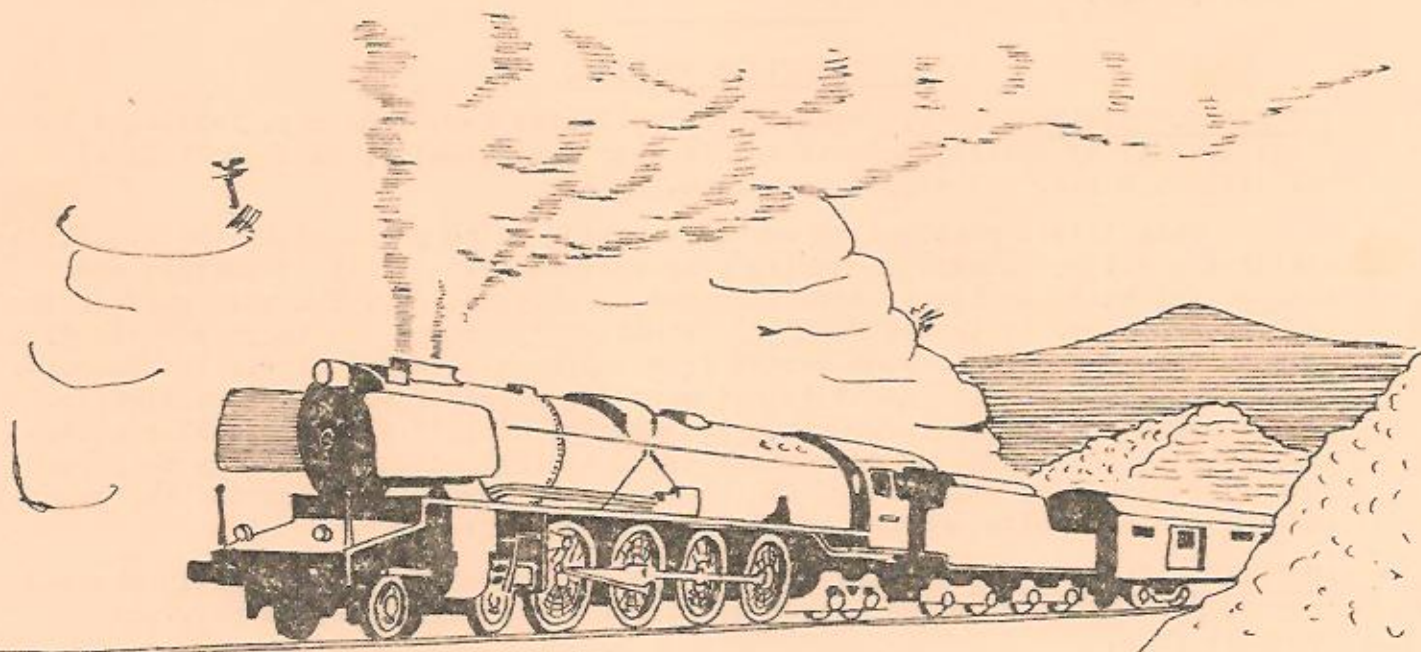


CONTINENTAL RAILWAY JOURNAL



RENFE 4-8-4 AT PANCORBO

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Comments on the subscription renewal forms were less numerous than in previous years, and most of those that did appear were complimentary rather than the reverse. This presumably means that most readers are reasonably satisfied with the Journal - at any rate we hope so.

One gratifying feature has been the large quantity of notes received for the current issue, particularly the main line section, and we sincerely hope this is no mere flash in the pan. Urgently required, however, are more articles for both sections of the Journal. At present there is practically nothing in reserve, and it is difficult, if not impossible, to present balanced issues when there is no pool of material from which to choose. We look forward to receiving a bumper crop of articles - long and short - before the next number appears.

PUBLICATIONS RECEIVED

AUSTRIA FOR RAILFANS by T. Marsh: 20pp duplicated 8vo, plus map. Published by Electric Railway Society and obtainable from E.R.S. Sales, 14 Sopwell Lane, St. Albans, Herts, price 2/6d post free.

This little pamphlet is one of a series being produced by the E.R.S. It contains excellent advice on making preparations for a visit to Austria and some useful hints on how to make the most of your holiday. The main part of the booklet, however, is in the form of a rambling "journey" and in your reviewer's opinion this detracts to some extent from the booklet's value, for two reasons. First there is no index, so it is not easy for a reader to find a particular place; and secondly the information is tied too closely to a particular routing, even to the extent of suggesting train timings which are likely to become out of date and, so, misleading. The best plan is probably to combine the general information here with another small booklet, namely:-

AUSTRIAN RAILWAY GUIDE by G.J. Hoare: 32pp duplicated 4to, maps and 16 photographs. Obtainable from the author at 11 New Road, Weybridge, Surrey, price 3/- post free.

This is a well-produced booklet giving a brief description of each secondary line in Austria, with details of sheds and locomotives as at publication date. There is no index, but a comprehensive contents table, together with a sensible arrangement of lines (e.g. private narrow gauge all grouped together) makes it easy to locate the desired information. The maps are keyed to the text by use of the Austrian Railway Timetable numbers, a very useful feature, and a well-reproduced photographic insert shows typical steam motive power. Brief notes are also given on surviving Ö.B.B. main line steam power.

(Continued on Page 11)

IN SEARCH OF STEAM

(A suggested weekend trip from London or the south of England)

by D. Trevor Rowe

With the rapid dieselisation of British Railways nowadays, one of the nearest steam worked main lines to London is that of the S.N.C.F. (French National Railways) from Calais and Boulogne to Amiens, electric traction being the order of the day thence to Paris. For those who prefer country branches to main lines, there are also a number of secondary lines around Calais and Boulogne, often worked by locomotives of class 230D, 4-6-0's built for the Northern Railway of France just prior to World War I. The main line expresses are handled by Chapelon pacifics of class 231E, the dwindling stock of which is nowadays supplemented by ex-P.L.M. Railway pacifics of series 231G and K, displaced from their former haunts, which included the Paris-Dijon-Lyon main line, by electrification.

This area can easily be reached for the weekend from London or the south-east of England, either by air vehicle ferry services of British United Airways, operating Lydd/Southend to Le Touquet/Calais, or by Townsend Vehicle Ferry service from Dover to Calais. British Railways' services are not conveniently enough scheduled to allow the maximum time possible in France, and although in high summer their car ferries operate almost hourly, they will not take foot passengers, at least in the Dover-Boulogne direction. Incidentally, this trip is suggested in mid-summer only, when frequent services are scheduled by both sea and air.

