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TAMIL NADU ARCHIVES

GOVERNMENT OF TAMIL NADU

Public DEPARTMENT

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CURRENT No. 1206

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

27th May 1881, No. 387 R.

Railway.

Read the following paper :

No. 39. From the Consulting Engineer for Railways, dated Madras, 19th May 1881.

From W. S. BETTS, Esq., Agent of the South Indian Railway, to the Consulting Engineer for Railways, dated Negapatam, 1st April 1881, No. 10,275.

I wish to submit, for the information of Government, the accompanying copy of a letter (No. 332) which I have received from the Managing Director relative to a revision of the scale of passenger fares in force on the South Indian Railway.

2. In accordance with the instruction contained in the last paragraph of this letter, I now solicit the sanction of Government to the maximum speed over this railway of the through mail trains being increased from 20 to 25 miles an hour.

3. The increased wear and tear which a higher speed of 5 miles an hour would cause would, in my opinion, be more than compensated for by savings under other headings, and by the greater comfort which would be afforded to our passengers. I trust that Government will be pleased to grant the wishes of my Directors in this respect, so that I may be able to submit a revised train time-table for approval.

From the Managing Director, to the Agent of the South Indian Railway, dated London, 4th March 1881, No. 332.

THE Directors have again had under consideration the question of passenger fares. The scale at present in operation, which was introduced on 1st January 1880, is—

First class,	18	pies per mile.
Second „	6	„ „
Third „	3	„ per mail trains.
	2	„ per local „

In your report, dated 13th October 1880, you recommend that from the experience gained of the result of these fares, which in your opinion had not proved satisfactory, the scale should be altered to—

First class,	12	pies per mile.
Second „	4	„ „
Third „	3	„ „

the maxima fixed by Government being 24, 14, and 4 pies for the three classes respectively, and that in re-arranging the service of trains the maximum speed of the through mail trains

should be increased from 20 to 25 miles an hour. In the new rules and regulations for Indian Railways it is laid down that the limits of speed within which engines or trains must run are, for metre gauge lines, a maximum of 40 miles an hour for passenger trains, and of 20 miles an hour for goods and mixed trains, and it will be within your recollection that, a reference on this subject having been made to the Company's Consulting Engineers in 1879, these officers recorded their opinion that there was no objection, on the score of safety, to a maximum speed of 25 miles an hour being run over this line, and that the locomotives which had then recently been sent out had been specially designed for working at such a speed with ease and economy.

In a despatch from the Government of Madras to the Secretary of State for India, dated 16th December last, a copy of which has been communicated to the Board, that Government states that on general grounds of public convenience they are of opinion that frequent changes in the passenger tariff are highly undesirable. In this opinion the Board concur, and it is their earnest desire to arrive at such a tariff as will if possible obviate the necessity for changes in future, the rates hitherto being regarded as experimental. The present scale has now been in operation for upwards of twelve months, and as regards the fare for third-class (local train) passengers constituting the bulk of the traffic, the 2 pice fare which was introduced on 1st July 1872 has since then for a period of nearly nine years been continuously in force.

That fare has not in the opinion of the Board been financially a success, nor do they think has the differential fare of 3 pice for through trains which was tried for the first time on this line on 1st January 1880.

The endeavour of the Board is to find such a tariff as will, while within the means of the passengers who use the line and developing the traffic of the country, yield such a return as will not only cover the guaranteed interest on the capital invested, but will also if possible enable them to pay a dividend over and above to their shareholders for whom they are trustees. This last-mentioned object is clearly contemplated in the contract with the Government.

Upon a review of the whole circumstances, the Board desire that you will make arrangements for bringing into operation, as an experimental measure for at least a year, the following

First class, 18 pies per passenger per mile, the same as now charged.
Second " 6 do. do. do.
Third " 2 do. do. do.

Second " 6 pies per passenger per mile, the same as now charged

Third " 2½ pies per passenger per mile, in place of the 8 pies for local trains.

for local trains now in force.

