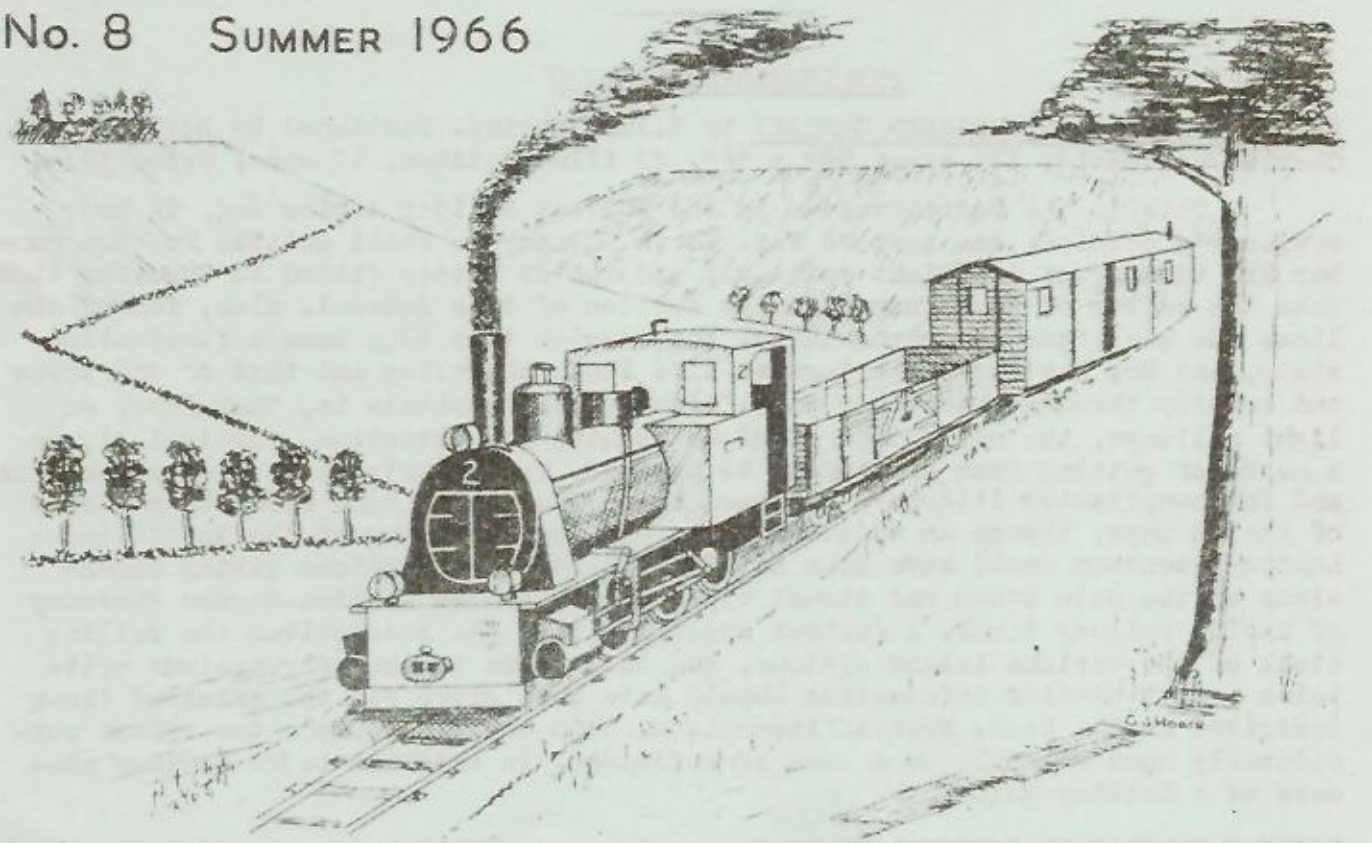
CONTINENTAL RAILWAY JOURNAL

No. 8 SUMMER 1966



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SPECIAL STEAM TRAIN ON THE SIHLTALBAHN

The Circle hopes to arrange a special steam-hauled train on the Sihltalbahn, from Zurich to Sihlwald and back, on Saturday, 18th June, the fare depending on the number of persons taking part. The date has been specially chosen as the day following the steam special on the Rhaetian Railway, referred to elsewhere in this issue. Will readers desiring further details please apply as soon as possible, with S.A.E., to the Journal distribution address and state whether they would be willing to pay up to 10/-, up to £1, or up to 30/- for the trip.

PUBLICATIONS RECEIVED

RAILWAY HOLIDAY IN NORTHERN GERMANY by W.J.K. Davies. Published by David & Charles/Macdonald. 172 pages 5½" x 8½", 40 illustrations, 12 maps; price 30/-.

This is the fourth volume in the Railway Holiday series and, in your reviewer's opinion, the best so far. North Germany is still notable for the number and variety of its light railways, and who is better fitted to describe them than the editor of the Minor Railways section of this Journal. Alas, few of the lines now use steam power regularly, but despite this they make a fascinating study, and Mr. Davies ably brings to life their character and that of the towns and country through which they pass. Although the emphasis is, therefore, on light railways, the main lines of DB do receive due attention, particularly as a means of getting from one system to another. The illustrations are well chosen and the complicated itinerary followed by the author is made clear by a series of sketch maps, though an additional one showing the lines of the Westfälische Landes-Eisenbahn would have been helpful. There are appendices giving dimensions of the main steam and diesel types of DB, and an English-German glossary of useful railway terms. A further appendix lists the locomotives and rolling stock of the various island systems, and this leads to the only serious criticism – that similar information should have been given for the mainland lines described in the book. Even if incomplete, this would have made the volume considerably more valuable as a work of reference, in addition to its obvious success as a holiday guide.

RAILWAY HOLIDAY IN SWITZERLAND by George Behrend. Published by David & Charles/Macdonald. 182 pages 5½" x 8½", 41 illustrations, 12 maps; price 30/-.

This is No.5 in the Railway Holiday series, and the author follows precedent by describing a circuitous itinerary through the country of his choice. The book is written in typical Behrend style and, whilst hardened visitors to

(Continued on Page 19.)

BEUGNIOT LOCOMOTIVES

by P.M. Kalla-Bishop

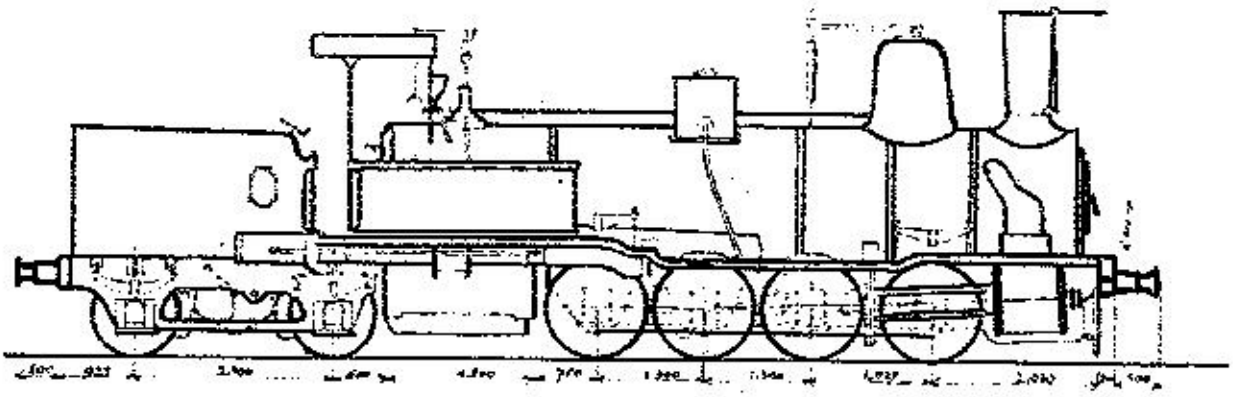
(Continued from Winter 1965 Journal)

The idea of giving flexibility to the coupled wheelbase was carried on. In some 0-8-2T for Munich Lokalbahn, later DB 98[17] class, Beugniot bars were fitted between each pair of axles, thus producing a locomotive with no fixed wheelbase at all. From 1928 Schwartzkopff built 0-10-0T for the 785mm-gauge lines of the PKP with Beugniot bars connecting the two pairs of axles at either end and in 1931 Krauss produced 0-10-0T for the Brohltalbahn similarly fitted. Krauss also built an 0-10-0T for the Kassel-Naumburg Railway in 1938 with only the first two axles connected and 0-12-0T in 1939 for the metre-gauge Radlovac-Zervanjska line in Jugoslavia with the two end pairs of axles each connected by Beugniot bars.

