

Public Works (1894) Department.

RAILWAY BRANCH.

G.O., No. 219-20 R

DATED 10th April

[Despatch Abstract.]

Madras Railway. — Analysis of working of the — for the second half of 1893, ordered to be forwarded to the Director Genl of Railways and to the Secretary of State.

Madras Railway. — Forwarding the analysis of working of the — for the second half of 1893.

Forwarding copy of Procs. embodying the analysis of working of the Madras Railway for the second half of 1893. [Incl. 10-11-93]

[illegible]

G.O.	No.	Department.	Date.	G.O.	No.	Department.	Date.

Frd. R. J. Pereira.
Spare Copies

RAILWAY.

Govt. of {1894} Madras.
PUBLIC WORKS.

Dated April, 10th.

Recd.

Encl.

G.O., 10th Apr. 1894, Nos. 219,
220 R.

APRIL

Madras Railway

Forwarding the analysis of working of
the — for the second half of 1893.

10TH APRIL 1894, No. $\frac{2}{219}$ R., PUBLIC WORKS.

PUBLIC WORKS DEPARTMENT.

LETTER—to

THE RIGHT HONORABLE THE SECRETARY OF STATE FOR INDIA.

SIR,

We have the honour to forward a copy of our Proceedings, No. 219 R., dated 10th April 1894, embodying the analysis of working of the Madras Railway for the second half of 1893.

We have the honour to be,

Sir,

Your most obedient, humble servants,

(Signed) WENLOCK.
(„) H. W. BLISS.
(„) J. GROSE.

FORT ST. GEORGE,
10th April 1894.

Ed. S. J. Pereira.

GOVT. OF MADRAS.

PUBLIC WORKS DEPARTMENT.

(Copy.)

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

No. $\frac{3}{219 R.}$ dated 10th Apr. 1894.

FORWARDING copy of Proceedings embodying
the analysis of working of the Madras Railway
for the second half of 1893.

Recd 2/4/94

Madras Railway Company.

ANALYSIS OF WORKING

FOR THE

Half-Year ending 31st December, 1893.

VEST AND COMPANY, PRINTERS, MADRAS.

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MADRAS RAILWAY COMPANY.

Analysis of Working for the Half-year ended 31st December, 1893.

Progressive Number.	HEADINGS.		REMARKS.
No. I.			
DESCRIPTION OF RAILWAY WORKED.			
			Ft. In.
1	Gauge of Railway Miles	5	6
2	Mean mileage worked No.	839	225
3	Number of Stations	142	
4	Total length of the following gradients:—	Miles	Nil.
	(a) $\frac{1}{8}$ and less	"	17.99
	(b) $\frac{1}{4}$ to $\frac{1}{8}$	"	48.09
	(c) $\frac{1}{2}$ to $\frac{1}{4}$	"	197.14
	(d) $1\frac{1}{2}$ to $\frac{1}{2}$	"	123.86
	(e) $3\frac{1}{2}$ to $1\frac{1}{2}$	"	
5	Steepest gradient worked—	Miles	0.80
	(a) Length		1 in 60
	(b) Inclination		
No. II.			
FINANCIAL RESULTS.			
6	Percentage of net earnings (including Steam-boat traffic) on Capital outlay Per cent.	2.14	
7	Percentage of net earnings on paid up capital	2.14	Excluding £12,014-1-4. Capital not bearing interest.
No. III.			
OUTLAY, EARNINGS AND EXPENSES.			
<i>(Exclusive of Steam-boat Service.)</i>			
8	Capital outlay per mile open Rs.	1,39,993	
9	Total earnings per mile open per week	239.15	
10	Total working expenses per mile per week	120.88	
11	Total earnings per train-mile	3.888	
12	Total working expenses per train-mile	1.965	
13	Net earnings per train-mile	1.923	
14	Cost per 1,000 gross ton-miles moved (freight and dead weight)	6.99	
15	Percentage of total working expenses upon total earnings Per cent.	50.54	
16	Percentage of total working expenses upon total earnings, excluding from both sides of the account the charges for carriage of revenue stores... ..	49.92	
<i>(Inclusive of Steam-boat Service.)</i>			
17	Percentage of total working expenses on total earnings (for details, see Table No. VII)	50.54	
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.	25,64,094	
Proportions, dividing expenditure in ratio of gross ton-mileage (freight and dead load).			
19	Coaching	9,25,606	
20	Goods	16,38,488	

ANALYSIS OF WORKING
For the Half-year ended 31st December, 1893.

