

Public Works (1897) Department.

CONCERNS BOTH BRITISH INDIA
AND INDIAN STATES.

G.O., No. 215-17 R

DATED 31. March 1897

*Prof wanted Report 20m
by Monday evening
5th inst. Contd*

3/4/97

[Despatch Abstract.]

Analysis of Working, Madras Railway: Order
that Copies of the — (including the Kolar Gold
Fields and the Madras Enner Railways) for the
half year ended the 31st December 1896, be for-
warded to the Director General of Railways
and to the Secretary of State.

Analysis of Working, Madras Railway: Forward-
ing Pros: embodying the — (including the Kolar
Gold Fields and the Madras Enner Railways)
for the half year ended the 31st December 1896.

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BACK PAPERS.

FURTHER PAPERS.

RAILWAY.

Government { 1897 } of Madras.
PUBLIC WORKS.

Recd.

Enclosures

Regd.

Spare copies

G.O., Nos. 216, 217 R., 31st March 1897.

MARCH.

Analysis of Working, Madras Railway

Forwarding Proceedings embodying the — (including the Kolar Gold Fields and the Madras-Ennur Railways), for the half-year ended the 31st December 1896.

No. 216 R., 31st MARCH 1897.

GOVERNMENT OF MADRAS.
PUBLIC WORKS DEPARTMENT.

Railway.

Read the following paper :—

From the Agent and Manager, Madras Railway, dated 26th March 1897, No. 44/289. R.

ORDER—No. 216 R., dated 31st March 1897.

Ordered that nine copies of the Analysis of Working, Madras Railway (including the Kolar Gold Fields and the Madras-Ennur Railways), for the half-year ended the 31st December 1896, be forwarded to the Director-General of Railways and to the Secretary of State for India.

[Here enter No. 217 R., dated 31st March 1897.]

(True Extract.)

(Signed) F. D. FOWLER,
Offg. Joint Secy. to Govt.,
Railway Branch.

To the Agent and Manager, Madras Railway.
„ Examiner, Railway Accounts, Madras.

ENDORSEMENT—No. 217 R., dated 31st March 1897.

Forwarded.

(By order.)

Offg. Joint Secretary to Government,
Railway Branch.

To the Director-General of Railways.

Ed. T. K. Narayana Aiyangar.

Madras Railway Company.

INCLUDING THE KOLAR GOLD FIELDS AND MADRAS-ENNORE
SECTION OF THE BEZWADA-MADRAS RAILWAYS.

ANALYSIS OF WORKING

FOR THE

Half-Year ending 31st December 1896.

Printed by H. Plumbe, at the Lawrence Asylum Press, Mount Road, Madras—1897.

TABLE OF CONTENTS.

No.	Description	Page.
I.	DESCRIPTION OF RAILWAY WORKED ...	1
„	II.—FINANCIAL RESULTS ...	1
„	III.—OUTLAY, EARNINGS AND EXPENSES ...	1
„	IV.—DIVISION OF EXPENDITURE BETWEEN COACHING AND GOODS TRAFFIC ...	1
„	V.—COACHING TRAFFIC ...	2
„	VI.—GOODS TRAFFIC ...	3
	VII.—DETAILED PERCENTAGES OF EARNINGS AND EXPENDITURE ...	5
	VIII.—WORKING EXPENSES ...	6—11
	MAINTENANCE OF WAY, WORKS AND STATIONS. TABLE A ...	6
	LOCOMOTIVE EXPENSES ... „ B ...	7
	CARRIAGE AND WAGON EXPENSES ... „ C ...	8
	TRAFFIC EXPENSES ... „ D ...	9
	GENERAL CHARGES ... „ E ...	10
	STEAM-BOAT SERVICE ... „ F ...	11
	SPECIAL AND MISCELLANEOUS EXPENDITURE ... „ G ...	11
	APPENDICES TO THE ANALYSIS OF WORKING ...	12—18
No.	I.—WORKING OF LOCOMOTIVES ...	13
„	II.— Do. OF VEHICLES ...	14
„	III.—DISTRIBUTION OF MILEAGE... ...	16
„	IV.—MAINTENANCE OF WAY-RAILS ...	17
„	V.— Do. WAY-SLEEPERS ...	18

MADRAS RAILWAY COMPANY.