The electric locomotive was not neglected, the MÁV twelve-coupled 0-F-0 V60 class, three of which were built in 1932, have compound Beugniot bars. The two inside axles are connected by a primary Beugniot bar and the two outer pairs of axles are each held in a species of bogie frame. The centre of the bogie frame is connected by a Beugniot bar to a point on the primary Beugniot bar halfway from its point of rotation and the axle bearing. The effect is that the two centre driving axles can both move sideways with respect to the other axles, as well as moving in different directions with respect to each other. The coupling rods not being made of rubber, it is to be presumed that there is some form of articulation in them. The locomotives are still running and a film of the coupling rods as the locomotive passed through a crossover would not be without interest.

In 1936 the DR rebuilt T16 class 0-10-0T No.94.1301 with Beugniot bars on the two pairs of axles at each end; also three G10 class 0-10-0 with bars at the front end only. The upshot of the experiment was the building of the 41 locomotives of the DB 82 class, from 1950. These are 0-10-0T with Beugniot bars at each end; interestingly enough double bars such as had not been used since the French 0-8-0 of 1859. A year or two later the final steam locomotives with Beugniot bars appeared, handsome 2-10-0 by Henschel, five for the Uruguay Central Railway and fifteen for the General Urquiza State Railway in Argentina. These had a Krauss-Helmholtz truck and a Beugniot bar for the first and second coupled axles.

The end of the system is not yet. From 1953 the Finnish State Railways started building 0-D-0 diesel-hydraulic locomotives, first the Vr11 class and latterly the 62 locomotives of the Vr15 class. These locomotives have a jack-shaft drive in the centre and two pairs of wheels on either side, the wheelbase thus being elongated. Beugniot bars are employed to mitigate this on the pairs of axles at either end. Valmet, Lokomo and Tampella thus carry on a one-hundred-year old device to fresh fields. All the same, it would be interesting to know the rate of wear in coupling rod brasses and the incidence of broken coupling rods in some of the locomotive classes mentioned; driving axles sliding about sideways must have some effect.



UPPER ITALY RAILWAYS (SFAI) No.1011 "SAN MARTINO"

BIBLIOGRAPHY

Les Locomotives du Système E. Beugniot, Bulletin de la Société Alsacienne, 1956, July, page 64.

EWALD, KURT - Das Beugniot-Gestell, Glasers Annalen 88, (1964, No.7), page 240.

ITALIAN BEUGNIOT 0-8-0's

Date	Works No.*	Lombard-Venetian Rly.			Upper Italy Railways			Rete Mediterraneo		F.S.
		No.	No. 1865	Name	No. 1866	No. 1880	Name	No. 1885	Name	No. 1905
1861	612	205	501	L'APENNIN	1001	1201	L'APENNIN	4001	MAMMUTH	-
1862	613	206	502	LE RUBICON	1002	1202	LE RUBICON	4002	MASTODONTE	-
1863	794	199	503	MAGENTA	1003	1203	MAGENTA	4003	ELAFANTO	4001
1863	795	200	504	MONTEBELLO	1004	1204	MONTEBELLO	4004	COLOSSO	-
1863	796	201	505	TURBIGO	1005	1205	TURBIGO	4005	PEGASO	4002
1864	797	202	506	PALESTRO	1006	1206	PALESTRO	4006	RABICANO	4003
1864	798	203	507	MELIGNANO	1007	1207	MELIGNANO	4007	IPPOGRIFO	4004
1864	799	204	508	SOLFERINO	1008	1208	SOLFERINO	4008	GRIFONE	-
1866	1008	-	509	VOLTURNO	1009	1209	VOLTURNO	4009	?	-
1866	1009	-	510	BUFFALORA	1010	1210	BUFFALORA	4010	?	-
1871	1263	-	-	-	1011	1211	SAN MARTINO	4011	CICLOPE	4005
1871	1264	-	-	-	1012	1212	PASTRENZO	4012	FELONTE	4006
1871	1265	-	-	-	1013	1213	ARCOLE	4013	TIFEO	4007
1871	1266	-	-	-	1014	1214	CASTIGLIONE	4014	POLIFEMO	4008
1871	1267	-	-	-	1015	1215	BERICO	4015	ANTEO	4009
1871	1268	-	-	-	1016	1216	FRASSINATE	4016	GERIONE	4010
1871	1269	-	-	-	1017	1217	CALDIERO	4017	BRONTEO	4011

* All built by Koechlin

THE STORY OF LA MAQUINISTA TERRESTRE Y MARITIMA, BARCELONA

by D. Trevor Rowe

Today there are four principal companies in Spain which between them account for almost all the steam locomotives which have been constructed in that country. These are:-

Babcock & Wilcox S/A, Bilbao.
Compañia Euskalduna, Bilbao.
Material y Construcciones S/A (formerly Talleris Devis), Valencia.
La Maquinista Terrestre y Maritima, Barcelona.

The first three commenced construction of railway locomotives between 1920 and 1930. By then MTM were well established in this line, the first locomotives built at their Barceloneta works being two 0-4-0 metre gauge tram engines, constructed in 1883 for the Barcelona-San Andres tramway, which was opened the following year. These were probably the first locomotives ever to be built in Spain. Shortly afterwards, in 1886, two more orders were received, this time for 0-6-0T's. Two were built for the Barcelona-Sarria railway in 1886, and four for the Langreo railway, Asturias, between 1886 and 1888. Already the company had experience in building for three gauges - metre, 5'6" and 4'8½" respectively!

In 1895 came the first order for tender engines, two 2-4-0's being built for the Tarragona, Barcelona y Francia Railway (later part of the MZA system). The company were now well established as locomotive manufacturers, and by 1917 a total of 85 machines had been constructed. Fifteen of these were 0-8-0's built in 1900/1 for the MZA, which was in later years to become MTM's best customer. Many of the other early locomotives were for metre gauge lines and industrial concerns, while seven 3' gauge 2-6-0T's went to the railways of Mallorca.

In 1917, the construction of railway locomotives was transferred to a new works in the suburb of San Andres, the former works at Barceloneta continuing with the "maritima" part of the business. The company were now in a position to commence large scale mass production, and with the rapid expansion of railways in Spain, orders were forthcoming for larger and more powerful types than hitherto. In 1917, four 4-8-4T's were supplied to the Ferrocarril de Betanzos al Ferrol (later absorbed by the Western Railway) and in 1920 work commenced on a batch of 50 express 4-8-0's for the MZA. By 1926 the four principal Spanish companies - MZA, Norte, Andaluces and Oeste - were customers, and production proceeded rapidly until 1936, by which year 498 locomotives had been built.

The 500th locomotive to be constructed was the second of a series of ten streamlined 4-8-2's for the MZA. Ordered in 1935, delivery of these machines was delayed by the Civil War. They are the only streamlined type in Spain and have recently been converted to burn oil fuel.