For our first photographic weekend, a friend and I chose the sea route, and we left London for Dover very early on the Saturday morning, arriving at the port just before 8.0 a.m. At the Townsend Ferries office we booked returns to Calais at a cost of £4.2.0. (there is a day return facility for only £2.5.0) and soon afterwards we were boarding their minibus for the Eastern Dock. Non-car owning passenger traffic was heavy this morning, and a total of 20 passengers was crammed into the 11-seater vehicle! It was a most uncomfortable journey but happily a short one, and the minibus is driven right onto the ship, which this morning is 'Free Enterprise I'. We sail at 9.0 a.m., reaching Calais at 10.30, and once again board the minibus to be driven ashore, although this time it only takes us up the ramp to the Customs shed, and it is necessary to walk into town.

Unfortunately it is a very dull day, with every promise of rain, and so we abandon our original plan, which was lineside photography way out in the country on the well-known Caffiers bank, and catch instead the 11.45 railcar to Boulogne. Just before this railcar leaves Calais Ville station, there is the 11.42 to Lille, hauled by a 230D, and it is possible to photograph this leaving if one is smart enough to get back to the railcar in rather less than 3 minutes! We leave past Calais shed, where the usual assortment of 141R's, 231E's, G's and K's, and 230D's are visible, together with some 050TE tank engines for yard shunting and empty stock working round to the Maritime station. The railcar stops at every station to Boulogne, arriving there at 12.47.

Our revised objective for the afternoon is Hesdigneul, two stations out of Boulogne towards Amiens, which we have been told is a good spot for railway photography, but we find that there is no train until 14.58, so decide to spend a short while photographing departures from Boulogne in the direction of Calais. There is a convenient 'cabbage patch' on the bank just clear of the Ville station, and we instal ourselves there by the tunnel mouth just as a thin drizzle of rain begins to fall. Shortly before a steam train is due, the owner of the cabbage patch arrives for a pleasant Saturday afternoon's gardening, and is not at all pleased to find two foreigners in occupation. Fortunately, and perhaps because it's two to one, he does not become violent when his instructions to depart AT ONCE are politely ignored. Instead, he retires behind the bean sticks, muttering insults we do not recommend this spot to intending visitors, as we feel that their reception will leave something to be desired!

After the boat train, hauled by a 231E, has been duly photographed, we return to the station for the railcar to Hesdigneul, as on short weekend trips like this there are no midday meal breaks; one brings one's food along and eats between trains. On arrival at Hesdigneul we station ourselves first of all at the point where the Desvres branch leaves the main line, and record here the Paris-bound Golden Arrow and the following two boat trains, although by now it is very dull and raining. Rather to our surprise, a freight train comes off the single track branch double-headed by two large modern tank engines of class 151TQ, and as this comes to rest in the station we head back there and manage to photograph it again leaving. Just on the Boulogne side of the station is a good spot for photography, as it is on a curve and (with no sun) one can photograph trains travelling in either direction. Unfortunately, it is in the goods yard, and before long we are politely moved on by one of the station staff. However, it is no distance to a level crossing, an almost equally good spot out of sight of the station, and here we remain, seeing in quite a short space of time 231E's, G's and K's on passenger trains, 141R's on both passenger and freight trains, and two car sleeper trains from Boulogne with the locomotives working really hard and throwing out some fine smoke effects as they thunder past. At 17.30 the branch train for Desvres (there are only two daily in each direction) arrives and is held in the platform road while an express thunders past on the adjacent track. This branch train is powered by a 230D but, to our disgust, the train due later off the branch, on which we must travel to Boulogne, is powered by a 1965-built BB diesel, an ominous sign which portends the early demise of the remaining 23CD's.

An interesting insight into French commercial practice is afforded when we buy our tickets back to Boulogne. As the outward ones cost 82 centimes each, I naturally offer this sum for the return journey, only to be told that the fare is two centimes less. It transpires that a small surcharge is levied at Boulogne to help pay for the new Ville station; this has been agreed by the local Chamber of Commerce as it is assumed that most people purchasing tickets are local residents and should therefore contribute just a little towards having a fine modern station in THEIR town. British Railways would no doubt welcome a similar offer from local authorities.

Back in Boulogne once more, it's a meal and bed for two rather tired and very damp travellers, but the next morning dawns bright and sunny, and as our train to Caffiers does not leave until 10.26 (we missed the 7.26 as we consid-

ered it rather too early on a Sunday morning) we take a stroll down to the Maritime station, too late to photograph the arrival of a passenger train, but in time to see the empty stock being drawn out by a tender first 141R, travelling at walking pace because a man with a red flag precedes the train to warn traffic of its passage.

The 10.26 to Caffiers is a railcar, as are all the stopping trains between Boulogne and Calais, and on arrival there we climb the grassy bank and settle down in the sunshine, eating wild strawberries, to await events. It is not long before a Calais-bound boat train passes through in fine style, headed by a 231E piloting a 141R, and this is followed some while later by a 141R on a freight travelling in the opposite direction. On a Sunday traffic is not very heavy, and by 13.00 we are to be found in the Café de la Gare, where we remain until after 2 o'clock. On emerging, we find that the sun has moved round and so we place ourselves at the top of the bank on the Calais side of the station, and await the succession of afternoon boat trains. First comes the Paris-bound Golden Arrow, headed by 231G235, and only five minutes behind it the ordinary boat train with 231K82. Then, just before 15.30, the Calais-bound Golden Arrow passes, hauled by 231G31, followed almost immediately by 231E21 on another boat train towards Paris. As we are getting ready to leave, 231K81 passes towards Calais hauling one Wagon Lits and one coach; I cannot imagine the reason for this working, although several interesting possibilities spring to mind, such as these two vehicles having been left uncoupled from the main train at Paris but I am sure there is a more prosaic reason, and anyway they may be empty stock as I omitted to observe if there were any passengers aboard.

We have enjoyed an exceedingly good day's photography, but now we have a problem; the boat leaves Calais at 18.15 and there is no train due to stop at Caffiers until well after that, but the Route Nationale is only about 5 miles away, and we know that a bus is due along it at about 16.30. Fortunately we have not walked very far before we get a lift, and the car driver very kindly runs us right up to the main road, although he is going out of his way to do so. We have about 30 minutes to wait for the bus which takes us at high speed into Calais, past the familiar advertisement exhorting one to 'mettez un tigre dans votre moteur'. The driver seems to ignore the Government-sponsored hoardings suggesting 'Sobriété, Sécurité', as at two stops en route he visits bars with one of the only other three passengers aboard, and returns some few minutes later, obviously well refreshed!

At Calais we have time for a little shopping before boarding 'Free Enterprise II' again, for the crossing to Dover. Although it is forbidden to walk into the Eastern Dock, it seems quite in order to walk out of it, and less than ten minutes after docking we are on the road back to London, well satisfied with a good weekend's steam photography, which has cost us less than £10 in all, fares, food and accommodation included. For those who smoke, the Duty Free concession in cigarettes almost pays their fare in one direction!

