C№ 10654

Govt. of 18 Madras.

PUBLIC WORKS.

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G.O., 18th Nov 1890, No. 1823-24

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South Indian Railway

—

The analysis of working of the — for the first half of 1890, ordered to be forwarded to the D.G. of Rys & the Secy of State for India

—

Forwarding the analysis of working of the S.I.Ry for the 1st half of 1890

—

Forty copy of Proceedings embodying the analysis of working of the S.I.Ry for the 1st half of 1890

P.C. 21.11

18TH NOVEMBER 1890, No. 1823 R., PUBLIC WORKS.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Railway.

Read the following paper:—

From the Consulting Engineer for Railways, dated Madras, 6th November 1890, No. 769.

Ten copies of the analysis of working, South Indian Railway, for the half-year ended the 30th June 1890.

Submitted to Government for transmission to the Director-General of Railways with reference to letter from the Government of India, No. 204 R.E., dated 23rd March 1888, embodied in the Proceedings of Government No. 274 R., dated 6th April 1888.

ORDER—dated 18th November 1890, No. 1823 R., Public Works.

Ordered to be forwarded to the Director-General of Railways and to the Secretary of State.

(Here enter No. 1824 R., dated 18th November 1890.)

(True Extract.)

(Signed) T. GRACEY, Lieut.-Colonel, R.E.,
Offg. Joint Secy. to Govt., P.W.D.,
Railway Branch.

To the Consulting Engineer for Railways.
„ Examiner, Guaranteed Railway Accounts.

ENDORSEMENT—dated 18th November 1890, No. 1824 R., Public Works.

Forwarded.

(By Order.)

Lieut.-Colonel, R.E.,
Offg. Joint Secy. to Govt., P.W.D.,
Railway Branch.

Exd. S. Pereira.
Spare Copies

RAILWAY.

Govt. of {1890} Madras.

PUBLIC WORKS.

Dated November, 18th.

Read.

Encl.

G.O., 18th Nov. 1890, Nos. 1823, 1824 R.

NOVEMBER.

South Indian Railway

Forwarding the analysis of working of the South Indian Railway for the first-half of 1890.

PUBLIC WORKS DEPARTMENT.

LETTER—to

THE RIGHT HONORABLE THE SECRETARY OF STATE FOR INDIA.

MY LORD,

We have the honor to forward a copy of our Proceedings, No. 1823 R., dated 18th November 1890, embodying the analysis of working of the South Indian Railway for the first-half of 1890.

We have the honor to be,
My Lord,
Your Lordship's most obedient, humble servants,

(Signed) CONNEMARA.
(„) J. H. GARSTIN.
(„) J. GROSE.

FORT ST. GEORGE,
18th November 1890.

Exd. S. Pereira.

GOVT. OF MADRAS.

PUBLIC WORKS DEPARTMENT.

(Copy.)

LETTER to the Right Honorable
the Secretary of State for
India.

No. $\frac{18}{1823\ R.}$ dated 18th Nov. 1890.

Forwarding copy of Proceedings embodying the analysis of working of the South Indian Railway for the first-half of 1890.

SOUTH INDIAN RAILWAY.

(INCLUDING PONDICHERRY RAILWAY.)

ANALYSIS OF WORKING

FOR THE

Half-Year ended 30th June, 1890.

PRINTED AT THE BRANCH "ECLIPSE" PRESS, TRICHINOPOLY.

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SOUTH INDIAN RAILWAY.

(INCLUDING PONDICHERRY RAILWAY.)

ANALYSIS OF WORKING.

FOR THE HALF-YEAR ENDED 30*th June*, 1890.

Progressive Number.	HEADINGS.			Ft. In.	REMARKS.
	No. I.				
	DESCRIPTION OF RAILWAY WORKED.				
1	Gauge of Railway	...		3 $3\frac{3}{8}$	
2	Mean mileage worked	...	*Miles.*	662·46	
3	Number of stations	...	*No.*	104	
4	Total length of the following gradients :				
	(*a*) $\frac{1}{80}$ and less	...	*Miles.*		
	(*b*) $\frac{1}{81}$ to $\frac{1}{80}$	...	,,		
	(*c*) $\frac{1}{81}$ to $\frac{1}{100}$	...	,,	10·851	
	(*d*) $\frac{1}{101}$ to $\frac{1}{200}$	...	,,	100·55	
	(*e*) $\frac{1}{201}$ to $\frac{1}{300}$	...	,,	65·582	
5	Steepest gradient worked—				
	(*a*) Length	...	*Miles.*	2·537	
	(*b*) Inclination	...	,,	1 in 100	
	No. II.				
	FINANCIAL RESULTS.				
6	Percentage of net earnings (including steam boat traffic) on Capital outlay	...	*Per cent.*	2·53	S. I. Ry. only.
7	Percentage of net earnings on paid up capital	...	,,	2·55	do.
	No. III.				
	OUTLAY, EARNINGS AND EXPENSES.				
	(*Exclusive of Steam Boat Service.*)				
8	Capital outlay per mile open	...	*Rs.*	70,390	S. I. Ry. only.
9	Total earnings per mile open per week	...	,,	174·97	
10	Total working expenses per mile per week	...	,,	101·63	
11	Total earnings per train-mile	...	,,	2·91	
12	Total working expenses per train-mile	...	,,	1·69	
13	Net earnings per train-mile	...	,,	1·22	
14	Cost per 1,000 gross ton-miles moved (freight and dead weight)	...	,,	9·73	
15	Percentage of total working expenses upon total earnings	...	*Per cent.*	58·09	
16	Percentage of total working expenses upon total earnings, excluding from both sides of the account the charges for carriage of Revenue Stores	...	,,	57·27	
	(*Inclusive of Steam Boat service.*)				
17	Percentage of total working expenses on total earnings (for details see table No. VII.)	...	,,	58·09	
	No. IV.				
	DIVISION OF EXPENDITURE BETWEEN COACHING AND GOODS TRAFFIC.				
18	Total working expenses for both coaching and goods traffic, excluding steam boat expenses, and after deducting telegraph and Sundry receipts and leaving only the balance of payments to other lines for mileage, &c.	...	*Rs.*	16,86,735	
	Proportions, *dividing expenditure in ratio of gross ton-mileage (freight and dead load)*	...	,,		
19	Coaching	...	,,	7,07,052	
20	Goods	...	,,	9,79,683	