The railways of Spain were seriously damaged during the Civil War (1936-1939) and in 1941 the new Government nationalised all the standard gauge (i.e. 5'6") lines under the title of Red Nacional de los Ferrocarriles Españoles, normally abreviated as RENFE. New locomotives were urgently required and 55

4-8-0's, followed by 57 4-8-2's, were built by MTM during the period 1941-1952. In addition, the first of an order for 22 three cylinder 2-10-2's was completed in 1942, for working heavy freight trains over the steeply graded Leon-Ponferrada section, now electrified. The last of these was delivered in 1945.

In 1947 MTM built two of six 4-8-0's ordered from Spain by the Portuguese State Railways, and these are believed to be the only Spanish locomotives ever exported, apart from deliveries to Spanish Morocco. An interesting machine built in 1948 was 2-2-2 'MATARO', a replica of the first locomotive to operate in Spain in 1848. This locomotive hauls a train of period coaches and is used to celebrate railway centenaries all over Spain.

By 1952 RENFE had decided to standardise on a series of 2-8-2 mixed traffic locomotives and the initial 25 were supplied by the North British Locomotive Co. Ltd. Further machines were to be assembled in Spain by the four principal Spanish constructors and the class is now 242 strong, a fair number of these having been built by MTM.

RENFE had a large stock of 4-8-2's which were used on the principal expresses, but it was decided that a series of even larger machines could be usefully employed on the heaviest trains over the unelectrified section of the Irun-Madrid main line. Accordingly, ten 4-8-4's were ordered from MTM and these came into service in 1956. They were the last new type of steam locomotive to be built in Spain. One of this class featured in the cover drawing of the last issue of the Journal.

La Maquinista Terrestre y Maritima have built more locomotives than any other company in Spain and although the total of steam constructed, approximately 700, is small when compared with better known European and American firms, it should be noted that since 1917, when large scale production commenced, only 22 locomotives with less than eight coupled wheels have been built and these are exactly balanced by the 22 2-10-2's. This is a good illustration of the predominance of 8-coupled locomotives in the modern steam stock of RENFE and of Maquinista's contribution to this, not the least impressive fact being that all the 162 two cylinder 4-8-2's in service today were built by the company. MTM have now turned over to the construction of diesel and electric locomotives.

I should like to conclude by thanking my friend John Morley for his assistance with this article.

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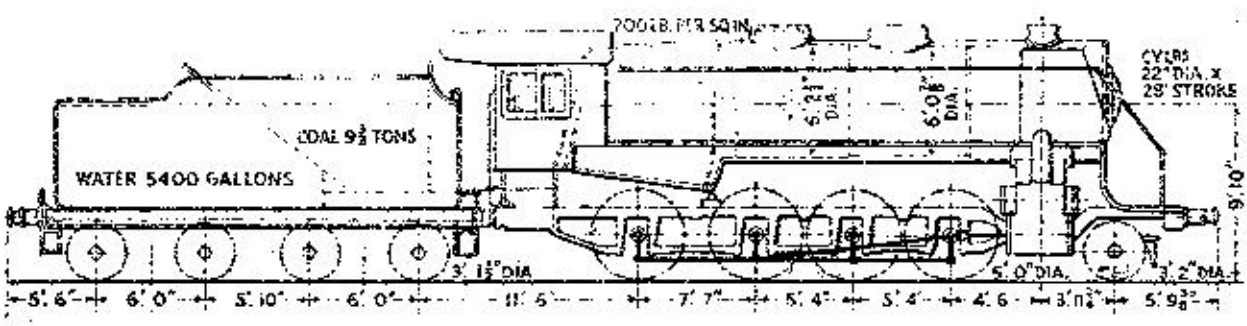


S.N.C.B. Class 29

NOTES AND NEWS

HUNGARY

MAV is taking delivery of 52 Russian-built Co-Co diesel-electrics, the design being based on Soviet Railways TE-3 class. They are MAV M62 class and the first arrivals are taking over freight trains from the 20 Nohab-built M61 class on the Budapest-Debrecen main line, as the M62 have no steam heat. The M61 are going on to main line expresses. MAV expects to put a further 400 diesels into service by 1970. It is planned to electrify at 25kV, 50c/s, the Budapest-Debrecen-Nyiregyhaza-Zahony main line by 1970. The section between the two last named places will be done first, following on the completion of the Miskolc-Szerencs-Sátoraljaújhely and Szerencs-Nyiregyhaza electrifications. An additional 136 electric locomotives will be in service on the MAV by 1970.

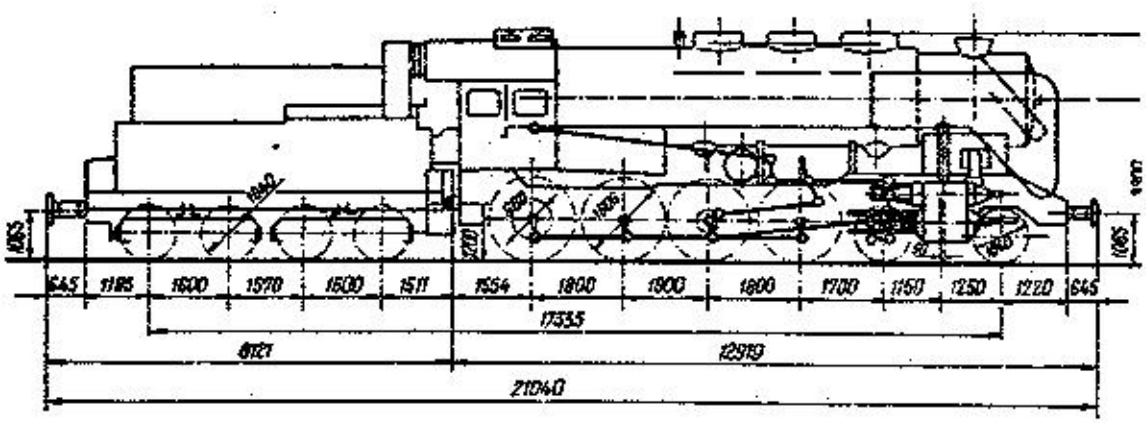
ITALY

Savona-Ventimiglia is to be converted from three-phase to 3000V d.c. This will be done before completion of about 70 miles of new double-track railway to eliminate single-track sections on this line. The remaining three-phase trunk line is Savona-Fossano-Carmagnola (for Turin). Branches off this route are being dieselised.

The prototype D443 class B-B monomotor bogie diesel-electric, built in 1965 by Pistoiesi with a Fiat 2000hp. engine has run trials. Versions of the FS 245 class 500hp. C shunter now in traffic are Badoni 245.0001-0018, O.M. 245.1001-1020 (part delivered) and Stanga-Jenbach 245.6001-6009. Further orders are 40 from Badoni, 20 from Reggiane-Breda and 115 from Palermo Shipyards under licence from Jenbach. Nos.214.7001-7020, Greco-Deutz B 140hp. shunters have been delivered. No.216.0001 is the first of 55 similar 160hp. shunters from Badoni. By law the FS must now purchase 40 per cent of its locomotives, or parts of them, from southern Italy. OCREN has long been established at Pozzuoli outside Naples, Breda and Fiat have taken interests in new works at Matera and Reggio Calabria respectively.

JUGOSLAVIA

Ansaldo, Genoa, has completed delivery of 35 Bo-Bo-Bo 3000V d.c. locomotives to the JZ. Based on Italian designs they are 362.001-035. A further 55 locomotives are on order from Ansaldo.



MAV 424

CZECHOSLOVAKIA

The 3000V d.c. electrification of the CSD is now complete from Čierna nad Tisou (Chop) on the Russian border through to Děčin in northern Bohemia. There is a branch to Prague, as well as branches to Zebrzydowice and Glucholazy in Poland. The 25kV, 50c/s, electrification opened in 1962 between Plzeň and Babin (Horaždovice) is being extended from Babin to České Budějovice and in the other direction from Plzeň to Cheb and Sokolov. Work has commenced on the electrification of the Prague-Brno-Bratislava-Štúrovo main line. The 25kV, 50c/s, section commences at Leština, some way south of the 3000V d.c. start of the route out of Prague. Electrification westwards from Děčin to Cheb is evidently to be at 50c/s, for a 19-mile section between Trmice and Bilina is planned at this frequency. The overhead equipment will be of modified design to permit speeds up to 110mph. The 5ft-gauge Soviet Railways branch from Munkevo in Russia to Kosice in Czechoslovakia, 64 miles long, was formally opened to traffic in November 1965. A gauge-converted CSD diesel, No. T458.013 hauled the inaugural train.