INCLUDING THE KOLAR GOLD FIELDS AND MADRAS-ENNORE SECTION
OF THE BEZWADA-MADRAS RAILWAYS.

Analysis of Working for the Half-year ended 31st December 1896.

Progressive Number.	HEADINGS.		REMARKS.
No. I.			
DESCRIPTION OF RAILWAY WORKED.			
		Ft. In.	
1	Gauge of Railway	5 6	
2	Mean mileage worked Miles	857·676	
3	Number of Stations No.	160	
4	Total length of the following gradients:—		
	(a) $\frac{1}{80}$ and less Miles	Nil.	
	(b) $\frac{1}{81}$ to $\frac{1}{80}$	22·64	
	(c) $\frac{1}{81}$ to $\frac{1}{100}$	50·13	
	(d) $\frac{1}{101}$ to $\frac{1}{200}$	197·69	
	(e) $\frac{1}{201}$ to $\frac{1}{300}$	124·10	
5	Steepest gradient worked—		
	(a) Length Miles	0·80	
	(b) Inclination	1 in 60	
No. II.			
FINANCIAL RESULTS.			
6	Percentage of net earnings (including Steam-boat traffic) on Capital outlay Per cent.	a. 2·21	
7	Percentage of net earnings on paid up capital	b. 2·22	Excluding £12,038-13-4. Capital not bearing interest.
No. III.			
OUTLAY, EARNINGS AND EXPENSES.			
(Exclusive of Steam-boat Service.)			
8	Capital outlay per mile open Rs. c.	1,39,837	
9	Total earnings per mile open per week	248·15	
10	Total working expenses per mile per week	127·00	
11	Total earnings per train-mile	4·340	
12	Total working expenses per train-mile	2·221	
13	Net earnings per train-mile	2·119	
14	Cost per 1,000 gross ton-miles moved (freight and dead weight)	7·41	
15	Percentage of total working expenses upon total earnings Percent.	51·18	
16	Percentage of total working expenses upon total earnings, excluding from both sides of the account the charges for carriage of revenue stores	50·58	
(Inclusive of Steam-boat Service.)			
17	Percentage of total working expenses on total earnings (for details, see Table No. VII)	51·18	
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.	27,51,019	
	Proportions, dividing expenditure in ratio of gross ton-mileage (freight and dead load)		
19	Coaching	10,02,498	
20	Goods	17,48,521	

	a.	b.	c.
Madras Railway	2·20	2·21	1,41,355
K. G. F. Railway	4·55	4·66	72,821
Madras-Ennore Section	1·16	1·16	68,459

ANALYSIS OF WORKING

For the Half-year ended 31st December 1896.