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ERRATA - The upper caption to the right-hand illustration on page 8 of Journal No.6 should read "DIAKOFTO KALAVRYTA No.11". The caption below the drawing is correct.

BEUGNIOT LOCOMOTIVES

by P.M. Kalla-Bishop

Beugniot locomotives are little-known, possibly because there is little to distinguish them from those of orthodox construction. Edouard Beugniot was chief locomotive engineer of Koechlin & Cie., and a little over one hundred years ago he was concerned with designing locomotives for mountain routes with multiple driving axles. The problem was, how were eight-coupled locomotives to get round curves? Some flexibility in the wheelbase was clearly indicated, and the Beugniot solution was to couple adjacent driving axles with a bar, resting on bearings on each axle and vertically pivoted to a frame stretcher at its centre.

For the first designs two such bars were provided, but afterwards a single bar on the centre-line of the locomotive sufficed. The connected axles had slight side play and the effect when rounding a curve was to make the rear axle move laterally in the opposite direction to the front axle. On hitting a right-hand curve, the front coupled axle of the locomotive would be forced to the right and the Beugniot bar would send the following axle to the left - just what was required to round the curve.

Beugniot's first two locomotives with his bars were adaptations of an existing design, Nos. 1537/8 of the P.L.M., 0-6-0's for service on the twisting Saint Etienne-Andrézieux section, put into service in 1858. The following year came two 0-8-0's, Nos. 1998 LA RAMPE and 1999 LA COURBE; the latter the P.L.M. lent to the Central Swiss Railway for trial for a time. The first two and last two axles were connected by Beugniot bars, and there were other design peculiarities. They had outside frames and two inside cylinders, but these faced the wrong way and each piston rod was connected to a rocking lever at the front of the locomotive, which was connected at its other end with the crosshead and connecting rod. A further peculiarity was an articulated tender. They were not Engerth locomotives but the exact opposite. The point of Engerth's invention was to use some of the tender's weight for adhesion. Beugniot found on the other hand that he had too much weight on the rear axle of his 0-8-0, and used the articulated tender to relieve the locomotive of the excess. The P.L.M. found the locomotives too complicated for their taste, and in 1869 they were drastically rebuilt into orthodox locomotives, without Beugniot bars. The final French locomotive with Beugniot bars was the well-known Petiet 0-6-6-OT of the Nord, with a preheater on top of the boiler barrel, No. 605 LE RENARD. In this case the bars were used to connect the outer axles of each group of three.

Beugniot had more success abroad with the Lombard-Venetian Railway. Their No. 90 CAVALLI, a 2-4-0, one of a batch of ten, was delivered with Beugniot bars in 1859, no doubt as a trial locomotive. Here an excursion into financial and European history must be made. The Lombard-Venetian was the old K.u.k.Ferdinandsbahn, which was denationalised in 1858 and came into the hands of the Rothschilds, the international bankers. The Rothschilds also controlled the Austrian Südbahn and had in project the Italian Southern Railway to run down the Adriatic coast of Italy. In 1859 an agreement was signed by which the Südbahn

took over the other two companies and their subsidiaries to create a vast railway system which would have stretched from Milan to Budapest and Vienna to Brindisi.

Meanwhile and also in 1859, the French and Piedmontese started a war with Austria which resulted in the Piedmont king becoming the king of united Italy. Half the Austrian dominions in Italy were engulfed, and the rest in 1866. The new government had no intention of having the larger part of its railways controlled by a Viennese company, and the Rothschilds had to undo their agreement, so that the Lombard-Venetian and Italian Southern remained independent. No. 90 CAVALLI was put ashore at Trieste while the war was on, and became caught up in these troubles. She was promptly renumbered 61 in a special Südbahn list, and then became No. 161 of the Südbahn proper. Most of her life was spent working Vienna-Wienerwald locals until breaking up in 1896.

During the war a railway was building from Bologna to Pistoja with lengthy 1 in 40 gradients, nominally owned by the Greater Südbahn. Two 0-8-0's were ordered for it from Koechlin, Südbahn Nos. 902 L'APENNIN and 903 LE RUBICON, with outside cylinders, inside frames, Beugnot bars and articulated six-wheel tenders. By the time they were put ashore at Trieste the war was over and the connection with the Italian railways severed, but the Südbahn had ordered them and to the Südbahn they were delivered. No doubt they found useful employment up the hill out of Trieste on the line to Vienna. It left the Lombard-Venetian with nothing to work their new railway, so Nos. 199-204 were hastily ordered to the same design, built in 1863 and named after battles in the late war. The following year the Südbahn sold their two to the L.-V., which became Nos. 205/6.

Two more were built in 1866 to a slightly modernised design, with four-wheel articulated tenders, Nos. 509/10, named after battles in Garibaldi's campaign of 1860. Finally, ten more were built with four-wheel tenders in 1871, Upper Italy Railways Nos. 1011-20, named after battles in the 1866 Austro-Italian war. The 20 locomotives worked the Bologna-Pistoja until 1885 and then migrated elsewhere, some at least being rebuilt as straight tender locomotives. Withdrawal began about the turn of the century, and by 1910 or thereabouts they had all gone. (A complete list of these Italian Beugnot 0-8-0's will appear in the next issue with the second part of this article.)

After these Italian locomotives, no more Beugnot locomotives were built for over thirty years. It was the German firm of Krauss who revived the idea for a little 0-8-2T they built for the metre-gauge Cantabrico Railway in 1905. No. 15 (later 50) SERDIO had a Beugnot bar between the first and third driving axles and the third and the rear trailing truck. Five more were built up to 1909 and another in 1926. The ten 2-8-2T built at the Trubia Arsenal, Oviedo, from 1929 also had a Beugnot bar for the front and rear trucks it may be noted, but the history of controlling carrying wheels in such a manner cannot be taken further here. The little SERDIO started something for front and rear trucks, the Krauss-Helmholtz truck (widely applied), the Schwartzkopff truck, the Eckhardt truck and others, all deriving from the Beugnot bar.

(To be continued)

NOTES AND NEWS

AUSTRIA

There are still quite a number of steam passenger turns on the Graz-Bruck a.d. Mur section, with classes 52, 77 and 78, and reasonably frequent double heading occurs, though the principal expresses are diesel hauled. The last 33 class 4-8-0 has been withdrawn from service, as have the 38 class 4-6-0's at Amstetten. Although electric traction was supposed to commence on the Leoben-Vordernberg section in May 1963, all the trains observed on this line were steam hauled, including 57 class 0-10-0's on passenger turns. In early August, the rack 2-12-2T was still out of use at Vordernberg, and the diesel was not working either. The heavily graded Hieflau-Eisenerz section is recommended for action photography and recording, as iron ore trains are also worked this way and produce 86 class 2-8-2T's piloting 52 class 2-10-0's. There are still a few 35 class 2-6-2's at Bruck a.d. Mur for local turns.

