could well be that it will be a principal one at the show. Let us make it a display to be remembered. Photographs, negatives and details of your railway bits etc. as soon as possible to Alan Wheeler on Marlow 2995. One final thought from the MMPA, if it is a success it could well become an annual event.

ANNUAL FAMILY OUTING

Next Year's railway trip for the family will be to the Severn Valley Railway. Further details in the next issue of the Marlow Donkey.

A TRIP TO PENDON MUSEUM

Contributed by:
Martin Sherwood

On a fine evening in August members set out to visit the Pendon Museum by Jeffways coach. When we arrived we were met by 2 members of the museum, who gave us a conducted tour.

We saw many interesting models including a railway layout which was one of the first to have scale buildings and scenery. A working coal train with 80 private owner's wagons! Thatched cottages with amazing details.

After walking around, some had refreshments at the museum while others went down the lane to a pub.

When we came to leave, the coach had to reverse about a quarter of a mile back to the main road, because there was no room to turn around. Then it was back to the "Marlow Donkey" to end a very enjoyable evening.

210 DIESEL UNIT

- ERNIE DOVE

The 210 Diesel Unit 4 car set is diagrammed to work the following trains. Monday to Friday only from 29th November 1982.

| | | | | | |
|-------------|-------|----------------------------|-------|-------|-------|
| Padd'ton | 12.01 | 17.04 | 18.41 | 21.01 | 23.31 |
| Ealing B'Y | 12.09 | 17.12 | 18.49 | 21.09 | 23.39 |
| Southall | | 17.19 | 18.56 | | |
| Hayes | | 17.23 | 19.00 | | |
| W Drayton | | 17.27 | 19.04 | | |
| Iver | | 17.31 | | | |
| Langley | | 17.34 | | | |
| Slough | 12.26 | 17.39 | 19.14 | 21.26 | 23.56 |
| Burnham | 12.31 | | 19.19 | 21.31 | |
| Taplow | 12.35 | | 19.22 | 21.35 | |
| M'Head | 12.39 | | 19.27 | 21.39 | 00.05 |
| Twyford | 12.48 | | 19.36 | 21.48 | 00.14 |
| Reading A. | 12.56 | | 19.45 | 21.56 | 00.22 |
| Reading | 7.54 | All stations to Oxford A. | | | 8.45 |
| Oxford | 9.25 | All stations to Reading A. | | | 10.20 |
| Reading | 10.22 | 15.52 | | 19.52 | 22.22 |
| Twyford | 10.29 | 15.59 | | 19.59 | 22.29 |
| M'Head | 10.38 | 16.08 | | 20.08 | 22.38 |
| Taplow | 10.42 | 16.12 | | 20.12 | 22.42 |
| Burnham | 10.45 | 16.15 | | 20.15 | 22.45 |
| Slough | 10.52 | 16.22 | 17.50 | 20.22 | 22.52 |
| Langley | | | 17.54 | | |
| Iver | | | 17.58 | | |
| W Drayton | | | 18.02 | | |
| Hayes | | 16.32 | 18.06 | | |
| Southall | | 16.36 | 18.10 | | |
| Hanwell | | | 18.14 | | |
| West Ealing | | | 18.17 | | |
| Ealing B'Y | 11.09 | 16.43 | 18.19 | 20.39 | 23.09 |
| Acton M.L. | | | 18.23 | | |
| West:Park | | | 18.28 | | |
| Padd'ton | 11.19 | 16.53 | 18.33 | 20.49 | 23.19 |

NORTH AMERICAN NOTEBOOK - CHANGING TRENDS IN TRACTION

- MIKE WALKER

Although Rudolph Diesel was German, it was in North America that the full potential of the compression ignition engine for rail traction was exploited. From the first successful diesel built in 1925 for the Long Island railroad by Alco/General Electric/Ingersoll Rand the breed spread rapidly, initially taking over switching (shunting) duties then powering the lightweight passenger streamliners of the 30's. The big breakthrough into heavy freight haulage came with EMD's FT unit of 1939 after which the writing was on the wall for steam, the Western Pacific becoming the first major all diesel road in 1954. Despite a valiant rear guard action by steam on the Norfolk & Western, the diesel reigned supreme by 1962.