Progressive Number.	HEADINGS.		REMARKS.
No. V.			
COACHING TRAFFIC.			
GROSS RECEIPTS AND TRAIN-MILEAGE—			
21	Receipts from coaching traffic	Rs.	22,81,799
22	Coaching train-miles run	No.	656,682
23	Average coaching receipts per train-mile	Rs.	3.47
UNITS AND UNIT MILEAGE—			
Number of units carried one mile—			
24	1st Class	Unit miles.	1,918,867
25	2nd "	"	4,662,884
26	3rd or Intermediate class	"	.....
27	4th or Lowest	"	.....
28	Total passenger unit mileage	"	162,690,939
29	Other coaching traffic	"	169,272,690
	Average sum received for carrying a unit one mile—	Ton-miles.	1,563,503
30	1st Class	Pies.	9.83
31	2nd "	"	4.98
32	3rd or Intermediate class	"	.....
33	4th or Lowest	"	.....
34	Average for all classes...	"	2.10
35	Other coaching traffic per ton-mile	"	2.26
	Average number of units in a train—	"	35.22
36	1st Class	No.	2.92
37	2nd "	"	7.10
38	3rd or Intermediate class	"	.....
39	4th or Lowest	"	.....
40	Total passenger units	"	247.75
41	Other coaching traffic	"	257.77
		Tons.	2.38
VEHICLES AND VEHICLE MILEAGE—			
Number of coaching vehicles hauled one mile—			
42	1st Class	Vehicle miles	916,883
43	2nd "	"	1,027,859
44	3rd or Intermediate class	"	.....
45	4th or Lowest	"	.....
46	Other vehicles	"	6,650,366
47	Brake Vans	"	788,901
48	Total	"	9,384,009
Average number of vehicles in a coaching train—			
49	1st Class	No.	1.40
50	2nd "	"	1.56
51	3rd or Intermediate class	"	.....
52	4th or Lowest	"	.....
53	Other vehicles	"	10.13
54	Brake Vans	"	1.20
55	Total	"	.....
	Average earnings per coaching vehicle per mile—	"	14.29
56	1st Class	Pies.	20.57
57	2nd "	"	22.58
58	3rd or Intermediate class	"	.....
59	4th or Lowest	"	.....
60	Other vehicles	"	51.27
		"	69.80
Carrying capacity hauled one mile (excluding brakes)—			
61	1st Class	Seats	9,546,177
62	2nd "	"	20,555,442
63	3rd or Intermediate class	"	.....
64	4th or Lowest	"	338,749,413
65	Other vehicles	Tons	3,115,906
Percentage of freight upon capacity hauled—			
66	1st Class	Per cent.	20.10
67	2nd "	"	22.68
68	3rd or Intermediate class	"	.....
69	4th or Lowest	"	48.03
70	Other vehicles	"	50.18

ANALYSIS OF WORKING

For the Half-year ended 31st December 1896.

Progressive Number.	HEADINGS.		REMARKS.
WEIGHT OF TRAIN AND TON-MILEAGE—			
Gross ton mileage of all coaching trains—			
71	Freight	Ton-miles.	11,889,876
72	Dead weight	"	123,298,073
73	Total	"	135,187,949
Average weight of a coaching train—			
74	Freight	Tons.	18.11
75	Dead weight	"	187.76
76	Total	"	205.87
COST OF WORKING AND PROFITS—			
77	Average cost of hauling a coaching train one mile...	Rs.	1.53
78	Average cost of hauling a coaching vehicle with its load one mile	Pies.	20.51
Average cost of hauling a coaching unit one mile—			
79	Per passenger unit	Pies.	1.04
80	Other traffic per ton	"	10.67
81	Average profit on working a coaching train one mile	Rs.	1.94
Average profit on working a coaching vehicle one mile—			
82	1st Class	Pies.	.06
83	2nd "	"	2.07
84	3rd or Intermediate class	"	.....
85	4th or Lowest	"	30.76
86	Other vehicles	"	49.29
Average profit on working a coaching unit one mile—			
87	Per passenger unit	Pies.	1.22
88	Other traffic per ton	"	24.55
No. VI.			
GOODS TRAFFIC.			
GROSS RECEIPTS AND TRAIN-MILEAGE—			
89	Receipts from goods traffic	Rs.	31,37,091
90	Goods train-miles run	No.	618,382
91	Average goods receipts per train-mile	Rs.	5.07
UNITS AND UNIT MILEAGE—			
92	Tons of goods carried one mile	Ton-miles.	71,464,578
93	Average sum received for carrying a ton one mile	Pies.	8.43
94	Average number of tons in a train	Tons.	115.57