GERMANY

A visit to Minden for two days in September 1965 showed that most of the passenger services between Hannover and Bielefeld are now diesel hauled by V200's. Some 01 pacifics were seen, mainly on summer extras, and one 03^{10} hauled a Hagen train. Local trains were variously hauled by 23 class steam and V100 diesels. Heavy mineral trains were in the hands of the 44 class, while 50 and 41 classes were seen in larger numbers on other freights. The local trip freights were hauled by 86 class tanks. Two 45 2-10-2's were noted at the depot, together with three 18 pacifics. They have no regular duties, and 18.323 and 18.505 were awaiting disposal behind the shed. Also present were some 55 class, all out of steam. Photographers are recommended to travel to Porta Westfalica, a little west of Minden, and explore the various locations from the combined road bridge, over the railway and River Weser, to the west towards Löhne.

Another recommended spot in northern Germany where steam is predominant is east of Osnabruck, particularly between Vehrte and Ostercappeln, where the main line to Bremen and Hamburg crosses a wooded ridge. Due to the relative inaccessibility of this stretch of line by public transport, a car is essential. Types to be noted include 01, 01^{10}, 03, 23, 41, 44 and 50. 50 class with Crosti boilers are now rare.

Emden is worth a visit still, in spite of the forlorn line of 78 tanks and 38 4-6-0's at Emden West station. Their work has been taken over by 23 class engines transferred recently from elsewhere (mainly Oldenburg it appears). 38 class are still to be found working from Bremerhaven Lehe depot, nowadays mostly on P.W. and works trains in connection with the progressing electrification of the route to Bremen, and trip working to the docks. Bremen still has one or two 78 4-6-4T's active. Early in January the writer had a spirited trip from Bremen to Oldenburg behind one in good condition. At Oldenburg the train, to Wilhelmshaven, was taken over by a V160 diesel. These have taken over nearly all the remaining steam duties to Wilhelmshaven and Leer. One 01 or 03 works daily (except Sundays) to and from Wilhelmshaven, but the former mainstay of passenger services in the area, the 23 class, are no longer seen. The boat train from Wilhelmshaven to Harle (connecting with the boat to Wangerooge) was, last summer, normally hauled by a 78 class. In the autumn it increasingly became a duty for a 50 class with tender cab, and sometimes, especially at the weekends, a V60. During the winter the connecting service has been a bus.

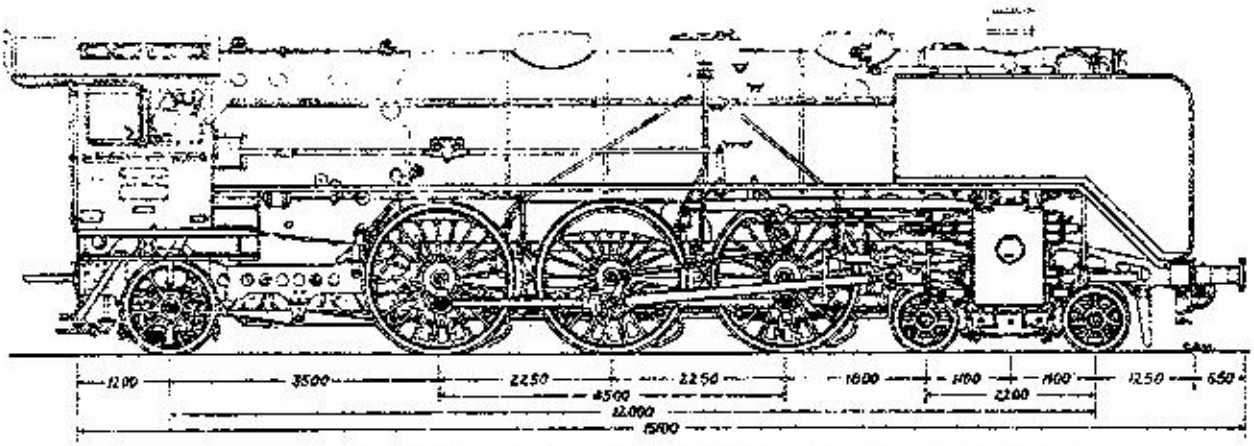
August 1965 showed the Trier area to be a steam paradise. The line down the Mosel valley to Koblenz carries a very heavy traffic indeed, with many mineral trains bound for Luxembourg, Lorraine and the Saar. These are hauled by 44 class which, from Cochem to Ürzig, are banked by 50 class. Passenger trains are mostly 01-hauled, with some P8's on locals. Some good photographic locations are to be found around Bullay. The Eifel route to Köln has little freight, and its chief attraction, apart from scenery, is the use of 39 class 2-8-2, stationed at Jünkerath, on some of the trains. For maximum traffic, Ehrang can be recommended. This is the junction of the Mosel and Eifel lines just before Trier, there being a convenient overbridge for photography. From Ehrang, all westbound and many eastbound freights travel over the avoiding line through Trier West, hence the main passenger station has not so much to offer. Not far from Trier, along the highly scenic, steam-worked Saar valley line, is Saarbrücken. From here there is an excellent rush hour service, the best place for the evening peak being Saarlouis, where trains restart on a curve and gradient at just the right angle to the sun (if any). Classes noted here were 01, 03, 23, 38^{10}, 44, 50 and 78^{0}. Although there are a number of diesel railcars and railbuses in the Trier-Saarbrücken area, diesel locomotives are satisfyingly few. A peculiarity noted with freight workings was the full service on Sunday, followed by a quiet day on Monday.

FRANCE

Steam still survived on suburban routes from three Paris termini in March this year. On the Nord, most suburban workings through Epinay were still in the hands of 141TC class, with the odd 230D on Beauvais trains. Some diesels were in evidence and, not being fitted for push-and-pull working, one was coupled at each end of the train, the rear one being hauled dead in each direction. The acceleration of such a cavalcade was noticeably inferior to that of a 141TC, but no doubt the replacement of one powerful steam locomotive by two feeble diesels represents progress and economy (!?). On the Ouest, the same double-diesel combination has appeared at St. Lazare, but there are still 141TD on many trains, and some of the old Etat 141TC at the rush hours. Steam expresses are still seen with Etat 231G, but some Paris-Le Havre trains have recently been taken over by diesels. The Bastille line of the Est is 100% steam, all trains being push-and-pull with 141TB, frequently coupled chimney end to train.

At Easter, Rennes shed was found to have no active steam allocation, but was the turn-round point for the few incoming steam locomotives (all 141R). The depot has enough diesels for most workings. At Le Mans, 241P work all expresses to Nantes, but for "a few months more" only. Some 141P were in steam, but not seen on trains. Argentan has an allocation of about 20 141P, mostly in use. They work Paris-Granville expresses, engines being changed at Argentan. At Rouen, 150P still work the sparse freight from Amiens. There was plenty else in steam - 040TA, 140C, 141C, 231D and 141R. Some expresses had 231G from Le Havre shed. A notable locomotive ex works was a 141TD, despite impending electrification from St. Lazare.