FINLAND

Official locomotive stock figures as at 30th June were 549 steam and 540 diesel. However, of the steam locomotives only about 100 are in active service, the remainder being stored. On 8th July Hyvinkää works was completely devoid of steam, except for four locomotives in store, including two of the Pr2 4-6-4T's. Government approval has now been given for electrification from Helsinki to Kouvola and Tampere.

SWEDEN

As previously reported, the Swedish State Railways have no regular steam workings. However, there are numerous locomotives in store and three examples noted at Norrköping, 2-6-4T's 1919 and 1921 (both Nohab of 1952) and 0-6-OT 1211 (Falun of 1914) had had all metal parts completely cleaned and painted, and the motion greased up.

DENMARK

A visit to Dybbølsbro shed in Copenhagen on 14th July, produced F 0-6-OT 489, D 2-6-0 820 and C 4-4-0 710 in steam. Stored were F 0-6-OT 480/8, 500; D 2-6-0 825/6; S 2-6-4T 727/32/6/7; Q 0-8-OT 341/2/4; and E 4-6-2 979/80/1/3/4/5/8/93/4/6. Some pacifics were also seen in action. On 16th July N 2-10-0 208 and E 4-6-2 967/74 were in steam at Fredericia shed, whilst in store were Q 0-8-OT 350/1; F 0-6-OT 662; R 4-6-0 944; and N 2-10-0 210.

BELGIUM

During a recent brief but reasonably comprehensive visit the following classes were noted, the number of examples of each type seen being given in brackets:- Class 29 2-8-0 (13); class 50 0-4-OT (1); class 53 0-8-OT (5); class 58 0-6-OT (1); class 64 4-6-0 (8); class 81 0-8-0 (16). Steam sheds were noted still to exist at Aalst (classes 29 and 53); Arlon (29); Herbesthal (29 and 81); Merelbeke (Gent) (50, 53, 64 and 81); St. Ghislain (29, 53 and 81); St. Nikolaas (64 and 81). This list is by no means complete, and in particular it is reasonable to assume that there is still a steam shed with quite an extensive allocation in the Liège area. St. Ghislain was the only depot actually visited and 3 service locomotives of "Caledonian" 0-6-0 style were seen there.

Steam was observed working all classes of traffic between Liège and Herbesthal. Trains on this route are subject to very severe delays owing to electrification, the accompanying engineering works being of a far more extensive nature than anything ever encountered between Euston and Crewe. Steam was also observed working four evening rush hour trains out of Gent, on the lines to Eeklo, Kortemark and Zottegem; and on the line from Gent to Antwerp (Linkeroev.) though not on passenger trains.

ROUMANIA

A visit was paid to the Boutari-Subcetate section, which is standard gauge rack either side of Portile de Pier summit. The rack is not continuous on the western slope, and on the east side there is only a short rack section. The route appears to be very much a back alley, with two mixed trains each way indicated in the public timetable. Travelling east, the rack locomotive came on to the rear at Boutari and pushed the train to the summit. She was 40.001, a 2-8-2T built by Floridsdorf in 1908 for MAV. The train consisted of only three coaches, and the engine exhaust was so soft as to be almost inaudible. At the summit, the locomotive ran round the train, which it then headed downhill picking up wagons en route, until a total of 30 had been amassed by Subcetate. Here there was a shed with several other 40 class on view.

JUGOSLAVIA

During a visit last summer no mallets were seen banking at Kostajnica, the only locomotives noted on such duties being one 0-10-0 and one 2-10-0.

FRANCE

In May, Batignolles shed was very busy with 40 pacifics on the books, though there will presumably be a marked change when the Paris-Rouen electrification is implemented in the near future. Several 140C class were working engineer's trains in connection with electrification.

Electric traction has now been extended from Laval to Rennes, with resultant displacement of steam. However, 241P's still work from Le Mans to Nantes. The south Breton coast line towards Quimper is mainly worked by 141R's, although the occasional 241P appears. The mixed trains on the Quiberon branch are 141C-hauled. The allocation of Auray shed is mainly oil-burning 141R's, but also present was 1871-built 030TA645. This had recently suffered a broken spring which would only be repaired if the necessary spare was available from stock.

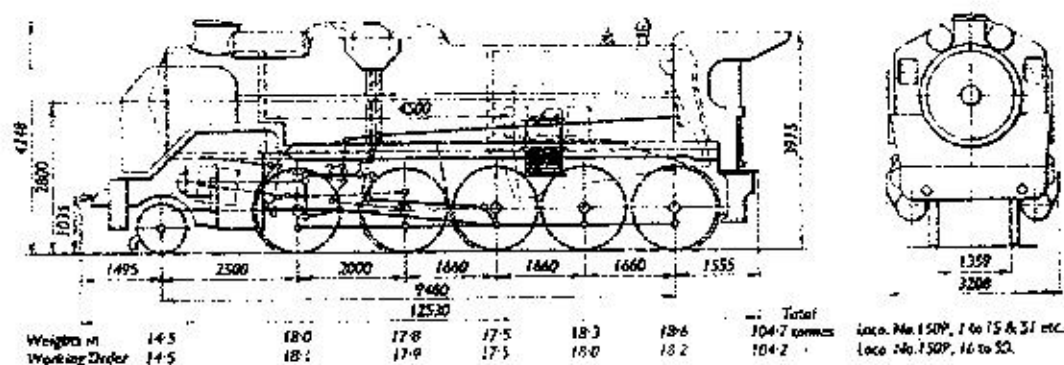
SPAIN

Some of the 151.3xxx class have been transferred from the Leon-Venta de Baños line (now possibly electrified) to Arcos de Jalon, which is an engine changing and banking shed approximately half-way between Madrid and Zaragoza on the old MZA main line. During a visit in July, 7 members of the class were noted at and near Arcos, and were reported as having just arrived. Presumably they will eliminate the need to bank westbound freights from Arcos, although one such train was observed with 240F.2487 banked by 240F.2473.