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	Vehicle Miles	11,514,506
96	Empty	"	3,463,302
97	Brake Vans	"	2,687,665
98	Total	"	17,665,473
Average number of vehicles on a goods train—			
99	Freight vehicles	No.	24.22
100	Brake Vans	"	4.35
101	Total	"	28.57
102	Average earnings per goods vehicle per mile (excluding brakes)	Pies.	40.21
103	Carrying capacity hauled one mile (excluding brakes)	Tons.	177,098,659
104	Percentage of freight upon capacity hauled	Per cent.	40.35
105	Average load of a goods vehicle (including both loaded and empty)	Tons.	4.77
106	Average load of a loaded goods vehicle	"	6.21
WEIGHT OF TRAIN AND TON-MILEAGE—			
Gross ton-mileage of all Goods trains—			
107	Freight	Tons.	71,461,578
108	Dead weight	"	164,325,522
109	Total	"	235,790,100
Average weight of a goods train—			
110	Freight	Tons.	115.57
111	Dead weight	"	265.73
112	Total	"	381.30
COST OF WORKING AND PROFIT—			
113	Average cost of hauling a goods train one mile	Rs.	2.83
114	Average cost of hauling a goods vehicle with its load one mile	Pies.	22.41
115	Average cost of hauling a goods unit (viz., one ton) one mile	"	4.70
115A	Do. do. do. do. including interest on capital expended on open line, &c....	"	9.92
116	Average profit on working a goods train one mile	Rs.	2.24
117	Average profit on working a goods vehicle with its load one mile	Pies.	17.80
118	Average profit on working a goods unit (viz., one ton) one mile	"	3.73

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

Progressive Number.	HEADINGS.		REMARKS.
No. VII.			
DETAILED PERCENTAGES OF EARNINGS AND EXPENDITURE.			
Percentage to Total Earnings—			
119	Coaching Traffic	Per cent.	41.24
120	Goods Traffic	"	56.69
121	Sundries, including telegraph	"	2.07
122	Steam-boat Earnings ... ..	"	.....
	Total Earnings	"	100.00
Percentage of Working Expenses upon Total Earnings—			
123	Maintenance	Per cent.	12.14
124	Locomotive Expenses	"	19.44
125	Carriage and Wagon Expenses	"	5.65
126	Traffic Expenses	"	7.70
127	General Charges	"	5.31
128	Miscellaneous Charges	"	.94
129	Steam-boat Expenses ... ..	"	.....
130	Total, Working Expenses	"	51.18

ANALYSIS OF WORKING
For the Half-year ended 31st December 1896.
No. VIII.—WORKING EXPENSES.

TABLE A.
Maintenance of Way, Works and Stations.

REFERENCE TO REVENUE ACCOUNT.		Progressive num- ber 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.			(857·68)	(1,046·60)	(1,275,064)	370,978,049
IX(A)	1 & 2 3 to 5 6	131	<i>General Superintendence—</i>	Rs.	Rs.	As.	Rs.
			Engineers' salaries and allowances ...	68·33	56·00	·74	·16
			Subordinate Superintendents' salaries and allowances, including overtime ...	43·34	35·51	·46	·10
			Office expenses ...	39·07	32·02	·42	·09
	2 { 1 2	132	Total... <i>Maintenance and Renewal of Permanent- way—</i>	150·74	123·53	1·62	·35
			Wages ...	178·07	145·93	1·92	·41
			Materials ...	136·09	111·52	1·46	·32
			Total... <i>Repairs of Bridges, &c.—Wages and Materials—</i>	314·16	257·45	3·38	·73
	3 { 1 2	133	Bridges and tunnels ...	31·77	26·04	·34	·07
			Miscellaneous ...	37·42	30·66	·41	·09
			Total... <i>Conservancy of Rivers</i>	69·19	56·70	·75	·16
			<i>Repairs of Stations and Buildings—Wages and Materials—</i>				
3(A)	4 { 1 2	135	Repairs of all, except staff quarters ...	84·76	69·46	·91	·19
			Repairs of staff quarters ...	21·42	17·56	·23	·05
			Total... <i>Maintenance by Contract—</i>	106·18	87·02	1·14	·24
			Amount paid to contractors ...				
	5 { 1 2		Materials supplied by the Railway ...				
			Total...				
			<i>New Minor Works</i> ...	10·26	8·41	·11	·02
			<i>Unclassified Expenditure—</i>				
	7 { 1 2 3 4 5 6		Plantations ...	1·41	1·15	·02	...
			Tools and Plant ...	4·37	3·59	·05	·01
			Loss by exchange ...	88·54	72·56	·95	·21
			Loss on stores, &c. ...	·16	·13	...	...
6	5		Freight on stores ...	36·58	29·97	·39	·09
			Arcot-Ranipet Survey ...	1·90	1·56	·02	...
			Total...	132·96	108·96	1·43	·31
			<i>Total, Heads 5, 6 and 7 Less Credits...</i>	143·22	117·37	1·54	·33
	136		<i>Net Total, other charges</i> ...	143·22	117·37	1·54	·33
			<i>Total Maintenance</i> ...	783·49	642·07	8·43	1·81