Progressive Number.	HEADINGS.	REMARKS.
No. V.		
COACHING TRAFFIC.		
GROSS RECEIPTS AND TRAIN-MILEAGE—		
21	Receipts from coaching traffic Rs.	19,52,189
22	Coaching train-miles run No.	661,423
23	Average coaching receipts per train-mile Rs.	2-95
UNITS AND UNIT MILEAGE—		
Number of units carried one mile—		
24	1st Class Unit miles	1,610,622
25	2nd " "	4,154,913
26	3rd or Intermediate class ... .. "	.....
27	4th or Lowest " "	174,907,867
28	Total passenger unit mileage "	180,703,432
29	Other coaching traffic Ton-miles	1,596,034
Average sum received for carrying a unit one mile—		
30	1st Class Pies	9-94
31	2nd " "	4-92
32	3rd or Intermediate class ... .. "	.....
33	4th or Lowest " "	1-64
34	Average for all classes "	1-79
35	Other coaching traffic per ton-mile "	32-21
Average number of units in a train—		
36	1st Class No.	2-48
37	2nd " "	6-28
38	3rd or Intermediate class ... .. "	.....
39	4th or Lowest " "	261-44
40	Total passenger units "	273-20
41	Other coaching traffic Tons	2-41
VEHICLES AND VEHICLE MILEAGE—		
Number of coaching vehicles hauled one mile—		
42	1st Class Vehicle miles	943,834
43	2nd " "	974,034
44	3rd or Intermediate class ... .. "	.....
45	4th or Lowest " "	6,720,797
46	Other vehicles "	736,792
47	Brake Vans ... .. "	.....
48	Total "	9,375,457
Average number of vehicles in a coaching train—		
49	1st Class No.	1-43
50	2nd " "	1-47
51	3rd or Intermediate class ... .. "	.....
52	4th or Lowest " "	10-16
53	Other vehicles "	1-11
54	Brake Vans ... .. "	.....
55	Total "	14-17
Average earnings per coaching vehicle per mile—		
56	1st Class Pies	17-27
57	2nd " "	20-98
58	3rd or Intermediate class ... .. "	.....
59	4th or Lowest " "	42-65
60	Other vehicles "	69-78
Carrying capacity hauled one mile (excluding brakes)—		
61	1st Class Seats	9,734,466
62	2nd " "	19,314,731
63	3rd or Intermediate class ... .. "	.....
64	4th or Lowest " "	352,573,011
65	Other vehicles Tons.	2,850,179
Percentage of freight upon capacity hauled—		
66	1st Class Per cent.	16-85
67	2nd " "	21-51
68	3rd or Intermediate class ... .. "	.....
69	4th or Lowest " "	49-61
70	Other vehicles "	56-00

ANALYSIS OF WORKING
For the Half-year ended 31st December, 1893.

Progressive Number.	HEADINGS.	REMARKS.
WEIGHT OF TRAIN AND TON-MILEAGE—		
Gross ton-mileage of all coaching trains—		
71	Freight Ton-miles.	12,586,963
72	Dead weight "	119,838,127
73	Total "	132,425,090
Average weight of a coaching train—		
74	Freight Tons.	19-03
75	Dead weight "	181-18
76	Total "	200-21
COST OF WORKING AND PROFITS—		
77	Average cost of hauling a coaching train one mile Rs.	1-40
78	Average cost of hauling a coaching vehicle with its load one mile Pies.	18-96
Average cost of hauling a coaching unit one mile—		
79	Per passenger unit Pies.	90
80	Other traffic per ton "	9-31
81	Average profit on working a coaching train one mile... .. Rs.	1-55
Average profit on working a coaching vehicle one mile—		
82	1st Class Pies.	Minus 1-69
83	2nd " "	2-02
84	3rd or Intermediate class ... .. "	.....
85	4th or Lowest " "	23-69
86	Other vehicles "	50-82
Average profit on working a coaching unit one mile—		
87	Per passenger unit Pies.	89
88	Other traffic per ton "	22-90
No. VI.		
GOODS TRAFFIC.		
GROSS RECEIPTS AND TRAIN-MILEAGE—		
89	Receipts from goods traffic Rs.	31,45,103
90	Goods train-miles run No.	680,835
91	Average goods receipts per train-mile Rs.	4-62
UNITS AND UNIT MILEAGE—		
92	Tons of goods carried one mile Ton-miles.	73,163,680
93	Average sum received for carrying a ton one mile Pies.	8-25
94	Average number of tons in a train Tons.	107-46

ANALYSIS OF WORKING
For the Half-year ended 31st December, 1893.