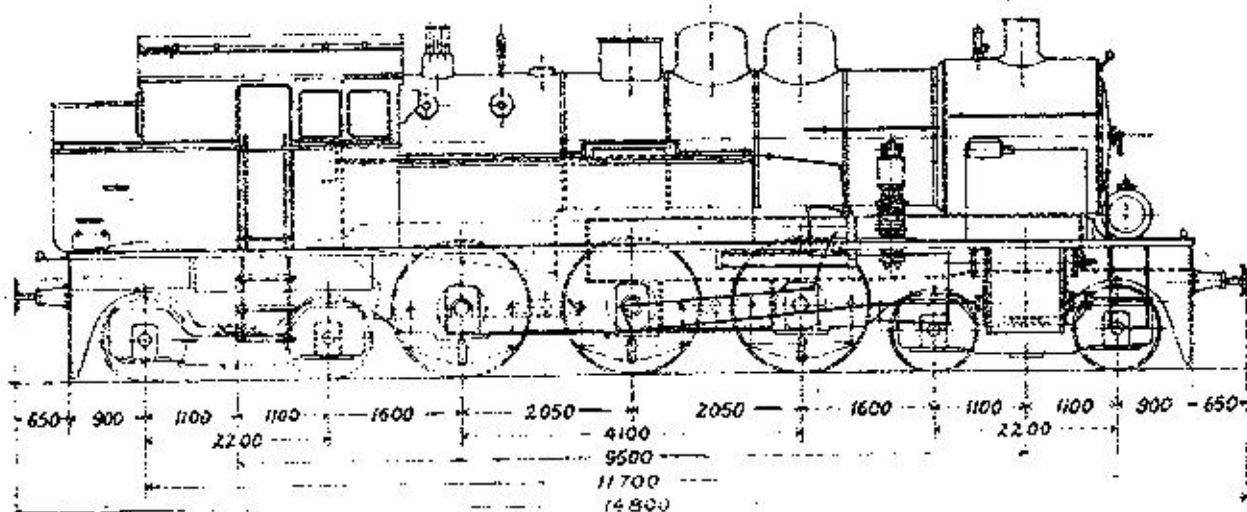
There have been some developments in the south also. The 241.22xx type has disappeared from the Córdoba-Algaciras line, the principal overnight expresses now being handled by diesels. It is very difficult to get a run behind a steam engine on the Bobadilla-Málaga line, since even the "Correos" are usually hauled by diesels, though giving way to steam between Bobadilla and Córdoba. However, on 12th July, the Málaga-Córdoba "Auto" materialised at Bobadilla as

141.2243 at the head of one van and one second class coach - better than an "auto" any day. The following day, the return working arrived at Malaga behind 240.2412. The appearance of a standard RENFE 2-8-2 (141.2243) is noteworthy, as these were previously unknown on the Andaluces section, but there would now appear to be about half a dozen of them at Córdoba, and they work to both Malaga and Sevilla. It seems that standard RENFE 240.2xxx locomotives are not permitted to work south of Bobadilla.

At Sevilla the most noticeable change has been the demise of the small tanks that were always to be seen around San Jeronimo shed. 020.0201 has disappeared to Madrid (for preservation?), the two old MZA Sharp Stewart 2-4-OT's are now lying derelict, and one of the shed pilots was later found dismantled outside Atocha Works. The only tank locomotive in steam was 030.0212. 120.0231 (Sharp Stewart of 1901, ex Bilbao-Portugalete Railway) was being repaired, and is rumoured to take over the job vacated by 020.0201, i.e. permanently coupled to a four-wheeled coach for working staff trains to Sevilla.



SNCF (Nord) 150P



TCDD 3701-08

There is not much to report from Madrid. Delicias seems completely different now, without four or five streamlined 241's sitting around the turntable - presumably they are all in the north. At Atocha the two remaining 120's were scrapped earlier this year. A number of the long-boilered MZA 241's have acquired larger capacity tenders from 240's, so that now they look even more like Spanish "Princess Royals".

Acknowledgements for information are due to Messrs. J. Carter, R.S. Fraser, F. Jones, H. Luff, R.M. Napier and Dr. T.A. Wyatt.

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PUBLICATIONS RECEIVED (Continued from Page 2)

THE RESEAU BRETON by R.G. Harman and B. Roze: 40pp 6 $\frac{1}{2}$ " x 7 $\frac{1}{2}$ ", plus 16pp illustrations, maps and diagrams. Obtainable, price 6/- plus postage, from Branch-Line Handbooks, 41 Manor Road, Teddington, Middlesex.

This is an English translation, with additional material, of an earlier French publication. After a brief history of the line, there are sections devoted to operation, description of the routes, locomotives and rolling stock. Track diagrams of the main stations are provided. Production is apparently by a lithographic process and some of the illustrations have suffered accordingly; also the proof reading could have been better. However, these are small complaints, and the book is good value at the price asked.

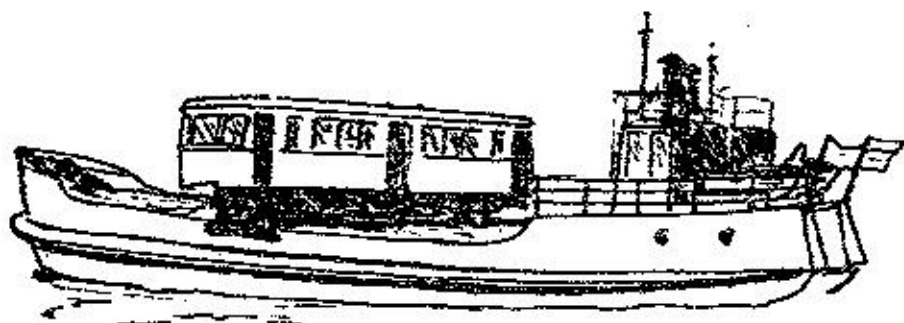
RENFE STEAM compiled by R.S. Fraser and obtainable from him at 138 Garron Lane, South Ockendon, Essex, price 2/6d post free. 20pp quarto duplicated, plus map.

This booklet catalogues the surviving steam stock of RENFE, giving locomotive batch numbers, pre-RENFE owners, builders, dates of construction and latest known locations. There are also lists of depots and of preserved locomotives. For any reader contemplating a visit to Spain, this booklet will prove a most worthwhile acquisition.

VERZEICHNIS DER DEUTSCHEN LOKOMOTIVEN 1923-1963 by Griebel & Schadow. Published by Transpress, East Berlin and Verlag J.O. Slezak, Vienna. 144 pp 5 $\frac{3}{4}$ " x 8 $\frac{1}{2}$ ".

This book lists all German locomotives, steam, electric and diesel existing during the years named, including stock from wartime occupied countries renumbered into the German series. Details given include years of construction, original owner and class, wheel arrangement, number of cylinders and so on. Additionally, there is a comprehensive description of the numbering systems used by the national railway administration of all European countries. Text is, of course, in German, but an English language key makes the main tabular matter easily understandable by all. This book is an essential work of reference for anyone interested in German locomotives and is highly recommended. By special arrangement, we can offer copies to Journal readers at the favourable rate of 6/- post free. Orders, accompanied by remittance, should be sent to the Journal Distribution address before 31st January 1966, and books will be despatched about the middle of February.

AUSTRIAN LOCOMOTIVE LIST - This duplicated list gives all locomotives of the Austrian Federal and private lines as at 31st December 1964, together with the shed allocation of each. A strictly limited number of copies is available from the Journal Distribution address, price 1/6d post free.