ANALYSIS OF WORKING
For the Half-year ended 31st December 1896.
No. VIII.—WORKING EXPENSES.

TABLE B.
Locomotive Expenses.

REFERENCE TO REVENUE ACCOUNT.		Progressive num- ber in analysis.	DETAILS.	Per Total train-mile.	Per engine mile.	Per 1,000 gross ton- miles.
Table and main-head.	Sub- head.			(1,275,064)	(1,519,722)	370,978,049
IX (B) 1	1 & 2 3 to 5 6	138	<i>General Superintendence—</i>	As.	As.	Rs.
			Salaries of Superintendents and assistants, includ- ing allowances ...	·20	·17	·04
			Do. of subordinate do. including do. ...	·43	·35	·09
			Office expenses... ..	·25	·21	·06
	2 { 1 & 2 3 4	139	Total... <i>Running Expenses—</i>	·88	·73	·19
			Wages of drivers and firemen, including overtime...	1·82	1·53	·40
			Fuelling, cleaning and looking after engines ...	·37	·31	·07
			Contingent expenses	...	...	...
	3 1 to 4	140	Total... <i>Fuel—[In terms of Giridih (Kurhurbaree) Coal].</i>	lbs.	lbs.	lbs.
			Average quantity consumed	52·35	43·92	173·93
			Average price per ton Rs. 14·79	As.	As.	Rs.
			Do. cost	5·53	4·64	1·19
4	5	141	<i>Water—(including wages and stores)</i> ...	·21	·17	·04
			<i>Oil, Tallow and other Stores</i>	·30	·26	·06
			<i>Maintenance and Renewals of Engines—</i>			
			Wages, including overtime	1·70	1·42	·37
	6 { 1 & 2 3	143	Materials	1·54	1·30	·33
			Total... <i>Maintenance and Renewals of Machinery—</i>	3·24	2·72	·70
			Wages, including overtime	·09	·07	·02
			Materials	·02	·02	...
	6a { 1 & 2 3	143a	Total... <i>New Minor Works—</i>	·11	·09	·02
			<i>Payments to other Lines—</i>			
			<i>Unclassified Expenditure—</i>			
			Loss by exchange	·65	·55	·14
9	1 2 3		Loss on stores, &c.	·39	·33	·09
			Freight on stores	...	...	...
			Total... <i>Total, Heads 7, 8 and 9...</i>	1·04	·88	·23
			<i>Less Credits</i>	...	...	...
	144		<i>Net Total, other charges</i>	1·04	·88	·23
			<i>Total Locomotive Expenses</i>	13·50	11·33	2·90

ANALYSIS OF WORKING
For the Half-year ended 31st December 1896.
No. VIII.—WORKING EXPENSES.

TABLE C.
Carriage and Wagon Expenses.

