

interoffice
M E M O R A N D U M



to: Pat Abels, Elise Lozano
from: Bruce Carter
subject: Additional C-E exhibits
date: September 24, 1998

Attached are copies of articles I received from Pat Hovatter that should be added to the C-E Exhibit list.

1. The Engineer April 4, 1930 P. 379
2. The Engineer Jan. 16, 1931 P. 77
3. Engineering Jan. 22, 1932 P. 107
4. Engineering Oct. 14, 1932 P. 381

Railway and Road Matters.

SPEAKING at the annual meeting of the combined companies that form the London "Underground" Railways group, Lord Ashfield, the chairman, remarked that the delays on the railways were down to four minutes per 10,000 miles run. That was a record and was mainly due to the greater care and attention which had been paid to the rolling stock.

The annual report of the Metropolitan District Railway Company shows that in 1929 it carried 1,780,948,937 passengers, of whom 65,607,932 were booked at workmen's fares, as compared with 1,744,771,988 passengers, including 62,465,889 workmen, in 1928. The average fare per passenger was, however, 1.91d., as against 1.93d. The gross receipts were £1,605,538, as compared with £1,550,328, and the net receipts £541,528, as against £541,802.

ANSWERING a question addressed to him on March 20th, as to a train running into a motor car near Hurton-on-Trent, the Minister of Transport said that the accident appeared to have been due to lack of care on the part of the driver of the motor car. Proceeding, Mr. Morrison said that under the Railway Clauses Act, 1855, he already had the power to require railway companies to abolish level crossings, to which Sec. 7 of that Act applied, if necessary for the public service. He was prepared to consider applications from highway authorities for financial assistance towards well-considered schemes.

The Ministry of Transport railway statistics for December have recently been issued as a Stationery Office publication, price 3s. 6d. They show that, compared with December, 1928, there was an increase of 1.9 per cent. in the number of passenger journeys made, but the receipts therefrom decreased by 1.3 per cent., combined with an increase of 1.9 per cent. in the passenger train mileage. Thanks to an increase of 8.1 per cent. in the tonnage of coal, coke, and patent fuel, the tonnage of the merchandise traffic rose by 5.6 per cent. The freight traffic receipts increased by 0.6 per cent., and the train mileage by 4.6 per cent. The average train load increased from 128½ to 130½ tons, and the net ton-miles per engine hour from 418½ to 429½.

There are four lines of way for the whole of the distance from Eland to Normanton on the former Lancashire and Yorkshire, except for the short length at the west end of Mirfield Station, where the railway crosses the river Calder. That length of line is now to be quadrupled under the Development (Loan Guarantees and Grants) Act. Another piece of work which, under the same Act, has been approved by the Government is the widening from two to four lines of the 1½ miles between Broadholme signal-box, north of Belper, near Derby, and Ambergate. That work will necessitate the opening out of Alderwasley tunnel, which, as it was completed in 1840, is no doubt of reduced dimensions as to structure gauge when compared with the requirements of the present day.

On the 93,855 steam-worked trains that ran on the Southern Railway in January last, 66.87 per cent. arrived at their destination on time, 26.63 per cent. were from 1 to 5 minutes late, and 5.25 per cent. were from 6 to 10 minutes late. The average late arrival was 1.32 minute. Whilst that is a very good record, the freight trains made a yet better showing, as of 18,957 trains run, 87.5 per cent. arrived on booked time and 8.7 per cent. were from 1 to 15 minutes late. Equally creditable was the fact that the average late start from the commencing point was only 1.9 minute. The Southern Railway Magazine for March, in giving the statistics from which the above facts have been extracted, says that fortunately there was very little fog during the month, but heavy gales caused a certain amount of dislocation and late running.

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THE principal islands of Greece are to be linked up with Athens and the mainland by wireless telephone and telegraph services, for which the Greek Government has ordered equipment from Marconi's Wireless Telegraph Company. Three of the latest type Marconi stations for duplex telephony and high-speed telegraphy are to be erected, one on or near Athens, with duplicate plant, one on the island of Crete, and the other on Chios. A similar Marconi station, but working on telegraphy only, is also to be installed to exchange messages with ships. The equipment of this station will include a Marconi wireless direction finder for the assistance of navigation.