Progressive Number.	HEADINGS.	REMARKS.
VEHICLES AND VEHICLE MILEAGE—		
Number of goods vehicles hauled one mile—		
95	Loaded <i>Vehicle miles</i>	11,659,361
96	Empty	3,360,970
97	Brake Vans	2,633,290
98	Total	17,653,621
Average number of vehicles on a goods train—		
99	Freight vehicles <i>No.</i>	22.06
100	Brake Vans	3.87
101	Total	25.93
102	Average earnings per goods vehicle per mile (excluding brakes) <i>Pies.</i>	40.20
103	Carrying capacity hauled one mile (excluding brakes) <i>Tons.</i>	162,189,347
104	Percentage of freight upon capacity hauled. <i>Per cent.</i>	45.11
105	Average load of a goods vehicle (including both loaded and empty) <i>Tons.</i>	4.87
106	Average load of a loaded goods vehicle	6.28
WEIGHT OF TRAIN AND TON-MILEAGE—		
Gross ton-mileage of all goods trains—		
107	Freight <i>Tons.</i>	73,163,686
108	Dead weight	161,252,289
109	Total	234,415,974
Average weight of a goods train—		
110	Freight <i>Tons.</i>	107.46
111	Dead weight	236.85
112	Total	344.31
COST OF WORKING AND PROFIT—		
113	Average cost of hauling a goods train one mile <i>Its.</i>	2.41
114	Average cost of hauling a goods vehicle with its load one mile	20.94
115	Average cost of hauling a goods unit (<i>viz.</i> , one ton) one mile <i>Pies.</i>	4.30
115A	Do. do. do. do. including interest on capital expended on open line, &c.	9.34
116	Average profit on working a goods train one mile <i>Its.</i>	2.21
117	Average profit on working a goods vehicle with its load one mile	19.26
118	Average profit on working a goods unit (<i>viz.</i> , one ton) one mile <i>Pies.</i>	3.95

ANALYSIS OF WORKING
For the Half-year ended 31st December, 1893.

Progressive Number.	HEADINGS.	REMARKS.
No. VII.		
DETAILED PERCENTAGES OF EARNINGS AND EXPENDITURE.		
<i>Percentage to Total Earnings—</i>		
119	Coaching Traffic <i>Per cent.</i>	37.41
120	Goods Traffic	60.27
121	Sundries, including telegraph	2.32
122	Steam-boat Earnings	...
	Total Earnings	100.00
<i>Percentage of Working Expenses upon Total Earnings—</i>		
123	Maintenance <i>Per cent.</i>	11.65
124	Locomotive Expenses	19.13
125	Carriage and Wagon Expenses	4.95
126	Traffic Expenses	8.77
127	General Charges	5.28
128	Miscellaneous Charges	.76
129	Steam-boat Expenses	...
	Total Working Expenses	50.54

ANALYSIS OF WORKING

For the Half-year ended 31st December, 1893.

No. VIII.—WORKING EXPENSES.

TABLE A.
Maintenance of Way, Works and Stations.

REFERENCE TO REVENUE ACCOUNT.		Progressive number in analysis.	DETAILS.	Per mile of line maintained.	Per mile of track, including sidings.	Per total train-mile.	Per 1,000 gross ton-miles.
Table and main head.	Sub-head.			(839.22)	(1,013.89)	(1,342,258)	(366,841,064)
IX (A)	1	1 & 2 3 to 5	General Superintendence—	Rs.	Rs.	As.	Rs.
			Engineers' salaries and allowances ...	76.47	63.30	.77	.18
	6	6	Subordinate Superintendents' salaries and allowances, including overtime ...	47.08	38.97	.47	.11
			Office expenses ...	46.17	38.22	.46	.10
	131	131	Total...	169.72	140.49	1.70	.39
			Maintenance and Renewal of Permanent-way—				
	2	1 2	Wages ...	178.61	147.84	1.79	.41
			Materials ...	128.37	106.25	1.28	.29
	132	132	Total...	306.98	254.09	3.07	.70
			Repairs of Bridges, &c.—				
	3	1 2	Wages and Materials—				
			Bridges and tunnels ...	6.95	5.75	.06	.02
	133	133	Miscellaneous ...	39.58	32.76	.40	.09
			Total...	46.53	38.51	.46	.11
	3(A)	134	Conservancy of Rivers ...				
			Repairs of Stations and Buildings—Wages and Materials—				
	4	1 2	Repairs of all, except staff quarters ...	73.02	60.44	.73	.16
			Repairs of staff quarters ...	19.50	16.14	.20	.05
	135	135	Total...	92.52	76.58	.93	.21
			Maintenance by Contract—				
	5	1 2	Amount paid to contractors ...				
			Materials supplied by the Railway ...				
	6	136	Total...				
			New Minor Works ...	14.99	12.41	.15	.04
	7	1 2 3 4 5	Unclassified Expenditure—				
			Plantations ...	1.80	1.49	.02	
	137	137	Tools and Plant ...	.89	.73	.01	
			Loss by exchange ...	49.78	41.21	.50	.12
	138	138	Loss on stores, &c. ...	41.10	34.02	.41	.09
			Freight on stores ...				
	139	139	Total...	93.57	77.45	.94	.21
			Total, Heads 5, 6 and 7 ...	108.56	89.86	1.09	.25
	140	140	Less Credits ...	.02	.02		
			Net Total, other charges ...	108.54	89.84	1.09	.25
	141	141	Total Maintenance...	724.29	599.51	7.25	1.66

ANALYSIS OF WORKING

For the Half-year ended 31st December, 1893.