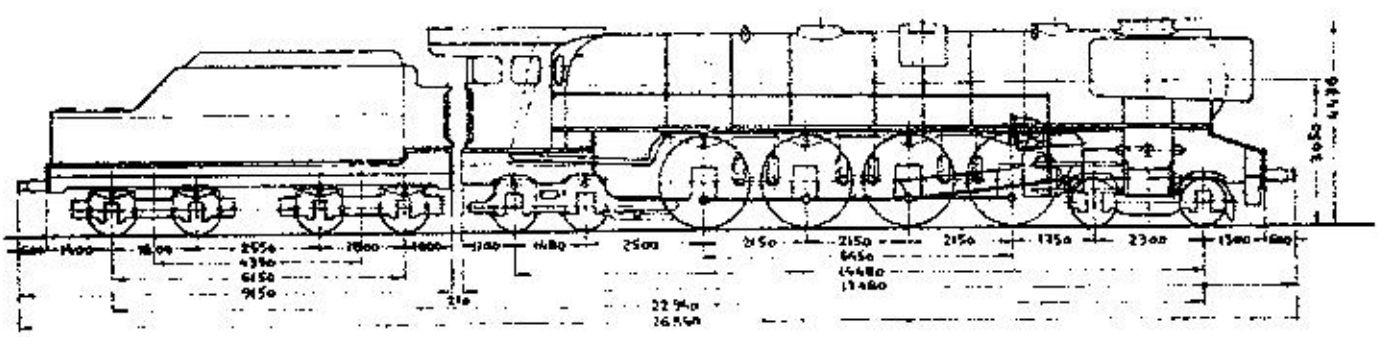
In October last the Dunkerque-Basle train was hauled by a 230D as far as Ville station, and this has been reported again more recently, so is presumably a regular occurrence. At Lille, most non-electric suburban trains were worked by 242TA, and 040D208 brought in the morning express for Paris from Tourcoing. At Busigny two 040TG were noted outside the shed, one being in steam; another was working in the yard. Tergnier had a fair amount of steam in evidence, with



DR / DB CLASS 03 IN ORIGINAL CONDITION

0-10-0T's shunting. Laon shed is out of sight from the main line, but seemed to have plenty of steam locomotives; two or three 0-10-0T's and a 141R were in the yard. At Reims, 040TX, 140C (mostly stored) and 141R were seen outside the shed - about a mile north of the station - and another 140C was on a local freight at Chalons-sur-Marne. St. Dizier had several locomotives in steam on shed, including 140C and 141P. At Bologne there was a large dump, including 241A.

Expresses between Chaumont and Paris were mainly diesel-hauled. Between Chaumont and Mulhouse, however, it appeared that only the first class rapides had diesels, and 241P and 141P were seen on other expresses. The 18.29 express from Belfort to Delle was hauled by 230B517, which returned the following morning. The 7.50 arrival at Belfort from Marseilles via Besancon was brought in by 231K34 and departed for Mulhouse behind 141P309. The morning rapide to Paris and the 8.37 "direct" to Nancy were both diesel hauled. All freight trains seen at Belfort were steam hauled, types including 140C, 141R and 241P, whilst 230B720 spent most of the morning pottering about in various private sidings. Additional steam classes noted on shed were 150P and 030TU.



R.E.N.F.E. 4-8-4

AUSTRIA

The following notes are based on a visit at Easter this year. The line from St. Valentin to Klein Reifling was mainly steam worked with 77 class 4-6-2T's, although one or two diesel locomotives were seen and one turn was worked by railcars. The freight was mainly in the hand of 2-10-0's. One 770 class 2-4-0T was still at work between Pochlarn and Kienberg Gaming. It appeared to be in good condition and master of the schedules. The other passenger trains and freight traffic on this line were all in the hands of 93 class 2-8-2T's. Two more 770 class were seen dead outside St. Pölten shed and will probably not work again. The line between St. Pölten and Leobersdorf was worked mainly by 77 class although certain short workings and branch trains were in the hands of 93's.

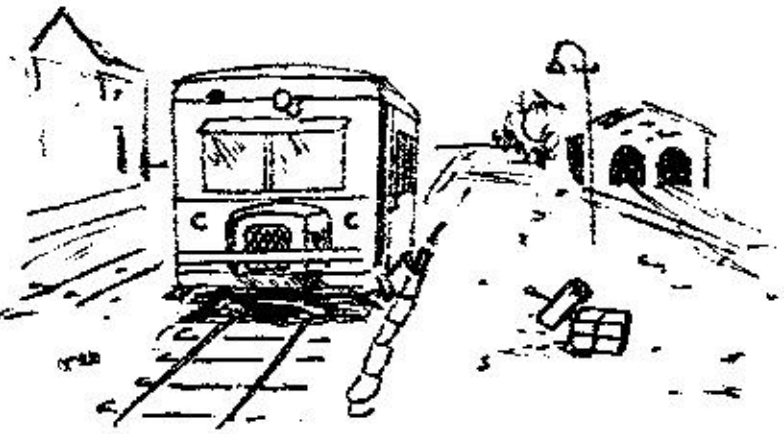
Timekeeping on the Semmering line was badly affected by engineering works, several trains being noted 20 or more minutes late by Mürzzuschlag. Steam can still be seen on the Semmering on engineer's trains, two 2-10-0's being noted near Payerbach on 13th April. The Neuburg branch is still worked by 91 class 2-6-0T's on both passenger and freight trains, although it is reported that diesel locomotives are used at weekends and on public holidays. Electrification to Graz is scheduled for completion with the commencement of the summer service on 22nd May, although it seems doubtful whether there will be sufficient electric locomotives available to work all traffic. Steam can still be observed between Leoben and Vordernberg although electric locomotives of the 1245 class work a number of services. A journey by the 19.24 from Leoben on 13th April produced 0-10-0 57.252 which put up the best display of pyrotechnics that the writer had seen for a long while! 77.04 was at Leoben, working an evening Graz to Unzmarkt train.

The Vordernberg to Eisenerz line is as fine as ever, with steam reigning supreme. The 97 class 0-6-2T's work most turns, 97.209 being faced with the unusual load of six four-wheelers on the 07.13 Leoben to Hieflau as far as Präbichl on 16th April. The engine made rather heavy weather of this task, losing some five minutes up the hill. 2-12-2T 297.401 was outside the shed at Vordernberg receiving attention, and the shed master said that it was destined for a museum in Vienna. One 0-12-0T was working daily, leaving Vordernberg for Eisenerz in the small hours of the morning. On enquiring the working of the shed master, the writer was told that the 197 left Eisenerz on arrival of the 07.13 ex Leoben, reaching Erzberg at 10.27 and returning thence at 10.52, due Eisenerz at 11.10. The next working was the 19.20 from Eisenerz to Vordernberg. On the morning following these enquiries the writer travelled to Erzberg to photograph 197.302, which duly appeared at about 10.10 running light. It returned some 40 minutes later again running light! Could this have been a purely photographic trip? Passenger and freight trains between Eisenerz and Hieflau are worked by 86 class 2-8-2T's, which also appear to have taken over pilot duties at Hieflau from the 92 class, two of which were noted stored.

Most workings between Amstetten and Selzthal were in the hands of 78 class 4-6-4T's, although some diesel power was also seen. The freight traffic was worked predominantly by 2-10-0's.

Acknowledgements for information are due to Messrs. Felton, Firminger, Forshaw and Kalla-Bishop.

~ MINOR RAILWAYS SECTION ~



BELGIUM

Schepdaal museum is to receive two new items of stock - a 4-wheel steam trailer with centre baggage compartment, now completely restored by the SNCV, and the Type 7 0-6-0T 303, which the SNCV has acquired from the Charbonnages d'Argenteau in exchange for an ART. For the first time for many years, an autorail traversed the streets of Brussels this Easter - AR133, destined for the TTA, participated in the opening of Schepdaal. TTA services are expected to start as far as Amonines in July.