MINOR RAILWAYS SECTION

Carrying VT1 to Langeoog.

NOTES & NEWS FROM:

BELGIUM

T.T.A. - The SNCV has now granted a definite concession for the Tramways Touristique de l'Aisne to operate the part of the old Melreux-Manhay route lying between Pont d'Erezée and Lamorménil, a total of 11.26 km. This is the most scenic part of the line, almost entirely on its own right-of-way, and it is hoped that the first section, from Erezée to Amonines, will be working next summer. At present the stock consists of AR96 (ex-ART96) from Tirlemont, which is in sound mechanical order but with a wooden body somewhat the worse for wear, after standing for some time in the open; AR133, an excellent metal-bodied machine by Baume-et-Marpent which needs a new gearbox; camping coach 2115; the bogie trailer 19189 formerly at Warsage; and divers wagons for maintenance work.

Charbonnages d'Argenteau - Steam is on the way out. The Type 7 0-6-OT has been withdrawn and exchanged for an autorail-tracteur (ART86). The Type 7 will go to Schepdaal museum. If the ART is successful, the other steam locomotives may well be replaced in due course.

FRANCE

Verneuil Museum - Buffaud et Robatel 0-6-2T 3714 and a 4-wheel, balconied brake van from the Nangis-Jouy line were sent to Verneuil in June 1965. The other FACS material stored at Jouy accompanied them. Also at Verneuil are Corpet Louvet 2-6-OT AISNE No.1 from Guignicourt and a Cail 2-6-OT originating on the CFD des Charentes.

60 cm. gauge lines - The FACS still hopes to get a 'living museum' established at Pithiviers. The Crochat railcar, locos. 3.5; 5.3; 3.20; and 4.14 are preserved with this in mind and a 2-6-OT from Maizy will join them soon. The FACS has acquired this locomotive in a direct "swap" for the Couillet No.1 which has gone to the Ile d'Oleron - being lighter it is a better machine for the St. Trojan line which has, incidentally, now been extended to the west coast of the island. Of the other Maizy locomotives, a 2-6-OT and Couillet 0-6-OT 2 have gone to Meyzieu, as have TPT Nos. 4.12 and 22.5. The C.F.T.M. has also been given two 4-w. tramcar trailers ex-Neuchatel (Switzerland) which have been regauged, and it has put into service the rebuilt d/e railcar from Cap Ferret.

Mamers-St. Calais - Passenger services ended with the commencement of the winter timetable period.

Vertaizon-Billom (CF de la Limagne) - This goods only line was taken over 'en regie directe' by the Département of Puy de Dôme from 1st April 1965. In practice it is worked by the SNCF diesel shunter from Vertaizon.

CFTA Réseau de la Somme - This system appears to have developed a passion for painting everything except goods wagons red and cream. The sugar refinery at Lanchères has closed, thus denying the line some useful traffic; the closure will probably lead to closure of the Canchy branch which was maintained almost entirely for best trains.

CF de la Corse - As from June, this system has been taken over by the SACS who formerly ran the CFD du Tarn so efficiently. With their usual ruthless efficiency the company have cut the number of staff by about 50% while arranging improved services. They have increased the stock by bringing in from the Tarn Billard 100 hp. cars 511-3 and 150 hp. cars 524-5; and by buying a 200 hp. shunter from the now defunct VF du Dauphiné.

GERMANY

Kreisbahn Aurich - Still going strong, with daily goods Leer-Aurich and sundry other goods traffic. Passenger service Esens-Bensersiel is maintained by VT55 (Linke-Hofmann-Busch, 1926) ex-EPG in 1963; one rebuilt LAF bogie coach, and a rebuilt coach and van from the EPG. Bogie goods railcar T47 handles goods traffic with 0-6-OD No.12 (Jung 1951) ex Rendsburg and Selters in reserve.

Oberschefflenz-Billingheim (SWE) - This ex-DEBG standard gauge steam-worked line near Mosbach closed as from 10th June 1965.

Philippsheim-Binsfeld - Fred Pugh's long promised article on this 750mm. gauge line will now, alas, be only an obituary, as it closed to all traffic as from 9th August last. The 8.1 km. line was opened on 6.5.00 and had passenger services until 1950. Goods traffic, latterly running at about 20,000 tons a year, was worked by two 0-6-OT dating from the opening of the line.

Teutoburger Wald Eisenbahn - The end of steam traction is said to be near, with only locos. 161, 162, 222, 261 and 271 in service. The line recently made headlines when the royal train was stabled on it during the Queen's tour of Germany earlier this year.

Vechta-Cloppenburg - The line's future is threatened by a plan for a new autobahn which will cross the route. The expense of a bridge is not considered justifiable and through traffic was to be discontinued from 30th September. It is possible the ends will be worked as sidings, since through traffic was in any case very small.

SPAIN

Alicante-Denia (ESA) - This line was taken over by the Estado in September 1964 and a new timetable operative from 1st August 1965 provides for an increase in the number of through workings between the ESA and the Carcagente-Denia line (CD) which is already operated by the Estado. There are now two through railcar services in each direction daily, in place of the single service which has operated for several years, but a bigger change is that the daily "Correo" is now a through train over the two lines. Leaving Carcagente at 8.30, it reaches

Alicante at 13.20 and returns from there at 15.50, arriving back at Carcagente at 20.43. Motive power is usually provided by one of the CD Estado type 0-6-ODH locomotives, but steam engines are used occasionally, an 0-6-OT or Black Hawthorn 4-4-OST on the CD section and a 2-6-OT over the ESA. Freight trains over the ESA are still steam hauled, ESA 2-6-OT's Nos. 3, 5, 6 and 7 having been seen in use, and possibly also No. 1 which was complete in Alicante works in July. Also at Alicante are Nos. 2 and 8, both derelict, and two frames both numbered 3.

Two of the CD Black Hawthorn 4-4-OST's were in use in September. No. 1 was seen working the "Correo", while the daily goods left Carcagente double-headed by No. 4 and one of the 0-6-OT's. Both locomotives work to Gandia, and the 0-6-OT then continues to Denia, while No. 4 returns as far as Benifaro, shunting at Gandia and the intermediate stations. Here the 0-6-OT returning from Denia catches it up and the goods train finishes its journey back to Carcagente behind both locomotives.

As both the Alcoy-Gandia (AG) and Villena-Alcoy-Yecla (VAY) lines have also recently been taken over by the Estado, this organisation now has control of the four metre gauge lines north of Alicante, and as well as the through CD/ESA workings already mentioned, other signs of the unified management have been the appearance of CD 0-6-OT No. 27 on the VAY in April and of CD 4-4-OST No. 4 on the AG in June. Of the remaining six AG Bayer Peacock 2-6-2T's, only Nos. 5 and 7 have been in use recently, while Nos. 1 and 2 are under repair at Gandia and Nos. 3 and 6 are out of use.