SOUTH INDIAN RAILWAY.

(INCLUDING PONDICHERRY RAILWAY.)

ANALYSIS OF WORKING.—(*continued.*)

HALF-YEAR ENDED 30*th June*, 1890.

Progressive Number.	HEADINGS.			REMARKS.
	No. V.			
	COACHING TRAFFIC.			
	GROSS RECEIPTS AND TRAIN-MILEAGE—			
21	Receipts from coaching Traffic	... *Rs.*	15,79,880	
22	Coaching Train miles run	... *No.*	453,323	
23	Average coaching receipts per train-mile	... *Rs.*	3·49	
	UNITS AND UNIT MILEAGE—			
24	Number of Units carried one mile.			
25	1st class			
26	2nd „	... *Unit Miles.*	462,872	
27	3rd or Intermediate class	... „	2,623,054	
28	4th or Lowest class	... „		
29	Total Passenger unit mileage	... „	137,000,944	
	Other coaching traffic	... „	140,086,870	
30	Average sum received for carrying a unit one mile.	... *Ton Miles.*	254,628	
31	1st class			
32	2nd „	... *Pies.*	10·85	
33	3rd or Intermediate class	... „	3·95	
34	4th or Lowest class	... „		
35	Average for all classes	... „	2·00	
	Other coaching traffic per ton mile	... „	2·06	
36	Average number of units in a train.	... „	55·34	
37	1st class			
38	2nd „	... *No.*	1·02	
39	3rd or Intermediate class	... „	5·79	
40	4th or Lowest class	... „		
41	Total passenger units	... „	302·21	
	Other coaching traffic	... „	309·02	
		... *Tons.*	·56	
	VEHICLES AND VEHICLE MILEAGE—			
42	Number of Coaching Vehicles hauled one mile.			
43	1st class			
44	2nd „	... *Vehicle Miles.*	568,327	
45	3rd or Intermediate class	... „	984,024	
46	4th or Lowest class	... „		
47	Other Vehicles	... „	6,337,533	
48	Brake-vans	... „	1,404,370	
	Total	... „	58,636	
49	Average number of Vehicles in a Coaching train.	... „	9,352,890	
50	1st class			
51	2nd „	... *No.*	1·25	
52	3rd or Intermediate class	... „	2·17	
53	4th or Lowest class	... „		
54	Other Vehicles	... „	13·98	
55	Brake-vans	... „	3·10	
	Total	... „	·13	
56	Average earnings per coaching vehicle per mile.	... „	20·63	
57	1st class			
58	2nd „	... *Pies.*	8·83	
59	3rd or Intermediate class	... „	10·54	
60	4th or Lowest class	... „		
	Other vehicles	... „	43·21	
61	Carrying capacity hauled one mile (excluding brakes.)	... „	10·03	
62	1st class			
63	2nd „	... *Seats.*	7,341,088	
64	3rd or Intermediate class	... „	26,639,456	
65	4th or Lowest class	... „		
	Other vehicles	... „	224,591,168	
66	Percentage of freight upon capacity hauled.	... *Tons.*	4,523,147	
67	1st class			
68	2nd „	... *Per cent.*	6·30	
69	3rd or Intermediate class	... „	9·85	
70	4th or Lowest class	... „		
	Other vehicles	... „	61·00	
		... „	5·63	

SOUTH INDIAN RAILWAY.

(INCLUDING PONDICHERRY RAILWAY.)

ANALYSIS OF WORKING.—(*continued.*)

HALF-YEAR ENDED 30*th June*, 1890.