FRANCE

TPT - The Museum Association hope to run regular Sunday trips this year over about 3½ km. of line with 0-6-0T 3.5. CF de la Corse - Rejuvenation proceeds. Staff is being cut by 50%, a new 414hp. diesel of similar type to those at Tulle has been ordered from CFD; 0-6-0D No.12 of the VFD has been bought for shunting purposes and the two Billard 150hp. cars from the Tarn, 524/5, have been rebuilt at Bordeaux for express services with individual armchair seating and all mod. cons. CFD de la Lozère - Mallets 324/5 are now scrapped. The line's future is very uncertain. CF de Mamers à St. Calais - Passenger traffic has been withdrawn, but the whole system is still open for goods. CFTA - The ex-CFS standard gauge lines are now run mainly with ex-SNCF locomotives and stock. Provins has 131TB; also one Bo-Bo diesel and a Billard 150hp. railcar. Gray, apart from autorails is 100% steam. According to the Chef de Depot, there are now 15 130B and 3 140C. On a visit last autumn, there were 7 130B in the shed and works, one was shunting the marshalling yard, another arrived at about 16.00 from the direction of Is-sur-Tille with a freight which included a 4-wheel coach, and about an hour later a freight left for Chalindrey hauled by one of the class noted earlier at the depot. Also found at the back of the shed was a derelict 0-6-0T (Batignolles 1185/86), bearing the name GUDMONT, a CFE plate and the number 3031. P.O. Corrèze - It is reported that one of the surviving mallets is to go to America later this year. As a swan song for steam, it will be used regularly during the months of June to September, though whether on the daily mixed to Argentat or on the thrice-weekly plus to Treignac is not known.

GERMANY

Georgsmarienhütten-Eisenbahn (See also article on Osnabrück in this issue) - Latest news is that most steam is now derelict; 5 (2-6-0T) and 16 (0-4-0T Jung 9846/43) were in use at the end of 1965 with No.4 on passenger work, but the

latter was said to be used only in the winter when steam heating was required. Four diesels were in use at the works on 13th March this year. Herforder Kleinbahn - Passenger services were due to cease on 22nd April. 0-6-0D V15 has been sold to the Kreis Altenaer for use at Ludenscheid and the HKB would like to give up all rail traffic. The problem is serving the various factories around Herford, DB not wishing to take on metre gauge shunting. Hoya - Regauging is complete to Syke Town; the company has bought railcar 157 of the Niederweserbahn and when regauging is complete intends to modify narrow gauge railcar 65 to work the Asendorf branch in place of 0-6-0T No.33. TWE - There is still some steam left. Serviceable on 12th March were 161/2; 222/3; 261 and 271. See Osnabrück article in this issue for further details of this line.

GREECE

Buses now run thrice daily between Volos and Milée which makes a visit to the line much easier. Intermediate villages still appear to be without rail access, so the railway is probably safe.

ITALY

Trento-Male - Since December 1964 has been on 3000v. operation. Stock is three Bo-Bo-Bo-Bo three-coach articulated trains, five Bo-Bo motor coaches and one Bo-Bo locomotive all by TIBB. Transporter wagons are in use. Renon Railway - The lower section has been replaced by a ropeway, cutting journey time from 50 to 11 minutes. The upper section from Soprabolzano still runs. Turin-Castellamonte - Now has an 800hp. Bo-Bo diesel electric DE101 (OM-CGE) for freight and ten diesel railcars. The two surviving steam locomotives are in reserve at Rivarolo.

JUGOSLAVIA

Much tunnelling is going on between Gostivar and Kicevo - 53 miles - in connection with the new standard gauge line scheduled to replace at least part of the Ohrid 60cm system. It is reported that the further 52 miles from Kicevo to Ohrid and the five mile Struga branch may be abandoned soon without rail replacement.

CZECHOSLOVAKIA

CKD is building 18 Bo-Bo-Bo-Bo three-coach articulated trains for CSD narrow gauge railways, class EMU89. The first has gone into service on the 22-mile, 1500v d.c., metre gauge line from Poprad-Tatry to Štrbské Pleso.

AUSTRIA

It is confirmed that the Kühnsdorf-Eisenkappel line is still open to freight, though most trains do not proceed beyond the Rechberg paper mill. Garsten-Klaus and the Sierning branch are still all steam. At Easter 298.102 appeared to be the usual branch engine; 298.14 and 498.04 were in store at Garsten. Passenger traffic to Sierning was very sparse, though a fair amount of parcels traffic was noted.

SPAIN

It is reported that two more diesels have been ordered by the Sierra Menera. When delivered, these will probably mean the complete replacement of steam on the main line.

(Continued on Page 19.)

THE FC DE CASTRO-URDIALES A TRASLAVIÑA

by J. Morley

This metre gauge line, which is reported to have been closed on 15th January this year, ran northwards from Traslaviña, 33kms. west of Bilbao on the main line of the FC de Santander a Bilbao (SB), for 24kms. to the coast at Castro Urdiales. It was opened in 1899 by the Compañia de los Ferrocarriles de San Julian de Musques a Castro-Urdiales y Traslaviña and was one of the first two narrow gauge lines to be taken over by the Estado on its formation in 1926.

The first five locomotives were 2-6-2T's, three being supplied by Hartmann in 1897 and two by Maquinista in 1899. In August 1958, apart from the frames of No.2 which were dumped some distance beyond the station at Castro-Urdiales, the only survivor was No.3 GALDAMES, which was being rebuilt in the works there with a new boiler. This work took a long while to complete, and it was not until September 1965 that it was seen in service, when it was noted shunting at Traslaviña.

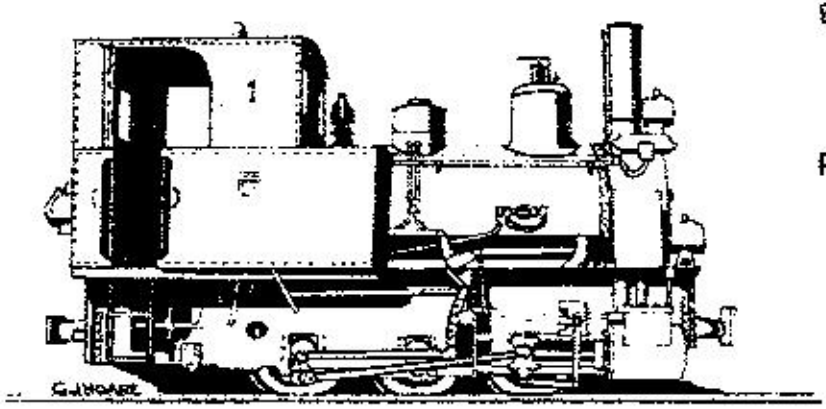
The next locomotives were 0-6-0T's, No.6 MIOÑO (Tubize 830/91) and No.7 MUÑECAS (La Meuse 1207/91) which were acquired from the Belgian Vicinal. They are the only SNCV locomotives known to have been sold to Spain and were originally Nos.422 and 437 respectively. Another second-hand acquisition was a 2-6-0T, LM 301 DEVA (Nasmyth Wilson 455/94), from the FC de Luchana a Munguia, its name and number originating with its previous owners, the FFCC Vascongados. These three locomotives have not been used for some time.

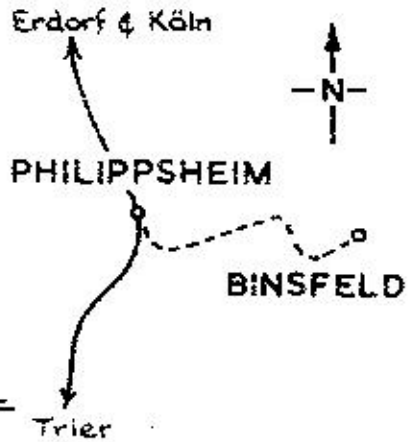
For many years the passenger service consisted of three trains daily in each direction, with either through coaches or connections at Traslaviña with the SB trains to and from Bilbao. The "Correo" left Castro at 7.25 and returned from Traslaviña as the "Mixto" at 8.45. The "Ligero" (light train) left Castro at 12.50 and after arrival at Traslaviña the locomotive continued along the SB to Aranguren, where it awaited the arrival of the westbound "Correo" (14.30 from Bilbao) which it then assisted up the bank to the junction, from where it left for Castro at 15.40. In the evening the "Mixto" left Castro at 19.30 and returned as the "Correo" from Traslaviña at 21.05. The actual timings varied slightly over the years and the journey time was about one hour in either direction.