THE *Edgar Allen News* is in a reminiscent vein in its issue for March and brings back visions of Mueset steel. It is noteworthy that Mueset steel is contemporary with Bessemer steel. It is recorded that "the first ingot of 'self-hardening' steel that could be successfully forged was made at Coleford, in the Forest of Dean, England, by the late R. F. Mueset, in the autumn of 1888. The new steel was evolved after several months of experimenting in steel alloying, conducted, by the way, with quite another object in view. Mr. Mueset wished to take out a patent, but I (Mr. E. Woodword) opposed that method of telling everybody 'how it was done,' and remanded him of the patent he had already taken out, and the absence of benefit therefrom to himself. I said, 'Let us try a secret for once,' and a secret it has remained for thirty-three years and is likely to remain."

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THE *Edgar Allen News* is in a reminiscent vein in its issue for March and brings back visions of Mueset steel. It is noteworthy that Mueset steel is contemporary with Bessemer steel. It is recorded that "the first ingot of 'self-hardening' steel that could be successfully forged was made at Coleford, in the Forest of Dean, England, by the late R. F. Mueset, in the autumn of 1868. The new steel was evolved after several months of experimenting in steel alloying, conducted, by the way, with quite another object in view. Mr. Mueset wished to take out a patent, but I (Mr. R. Woodward) opposed that method of telling everybody 'how it was done,' and reminded him of the patents he had already taken out, and the absence of benefit therefrom to himself. I said, 'Let us try a secret for once,' and a secret it has remained for thirty-three years and is likely to remain."

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The laboratory for carrying out large-scale experiments on hydrocarbon and coal established at Duisburg by the A.G. for Stahlwerkverföhrung und Veredlung, says the *Iron and Coal Trades Review*, been closed. This step has been found necessary, due to the fact that owing to the want of suitable materials for the parts of the plant exposed to very high pressures these were very quickly worn out. The same trouble has prompted the I.G. Farbenindustrie to curtail considerably its activity in the field of hydrogenation of coal.

The official returns rendered to the Electricity Commissioners show that 1150 million units of electricity were generated by authorised undertakers in Great Britain during the month of December, 1930, as compared with 1049 million units in the corresponding month of 1929, or an increase of 9-6 per cent. During the year ending December 31st, 1930, the total amount of electricity generated by authorised undertakers was 10,869 million units, as compared with 10,294 million units for the year ending December 31st, 1929, representing an increase of about 5-6 per cent.

The Commercial Secretary to the British Embassy at Istanbul, Turkey, reports that a revised draft Bill designed to introduce the metric system of weights and measures has been submitted to the Budget Commission of the Grand National Assembly. The Bill prohibits the use of other measures in all contracts, agreements, invoices, commercial books, notices, documents, &c. A translation of the Bill may be seen at the Department of Overseas Trade, 35, Old Queen-street, London, S.W.1 (reference 2283/28). It will be recalled that a similar Bill was introduced in 1926, and again in 1928, without becoming law.

At a recent meeting of the 1890 Settlers' Association at Cape Town, the organising secretary, Captain Edwards, explained the circumstances in which 29 Scottish riveters who were brought out from the Clyde to work on the Northern Rhodesia copper mines returned to Scotland after ten weeks. He said, according to the *S.A. Mining and Engineering Journal*, these men had come out on a contract of 26s. a day, and had refused to carry it out because certain casual workmen were getting 28s. 6d. a day. They complained that on their arrival at the mines they found that though their earnings with overtime amounted to £55 a month, casual workers from Johannesburg engaged on the spot earned, with overtime, as much as £60 a month. The men, who had not come out under the auspices of the Association, which had merely been asked to befriended them, said they preferred the dole in England to £55 a month in Rhodesia as long as there were men worth less earning money.

The Home Secretary gives notice that in pursuance of his powers under Sec. 47 of the Workmen's Compensation Act, 1925, as extended by the Workmen's Compensation (Silicosis and Asbestosis) Act, 1930, he proposes to make a scheme to provide for the appointment of a medical board to give the necessary certificates in all cases where compensation is claimed for silicosis or asbestosis, and to carry out periodic medical examinations of workers employed in certain specified processes involving exposure to silica or asbestos dust. He further gives notice that he proposes as the same time to amend the Metal Grinding Industries (Silicosis) Scheme, 1927, and the Various Industries (Silicosis) Scheme, 1928, with a view (1) to provide for the certification by the medical board of cases arising under these schemes, and (2) to extend the right to compensation to workmen. He further proposes to make a scheme—to be cited as the Asbestos Industry (Asbestosis) Scheme, 1931—to provide for the payment of compensation by employers of workmen employed in certain processes involving exposure to asbestos dust.