North of Valencia it is sad to learn that the track of the 750 mm gauge FC de Onda al Grao de Castellon had nearly all been lifted by September, although most of the rolling stock still remained at Grao de Castellon. Krauss two-cylinder compound 0-6-2T's Nos. 5 and 7 have fortunately been transferred to the FC de San Feliu de Guixols a Girona for further service on the last remaining 750 mm gauge line in Spain to operate a regular steam worked passenger service for the general public.

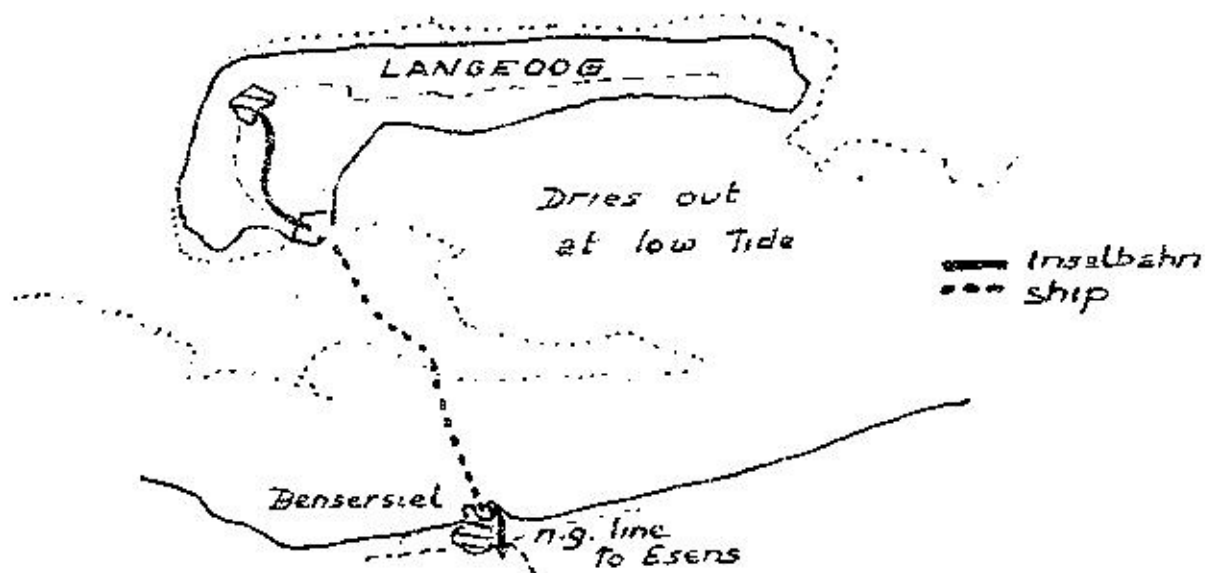
ROMANIA (760 mm gauge)

During a visit this summer, 0-6-2T 395.001/4/5 and 0-8-OT 764.411-3 were seen on shed at Alba Julia, where the staff were most cooperative. Tirgu Mures is at the centre of a small network of lines, and the stock is much more varied than at Alba. Unfortunately, although the shed staff were most friendly, so that a number of photographs were taken, the chef was not, and your reporter was marched off to the police office on the station with only scrappy notes. Locomotives recorded were 0-8-OT's 764.003/155 and 0-8-OT 764.403, while an 0-8-0 tender locomotive 764.205 was going off shed. 397.001 was an elderly 0-6-2T, while the outstanding locomotive seen was an 0-4-4-OT IVK 148, built by Saechs, 3211/09 - a Meyer.

JUGOSLAVIA (760 mm and 600 mm gauges)

A visit to the branch shed at Zrenjanin produced 0-8-OT 80.001/2/7, but the most interesting locomotive seen was 0-6-0 182.002, being very low built with a diminutive tender. At Cacak 0-8-2 P21 (O & K 11800) was shunting, this being an addition to the JDZ locomotive list given in earlier issues of the Journal. At Cuprija the shed had 90.008 derelict, together with 206.96, and no serviceable

(Continued on Page 19)



Island railway systems tend to be mildly eccentric at the best of times. The Friesian Island lines have somehow managed to mix a good leavening of modern efficiency in with the eccentricity without losing much of their charm and, in the case of Langeoog at any rate, there is an additional admixture of slightly sardonic humour, which gives the whole concern a rather light hearted air. Anyone but a rabid steam fanatic could not fail to be intrigued.

Langeoog itself is the "third from the right" in the chain of seven overgrown sandbanks lying off the north German coast and its sole means of transport, if you discount odd bicycles and a few horse-drawn drays, is the metre-gauge Inselbahn. This started in 1901 as a horse tramway, running through most of its length over a low trestle pier spanning the mudflats, and using elegant 4-wheeled closed cars; there exist fascinating photographs showing the cars apparently trundling through the sea! Unlike the other island systems, it was always run by the Gemeinde or Community (roughly the equivalent of our District Councils) who also started a connecting shipping route in 1927. In 1936 a tremendous October storm smashed the tramway, and opportunity was taken to rebuild it entirely, from a new jetty to the present smart terminus at the southern end of Langeoog town. At the same time, modernisation arrived in the shape of diesel tractors and six elegant old bogie coaches from the Steinhuder-Meer Bahn and the Mindener Kreisbahnen. These sufficed until 1961, when the line acquired bogie Talbot railcar V71 from the Kreis Altenaer, together with four trailers, adding another railcar, ex Ruhr-Lippe V76, in 1964. Not the least intriguing thing about the system is the ingenious way it transferred the cars to the island without calling in outside help. It simply lashed the island's two little cargo ships side by side and carried the cars athwartships, without, apparently, any fuss at all. The only problem, says Dr. Alt the Kurdirektor, was getting both the boats free at the same time to do the job.

Mere historical fact, however, does not really do justice to the 2.5km. long line. Its crowning glories are undoubtedly the six coaches, which are very artistically decked out in various colours. Most of the islands go in for colour in some way "to attract the tourists" but Langeoog beats the lot. Its coaches are all in different two or three colour schemes - not crude "above and below the waist" efforts in primary colours, you understand, but something more subtle. Each coach has a base colour in a pastel shade, with its panel-beadings, window frames and wrought ironwork picked out in a toning or contrasting colour - blue on pink; red on white; blue on a fetching light brown; pale green picked out in cream and varnished wood; a sky-blue background with red and varnish trim; cream and dark blue; with the postvan in Bundespost yellow and black, they make a brave sight and a colour-photographer's delight.

LOCOMOTIVES:

No.1	4wD	Schöma	1937	125hp.
No.2	"	"	1949	90hp.
No.3	"	"	1952	90hp.