As a general rule no reduction of fare to be made for return or double journey tickets, nor for special accommodation, but reduced fares may be levied when circumstances appear to make them expedient, such as competition, extra inducements on special occasions, &c., and it will be for you to determine when it may be desirable to run excursion trains at special rates.

You will also apply to the Government for sanction to re-arrange the train service in the manner most calculated to meet the public convenience, and to permit the maximum speed for through mail trains being increased from 20 to 25 miles an hour.

From W. S. BETTS, Esq., Agent of the South Indian Railway, to the Consulting Engineer for Railways, dated Negapatam, 15th April 1881, No. 10,322.

Your letter No. 292 of the 7th instant. I attach hereto a skeleton time-table showing the train service which could be introduced if the rule restricting the speed of certain trains to 20 miles an hour is slightly revised. I do not consider it necessary at present to increase to 25 miles an hour the maximum speed south of Trichinopoly.

2. In working out the detailed times for ordinary trains, it will be necessary to require to be made in the following manner:

2. In working out the detailed times for ordinary trains, alterations would require to be made in the figures now submitted, but these alterations would affect the general arrangement; the times set down for the mail trains would be but very slightly modified.

3. The effect of adopting this service would be to reduce the night staff employed by the Engineering Department over a length of nearly 70 miles, and in the Traffic Department the cost of lighting and of a night staff would be saved at six stations.

SOUTH INDIAN RAILWAY.
Main Line.

[illegible]

Negapatam Branch.

Negapatam ... Dept.	A.M. 3-20	P.M. 1-15	P.M. 3-30	Tuticorin ... Dept.	P.M. 1-0	...	...
Tanjore ... Arr.	6-20	4-45	6-30	Madura ... Dept.	9-0	...	...
Tanjore ... Dept.	6-45	6-45	5-0	Trichinopoly ... Dept.	5-0	...	...
Kumbakonam ... Arr.	8-10	...	7-0	Madras ... Dept.	...	...	A.M. 6-0
Villupuram ... Arr.	1-41	...	...	Villupuram ... Dept.	...	A.M. 5-0	11-50
Madras ... Arr.	7-30	...	...	Kumbakonam ... Dept.	...	P.M. 1-22	5-21
Trichinopoly ... Arr.	...	9-0	...	Tanjore ... Arr.	6-34	3-34	6-46
Madura ... Arr.	...	6-0	...	Tanjore ... Dept.	6-40	3-45	7-0
Tuticorin ... Arr.	...	...	...	Negapatam ... Arr.	10-0	7-15	10-0

Pondicherry Branch.

Pondicherry ... Dept.	A.M. 9-0	P.M. 4-0	North mail ... Arr.	...	A.M. 11-40
Villupuram ... Arr.	11-30	6-30	South mail ... Arr.	...	P.M. 1-41
Villupuram mail, south Dept.	11-50	...	Villupuram ... Dept.	...	A.M. 7-30
Villupuram mail, north Dept.	1-51	...	Pondicherry ... Arr.	...	10-0 4-30

Arkónam-Chingleput Section.

Madras Railway... { East ... A.M. 11-30	Trichinopoly ... Dept.	...	A.M. 5-0
{ S.W. 4-40	Madras ... Dept.	A.M. 6-0	P.M. 2-45
{ N.W. 4-10	Chingleput... { Arr. 8-0	5-10	5-21
Arkónam ... Dept.	5-20	2-0	5-30
Conjeeveram ... { Arr. 6-15	3-15	8-30	6-50
{ Dept. 6-25	3-30	10-0	6-55
{ Arr. 7-45	8-0	11-30	7-45
Chingleput ... { Dept. 8-0	8-10	5-30	12-40
Madras ... { Arr. 10-0	...	7-30	12-30
Trichinopoly ... { Arr. ...	8-30	...	12-40
			8-25

Erode Branch.