No. VIII.—WORKING EXPENSES.

TABLE B.
Locomotive Expenses.

REFERENCE TO REVENUE ACCOUNT.		Progressive number in analysis.	DETAILS.	Per Total train-mile.	Per engine mile.	Per 1,000 gross ton-miles.
Table and main head.	Sub-head.			(1,342,258)	(1,570,409)	(366,841,064)
IX (B) 1	1 & 2 3 to 5	138	General Superintendence—	As.	As.	Rs.
			Salaries of superintendents and assistants, including allowances ...	.17	.15	.04
	6	6	Do. of subordinate do. including do. ...	.40	.34	.09
			Office expenses ...	.24	.21	.06
	139	139	Total...	.81	.70	.19
			Running Expenses—			
	2	1 & 2 3 4	Wages of drivers and firemen, including overtime...	1.94	1.66	.44
			Fuelling, cleaning and looking after engines ...	.31	.26	.07
	140	140	Contingent expenses ...			
			Total...	2.25	1.92	.51
	3	1 to 4	Fuel—(In terms of Kurhurbaree Coal).	lbs.	lbs.	lbs.
			Average quantity consumed ...	47.82	40.87	174.97
	4	141	Average price per ton Rs. 13.37.	As.	As.	Rs.
			Do. cost ...	4.57	3.90	1.04
	5	142	Water—(including wages and stores.) ...	.16	.13	.04
			Oil, Tallow and other Stores ...	.26	.23	.06
	6	1 & 2 3	Maintenance and Renewals of Engines—			
			Wages, including overtime ...	1.76	1.50	.40
	6a	143	Materials ...	1.23	1.05	.28
			Total...	2.99	2.55	.68
	7	144	Maintenance and Renewals of Machinery—			
			Wages, including overtime ...	.05	.04	.02
	8	145a	Materials ...	.01	.01	
			Total...	.06	.05	.02
	9	1 2 3	New Minor Works—			
			Payments to other Lines—			
	146	146	Unclassified Expenditure—			
			Loss by exchange ...	.47	.40	.11
	147	147	Loss on stores, &c. ...	.33	.29	.07
			Freight on stores ...			
	148	148	Total...	.80	.69	.18
			Total, Heads 7, 8 and 9 ...	.80	.69	.18
	149	149	Less Credits ...			
			Net Total, other charges ...	.80	.69	.18
	150	150	Total Locomotive Expenses ...	11.90	10.17	2.72

ANALYSIS OF WORKING
For the Half-year ended 31st December, 1893.
No. VIII—WORKING EXPENSES.

TABLE C.
Carriage and Wagon Expenses.

REFERENCE TO REVENUE ACCOUNT.		Progressive number in analysis.	DETAILS.	Per total train-mile. (1,342,258)	Per 1,000 vehicle miles run by home vehicles. (26,856,469)
Table and main-head.	Sub-head.				
IX (C) 1	1 & 2	146	<i>General Superintendence—</i>	As.	Rs.
	3 to 5		Salaries of superintendents, including allowances ...	·05	·13
	6		Do. of subordinate do. including do. ...	·10	·32
			Office expenses ...	·05	·19
			Total...	·20	·64
			<i>Repairs and Renewals of Vehicles—</i>		
	1 to 3	147	Coaching vehicles ... { Wages, including overtime ...	·54	4·74
			Materials ...	·31	2·79
			Total...	·85	(a) 7·53
	1 to 3	148	Goods vehicles ... { Wages, including overtime ...	·55	2·63
			Materials ...	·79	3·80
			Total...	1·34	(b) 6·43
2a	1 & 2	148a	<i>Repairs and Renewals of Machinery—</i>		
	3		Wages including overtime ...	·03	·10
			Materials ...	·01	·03
			Total...	·04	·13
			<i>Cleaning and oiling—</i>		
	1	149	Labour, including wages of oilers, &c. ...	·22	·69
	2		Stores ...	·16	·51
			Total...	·38	1·20
			<i>New Minor Works ...</i>		
			<i>Unclassified Expenditure—</i>		
5	1		Loss by exchange ...	·26	·81
	2		Loss on stores, &c. ...		
	3		Freight on stores ...	·01	·02
			Total...	·27	·83
			Total, Heads 4 and 5 ...	·27	·83
			Less Credits ...		
			Net Total, other charges ...	·27	·83
150			Total Carriage and Wagon Expenses ...	3·08	9·62

(a.) Per 1,000 Coaching Vehicle Miles.
(b.) Per 1,000 Goods Vehicle Miles.