Progressive Number.	HEADINGS.			REMARKS.
	No. V.			
	COACHING TRAFFIC.—(*Continued.*)			
	WEIGHT OF TRAIN AND TON-MILEAGE—			
	Gross ton-mileage of all coaching trains.			
71	Freight	... *Ton Miles.*	8,730,816	
72	Dead-weight	... „	63,931,279	
73	Total	... „	72,662,095	
	Average weight of a coaching train.			
74	Freight	... *Tons.*	19·26	
75	Dead-weight	... „	141·03	
76	Total	... „	160·29	
	COST OF WORKING AND PROFITS—			
77	Average cost of hauling a coaching train one mile	... *Rs.*	1·56	
78	Average cost of hauling a coaching vehicle with its load one mile	... *Pies.*	14·61	
	Average cost of hauling a coaching unit one mile.			
79	Per passenger unit	... „	·84	
80	Other traffic per ton	... „	71·07	
81	Average profit on working a coaching train one mile	... *Rs.*	1·93	
	Average profit on working a coaching vehicle one mile.			
82	1st class	... *Pies.*	*5·78*	*Loss.*
83	2nd „	... „	*4·07*	*do.*
84	3rd or Intermediate class	... „		
85	4th or Lowest class	... „	28·60	
86	Other vehicles	... „	*4·58*	*Loss.*
	Average profit on working a coaching unit one mile.			
87	Per passenger unit	... *Pies.*	1·22	
88	Other traffic per ton	... „	*15·73*	*Loss.*

SOUTH INDIAN RAILWAY.

(INCLUDING PONDICHERRY RAILWAY.)

ANALYSIS OF WORKING.—(*continued.*)

HALF-YEAR ENDED 30*th June*, 1890.

Progressive Number.	HEADINGS.			REMARKS.
	No. VI.			
	GOODS TRAFFIC.			
	GROSS RECEIPTS AND TRAIN-MILEAGE—			
89	Receipts from Goods Traffic ...	*Rs.*	13,69,999	
90	Goods Train-miles run ...	*No.*	582,823	
91	Average goods receipts per train-mile ...	*Rs.*	2·35	
	UNITS AND UNIT MILEAGE—			
92	Tons of Goods carried one mile ...	*Ton Miles.*	36,456,943	
93	Average sum received for carrying a ton one mile ...	*Pies.*	7·22	
94	Average number of tons in a train ...	*Tons.*	62·55	
	VEHICLES AND VEHICLE MILEAGE—			
	Number of goods vehicles hauled one mile.			
95	Loaded ...	*Vehicle Miles.*	8,819,951	
96	Empty ...	,,	3,081,183	
97	Brake-vans ...	,,	420,265	
98	Total ...	,,	12,321,399	
	Average number of vehicles in a goods train.			
99	Freight vehicles ...	*No.*	20·42	
100	Brake-vans ...	,,	·72	
101	Total ...	,,	21·14	
102	Average earnings per goods vehicle per mile (excluding brakes) ...	*Pies.*	22·10	
103	Carrying capacity hauled one mile (excluding brakes) ...	*Tons.*	70,851,719	
104	Percentage of freight upon capacity hauled ...	*Per cent.*	51·46	
105	Average load of a goods vehicle (including both loaded and empty) ...	*Tons.*	3·06	
106	Average load of a loaded goods vehicle ...	,,	4·13	
	WEIGHT OF TRAIN AND TON MILEAGE—			
	Gross ton mileage of all goods trains.			
107	Freight ...	*Ton Miles.*	36,456,943	
108	Dead-weight ...	,,	64,222,812	
109	Total ...	,,	100,679,755	
	Average weight of a goods train.			
110	Freight ...	*Tons.*	62·55	
111	Dead-weight ...	,,	110·19	
112	Total ...	,,	172·74	
	COST OF WORKING AND PROFITS—			
113	Average cost of hauling a goods train one mile ...	*Rs.*	1·68	
114	Average cost of hauling a goods vehicle with its load one mile ...	*Pies.*	15·81	
115	Average cost of hauling a goods unit (viz., one ton) one mile ...	,,	5·16	
115A	Average cost of hauling a goods unit (viz., one ton) one mile including interest on Capital expended at the rate of 5 per cent per annum ...	,,	8·94	
116	Average profit on working a goods train one mile ...	*Rs.*	·67	
117	Average profit on working a goods vehicle with its load one mile ...	*Pies.*	6·29	
118	Average profit on working a goods unit (viz., one ton) one mile ...	,,	2·06	

SOUTH INDIAN RAILWAY.

(INCLUDING PONDICHERRY RAILWAY.)

ANALYSIS OF WORKING.—(*continued.*)

HALF-YEAR ENDED 30*th June*, 1890.

Progressive Number.	HEADINGS.			REMARKS.
	No. VII.			
	DETAILED PERCENTAGES OF EARNINGS AND EXPENDITURE.			
	Percentage to Total Earnings—			
119	Coaching Traffic ...	*Per cent.*	52·42	
120	Goods Traffic ...	,,	45·46	
121	Sundries, including Telegraph ...	,,	2·12	
122	Steam-boat Earnings ...	,,		
	Total Earnings ...	,,	100·00	
	Percentage of Working Expenses upon Total Earnings—			
123	Maintenance ...	*Per cent.*	18·72	
124	Locomotive Expenses ...	,,	20·55	
125	Carriage and Wagon Expenses ...	,,	4·75	
126	Traffic Expenses ...	,,	7·74	
127	General Charges ...	,,	6·05	
128	Miscellaneous Charges ...	,,	·28	
129	Steam-boat Expenses ...	,,		
130	Total Working Expenses ...	,,	58·09	

SOUTH INDIAN RAILWAY.