LATE NEWS The RTM (Rotterdam Tramway Co.) is likely to cease railway operation in the very near future. At the time of writing only two return trips from Rotterdam Rosestraat to Hellevoetsluis are being operated daily, and these only survive because of a shortage of replacing road transport.

MAIN LINE TO MANIOBRA

Some interesting industrial steam locomotives in Spain,

by R.S. Fraser.

(Continued from Summer 1965 issue)

The spread of RENFE diesel shunters in Northern Spain has resulted in the almost complete demise of the many 0-6-0 and 0-8-0 tender engines retained for this work following electrification, but for many years RENFE have supplied locomotives to factories and mines for shunting duties, and this situation exists still. Consequently, it is possible to find locomotives at work, almost invariably the 0-6-0 type, at such places as Fabrica de Mieres, Hulleras Veguin-Olloniego and SMDF (Santa Ana mines). Another location is way out in "electric country" at Barruelo, at the end of a branch from the electrified section of the main line to Santander, where 030.2298 (Graffenstaden No.300 of 1864) shunts the colliery of Minas de Barruelo, S.A.

SUGAR The most important company operating factories for the production of sugar from sugar beet is the Ebro-Compañia de Azucares y Alcoholes, S.A. (ECAJA), with headquarters in Madrid. Not far from the city, at La Poveda, is the Azucarera de Madrid, situated alongside the metre-gauge FC Madrid a Aragon, but maintaining a connection to the RENFE Madrid-Zaragoza line on which it uses nowadays a standard Maffei 0-4-0WT or a locomotive hired from RENFE. In days gone by the locomotive in use was a 4-4-0T reputed to have been built by Beyer Peacock in 1862 for the Bilbao-Tudela Railway (similar to the one at "BASCONIA", Bilbao), but this very interesting locomotive was dismantled recently, presumably for scrapping.

A visit to La Poveda in 1963 proved very fruitful in discovering that the company owns factories - some known and some unknown at the time - in various parts of Spain; Azucarera Leopoldo (Miranda de Ebro), Azucarera de Castilla (Venta de Baños), Azucarera de Duero (Toro), Azucarera de Sevilla (Los Rosales), Azucarera de Córdoba (Villarubia), Azucarera de Gallego (Zaragoza) and Azucarera de Ebro (Luceni), all with steam locomotives - in addition to that at La Poveda. Some of these employ ex-main line locomotives, that at Los Rosales having an 0-6-0 tender engine purchased from RENFE in 1951, which should have been 030.2337 but still carries its MZA number of 362, built by Schneider in 1864 (but carrying the wrong makers' plate). A visit in 1963 found this aged locomotive out of use and replaced by an even older one - RENFE 040.2037 on hire, built by J.F. Cail in 1863. The factory at Villarubia, east of Córdoba on the line to Seville, has a 2-4-0 tender acquired also from the RENFE in 1951; this was allocated 120.2012 but still carries MZA 89, and was supplied by Evrard in 1863 (should be 18/1863, but carries 91/1863 plate). The legend on the buffer beam is 'ASR MZA 89' - but what is the meaning of 'ASR' ?

Moving across country, on the outskirts of Zaragoza is the Azucarera de Gallego, on the bank of the river of the same name, with a fairly lengthy connection to the RENFE. The two locomotives comprise an 0-6-0ST and another of the almost common (by now) 2-4-0Ts; the latter has not been identified, the

only indication being '3381' stamped on the motion, which is the makers' number carried by SAGARMINAGA at SHVL, Santa Lucia, so possibly they had similar origins. On the face of things, the 0-6-OST may seem to be uninteresting, as it is not strictly "ex-main line", but it is one of a batch of three such locomotives built by Andrew Barclay in 1925 (Nos.1872-1874) for the Anglo-Spanish Construction Company, for use on railway construction in Spain. At this time the only major railway under construction was the Santander-Mediterraneo (SM), and it would seem that the Barclays were used on this line, together with at least three inside-cylindereed 0-6-OSTs by Manning Wardle that had seen previous service on harbour construction in South America. ECAYA acquired two of each type, and up the Ebro valley from Zaragoza one Manning Wardle can be found at the Luceni factory, whilst one of each type can be found at Venta de Baños. It is interesting to note that one Manning Wardle reversed the order by going from industrial to main-line stock; it was taken over by the SM as their No.28, and later became RENFE 030.0214, nowadays being employed as works shunter at Villagarcia de Arosa.

However, the "pièce de résistance" of ECAYA is undoubtedly the Azucarera de Duero at Toro (Zamora). The Engineer at La Poveda had indicated that, amongst other items, there was another 2-4-0 at Toro - but he was wrong! ERCILLA, the locomotive in question, proved to be ex-Norte 87, a 4-4-0 tender engine built by Hartmann at Chemnitz in 1883. Originally one of a batch of 24 such locomotives built for the Norte, it was evidently sold to ECAYA many years ago, as it was not one of the nine that were taken over by RENFE and since scrapped. Whilst not the only 4-4-0 in Spain (there is at least one left with RENFE), it can certainly claim to be the oldest. Another interesting locomotive at Toro is a 2-6-0 tender engine by Baldwin (53371/20), the last remaining of four similar locomotives supplied to Spain.

OTHER INDUSTRIES Whilst not constituting an "industry", the operation of ports in Spain is often the responsibility of an authority known as a "Junta de Obras del Puerto" (JOP), sometimes having its own railway system connecting with the RENFE. The most well-known of these is that at Musel, adjacent to Gijon. As the port development at Musel is comparatively modern, it is not surprising to find that most of its locomotives were supplied new. However, some were acquired second-hand, the most renowned being their No.1 bought from the RENFE in 1956. This is the only 0-8-0 tender engine known to exist privately on the broad gauge, and was formerly 040.2161 (ex-Norte 2602) built by Hartmann in 1880; the beautiful working condition of this locomotive puts to shame others of the same type still working for the RENFE.

Along the northern coast is Pasajes, the port for San Sebastian, where the JOP owns four locomotives, the most interesting being their 1957 acquisition of RENFE 040.0207 SURROCA, an 0-8-OT built by Vulcan Foundry (No.849 of 1879). Two of the remaining three locomotives are vertical-boilered 0-4-OTs by Cockerill - ubiquitous in Northern France, but somewhat rare on 1674mm gauge. Southwards along the RENFE main line is Beasain, where the works of Compañia Auxiliar de Ferrocarril (CAF) are situated, and where an Andrew Barclay 0-6-OST has been seen (presumably the third of the batch mentioned earlier). Still further on, west of Alsasua, is Olazagutia and the cement works of Cementos Portland Pamplona, with another ex-MZA 2-4-0 tender engine. This was one presumably acquired from the MZA many years ago, as it does not appear to be one of the few that survived to be taken into RENFE stock; it carries the plate

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