ANALYSIS OF WORKING
For the Half-year ended 31st December, 1893.
No. VIII—WORKING EXPENSES.

TABLE D.
Traffic Expenses.

REFERENCE TO REVENUE ACCOUNT.		Progressive number in analysis.	DETAILS.	Per total train-mile. (1,342,258)	Per cent. of traffic earnings. Abstracts II and I. (50,97,292)
Table and main-head.	Sub-head.				
IX (D) 1	(a) 1 & 3	152	<i>General Superintendence—</i>	As.	Per cent.
	(a) 2 & 4		Traffic Manager, Assistants, &c., including travelling allowances ...	·52	·86
			Office establishment and contingencies ...	·31	·51
			Total ...	·83	1·37
	(b)	153	Station Staff ...	2·24	3·68
	(c)	154	Train Staff ...	·59	·97
	1 to 3	155	Fuel, Lighting, Water and General Stores ...	·94	1·54
			Clothing ...	·05	·08
			Printing, Stationery and Tickets ...	·46	·76
			Charges for Delivery and Collection of Goods, &c. ...	·01	·02
2		159	Miscellaneous Expenses ...	·03	·04
			<i>Payments to other Lines—</i>		
			Expenses at joint stations ...	·06	·11
			<i>Unclassified Expenditure—</i>		
	1		Loss by exchange ...	·23	·39
	2		Loss on stores, &c. ...	·02	·02
	3		Freight on stores ...		
			Total, Head 8 ...	·25	·41
			Less Credits ...		
			Net Total, other charges ...	·25	·41
161			Total Traffic Expenses ...	5·46	8·98

ANALYSIS OF WORKING
For the Half-year ended 31st December, 1893.
No. VIII.—WORKING EXPENSES.

TABLE E.
General Charges.

REFERENCE TO REVENUE ACCOUNT.		Progressive num- ber in analysis.	DETAILS.	Per	Per cent.
Table and main-head.	Sub- head.			total train- mile.	on total earnings.
				(1,342,258)	(52,18,323)
IX (E) 1	1 to 4	163	Home Expenditure	As.	Per cent.
				58	92
			<i>Indian Management—</i>		
	1	164	Agent's Office, including travelling allowances and contingencies	27	43
	2		Auditor's Office ditto ditto	79	123
	3		Account's Office ditto ditto		
	4		Paymaster's Office ditto ditto		
		165	Total 2 to 4	79	123
	5	166	Store Department, ditto ditto	13	20
	6	167	Medical Department, ditto ditto	19	31
	7		Rents		
	8 to 10		Miscellaneous expenses, including printing, stationery, medicine and contributions to Hospitals	13	21
		168	Total 7 to 10	13	21
3	1 to 3	169	Police	22	35
4		170	Advertising	02	04
			<i>Electric Telegraph—</i>		
	1 to 4		Salaries, &c.	57	91
	5		Maintenance (wages and stores)	06	11
	6		Government Telegraph Department for rent, maintenance and inspection		01
		171	Total	63	103
6			Clearing accounts with other Lines		
			<i>Unclassified Expenditure—</i>		
	1		Loss on stores, &c.		
	2		Expenses connected with Fire-engines	05	08
	3		Loss by exchange	31	50
	4		Freight on stores	01	01
			Total	37	59
			Total, Heads 6 and 7		
			Less Credits	37	59
		172	Net Total, other charges	05	08
		173	Total General Charges	32	51
				328	523

ANALYSIS OF WORKING
For the Half-year ended 31st December, 1893.
No. VIII.—WORKING EXPENSES.

TABLE F.
Steam Boat Service.

NIL.

TABLE G.
Special and Miscellaneous Expenditure.