(*INCLUDING PONDICHERRY RAILWAY.*)

ANALYSIS OF WORKING.—(*contd.*)—HALF-YEAR ENDED 30*th June*, 1890.

No. VIII.—Working Expenses.

TABLE A.

Maintenance of Way, Works and Stations.

Reference to Revenue Account. Table and main-head	Sub-head.	Progressive number in Analysis.	DETAILS.	*a.* Per mile of line maintained. 662·46	*b.* Per mile of track including Sidings. 742·13	*c.* Per total Train-mile. 1,036,146	*d.* Per 1,000 gross ton miles. 173,341,850
				Rs.	Rs.	As.	Rs.
IX(A)	...		*General Superintendence—*				
1	1 & 2		Engineers' Salaries and allowances ...	53·99	48·20	·55	·20
	3to5		Subordinate Superintendents' salaries and allowances, including overtime ...	37·20	33·21	·38	·14
	6		Office expenses ...	24·92	22·24	·26	·10
		131	Total...	116·11	103·65	1·19	·44
			Maintenance and Renewal of Permanent Way—				
2	1		Wages ...	123·46	110·21	1·26	·47
	2		Materials ...	386·51	345·01	3·95	1·48
		132	Total...	509·97	455·22	5·21	1·95
			Repairs of Bridges, &c.—Wages and Materials—				
3	1		Bridges and tunnels ...	13·40	11·96	·14	·05
	2		Miscellaneous ...	4·56	4·07	·05	·02
		133	Total...	17·96	16·03	·19	·07
3(A)		134	*Conservancy of Rivers—*				
			Repairs of Stations and Buildings—Wages and Materials—				
4	1		Repairs of all, except staff quarters ...	22·60	20·18	·23	·09
	2		Repairs of staff quarters ...	4·92	4·39	·05	·02
		135	Total...	27·52	24·57	·28	·11
5	1		*Maintenance by Contract—*				
	2		Amount paid to Contractors...				
			Materials supplied by the Railway ...				
			Total...				
6			*New Minor Works—*	4·25	3·79	·04	·02
			Unclassified Expenditure—				
7	1		Plantations ...	4·36	3·89	·04	·01
	2		Tools and Plant ...	3·29	2·94	·03	·01
	3		Loss by exchange ...	67·65	60·38	·69	·26
	4		Loss on stores, &c. ...	54·28	48·46	·56	·21
	5		Freight on Stores ...	51·74	46·18	·53	·20
			Total...	181·32	161·85	1·85	·69
			Total Heads, 5, 6 and 7 ...	185·57	165·64	1·89	·71
			Less Credits ...	*5·39*	*4·81*	*·05*	*·02*
		136	*Net Total, Other Charges* ...	180·18	160·83	1·84	·69
		137	*Total Maintenance* ...	851·74	760·30	8·71	3·26

If done Departmentally.

SOUTH INDIAN RAILWAY.

(*INCLUDING PONDICHERRY RAILWAY.*)

ANALYSIS OF WORKING.—(*contd.*)—HALF-YEAR ENDED 30*th June*, 1890.

No. VIII.—Working Expenses.—(*contd.*)

TABLE B.

Locomotive Expenses.

Reference to Revenue Account. Table and main-head.	Sub-head.	Progressive number in Analysis.	DETAILS.	*a.* Per total Train-mile. 1,036,146	*b.* Per Engine mile. 1,242,941	*c.* Per 1,000 gross ton-miles. 173,341,850
				As.	As.	Rs.
			General Superintendence—			
IX (B) 1	1 & 2		Salaries of Superintendents and Assistants, including allowances ...	·16	·14	·06
	3 to 5		Ditto of Subordinate ditto, including ditto ...	·32	·27	·12
	6		Office expenses ...	·26	·21	·10
		138	Total...	·74	·62	·28
			Running Expenses—			
2	1 & 2		Wages of Drivers and Firemen, including overtime ...	1·36	1·13	·51
	3		Fuelling, cleaning and looking after engines ...	·18	·15	·06
	4		Contingent expenses	·01	·01	·01
		139	Total...	1·55	1·29	·58
				lbs.	lbs.	lbs.
3	1 to 4		*Fuel.*—(In terms of coal) Average quantity consumed	30·43	25·37	181·92
				As.	As.	Rs.
			Average price per ton Rs. 16·19			
		140	Do. cost	3·52	2·93	1·31
4		141	*Water.*—(Including wages and Stores)	·16	·13	·06
5		142	*Oil, Tallow and other Stores*	·29	·24	·11
			Maintenance and Renewals—			
6	1 & 2		Wages including overtime	1·18	·99	·44
	3		Materials	·79	·66	·30
		143	Total...	1·97	1·65	·74
7			*New Minor works*			
8			*Payments to other lines*			
			Unclassified Expenditure—			
9	1		Loss by exchange	·86	·72	·32
	2		Loss on Stores, &c.	·22	·18	·08
	3		Freight on Stores	·32	·27	·12
			Total...	1·40	1·17	·52
			Total heads, 7, 8 and 9	1·40	1·17	·52
			Less Credits	*·07*	*·06*	*·03*
		144	*Net Total, Other Charges*	1·33	1·11	·49
		145	*Total Locomotive Expenses*	9·56	7·97	3·57

SOUTH INDIAN RAILWAY.