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The laboratory for carrying out large-scale experiments on hydrogenation of coal established at Duisburg by the A.G. für Steinkohlvergasung und Veredelung has, says the *Iron and Coal Trades Review*, been closed. This step has been found necessary, due to the fact that owing to the want of suitable materials for the parts of the plant exposed to very high pressures these were very quickly worn out. The same trouble has prompted the I.G. Farbenindustrie to curtail considerably its activity in the field of hydrogenation of coal.

The official returns rendered to the Electricity Commissioners show that 1150 million units of electricity were generated by authorised undertakers in Great Britain during the month of December, 1930, as compared with 1049 million units in the corresponding month of 1929, or an increase of 9.6 per cent. During the year ending December 31st, 1930, the total amount of electricity generated by authorised undertakers was 10,869 million units, as compared with 10,294 million units for the year ending December 31st, 1929, representing an increase of about 5.6 per cent.

The Commercial Secretary to the British Embassy at Istanbul, Turkey, reports that a revised draft Bill designed to introduce the metric system of weights and measures has been submitted to the Budget Commission of the Grand National Assembly. The Bill prohibits the use of other measures in all contracts, agreements, invoices, commercial books, notices, documents, &c. A translation of the Bill may be seen at the Department of Overseas Trade, 35, Old Queen-street, London, S.W. 1 (reference 32583/26). It will be recalled that a similar Bill was introduced in 1926, and again in 1928, without becoming law.

At a recent meeting of the 1820 Settlers' Association at Cape Town, the organising secretary, Captain Edwards, explained the circumstances in which 29 Scottish riveters who were brought out from the Clyde to work on the Northern Rhodesia copper mines returned to Scotland after ten weeks. He said, according to the *S.A. Mining and Engineering Journal*, these men had come out on a contract of 25s. a day, and had refused to carry it out because certain casual workmen were getting 25s. 6d. a day. They complained that on their arrival at the mines they found that though their earnings with overtime amounted to £55 a month, casual workers from Johannesburg engaged on the spot earned, with overtime, as much as £30 a month. The men, who had not come out under the auspices of the Association, which had merely been asked to befriend them, said they preferred the dole in England to £55 a month in Rhodesia as long as there were men worth less earning more.

The Home Secretary gives notice that in pursuance of his powers under Sec. 47 of the Workmen's Compensation Act, 1925, as extended by the Workmen's Compensation (Silicosis and Asbestosis) Act, 1930, he proposes to make a scheme to provide for the appointment of a medical board to give the necessary certificates in all cases where compensation is claimed for silicosis or asbestosis, and to carry out periodic medical examinations of workers employed in certain specified processes involving exposure to silica or asbestos dust. He further gives notice that he proposes at the same time to amend the Metal Grinding Industries (Silicosis) Scheme, 1927, and the Various Industries (Silicosis) Scheme, 1928, with a view (1) to provide for the certification by the medical board of cases arising under these schemes, and (2) to extend the right to compensation to workmen. He further proposes to make a scheme—to be cited as the Asbestos Industry (Asbestosis) Scheme, 1931—to provide for the payment of compensation by employers of workmen employed in certain processes involving exposure to asbestos dust.

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3.

LITERATURE.

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Year.	Motors, Cycles and Aircraft.*			
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1924	203,340	16,145	187,195	106.9
1925	214,840	14,100	200,740	114.3
1926	224,040	21,800	202,240	115.8
1927	232,860	18,319	214,541	122.3
1928	234,430	22,015	212,415	121.1
1929	248,410	17,814	230,596	129.9
1930	247,140	10,647	236,493	133.3
1931	251,350	37,463	213,887	110.3

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1923	1924	1925	1926	1927	1928	1929	1930	1931
71,398	118,600	133,000	163,500	192,722	167,195	200,740	202,240	193,887
100	166	188	229	271	236	284	287	275

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1923	71,394	1927	164,553
1924	116,800	1928	105,352
1925	132,000	1929	182,258*
1926	153,600	1930	171,052*
		1931	158,398*

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Railway and Road Matters.