REFERENCE TO REVENUE ACCOUNT.		Progressive num- ber in analysis.	DETAILS.	Per cent. on total earnings. (52,18,323)
Table and main-head.	Sub- head.			Per cent.
IX (G) 1		174	Luc Charges	02
			<i>Compensation—</i>	
	1		For goods lost or damaged	08
	2		" personal injury	
	3		" other claims	
			Total	08
		175		13
3		176	Rates and Taxes	
			<i>Payments to other Lines—</i>	
	1		Hire of locomotives	
	2		" of vehicles	
	3		Mileage of foreign stock	
	4		Rent of stations, &c., jointly occupied	
			Total	
		177		
6			<i>Contributions to—</i>	
			Railway Provident Institution	40
				17
5 & 7			Miscellaneous	57
			Total, Heads 5 to 7	03
			Less Credits	54
		178	Net Total, other charges	77
		179	Total Special and Miscellaneous Expenses	

MADRAS RAILWAY,
CHIEF AUDITOR'S OFFICE,
15th March, 1894.

FRED. DUNSTERVILLE,
Chief Auditor.

LOUIS S. MOSS,
Agent and Manager.

APPENDICES TO ANALYSIS OF WORKING

For the Half-year ended 31st December, 1893.

APPENDIX I.

Working of Locomotives.

REFERENCE TO REVENUE ACCOUNT.			Passenger.	Goods.	Tank.	Total.
Table and main-head.	Sub- head.					
		Locomotives { 1.—Wheels coupled ... 2.—Weight on driving axle ... 3.—Weight of engine in steam ... 4.—Weight of tender loaded ...	Single driving wheels. Tons. 13.25 32.30 25.15	4 and 6 wheels coupled. Tons. 12.16 32.38 26.09	Single driving wheels 4 wheels coupled. Tons. 14.00 33.45 ...	
XII	5	1.—Number of locomotives erected and made over to Locomotive Department ...	2	148	14	164
	11	2.—Average number of locomotives constantly under repairs and renewals ...	1	38	2	41
		3.—Number of locomotives laid by as spare ...	...	...	...	...
		4.—Ditto lent or hired out to other lines ...	...	...	...	...
		5.—Average number of locomotives 1—(3+4)...	2	148	14	164
		6.—Total mileage of locomotives (5) ...	7,888	1,426,895	135,626	1,570,409
		7.—Average miles run by a locomotive of each class 6+5 ...	3,944	9,641	9,638	9,576
		Per diem...	21.43	52.40	52.65	52.04
		8.—Weight of Coal, &c., used per engine-mile ...	lbs. 40.80	lbs. 41.64	lbs. 32.84	lbs. 40.87
		9.—Weight of wood used per engine-mile ...				
			Passenger trains.	Goods trains.	Mixed trains.	
		10.—Average gross weight of trains hauled. Tons	128.91	267.23	274.58	220.58
		11.—Average speed between stations... Miles per hour.	22.93	14.76	19.57	...
		12.—Average through speed... Miles per hour.	19.65	12.01	12.94	...
		13.—Average consumption of fuel per engine mile, lbs.	...	...	...	40.87

NOTE.—The fuel consumed by the different classes of locomotives on this line is expressed in terms of Kurharbaroo Coal as per Government of India Circular 7 of 19th June, 1891, the ratio of conversion being:—

Patent Fuel	0.40	} to 1.00 of Kurharbaroo Coal.
Singareni coal	1.02	
Borakur	0.92	
Wood	2.60	

APPENDICES.