(INCLUDING PONDICHERRY RAILWAY.)

ANALYSIS OF WORKING.—*(contd.)*—HALF-YEAR ENDED 30*th June*, 1890.

No. VIII.—Working Expenses.—*(contd.)*

TABLE C.

Carriage and Wagon Expenses.

Reference to Revenue Account. Table and main-head.	Sub-head.	Progressive number in Analysis.	DETAILS.	*a.* Per total Train-mile. 1,036,146	*b.* Per 1,000 Vehicle, miles run by home Vehicles. 21,700,830
			General Superintendence—	As.	Rs.
IX (C) 1	1 & 2		Salaries of Superintendents, including allowances	·04	·11
	3 to 5		Ditto of Subordinate ditto, including ditto	·07	·23
	6		Office expenses	·06	·18
		146	Total...	·17	·52
			Repairs and Renewals of Vehicles and Machinery—		
2	1 to 3		*Coaching Vehicles* ... { *Wages including overtime* ...	·31	2·16
		147	{ *Materials*	·43	2·98
			Total...	·74	5·14
	1 to 3		*Goods Vehicles* ... { *Wages including overtime* ...	·46	2·39
		148	{ *Materials*	·50	2·61
			Cleaning and Oiling— Total ..	·96	5·00
3	1		Labour, including wages of Oilers, &c.	·13	·40
	2		Stores	·05	·16
		149			
4			*New Minor Works—* Total...	·18	·56
			Unclassified Expenditure—		
5	1		Loss by exchange	·15	·45
	2		Loss on Stores, &c.	·02	·05
	3		Freight on Stores	·01	·02
			Total Heads, 4 and 5 ... ... Total...	·18	·52
			Less Credits	·18	·52
		150	*Net Total, Other Charges*	·02	·07
		151	*Total, Carriage and Wagon Expenses*	·16	·45
				2·21	6·60

SOUTH INDIAN RAILWAY.

(INCLUDING PONDICHERRY RAILWAY.)

ANALYSIS OF WORKING.—*(contd.)*—HALF-YEAR ENDED 30*th June*, 1890.

No. VIII.—Working Expenses.—*(contd.)*

TABLE D.

Traffic Expenses.

Reference to Revenue Account. Table and main-head.	Sub-head.	Progressive number in Analysis.	DETAILS.	*a.* Per total Train-Mile. 1,036,146	*b.* Per cent of Traffic earnings Abstracts H. and I. 29,49,879
			General Superintendence—	As.	Per cent.
IX (D) 1	(*a*) 1 & 3		Traffic Manager, Assistants, &c., including travelling allowances	·28	·61
	(*a*) 2 & 4		Office establishment and contingencies	·17	·38
		152	Total...	·45	·99
	(*b*)	153	*Station Staff*	1·85	4·06
	(*c*)	154	*Train Staff*	·37	·82
2	1 to 3	155	*Fuel, Lighting, Water and General Stores*	·40	·87
3		156	*Clothing*	·0004	·001
4		157	*Printing, Stationery and Tickets*	·24	·53
5		158	*Charges for delivery and collection of goods, &c.*	·0003	·001
6		159	*Miscellaneous Expenses*	·02	·04
			Payments to other Lines—		
7	1	160	Expenses at joint Stations	·03	·06
			Unclassified Expenditure—		
8	1		Loss by exchange	·12	·27
	2		Loss on Stores, &c.	·08	·17
	3		Freight on Stores	·04	·09
			Total Head, 8	·24	·53
			Less Credits	·001	·001
		161	*Net Total, Other Charges*	·239	·529
		162	*Total Traffic Expenses*	3·60	7·90

SOUTH INDIAN RAILWAY.

(*INCLUDING PONDICHERRY RAILWAY.*)

ANALYSIS OF WORKING.—(*contd.*)—HALF-YEAR ENDED 30*th June*, 1890.

No. VIII.—Working Expenses.—(*contd.*)

TABLE E.

General Charges.

Reference to Revenue Account. Table and main-head.	Sub-head.	Progressive number in Analysis.	DETAILS.	*a.* Per total Train Mile.	*b.* Per cent on total earnings.
				1,036,146	30,13,661
IX (E) 1	1 to 4	163	*Home Expenditure*	As. ·45	Per cent. ·96
			Indian Management—		
2	1	164	Agent's Office, including travelling allowances and contingencies.	·30	·65
	2		Auditor's office, ditto ditto		
	3		Accounts office, ditto ditto		
	4		Paymaster's office, ditto ditto ...	·73	1·57
		165	Total 2 to 4...	·73	1·57
	5	166	Store Department, ditto ditto ...	·20	·42
	6	167	Medical Department, ditto ditto ...	·11	·24
	7		Rents	·004	·01
	8 to 10		Miscellaneous expenses, including, printing, stationery and medicine	·16	·34
		168	Total 7 to 10 ...	·164	·35
3	1 to 3	169	*Police*	·38	·81
4		170	*Advertising*	·01	·03
			Electric Telegraph—		
5	1 to 4		Salaries, &c.		
	5		Maintenance (Wages and Stores)	·38	·81
	6		Government Telegraph Department, for rent, maintenance and inspection	·02	·04
		171	Total ...	·28	·61
				·68	1·46
6			*Clearing Accounts, with other lines*—		
			Unclassified Expenditure—		
7	1		Loss by exchange	·16	·34
	2		Loss on Stores, &c.	·01	·03
	3		Freight on Stores	·0005	·001
			Total...	·1705	·371
			Total Heads, 6 and 7	·1705	·371
			Less Credits	·0001	·0003
		172	*Net Total, Other Charges*	·1704	·3707
		173	*Total General Charges*	2·81	6·05