Unlike Britain or Europe where locomotives are purpose built to the requirements of the operators, North American railroads purchase their locomotives off the shelf from the standard ranges of the manufacturers. In the immediate post war years there were five manufacturers, General Motors, Electromotive Division (EMD); Fairbanks-Morse, American Locomotive (Alco); Lima and Baldwin. The last three were former steam builders who turned to the new power. All except EMD had left the market between 1951 (Lima) and 1969 (Alco). However, a new competitor appeared in 1960 when General Electric, who had previously built only industrial switches and supplied generators and traction motors to ALCO, launched their successful 'U' series heavy road switchers. For the past 14 years then, the choice has been between EMD or GE with the former taking 65-70% of the market with its giant La Grange plant near Chicago building 4 to 5 locomotives a day!.

There are approximately 29,500 locomotives in North America, although due to the recession and its consequent downturn in traffic, nearly 5,000 are currently stored. The recession and its effect on the economics of railroad operation is currently leading to a number of significant changes in locomotive design and in 1982 for the first time, General Electric have had a larger market share than EMD.

Recent years have seen a retraction in the market due to two causes. First, the general downturn in traffic and, secondly, the increasing cost of units which has led to roads rebuilding older units to modernise them for further life. New locomotive prices have risen by about 1% per month over the last five years so that a 3,000 hp 6 axle unit, such as EMD's SD40-2 or GE's C30-7, now costs around £600,000, double the price of 1976. Consequently, the rebuilding of 25 year old locomotives at £200,000 to £250,000 becomes much more attractive.

The cost of fuel is rising rapidly even in the USA therefore the railroads are looking to the manufacturers and to their own workshops to reduce the fuel consumption of units. This is a very important consideration as at present prices a locomotive will burn about six times its original cost in fuel during a lifetime of 25 years. The Union Pacific for example is currently running one SD40-2 and a C30-7 on a mixture of 80% diesel and 20% Bunker C (a heavy fuel used by ships) to determine the effects on power output, injector behaviour and the ability of the fuel filters to handle the tarry mix.

If successful the mix may be used more widely, as it saves 15 cents (9p) a gallon.

EMD have always fitted their locomotives with two-stroke engines, first the "567" series with a cylinder capacity of 9.29 litres, then the bigger "645" series with a cylinder capacity of 10.57 litres which is currently being installed. Over the years these engines have earned an enviable reputation for reliability and cleanliness but, being two-strokes, they are not the most fuel efficient. Five railroads have experimented by repowering EMD locomotives with engines of Cummins or Caterpillar manufacture to reduce running costs, whilst Morrison-Knudsen, a locomotive dealer and contract rebuilder of Boise, Idaho, have installed French built Suzer V16 16ASV25R four stroke 3,600 hp engines in a number of Santa Fe and Union Pacific SD45's. These replaced the original EMD V20 cylinder 645E engines of similar output. This represents a considerable fuel saving as well as a major saving in maintenance costs with four less power assemblies to maintain.

The reducing number of cylinders is being extended into new locomotives. Unlike EMD, General Electric use a four stroke engine of Cooper-Bessemer design designated 7-FDL with a cylinder capacity of 10.94 litres. Up to the late sixties there had been a horsepower race in which EMD, Alco and GE reached 3,000 H.P. with V16's. However, as already mentioned, EMD broke fresh ground by building a V20 to produce 3,600 h.p., later experimentally raised to 4,200h.p. Initially the SD45 sold well after its 1965 launch but in 1967 GE boosted the output of their V16 to 3,300h.p. and in 1969 the same engine was boosted again to 3,600h.p. These high horse units quickly began to outsell their V20 rivals as railroads found the GE's were cheaper to run and maintain. Ten years were to elapse before EMD produced a 3,500 h.p V16 in 1977, although this engine, the 645F, did not go into full production until 1981, when they appeared in the GP50 (4 axle) and SD50 (6 axle) units.