THE L.M.S. is making experiments both in England and Scotland with vehicles equipped to spray weed-killer over the tracks as they go along. The weed-killer train consists of an engine, a brake van and a wagon fitted with a large tank and a spray-pipe controlled by a man riding on the wagon.

THE late Sir Herbert Jekyll succeeded, in 1901, Mr. F. J. S. Hopwood as Assistant Secretary, Railway Department, at the Board of Trade, and when the London Traffic Branch was formed in 1907 he was made its chief and remained there until he retired, on reaching the age limit, at the end of 1911.

SPEAKING of a man who was killed in walking home through some sidings instead of by a quite convenient public road, Mr. J. L. M. Moore said in a recent report: "It is almost incredible that men should take such risks, but this regrettable occurrence brings to light the fact that some have done so in the past in spite of warnings and rules to the contrary."

FOLLOWING our note of August 5th, we can now announce that after negotiations lasting twelve years, four trunk-line railway systems in the eastern part of the United States have been merged into one system valued at \$8,000,000,000 dollars (\$1,600,000,000 at par). The railways are: The New York Central, the Pennsylvania, the Baltimore and Ohio, and the Chesapeake and Ohio.

A LETTER in *The Times* of October 6th suggests that railways could find a source of economy in omitting the lettering "Railway" from their carriages, e.g., "Southern," instead of "Southern Railway." We may point out in this connection, that Section 121 of the Railway Clauses Act, 1845, requires the owner's name to be painted in legible characters on some conspicuous part of the outside of every such carriage so as to be always open to view.

A NOBLE fleet of thirty "warehouses on wheels," for providing emergency or temporary warehouse accommodation at outlying stations, where there is no warehouse or where the existing accommodation is fully occupied, has been introduced by the L.M.S. Railway in several important areas, including North Wales, Leicester, Bristol, Northampton, and Stoke-on-Trent. These mobile warehouses are converted parcels brake vans or passenger vehicles, and are placed in wayside goods yards with a railway siding adjacent, so that freight can be unloaded direct from the wagons.

THE census of railway servants as on March 12th last, shows that there were 597,971 employed compared with 615,592 in March 1931, a decrease of 17,621. The L.M. and S. had, roughly, 7000 less, the L. and N.E. 6000, the Great Western 4000 and the Southern 3000. In all the railways there were 1330 fewer drivers and 1342 less firemen, but as an increase of 1009 is recorded in engine cleaners it would seem that many drivers now rank as firemen and firemen as put back to the cleaners' grade. There are 1778 fewer permanent way men and 3300 less shop and artisan staff.

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Railway and Road Matters.

THE L.M.S. is making experiments both in England and Scotland with vehicles equipped to spray weed-killer over the tracks as they go along. The weed-killer train consists of an engine, a brake van and a wagon fitted with a large tank and a spray-pipe controlled by a man riding on the wagon.

THE late Sir Herbert Jekyll succeeded, in 1901, Mr. F. J. S. Hopwood as Assistant Secretary, Railway Department, at the Board of Trade, and when the London Traffic Branch was formed in 1907 he was made its chief and remained there until he retired, on reaching the age limit, at the end of 1911.

SPREADING of a man who was killed in walking home through some sidings instead of by a quite convenient public road, Mr. J. L. M. Moore said in a recent report: "It is almost incredible that men should take such risks, but this regrettable occurrence brings to light the fact that some have done so in the past in spite of warnings and rules to the contrary."

FOLLOWING our note of August 6th, we can now announce that after negotiations lasting twelve years, four trunk-line railway systems in the eastern part of the United States have been merged into one system valued at \$8,000,000,000 dollars (\$1,600,000,000 at par). The railways are: The New York Central, the Pennsylvania, the Baltimore and Ohio, and the Chesapeake and Ohio.

A LETTER in *The Times* of October 6th suggests that railways could find a source of economy in omitting the lettering "Railway" from their carriages, e.g., "Southern," instead of "Southern Railway." We may point out in this connection, that Section 121 of the Railway Clauses Act, 1845, requires the owner's name to be painted in legible characters on some conspicuous part of the outside of every such carriage so as to be always open to view.

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