Earnings of the South Indian Railway Company	Rs.	30,03,182	11 3
Less amount received for working Pondicherry Railway Company's Line	„	14,955	1 3
		29,88,227	10 0
Earnings of the Pondicherry Railway Company	„	25,433	12 10
	„	30,13,661	6 10

SOUTH INDIAN RAILWAY.

(*INCLUDING PONDICHERRY RAILWAY.*)

ANALYSIS OF WORKING.—(*contd.*)—HALF YEAR ENDED 30*th June*, 1890.

No. VIII.—Working Expenses.—(*contd.*)

TABLE F.

Steam Boat Service.

Reference to Revenue Account. Table and main-head.	Sub-head.	Progressive Number in Analysis.	DETAILS.	Per cent on Steam boat earnings.
IX (F)	...		*Working Expenses*—	Per cent.
1	1		Salaries and allowances of Officers and crews...	
	2		Loading and unloading vessels	
	3		Pilotage fees	
	4		Contingencies	
			Repairs—	
2	1		Wages	
	2		Materials	
3	1 to 5	173*a*	*Fuel*	
4	...		*Miscellaneous Stores*	
5	1 & 2		*Steam Traffic Agencies*	
6	...		*New Minor Works*	
7	1 to 6		*Miscellaneous Expenditure*	
			Total	
			Less Credits...	
			Total Steam Boat Expenses	

TABLE G.

Special and Miscellaneous Expenditure.

Reference to Revenue Account. Table and main-head.	Sub-head.	Progressive Number in Analysis.	DETAILS.	Per cent on Total earnings.
				30,13,661
IX (G) 1	...	174	*Law Charges*—	Per cent. ·004
			Compensation—	
2	1		For goods lost or damaged	·068
	2		„ Personal injury	
	3		„ Other claims	·002
		175	Total...	·070
3	...	176	*Rates and Taxes*	·122
			Payments to other Lines—	
4	1	...	Hire of Locomotives	
	2	...	„ of Vehicles	
	3	...	Mileage of foreign stock	
	4	...	Rent of stations, &c., jointly occupied	·043
		177	Total...	·043
5	...	...	*Contributions to Special Funds* (*in detail*)	
6 to 8	...	...	*Miscellaneous*	·042
			Total Heads, 5 to 8	·042
			Less Credits	
		178	*Net Total, Other Charges*	·042
		179	*Total Special and Miscellaneous Expenses*	·28

WILLIAM S. BETTS,

Agent.

SOUTH INDIAN RAILWAY.

(INCLUDING PONDICHERRY RAILWAY.)

APPENDICES TO ANALYSIS OF WORKING.

HALF-YEAR ENDED 30*th June*, 1890.

APPENDIX I.

Working of Locomotives.

Reference to Revenue Account.								
Table & main head.	Sub-head.		Passenger.	Passenger.	Goods.	Tank.		Total.
		LOCOMOTIVES. 1—Wheels coupled ...		4 Coupled	6 Coupled	4 Coupled Ts. Cs. Qs.	6 Coupled Ts. Cs. Qs.	
		2—Weight on driving axle ...		7 Tons.	6 Tons.	6 8 0	9 0 3	
		3—Weight of Engine in Steam ...		20 „	18 „	20 0 0	27 17 1	
		4—Weight of Tender loaded ...		14 „	12 „			
XII	5	1—Number of Locomotives erected and made over to Locomotive Department ...		30	86	8		124
	11	2—Average number of Locomotives constantly under repairs and renewals ...		4·906	17·469	·917		23·292
		3—Number of Locomotives laid by as spare ..						
		4—Ditto lent or hired out to other lines ...			5			5
		5—Average number of Locomotives 1—(3+4) ...		30	81	8		119
		6—Total Mileage of Locomotives (5) ...		349,536	823,448	69,957		1,242,941
		7—Average miles run by a Locomotive of each class 6÷5 ...		11,651	10,166	8,745		10,445
		Per diem.		64·37	56·17	48·31		57·71
		8—Weight of coal, &c., used per Engine mile ... *To be separated if possible among the classes of Locomotives*		lbs.	lbs.	lbs.		lbs.
		9—Weight of wood used per Engine mile ...		21·02	25·59	21·08		25·37

	Passenger Trains.	Goods Trains.	Mixed Trains.			
10—Average gross weight of trains hauled *Tons*...	106·71	115·11	163·36			137·25
11—Average speed between stations *Miles per hour*...	20	13	16			
12—Average through speed *Miles per hour*...	16	9¼	12			
13—Average Consumption of coal per Engine mile lbs...	21·08	27·73	27·11			

APPENDIX II.