Erode ... Dept.	A.M. 6-45	P.M. 12-50	Tuticorin ... Dept.	P.M. 1-0	...
Trichinopoly ... Arr.	12-17	6-40	Madura ... Dept.	9-0	...
Trichinopoly ... Dept.	2-30	9-30	Kumbakonam ... Dept.	...	...
Tanjore ... Arr.	4-45	...	Negapatam ... Dept.	...	A.M. 8-30
Kumbakonam ... Arr.	7-0	...	Tanjore ... Dept.	...	6-45
Negapatam ... Arr.	10-0	...	Trichinopoly ... Arr.	A.M. 4-0	9-0
Madura ... Arr.	...	4-30	Trichinopoly ... Dept.	6-0	P.M. 12-40
Tuticorin ... Arr.	...	12-30	Erode ... Arr.	11-45	6-5

Tinnevely Branch.

Tinnevely ... Dept.	A.M. 10-0	P.M. 1-10	Madras ... Dept.	A.M. 6-0	...
Maniyáchi ... Arr.	11-0	2-10	Madura ... Dept.	5-30	...
Maniyáchi ... Dept.	11-23	2-17	Tuticorin ... Dept.	...	P.M. 1-0
Tuticorin ... Arr.	12-30	...	Maniyáchi ... Arr.	11-18	2-12
Madura ... Arr.	...	8-0	Maniyáchi ... Dept.	11-25	2-30
Madras... ... Arr.	...	7-30	Tinnevely ... Arr.	P.M. 12-25	3-30

From W. S. BETTS, Esq., Agent of the South Indian Railway, to the Consulting Engineer for Railways, dated Negapatam, 12th May 1881, No. 10,419.

Your letter No. 345 of the 28th ultimo. It is proposed to work the mail trains as "passenger" trains and exclude from them goods traffic. At present the mail trains are not used for local goods traffic, and the number of through goods trucks attached at Madras to No. 3 train, and consigned to stations south of Trichinopoly, did not during the last two months average four daily; the bulk of the trucks are for engine-changing stations.

2. Irrespective, however, of the speed of the mail trains being altered, I anticipate that the approaching introduction of a revised fare table will have the effect of displacing the goods traffic from those trains. All those passengers who now book and rebook to and from Chingleput, to and from Mayavaram, to and from Trichinopoly, &c., will, when they find they can travel at the same mileage fare by both through and local trains, be sure to join the former. The through passenger traffic will all be worked in the mail trains, and the goods traffic displaced will take its place on the local trains.

3. When the through train service was advocated the opportunity its introduction would give us of expediting the delivery of goods was certainly represented, but the principal object I had in view in advocating its introduction was the improvement of the passenger train service. In connection with this point, please read the following extract from Managing Director's letter, No. 263, dated 24th October 1879:—

"The Board agree with you that, in view to its development to the utmost, it is necessary to facilitate as much as possible the movement of traffic, and that, bearing economy in mind, the facilities afforded should rather be in advance of than behind the actual requirements from time to time, so that traffic may be encouraged and not repressed. The passenger traffic on this line is very large, the number carried during the half-year to 30th June last aggregating 2,665,311; and more consideration for the convenience of this large portion of the travelling public than it now receives might, in the Director's opinion, be properly shown. In this view they are fortified by that recently expressed by the Government of India, when they wrote on the subject of improved train services on guaranteed railways generally, that the speed for through service should be accelerated, because through passengers travel individually longer distances, and are therefore entitled to consideration."

SUBMITTED for the consideration of Government.

2. The Agent, South Indian Railway, forwards extract from a letter from the Board of Directors, stating that on 1st July next a uniform fare of 2½ pies per mile for third-class passengers will be introduced, and in accordance with the wishes of the Board applies for sanction to increase the maximum speed of the mail trains from 20 to 25 miles an hour.

At present the proposal extends only to the mail trains between Madras and Trichinopoly and on the Arkónam Branch.

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3. The following is a comparison of the present and proposed times of performing the distance between principal stations:—

Principal stations :—							Proposed times of performance.			
Miles.							Present.		Proposed.	
							Hours.	Miles per Hour.	Hours.	Miles per Hour.
<i>Madras.</i>										
251	Trichinopoly	...	...	...	...	...				
98½	Madura	...	...	...	...	...	20	12½	14½	17½
98½	Tuticorin	...	...	...	...	...	6½	14	7	13½
448							7	14	7	14
<i>Chingleput.</i>										
39	Arkónam	...	...	...	...	...	35	12½	30½	14½
							3½	12	2½	17

* Including all stoppages.