The GP50 and SD50 models have so far failed to emulate the success of the 3,000 h.p. V16-645E3 GP40/SD40 models. Around 4400 SD40's have been built making it the most numerous type of diesel in the US. There are two main reasons for the lack of market success of the "50 line". Firstly, the requirement for high power units has dropped more dramatically than the rest of the market, GE have built few of their rival B36-7 and C36-7 units in recent years. Secondly, there are reports that EMD product quality has slipped. This last item is of course a complaint not restricted to EMD, the US railroad industry, or even the US in general! Nevertheless, the Chicago & North Western placed several of its GP50's in store early this year following an alarming number of road failures including several fractured engine mountings.

General Electric have now taken the initiative with reduced operating costs on 3,000 h.p. locomotives by increasing the turbocharger boost, modifying fuel pump settings and intercooling the V12 version of the 7-FDL, which is normally rated at 2,300 h.p., to produce 3,000 h.p. Initially installed experimentally in three Missouri Pacific B23-7's the engine has proved operationally and commercially successful with 55 being purchased by Missouri Pacific, 22 by the Southern Railway and 25 cabless boosters (the first ever GE boosters) for the Burlington Northern.

The V12 3,000hp B-B's are designated B30-7A, boosters B30-7B.
The regular V16 is B30-7.

EMD are replying by developing a new range of two stroke engines to be known as the "701", 11.49 litre cylinder capacity, which will probably include a 3,000 h.p. V12 version, and further in the future is on EMD four stroke. However, it is unlikely that either of these will be in production before the mid to late "80's". An interesting parallel to this cylinder reduction policy is to be found on BR where the new class 58 has a V12 3,250 hp engine developed from the V16 3,250 hp unit in the class 56.

Advances in loco design are not confined to engines. Alternators have completely displaced d.c. generators in road units. Rectification is universally by solid state electronics incorporating thyristors. Both EMD and GE have developed advanced microprocessor controlled single axle wheelslip control systems which detect and correct wheelslip automatically without the engineer having to ease up on the power. Canadian National have developed their own wheelslip device called Positive Traction Control 'PTC', which can be retrofitted to older locomotives.

GE does not market locomotives in Canada, but GMDD, the local division of General Motors, faces competition from Bombardier, formerly MLW the Canadian subsidiary of ALCO. Until recently Bombardier has continued to build former ALCO designs and have recently launched a 2,400 h.p V12 B-B, the HR412 and a 3,200 h.p V16 C-C, the HR616. Both have ALCO designed four stroke engines driving alternators supplying motors through solid state rectifiers. Both models have been purchased only by CN and the HR616 has a special cowl body designed by the operator to combat the severe Canadian winters.

Bombardier's only other current model is the power car for the 'LRC' 120mph tilting body passenger train, a 2,900hp B-B. Passenger power makes only a small part of the market and the only other model is EMD's cowl bodied F40PH, a 3,200hp V16 B-B purchased only by Amtrak and a few commuter authorities.

There is only one electric locomotive currently in production. The AEM7 is a 7,000hp B-B passenger unit built jointly by EMD who provide the under-frame, Bogies and motors. Budd who construct the car body and ASEA of Sweden who provide the solid state rectifiers and control electronics developed from the famous Swedish Rc4 design. Again Amtrak are the only customer. Long haul electric haulage has almost vanished in the US and despite occasional pilot studies any new projects seem unlikely due to the enormous capital investment required because of the long distances involved. An alternative form of traction being explored is a possible return to steam. American Coal Enterprises are funding the development of two high technology 3,000hp 4-8-4's to be called ACE 3,000. These will probably work in the North West over the BN, but that is another story.