SOUTH INDIAN

(INCLUDING

APPENDICES TO ANALYSIS

APPEN

Working of

DESCRIPTION OF VEHICLES.	Total number on the list at end of the half-year.	Average Weight in Tons. Of each description of Vehicle.	Average Weight in Tons. Of each group.	Average Carrying Capacity. Of each description of Vehicle.	Average Carrying Capacity. Of each group.	Average number laid by as spare.	Average number lent or hired out.	Average number working a—(f+g)
	a.	*b.*	*c.*	*d.*	*e.*	*f.*	*g.*	*h.*
COACHING STOCK—								
Governor's Saloon Carriage	1	10·00	...	22	...	...	...	1
Inspection Carriage	1	10·00	...	22	...	...	...	1
First Class Carriage	18	5·11	...	12	...	...	...	18
Do. do. Clemenson's	1	10·00	...	22	...	...	...	1
Composite do.	26	5·30	...	16	...	...	...	26
Second Class do.	29	5·10	...	16	...	...	...	29
Intermediate do.	...	...	...	...	...	...	...	...
Third Class do.	324	4·65	...	32	...	...	...	324
Do. do. Clemenson's	37	10·26	...	64	...	...	...	37
Horse Boxes	20	4·35	...	·88	...	...	...	20
Carriage Trucks	4	2·90	...	·34	...	...	...	4
Luggage vans with brake	63	5·20	...	3·00	...	...	...	63
Post Office Vans	12	6·24	...	4·50	...	...	...	12
Post Office Vans with luggage compartment and brake	6	5·20	...	...	...	...	...	6
Total...	542	5·23	5·23	...	...	...	...	542
GOODS STOCK—								
Covered Goods Wagons	1,133	3·83	3·69	6·00	5·97	...	...	1,133
Cattle Trucks	6	3·94		2·00				6
Open Wagons	254	2·98		6·00				254
High sided Wagons	663	3·57		6·00				663
Cotton Trucks	77	5·02		5·05				77
Timber Trucks	37	3·57		6·78				37
Miscellaneous	2	6·69		10·00				2
Powder Vans	3	5·15		4·00				3
Brake Vans	34	3·74	3·74	...	...	...	...	34
Total...	2,209	3·69	3·69	5·97	5·97	...	...	2,209
GRAND TOTAL...	2,751	...	...	...	...	...	...	2,751

RAILWAY.

PONDICHERRY RAILWAY.)

OF WORKING.—(*contd.*)—HALF-YEAR ENDED 30*th June*, 1890.

DIX II.

Vehicles.

MILEAGE OF						Ton-mileage of Vehicle dead weight hauled on Home Line.
Foreign Vehicles on Home Line.		Home Vehicles on Home Line.		Home Vehicles on Foreign Lines.	Carrying Capacity hauled on Home Line.	
Loaded.	Empty.	Loaded.	Empty.			
i.	*k.*	*l.*	*m.*	*n.*	*o.*	*p.*
		686			15,092	6,860
		3,916			86,152	39,160
		446,463			5,357,556	2,281,426
		3,438			75,636	34,380
		290,517			4,648,272	1,539,740
		595,017			9,520,272	3,034,587
		5,443,015			174,176,480	25,310,020
		907,922			58,107,008	9,315,280
		1,494,489	18,548		4,850,914	8,117,908
		57,345				298,194
		9,242,808	18,548			49,977,555
		9,044,390	3,081,183		72,198,302	46,044,416
		289,261	24,040			1,171,746
		9,334,251	3,105,223			47,216,162
		18,577,059	3,123,771			97,193,717

* Includes 309 miles run by Travelling Crane.

The average mileage per diem run by { Coaching Vehicles 51,168. / Goods do. 68,726.

SOUTH INDIAN RAILWAY.

(*INCLUDING PONDICHERRY RAILWAY.*)

APPENDICES TO ANALYSIS OF WORKING.—(*contd.*)

HALF-YEAR ENDED 30*th June*, 1890.

APPENDIX III.

Distribution of Mileage according to the traffic carried, giving total mileage of Home and Foreign Stock on Home line.

DESCRIPTION OF VEHICLES.	MILEAGE OF			REMARKS.
	Vehicles.	Carrying Capacity.	Dead weight.	
Coaching—				
First class	568,327	7,341,088	2,936,447	
Second class	984,024	26,639,456	6,222,150	
Third or Intermediate class ...				
Fourth or Lowest class	6,337,533	224,591,168	33,117,242	
Total Passenger vehicles	7,889,884	258,571,712	42,275,839	
Other coaching vehicles	1,404,370	4,523,147	7,551,366	
Total paying coaching mileage ...	9,294,254		49,827,205	
Passenger brake-vans	58,636		302,127	
Total coaching mileage, including brakes ...	9,352,890		50,129,332	
Goods—				
Loaded vehicles	8,819,951	52,448,376	33,782,607	
Empty do.	3,081,183	18,403,343	11,367,731	
Total paying goods mileage ...	11,901,134	70,851,719	45,170,338	
Goods brake-vans	420,265		1,730,739	
Total goods mileage, including brakes ...	12,321,399	70,851,719	46,901,077	
Miscellaneous—				
Free Mileage for inspection, &c.	26,541		163,808	
GRAND TOTAL ...	21,700,830		97,193,717	

SOUTH INDIAN RAILWAY.