To replace the earlier locomotives the Estado introduced five 2-8-2T's, Nos.2, 6, 8, 9 and 10. Ten of this class were built by Trubia between 1933 and 1942 for use on the projected FC de Ferrol del Caudillo a Gijon but owing to its non-completion, they have been used on various Estado lines. However in spite of this apparently adequate supply of locomotives to maintain its services, others have been borrowed. In 1960 and 1961 one of the Estado 2-6-2T's, No.16, originally built for the FC Vasco Navarro was noted in use and in 1963 SB 2-6-2T 21 CADAGUA was seen at work on the line.

From 1st January 1961 an Estado diesel railcar was introduced and made three return workings daily over the line, the first train in each direction still being loco-hauled and running at the same times, although now described

(Continued on page 16.)





At last! Here is the long awaited report on that little-known line, the Philippsheim-Binsfeld - a little late it is true since the thing closed a few months ago. However, better late than never, so read on:

The Ph-B ran through a corner of the Eifel region to the north of the German Moselle valley and was, in latter years at any rate, something of a curiosity. It was built in 1899 on the 75cm gauge, from Philippsheim on the Köln-Trier line to the little village of Binsfeld, some 8.2km to the eastward up the very scenic Kyll valley. The steepest grade was 1 in 28, needed to scramble up to the plateau on which Binsfeld stands, and to master it the Company had only two small Heilbronn 0-6-0T's, which nevertheless did their job so capably that they lasted to the end of the line's existence.

The line was intended as a general purpose railway, but as the years went by, it came to depend more and more on freight traffic, particularly from a claypit at Binsfeld. The Summer 1948 Kursbuch for the British Zone of Germany shows a morning and evening passenger train in each direction on Mondays, Wednesdays, Thursdays and Saturdays only, with an extra early afternoon working in each direction on Mondays and Saturdays. All these called at the intermediate halts of Dudeldorf and Herforst, 5.5km and 6.5km respectively from Philippsheim. Passenger traffic was turned over to buses about 1951. At some time in its career, too, the concession was acquired by the Vereinigte Kleinbahnen of Frankfurt, who also ran the neighbouring but much more impressive Moselbahn.

Almost since the closure to passengers, the service has comprised a daily morning freight from the headquarters at Binsfeld to Philippsheim and return, with additional journeys when traffic demanded, but in 1964 the line's major customer, the Binsfeld claypit, started experimenting with road transport and this paved the way for complete closure. Matters were not made easier by the fact that the Ph-B had to ask permission every time it wanted to enter its Philippsheim terminus, since this was directly alongside a USAF fuel depot and

the Americans were apparently rather casual about leaving the filler caps off when discharging tank cars..... The Ph-B locomotives, of course, did not have such modern gadgets as spark arresters. Now the USAF need not worry any more.

Locomotive Stock

1	0-6-0T	Heilbronn 370/99
2	0-6-0T	Heilbronn 371/99

The heading to this article and the cover drawing, which also depicts the Ph-B, were provided by G.J. Hoare.

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FURTHER NOTES ON THE BILLARD TYPE L'ESPAGNE RAILCARS

The subject of the "Know your Enemy" article on page 15 of the Spring 1964 issue of the Journal was the 150hp. railcar design built by Billard for Spanish narrow gauge railways. This article contained a full description of these cars but only made a passing reference to some of the lines on which they are used.

From observations it would seem that 25 cars of this type were supplied by Billard in 1958-59. Four, Nos.2101-4, are used on the two Estado-operated 3'6" gauge lines, the first two on the FC de Buitron a San Juan del Puerto and Nos.2103/4 on the FC de Cartagena a Los Blancos while the others, Nos.2111-31 are used on metre gauge lines.

Four of these, Nos. 2111-3 and 2130 are on the FFCC de Peñarroya y Puertollano. The two lines at Malaga account for six more of which Nos.2114/5/26 are on the FFCC Suburbaños de Malaga, these three also carrying FSM numbers 1-3 respectively, while Nos.2117-9 are on the Estado Malaga-Fuengirola line.

The FC Secundarios de Castilla has Nos. 2120 and 2125 while Nos.2121/2 are on the FC de Astillero a Ontaneda. This is believed to be the only line of the metre gauge network in northern Spain to operate this type of Billard railcar.

As mentioned in the last issue of the Journal, the through workings over the Alicante-Denia and Denia-Carcagente lines were increased to two in each direction from last August and these are operated by Nos. 2116/23/24/29, which are also used on other services on both lines. Finally, Nos.2127/8 now provide all services on the FC de Reus a Salou and No.2131 works on the FC de Tortosa a La Cava, this car being also numbered T.A.B.1.

J. Horley

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THE FC DE CASTRO-URDIALES A TRASLAVIÑA (Continued from Page 14.)

as a "Mercancias-Viajeros". The additional service was the first railcar working leaving Castro at 8.38 and returning from Traslaviña at 9.39, the other two services leaving at approximately the same times as previously but with the journey time shortened to around 35-40 minutes. The final timetable operative from 4th August 1964 showed all four trains in each direction as railcars.