REFERENCE TO REVENUE ACCOUNT.		Progressive num- ber in analysis.	DETAILS.	Per total train-mile. (1,275,064)	Per 1,000 vehicle miles run by home vehicles. (27,888,666)
Table and main-head.	Sub- head.				
IX (C) 1	1 & 2 3 to 5 6	146	General Superintendence—		
			Salaries of Superintendents, including allowances ...	As. .06	Rs. .16
			Do. of subordinate do. including do. ...	.12	.35
	146		Office expenses ...	.07	.20
			Total...	.25	.71
	2	147	Repairs and Renewals of Vehicles—		
			Coaching vehicles ... { Wages, including overtime Materials ...	.50 .30	4.11 2.47
			Total...	.80	(a) 6.58
	1 to 3	148	Goods vehicles ... { Wages, including overtime Materials ...	.74 1.30	3.28 5.69
			Total...	2.04	(b) 8.97
2a	1 & 2 3	148a	Repairs and Renewals of Machinery—		
			Wages, including overtime ...	.06	.17
			Materials ...	.02	.06
	148a		Total...	.08	.23
			Cleaning and Oiling—		
	3	149	Labour, including wages of oilers, &c. ...	.25	.72
			Stores ...	.15	.42
	4		Total...	.40	1.14
			New Minor Works—		
	5		Unclassified Expenditure—		
			Loss by exchange ...	.33	.93
			Loss on stores, &c. ...		
3	1 2 3		Freight on stores ...	.02	.08
			Total...	.35	1.01
			Total, Heads 4 and 5 ...	.35	1.01
	150		Less Credits ...		.02
			Net Total, other charges ...	.35	.99
	151		Total Carriage and Wagon Expenses ...	3.92	11.21

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

ANALYSIS OF WORKING
For the Half-year ended 31st December 1896.
No. VIII.—WORKING EXPENSES.

TABLE D.
Traffic Expenses.

REFERENCE TO REVENUE ACCOUNT.		Progressive num- ber in analysis.	DETAILS.	Per total train- mile. (1,275,064)	Per cent. of traffic earnings. Abstracts H. and I. (54,18,890)
Table and main-head.	Sub- head.				
IX (D) 1	(a) 1 & 3	152	General Superintendence—		
			Traffic Manager, Assistants, &c., including travelling allowances ...	.61	.89
			Office establishment and contingencies ...	.30	.45
	(a) 2 & 4		Total ...	.91	1.34
			(b) 153 Station Staff ...	2.41	3.54
	(c)	154	Train Staff ...	.66	.97
			2 1 to 3 155 Fuel, Lighting, Water and General Stores ...	.58	.86
	3	156	Clothing ...	.07	.11
	4	157	Printing, Stationery and Tickets ...	.44	.64
	5	158	Charges for Delivery and Collection of Goods, &c. ...	.01	.02
6	...	159	Miscellaneous Expenses ...	.02	.03
			Payments to other Lines—		
			Expenses at joint stations ...	.14	.20
	7	160	Unclassified Expenditure—		
			Loss by exchange ...	.08	.12
	8	2	Loss on stores, &c. ...		
			Freight on stores ...	.02	.03
			Total, Head 8 ...	.10	.15
			Less Credits ...		
	161		Net Total, other charges ...	.10	.15
			162 Total, Traffic Expenses ...	5.34	7.86

ANALYSIS OF WORKING
For the Half-year ended 31st December 1896.
No. VIII.—WORKING EXPENSES.

TABLE E.
General Charges.