(*INCLUDING PONDICHERRY RAILWAY.*)

APPENDICES TO ANALYSIS OF WORKING.—(*continued.*)

HALF-YEAR ENEDD 30*th June*, 1890.

APPENDIX IV.

Maintenance of Way.

RAILS.

	DETAILS.	IRON.				STEEL.					Total Iron and Steel.
		Double headed weighing 68 lbs. per yard.	Flat footed weighing 40·3 lbs. per yard.	Flat footed weighing 35·5 lbs. per yard.	Total.	Steel, weighing 32 lbs. per yard.	Steel, weighing 41 lbs. per yard.	Steel, weighing 50 lbs. per yard.	Steel, weighing 56 lbs. per yard.	Total.	
1	Miles of rail in way, including sidings	285·985	497·996	3·909	787·890		124·834	551·426	·801	677·061	1,464·951
2	Average age of rails in way at the middle of the half-year years...	25·635	13·524	25·25	17·978		9·917	4·5	4·5	5·498	12·210
3	Rails renewed ... ... Miles...	25·349	4·918		30·267		1·752	·009		1·761	32·028
4	Proportion renewed per mile of rail (1)	·088	·009		·038		·014	·00001		·002	·021
5	Average number of tons hauled over each kind of rail in the half-year.	No reliable dataavailable.									
6	Thousands of tons hauled on an average over each kind of rail during the average age of rail in way (2)										

SOUTH INDIAN RAILWAY.

(INCLUDING PONDICHERRY RAILWAY.)

APPENDICES TO ANALYSIS OF WORKING.—*(concld.)*

HALF-YEAR ENDED *30th June*, 1890.

APPENDIX V.

Maintenance of Way.

SLEEPERS.

	DETAILS.	WOOD.						IRON.				STEEL TRANSVERSE SLEEPERS.
		TRANSVERSE.					LONGITUDINAL.					
		Creosoted Pine 9′ × 10″ × 5″	Creosoted ½ round 6′ × 10″ × 5″	Teak of sizes.	Pingadoo 6′—6″ × 9″ × 4½″	Total.		Pot sleepers Weighing 80 lbs.	Pot sleepers Weighing 70 lbs.	Pot sleepers Weighing 57 lbs.	Total.	Weighing 56 lbs.
		No.	No.	No.	No.	No.	Linl. ft.	Pairs.	Pairs.	Pairs.	Pairs.	No.
1	Number of Sleepers in way, including sidings at the commencement of the half-year ...	53,107	607,612	51,320	38,947	750,986	47,680	221,708	404,377	12,345½	638,430½	14,642
2	Average age of Sleepers in way at the middle of the half-year ... ... years...	27·6	13·52	18·25	5·1	14·402	16·47	22·75	4	5·5	10·540	5·5
3	Number removed	...	15,557	457	684	16,698	1,687	19,867½	82½	49½	19,999½	2,241
4	Number laid	...	13,652	85	507	14,244	1,687	1,700	26,445½	183½	28,329	...
5	Percentage of removals on total of each class (1) ...	...	2·560	·890	1·756	2·223	3·538	8·961	·020	·400	3·132	15·305
6	Number of Sleepers in way, including sidings at the end of the half-year	53,107	605,707	50,948	38,770	748,532	47,680	203,540½	430,740	12,479½	646,760	12,401

Total number of Wooden, Iron and Steel Sleepers laid ... 42,573
Total number do. removed .. 38,938½
Increase ... 3,634½

Increase is due to more 50 lbs. Pots being substituted for 68 lbs. Pots removed and extension of sidings.

Form No. 2.

PUBLIC WORKS DEPARTMENT.

OFFICE OF CONSULTING ENGINEER FOR RAILWAYS,

Madras, 6th December 1890.

Two copies of the Analysis of
Mess. King, Sir to Indian Railways for
the half year ended the 30th June 1890

No. 769.

SUBMITTED _____ to _____ Government, for
transmission to the
Director General of
Railways, with reference
to letter from the Govern-
ment of India No 204 R.
dated 23rd March 1888,
embodied in the Proceedings
of Government No 274 R
dated 6th April 1888.

Sidney Smith
Major R.E.
For Offg: Cnl: Engr: for Rys

A Form No. 3.

No. 274 Rly/6-4-88

JH 12/11/90 Ordered to be forwarded to the Director General of Railways and to the Secretary of State.

JE No 1824 R 18th Novr 1890

Forwarded

To the Consulting Engr for Rys

Ext Co. Rejected. W/11

JE No 18/1823 R 18th Novr 90

To JH 12/11/90 H 13/11

The Rt Honble the Secy: of State

for India

My Lord,

We have the honour to forward a copy of our Proc: No 1823 R of 18th November 1890, embodying the analysis of working of the South Indian Railway for the first half of 1890.

We have the honour

I have &c

B. R

H

From

THE CONSULTING ENGINEER

FOR RAILWAYS,

MADRAS,

No. 769

Dated 6th
Received 7th } November 1890.

No. OF ENCLOSURES. 1 (6 Spare)

Subject.

Submitting for transmission to the Director General of Railways, copies of analysis of working South Indian Railway for the Half year ended the 30th June 1890.

R