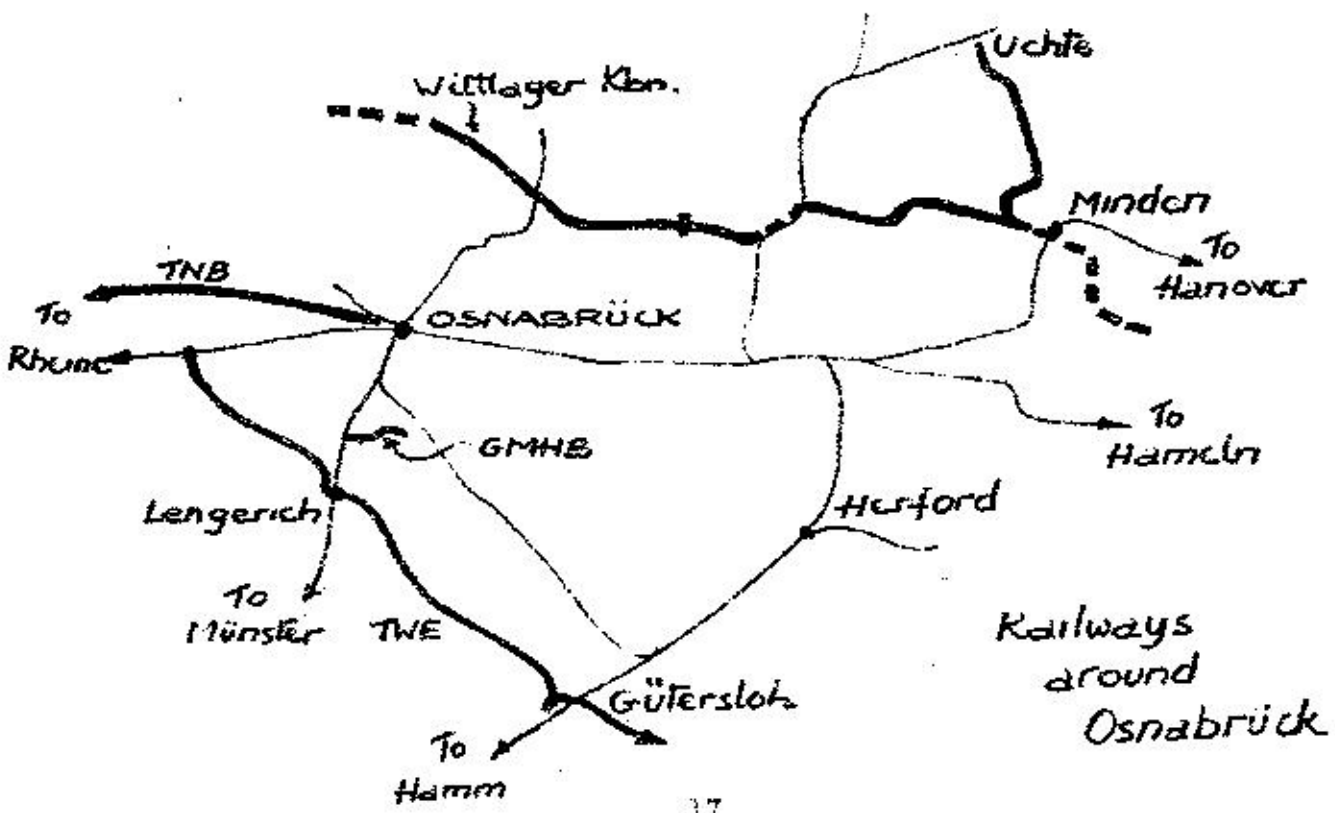
CENTRES FOR LIGHT RAILWAY ENTHUSIASTS - OSNABRÜCK

The Editor has received various requests for information on where to find surviving light railways with steam working in North Germany. The answer is in the Osnabrück area, which also provides much steam traction on DB to add interest.

Osnabrück itself is a very pleasant town in its own right, with a long history, close associations with England, a friendly tourist department and some fine mediaeval gabling which somehow survived the war. Its DB station is quite fantastic, behind a misleadingly demure frontage, since it is the junction of no less than five routes - and all lead to light railways. These latter are:

1. Tecklenburger Nordbahn (TNB) A standard gauge line from Osnabrück-Eversburg west to Rheine, this is only a ghost of its former self. Only one service a day runs through the whole length of the line, and goods traffic is mainly hauled by a grimy Deutz diesel. Two steam locomotives are, however, said to be out to grass at Mettingen, the depot half-way along the line.

2. Wittlager Kreisbahn. This standard gauge line, reached from Osnabrück by catching the DB train to Bohmte on the Bremen main line, has no steam locomotives left, but does have two advantages - a very pretty countryside and a collection of quaint and idiosyncratic railbuses, which include double-ended Wismars. The depot is at Preussisch Oldendorf, where some trains make lengthy stops, and a visit would form the basis for an interesting day tour, continuing via Lübbecke to the Mindener Kreisbahnen (see below) for a trip to Minden and thence back to Osnabrück by DB.



3. Mindener Kreisbahnen. This is a largely diesel-worked standard gauge concern with a heavy stone traffic on its southerly branch to Kleinenbremen which in turn supports meagre passenger traffic on the other two branches to Uchte and Lübbecke. Depot and works are at Minden light railway station, which is about a mile from DB on the opposite bank of the river. One or two steam locomotives are held in reserve.

4. Georgsmarienhütten-Eisenbahn. This short standard gauge line is owned by a steelworks and is best reached via its DB connection at Hasbergen, just south of Osnabrück. It possesses 16 steam locomotives including 0-10-0T's and an ex-Prussian T9 2-6-0T which handles passenger traffic. Depot and works are in the steelworks at Georgsmarienhütte. STRONGLY RECOMMENDED, as the house agents say.

5. Teutoburger Wald Eisenbahn (TWE). This standard gauge line can be reached from Ibbenburen to the west of Osnabrück or via an intermediate point at Lengerich-Hohne to the southward, from which the line runs on to Gütersloh and Hövelhof. The depot is here at Lengerich and usually contains several of the surviving 2-6-2T's, 2-8-0T's and solitary 2-10-2T which still work some of the freight traffic. Operating HQ is at Gütersloh Nord and it is advisable to write in advance since Lengerich depot is in the middle of loose-shunted goods yards and intruders are not popular.

-o-o-o-o-o-o-o-o-o-o-o-o-o-o-o-o-

NEWS FROM THE SURSEE-TRIENGENBAHN

It is likely that fewer enthusiasts in future will alight at Sursee, on the Swiss Federal main line from Basel to Luzern, to ride over the 9kms. of the Sursee-Triengen Bahn which, until it acquired a diesel locomotive in 1964, was the last standard gauge railway in Switzerland to operate all its services with steam locomotives.

For most of its existence the ST only owned three items of motive power, but while Nos.1 and 2 were orthodox 0-4-0T's built by Henschel in 1911, works numbers 11099 and 11100, the third was a remarkable combined locomotive, luggage van and postal sorting office steam railcar. This was numbered FZm 11 and was built by SLM in 1918, works number 2645. It had a cab at each end, ran on four wheels, two being driven, and was intended to be operated by one man. Unfortunately, it is thought that this most interesting vehicle was scrapped about 1962, but definite information about its fate would be welcome.

In September 1960 these three locomotives were all out of use at Triengen-Winikon and the services were being worked by No.1 of the Vereinigte Huttwil-Bahnen. This is an 0-4-0T enclosed in steam tram style above the footplate, but with its wheels and motion exposed, and was built by SLM in 1931, works number 3522. More recently 0-6-0T's have been acquired from the SBB to maintain the services and Nos.8477 and 8488 were both used in 1963. These are believed to have since been withdrawn and in August 1964 No.8522 was in use. The current Swiss timetable shows the line to be steam and diesel worked and details of the present motive power are required.

J. Morley

PUBLICATIONS RECEIVED (Continued from Page 2)

Switzerland will have little difficulty in following the narrative, the author's habit of interposing numerous asides and flitting rapidly from one theme to another will confuse the newcomer, for whom, presumably, the book is largely intended. This is a pity, for much useful information is included, particularly regarding some of the lesser-known lines which have seldom featured in English language publications. The illustrations are good and varied and have been culled from numerous sources. Of the maps, one shows the author's route through Switzerland and the others are useful enlargements of the more complicated areas. The book is completed by a schedule of Swiss Federal locomotives with shed allocations and, somewhat inexplicably, a list of Zurich tram depots and routes. Locomotive lists for the private lines visited would have been a useful addition.

SINGLE LINE RAILWAYS Edited by O.S. Nock. Published by David & Charles/Macdonald. 358 pages 5½" x 8½", 56 illustrations; price 50/-.

This book has been prepared for the Economic Commission for Asia and the Far East by a panel of 17 contributors, experts in their particular fields, under the editorship of O.S. Nock. In view of the territories in which the book will chiefly be studied, the title is appropriate, but nevertheless most of the text applies equally to double or multiple lines of track. The book is divided into six sections, dealing respectively with economic planning; physical planning, and construction; motive power and rolling stock; operation; staffing and productivity; and increasing line capacity. The development of a new railway is thus considered from the earliest stages to completion, in what is generally a well-balanced account. As is almost inevitable, however, with a book written by a panel of authors, there is some overlapping and, in particular, the chapters on methods of train working and on signalling could well have been combined. There is an interesting selection of illustrations, featuring railway construction and equipment in many different countries.

NEWS ITEMS (Continued from Page 13.)

SWITZERLAND

The Rhaetian Railway are running two steam-hauled specials in June, covering the itinerary Chur-Preda-Davos-Landquart-Chur, and hauled by one of their two surviving 2-8-0's. The second special, spread over the two days 18/19th June, is already fully booked, but tickets are still available for the earlier special on 17th June. These are obtainable, price 32/- from the Swiss National Tourist Office, 458 Strand, London W.C.2. The Sihltalbahn will run its famous steam passenger train "Schnaaggi-Schaaggi" each Sunday and Wednesday from July 11th to August 20th, leaving Zurich Selnau at 14.05 and returning there at 16.21. Motive power will be 0-6-0T No.5, built by SLM in 1899 and extensively overhauled in Offenburg last June. A steam special on this line is also proposed for 18th June - see page 2 for further details. The Emmentalbahn has stated that it will not be running any steam trains this year.

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