APPENDICES TO
For the Half-year
APPEN
Working of

DESCRIPTION OF VEHICLES.	Total number on the list at end of the half-year.	AVERAGE WEIGHT IN TONS.		AVERAGE CARRYING CAPACITY.		Average number laid by as spare.	Average number lent or hired out.	Average number working.
		Of each description of vehicles.	Of each group.	Of each description of vehicles.	Of each group.			
Couching Stock.								
Saloon State ... 6 wheeled.	2	10.72	...	4.00	...	...	...	2
Do Ordinary (1st Class Night Carriages)	26	9.55	...	8.00	...	...	...	25
Reserved Carriages ... 6 wheeled.	2	11.30	10.00	3.00	3.00	1	...	2
Do do ... 4 do.	7	9.63		3.00		...	7	
Composites 1st and 2nd Class Carriages								
Ordinary Sleeping ...	37	10.03	10.04	15.00	16.07	...	...	37
Do do do Day ...	4	10.10		26.00		...	4	
Second Class Carriages Ordinary ...	70	10.25	...	22.00	...	1	...	69
Third do do without Brakes								
Ordinary ...	337	8.50	8.52	53.00	52.46	...	...	...
Do do do Ambulance	28	8.50		53.00		...	328	
Do do and Postal Vans Ordinary	7	10.23		30.00		...	29	
Do do Carriages with Brakes						...	7	
Ordinary ...	4	7.15	...	42.00	...	...	...	...
Invalid Carriages ...	2	8.80		10.00		...	4	
Postal Vans ...	9	10.55	...	3.25	...	...	...	2
Carriage Trucks ...	21	5.15	...	6.00	...	...	...	9
Horse Boxes ...	46	8.35	...	3.00	...	3	...	18
Luggage Vans (Baggage Vans) ...	24	6.35	...	6.50	...	2	...	44
						...	...	24
Total...	626	8.70	8.70	Nil.	Nil.	16	...	610
Goods Stock.								
Covered Goods Wagons Ordinary, Iron...	400	7.55	7.25	10.50	10.61	...	...	400
Do do do Wooden...	610	7.05		11.00		...	610	
High Sided Wagon Ordinary, Iron				6.00				
Do do 16 Tons. 6 wheeled.	50	8.00	5.97	18.50	11.33	...	...	50
Do do 10 Tons. 4 do	803	6.15		11.50		...	803	
Do do 8 Tons. 4 do						...		
(In term of 10 ton vehicles)...	371	5.32	...	10.00	...	...	...	371
Low Sided Wagon Ordinary Wooden ...	213	4.95	...	12.00	...	...	...	213
Coal or Coke Wagons ...	60	...	...	6.00	6.42	2	13	198
Fuel Trucks ...	70	5.80		8.00		...	60	
Cattle Wagons ...	50	6.40	...	8.00	...	17	...	53
Platform do ... 8 wheeled.	1	10.27	7.22	5.00	13.33	...	...	50
Do do ... 4 do.	2	5.70		20.00		...	1	
Powder Vans ...	4	8.50	...	10.00	...	...	...	2
Tool or Accident Vans ...	10	7.57	...	9.00	...	...	...	4
Timber Trucks Wooden Double Bolster	50	...	...	6.00	...	...	...	10
Do do do Single do ...	100	5.20	...	9.00	...	...	...	50
Rail do do ... 6 wheeled.	50	7.45	...	18.00	...	...	...	100
Travelling Oil Tanks ... 6 do	4	9.43	...	12.00	...	...	...	50
Do Water Tanks ...	4	5.40	...	4.50	...	...	...	4
Do Cranes ... 6 wheeled.	2	23.58	15.25	10.00	5.33	...	...	4
Do do ... 4 do.	4	11.08		3.00		...	2	
Brake Vans ... 6 do.	17	11.43	...	8.00	...	...	...	4
Do ... 4 do.	153	8.57	8.86	4.50	4.93	2	2	17
								149
Total...	3,028	6.56	6.56	10.09	10.09	21	15	2,992
Grand Total...	3,654	Nil.	Nil.	Nil.	Nil.	37	15	3,602

Column f.—We have no Vehicles laid by as spare, but in this column Average Mileage per annum run on Do.

ANALYSIS OF WORKING
ended 31st December, 1893
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.			
...	...	2,957	328	...	13,140	35,215
...	...	437,863	16,309	...	3,633,376	4,337,343
...	...	...	...	...	...	...
78,055	3,725	44,831	5,610	...	396,663	1,322,210
...	...	...	...	...	...	...
777	75	688,386	19,074	...	11,382,574	7,111,452
66,979	600	482,429	68,714	...	13,611,884	6,341,901
...	...	...	...	...	...	...
8,743	4,203	6,482,444	210,536	...	352,160,098	57,194,130
...	...	...	...	...	...	...
...	...	981	175	...	11,560	10,173
72,306	...	221,176	...	...	953,817	3,096,235
1,411	1,411	31,691	29,003	...	399,096	342,557
4,550	4,550	166,026	96,844	...	815,910	2,270,950
...	...	73,820	31,004	...	681,356	665,632
...	...	...	...	...	...	...
252,821	14,564	8,642,604	477,597	313,254	Nil.	82,727,798
...	...	6,625,301	896,833	...	79,809,842	54,535,471
...	...	...	...	...	...	...
289,925	289,925	4,553,538	1,847,620	...	76,689,656	40,824,729
...	...	31,939	42,360	...	477,000	367,780
...	...	19,743	23,444	...	345,496	250,485
...	...	82,101	73,671	...	779,860	998,221
...	...	3,175	3,211	...	85,565	46,345
...	...	93,904	25,182	...	1,071,774	1,012,231
...	...	1,329	95	...	8,544	10,780
...	...	142,110	137,750	...	2,518,740	1,455,272
...	...	...	...	...	...	...
...	...	18,842	18,759	...	450,972	354,389
...	...	2,316	1,665	...	17,915	21,497
...	...	3,006	245	...	17,328	49,578
...	...	...	2,633,290	...	...	23,330,949
...	...	...	...	...	...	...
289,925	289,925	11,377,307	5,704,335	341,372	Nil.	123,257,727
...	...	...	...	...	...	...
522,746	304,489	20,019,911	6,181,932	654,626	Nil.	205,985,525

has been entered the number of vehicles broken up and awaiting renewal.
Home line by Couching Vehicles 60,910 78.
Goods do. 95,960 87.