The object sought by the revised train service is the greater comfort and convenience of passengers; and the extra wear and tear of rails and rolling stock caused by the higher speed would, in the opinion of the Agent, be more than compensated for by savings under other headings.

The night watchmen employed by the Engineering Department would, it is stated, be abolished over 70 miles of line, and in the Traffic Department the cost of lighting and of a night staff would be saved at six stations.

4. The Government have on more than one occasion objected to the speed of trains over sections of the line laid with 40 lbs. rails exceeding 20 miles an hour. Irrespective of this speed being as high as the rail will bear economically, they consider that it is sufficient for the present requirements of the country—(Vide G.O., dated 1st September 1879, No. 731 R.) The Agent wishes to establish a fast service between Madras and Trichinopoly, and proposes that the distance of 251 miles shall be run within the day (6 A.M. to 8-30 P.M.) It appears to me doubtful if a through speed of 17½ miles an hour can be attained with a maximum running speed of 25 miles an hour. It is presumed that the train would stop at every station, as it is necessary for a proper development of traffic that the through train shall be available to all passengers.

In the proposed revised time-table for the Madras Railway where the maximum speed is 45 miles an hour, the Traffic Manager considers that, in order to allow of stopping at every station, a through speed of only 18½ miles can be attained between Madras and Podanur, where the train conveys passenger vehicles only. The gradients on the South Indian Railway being lighter than on the Madras Railway the rate of speed would be more uniform, but allowing for this advantage the proposed speed appears to be comparatively high.

On the Madras Railway there would be 36 stoppages in 302 miles, against 39 stoppages in 251 miles on the South Indian Railway.

We know that on the latter line trains are now often driven at speed in excess of 20 miles an hour, and in my opinion the result of a sanctioned increase of 25 miles an hour would be excessive wear and tear of rails and rolling stock owing to the prescribed limit being exceeded. The labor involved in maintaining the line in good order would also be increased. On the Madras Railway it is found that, owing to the greater number of passengers now travelling by the mail trains, more time is required at stations, and, although the proposed fast service of the South Indian Railway would be performed during day-light, it is probable that the experience gained on the Madras Railway would apply here also. A speed of 25 miles an hour over the Arkónam-Conjeeveram section, where the line is laid with rails weighing only 36 lbs. per yard and runs along the side of the road, appears to be too high.

5. One effect of the proposed increase of speed which has probably escaped the notice of the Board is that the mail trains would be able to take coaching vehicles only, as the speed of mixed trains is, under No. 29 of the rules and regulations, limited to 20 miles an hour.

At the time of the introduction of the through service, considerable stress was laid upon the advantage which would accrue from a through service of goods—an advantage which would be lost were the present proposals sanctioned. In reply to this objection the Agent states that the number of through goods vehicles to stations beyond Trichinopoly does not generally exceed four per diem, and that with the alteration in the third-class fare there will probably be a full load of passenger vehicles for the through trains. The alteration in fare will without doubt increase the number of passengers by the through trains, but to what extent this will be the case can only be ascertained by experience.

Local passengers will avail themselves of the train which is most convenient for them, and it seems probable that a large proportion of through passengers now use the mail trains.

The difference in fare is not so great as that which existed for some time on the Madras Railway, and if, as believed by the Agent, the bulk of the passengers can afford to pay 8 pies per mile, it is probable that they now do so when wishing to avoid a break of journey.

6. The time-table would be an improvement on that at present in force, especially between Madura and Tuticorin, and Timbavally, and on the Arkónam Branch, but as already explained it appears doubtful if the proposed through speed could be attained with a maximum rate of 25 miles an hour. The time of departure from Madras must, however, depend on the service finally decided upon for the Madras Railway.