REFERENCE TO REVENUE ACCOUNT.		Progressive num- ber in analysis.	DETAILS.					Per total train- mile. (1,275,064)	Per cent. on total earnings. (55,33,614)	
Table and main-head.	Sub- head.									
IX (E) 1	1 to 4	163	Home Expenditure					As. ·46	Per cent. ·66	
			Indian Management—							
	{	1 164	Agent's Office, including travelling allowances and contingencies					·40	·58	
		2	Auditor's Office	ditto	ditto	...	...	} ·93	1·34	
		3	Account's Office	ditto	ditto	...	...			
		4	Cash Office	ditto	ditto	...	...			
		165	Total 2 to 4 ...					·93	1·34	
2	{	5 166	Store Department,		ditto	ditto	...	...	·14	·20
		6 167	Medical Department,		ditto	ditto	...	...	·19	·27
		7	Rents					...	...	
		8 to 10	Miscellaneous expenses, including printing, stationery, medicine and contributions to Hospitals					·10	·15	
		168	Total 7 to 10 ...					·10	·15	
3	1 to 3	169	Police					·25	·36	
4	...	170	Advertising					·04	·05	
			Electric Telegraph—							
	{	1 to 4	Salaries, &c.					·61	·87	
		5	Maintenance (wages and stores)					·27	·39	
		6	Government Telegraph Department for rent, maintenance and inspection					·01	·02	
		171	Total ...					·89	1·28	
6	...		Clearing accounts with other Lines					...	...	
			Unclassified Expenditure—							
	{	1	Loss on stores, &c.		...	...	...	...	·04	·06
		2	Expenses connected with fire-engines		...	...	...	...	·26	·38
		3	Loss by exchange		...	...	...	...	·02	·03
		4	Freight on stores		...	...	...	...	...	...
			Total ...					·32	·47	
			Total, Heads 6 and 7					·32	·47	
			Less Credits					·04	·06	
			Total, Heads 6 and 7					·28	·41	
		172	Net Total, other charges					3·68	5·30	
		173	Total, General Charges							

ANALYSIS OF WORKING
For the Half-year ended 31st December 1896.
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. (55,33,614)
Table and main-head.	Sub- head.						
IX (G) 1	...	174	Law Charges				Per cent. ...
			Compensation—				
	1		For goods lost or damaged				·03
	2		" personal injury				...
	3		" other claims				...
		175	Total				·03
3	...	176	Rates and Taxes				·28
			Payments to other Lines—				
	1		Hire of locomotives				...
	2		" of vehicles				...
	3		Mileage of foreign stock				...
	4		Rent of stations, &c., jointly occupied				...
		177	Total				...
6	...		Contributions to—				
			Railway Provident Institution				·38
5 & 7	...		Miscellaneous				·15
			Total, Heads 5 to 7				·53
			Less Credits				·01
		178	Net Total, other charges				·52
		179	Total, Special and Miscellaneous Expenses				·83

MADRAS RAILWAY,
CHIEF AUDITOR'S OFFICE,
18th March 1897.

F. DUNSTERVILLE,
Chief Auditor.

HENRY C. WEST,
Ag. Agent and Manager.

APPENDICES.

APPENDICES TO ANALYSIS OF WORKING

For the Half-year ended 31st December 1893.

APPENDIX I.

Working of Locomotives.

REFERENCE TO REVENUE ACCOUNT.			Passenger and Mail.	Mixed.	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	4 coupled. Tons. 13·15 37·40 30·13	4 coupled. Tons. 11·95 30·62 27·75	6 coupled. Tons. 13·55 38·32 30·12	4 coupled. Tons. 14·27 42·10 ...	
XII	5	1.—Number of locomotives erected and made over to Locomotive Department	41	40	69	16	166
	11	2.—Average number of locomotives constantly under repairs and renewals	10	8	14	3	35
		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)	41	40	69	16	166
		6.—Total mileage of locomotives (5)	366,375	395,311	650,000	108,036	* 1,519,722
		7.—Average miles run by a locomotive of each class 6÷5	8,936	9,883	9,420	6,752	9,155
		Per diem... ..	48·57	53·71	51·20	36·70	49·76
		8.—Weight of Coal, &c., used per engine-mile { To be separated if possible, 9.—Weight of wood used per engine-mile { among the classes of locomotives.	46·63	36·17	48·57	35·16	43·92
			Passenger trains.	Goods trains.	Mixed trains.		
		10.—Average gross weight of trains hauled...Tons.	141·12	319·26	288·07	...	231·75
		11.—Average speed between stations... Miles per hour	23·38	15·39	19·95	...	...
		12.—Average through speed... Miles per hour.	19·72	12·19	13·31	...	...
		13.—Average consumption of fuel per engine mile. lbs.	...	...	...	...	43·92

* { Inclusive of 17,305 Engine miles run over the Kolar Gold Fields Railway.
Do. 15,230 do. Madras-Ennore line.