APPENDICES TO ANALYSIS OF WORKING

For the Half-year ended 31st December, 1893.

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	928,297	9,672,318	9,102,892	
Second „	974,034	19,314,731	9,907,800	
Third „	6,720,797	352,573,011	57,250,906	
Total passenger vehicles	8,623,128	331,560,060	76,261,598	
Other coaching vehicles	736,792	2,850,179	6,375,374	
Total paying coaching mileage	9,359,920	Nil.	82,636,972	
	...	Nil.	...	
Total coaching mileage	9,359,920	Nil.	82,636,972	
Goods—				
Loaded vehicles	11,659,361	125,952,461	78,473,430	
Empty vehicles	3,360,970	36,236,886	21,396,572	
Total paying goods mileage	15,020,331	162,189,347	99,870,002	
Brake vans	2,633,290	...	23,330,949	
Total goods mileage, including brakes	17,653,621	162,189,347	123,200,951	
Miscellaneous—				
Free mileage for inspections, &c.	15,537	62,148	147,602	
Grand Total	27,029,078	Nil.	205,985,525	

APPENDICES TO ANALYSIS OF WORKING

For the Half-year ended 31st December, 1893.

APPENDIX IV.—Maintenance of Way-Rails.

DETAILS.	IRON.				STEEL.				Total Iron and Steel	
	Double head- ed weighing 65 lbs. per yard.	Double head- ed weighing 75 lbs. per yard.	Double head- ed weighing 84 lbs. per yard.	Others.	Total.	Steel weigh- ing 75 lbs. per yard.	Steel flat foot- ed on Bridges weighing 75 lbs. per yd.			
								Total.		
1 Miles of rail in way, including sidings	...	426-9818	791-8656	99-9848	...	1,318-8322	697-6394	11-3052	708-9436	2,027-7758
2 Rails removed, Miles	...	5-9981	8-5701	1-0749	...	13-6430	6-9536	...	6-9536	* † 22-5966
3 New rails laid	...	3-6555	5-0041	5500	...	9-2426	10-8076	3634	17-1710	* † 26-4136

Increased mileage of sidings--

South-West Line

North-West Line

...

...

...

9576

9509

1-0085

2

Miles ..

2 8170

The difference between Removed and Laid is owing to increased aidings.

* Of these figures 6536 mils were laid with 30 feet steel rails in substitution of 20 feet steel rails utilized for renewals elsewhere.

APPENDIX V.—Maintenance of Way-Sleepers.

DETAILS.	WOOD.											IRON BOWLS.
	TRANSVERSE.											
	TANK.					Jungle.			Total.	Creosoted Pine. 10' x 10' x 5'	Sleepers.	
	16' x 12' x 6'	14' x 12' x 6'	12' x 12' x 6'	10' x 12' x 6'	10' x 10' x 5'	10' x 12' x 6'	10' x 10' x 5'	10' x 10' x 5'				
1	Number of sleepers in way, including sidings, at the commencement of the half-year	2,418	153	3,410	1,584	7,516	3,256	17,822	38,159	145	3,190,966	
2	Average age of sleepers in way at the end of the half-year. Years...	15.6975	20.6278	20.1789	12.7719	12.6599	3.8517	7.0005	10.1410	7.6020	22.8740	
3	Number removed	10	...	143	4	71	283	456	* 967	* 2	* 3,840	
4	Number laid	8	2	115	1	36	596	770	* 1,523	...	* 10,959	
5	Percentage of renewals on total of each class	41.36	...	2.6433	2.525	9.447	8.6916	2.5586	2.5341	1.3793	1.203	
6	Number of sleepers in way, including sidings, at the end of the half-year	2,411	155	5,382	1,581	7,491	3,569	18,136	38,715	143	3,198,084	

* The difference between Removed and Laid is owing to increased sidings

* The difference between Removed and Laid is owing to increased sidings

A 219 R 2/10-4-94

PUBLIC WORKS DEPARTMENT.
RAILWAY BRANCH.

PROCEEDINGS OF THE MADRAS GOVERNMENT.

Read the following

Analysis of working, Madras Railway
for the half year ending 31st Decr. 1893.

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

M. 220 R 2/10 April 1894.
Forwarded

A.B.S.S.

M.L.

M. 219 R 2/10 April 1894

To the R. Hon. the Secy. of State
for India

Sir,
We have the honour
to forward a copy of the
Progs. No 219 R 2/10 April 1894
embodying the analysis of working
of the Madras Railway for
the second half of 1893.