If the proposals now before the Government of India be sanctioned, the mail trains will arrive at Arkónam later in the morning and will depart earlier in the evening. At present the Madras Railway mails often miss the South Indian train at Egmore.

A statement just received from the Postmaster-General shows that the mails from Raichūr were detained in Madras on 13 days during the month of March, and it appears absolutely necessary to allow more time for this train if it is to be run with fair punctuality.

7. When the South Indian Railway was constructed it was intended to be worked at a low rate of speed, and the engines were designed to haul heavy loads at such speed, but engines calculated for higher rates of speed have been sent out to meet later indents. These engines would be available for the fast service.

8. The questions for the decision of Government appear to be:—

- (1.) Is the present service up to the requirements of the country, and would more passenger traffic be obtained by an improved service?
- (2.) Supposing an improvement in the passenger traffic, would the increased earnings, and the saving in traffic expenses compensate for the extra expenditure due to increased wear and tear of rails and rolling stock, upkeep of permanent-way, and probable increase in train mileage?

9. The Government have held that the present service is up to the requirements of the country, and it is questionable whether any appreciable increase in earnings would result from an improved service.

The conversion of the mail trains, which are now mixed, into passenger trains, would, it is believed, involve additional train mileage.

The effect of a similar step on the Madras Railway has been prominently brought out in recent discussions, and too much deliberation cannot, in my opinion, be given to a measure which might, and probably would have the effect of entailing a permanent increase in the working expenses of the South Indian Railway.

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The object the Government have in view is that passengers shall be carried cheaply at low fares, and it has been demonstrated, in the case of the Madras Railway, that for economy it is necessary to restrict train mileage by securing full loads for all trains.

Although the alteration in fare may result in a moderate load being obtained for the mail trains at the higher speed, there can be little doubt that goods vehicles may continue to be attached at the lower rate of speed, and the higher speed must therefore have the effect of increasing train mileage.

No increase of the maximum speed should, in my opinion, be made until, at the least, the effect of the uniform third-class fare has been fully ascertained. No change in the time-table involving an earlier departure from Madras can, it is thought, be allowed until a final decision has been arrived at regarding the Madras Railway train service.

No. 40. ORDER THEREON, 27th May 1881, No. 387 R.

THE Government adhere to the opinion expressed in their Order, dated 1st September 1879, No. 731 R., that the present service is equal to the requirements of the country, and deprecate any increase of speed which would have the effect of excluding goods vehicles from the mail trains of the South Indian Railway, a measure which, in their opinion, must be attended with an increase in train mileage and be injurious to the goods traffic.

2. The Government doubt whether any increase in earnings would accrue from the improved service, and are of opinion that the extra expenditure in wear and tear, &c., would outweigh the savings indicated by the Agent.

3. No alteration in the existing time-table can be sanctioned until the effect of the uniform third-class fare has been ascertained and the future train service of the Madras Railway has been finally decided.

(Time Extract.)

Captain, R.E.,
Offg. Joint Secy. to Govt., P.W.D.,
Railway Branch.

To the Consulting Engineer for Railways.

„ Postmaster-General.

„ Public Department.

Chairman Chamber of Commerce.

*The Hon. Secy. of
Copy of the above forwarded
to the Govt. of India in continuation of
letter No. 739 of 10th Decr. 1880.*

Exd. E. C. Shunker.

Spare Copies

*will follow of Mr. H. C. ...
By Board*

(1881) Dept
(South Indian
Ry)
RAILWAY

Govt. of (1881) Madras.

PUBLIC WORKS.

(5)

T.

THE CONSULTING ENGINEER
FOR RAILWAYS.

&c., &c., &c.

CURRENT No. 1206

Dated May, 27th.

Issued

Recd.

June 13

G. O., 27th May 1881, No. 387 B.

MAY.

Nos. 39-40.

DISPOSED OF

15 JUN 81

BY G.O. No. 813

Speed of the South Indian Railway --
Deprecates any increase in the --.

With order

Order. 15 June 1881.
No 813.

Recorded

N. R. G. W.

South Bd. of Revenue
11/12/81
13/6/87