The total quantities of each description of fuel consumed were as follows :—

Description of Fuel.	Actual quantity consumed in lbs.	Rate of conver- sion.	Quantity consum- ed in terms of Giridih (Kurhurbaree) Coal in lbs.
Kurhurbaree Coal	...	1·00	...
Patent Fuel	55,888	0·80	69,860
Singareni Coal	35,402,752	1·20	29,502,293
Borakur Coal	1,590,736	1·15	1,383,249
Wood	93,062,180	2·60	35,793,146
Total ... ..	...	.....	66,748,548

APPENDIX 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.			
Coaching Stock.								
Saloon State... 6-wheeled.	2	10-72	...	4-00	...	f.	...	2
Do. Ordinary (1st Class Night Carriages)	26	9-55	...	8-00	...	...	...	26
Reserved Carriages ... 6-wheeled.	2	11-30	} 10-00	3-00	} 3-00	...	...	2
Do. do. ... 4 do.	7	9-63		3-00		...	...	7
Composites 1st and 2nd Class Carriages								
Ordinary Sleeping ...	39	10-03	} 10-04	14-00	} 15-36	...	...	39
Do. do. do. Day...	5	10-10		26-00		...	...	5
Second Class Carriages Ordinary ...	70	10-25	...	22-50	...	1	...	69
Third do. do. without Brakes								
Ordinary ...	351	8-50	} 8-52	51-72	} 51-03	4	...	347
Do. do. do. Ambulance	28	8-50		55-00		...	...	28
Do. do. and Postal Vans Ordinary	7	10-23		30-00		...	...	7
Do. do. Carriages with Brakes		7-15		3-50		...	...	6
Ordinary ...	6	8-80	} 42-50	3-25	}	...	...	9
Postal Vans ...	9	10-55		6-00		2	...	19
Carriage Trucks ...	21	5-15	...	3-00	...	...	...	46
Horse Boxes ...	46	8-35	...	6-00	...	...	...	24
Luggage Vans (Baggage Vans) ...	24	6-35	...	...	...	...	...	...
Total ...	643	8-71	8-71	...	...	7	...	636
Goods Stock.								
Covered Goods Wagons Ordinary, Iron	396	7-55	} 7-19	11-75	} 11-78	19	...	396
Do. do. do. do. Wooden	976	7-05		12-00		6-00	...	...	957
High Sided Wagon Ordinary, Iron								
16 Tons, 6-wheeled.	50	8-00	} 6-22	18-50	} 12-27	2	...	50
Do. do. Wooden 10 Tons, 4 do.	800	6-15		12-00		...	...	798
Do. do. 8 Tons, 4 do.								
(In term of 10 ton vehicles) ...	422½	5-32	}	10-00	}	21	...	422½
Low Sided Wagon Ordinary, Wooden.	213	4-95		12-00		6-00	6-42	...	192
Coal or Coke Wagons ...	60	5-80	...	7-00	...	27	...	103
Fuel Trucks ...	70	5-80	...	7-00	...	2	...	48
Cattle Wagons ...	50	6-40	...	6-33	...	...	...	...
Platform do. ... 8-wheeled.	1	10-27	} 7-22	20-00	} 14-67	...	...	1
Do. do. ... 4 do.	2	5-70		12-00		...	...	2
Powder Vans ...	4	8-50	...	7-50	...	...	...	4
Tool or Accident Vans ...	10	7-57	...	6-50	...	2	...	8
Timber Trucks Wooden, Double Bolster	60	5-20	...	12-00	} 10-69	2	...	58
Do. do. do. Single do.	115	5-20	...	10-00		1	...	114
Rail do. do. ... 6-wheeled.	50	7-45	...	18-00	...	...	...	50
Travelling Oil Tanks ... 6 do.	11	9-43	...	12-00	...	...	...	11
Do. Water Tanks ...	4	5-40	...	11-50	} 7-19	...	...	4
Do. Cranes ... 6-wheeled.	3	23-58	} 17-80	5-75		...	...	3
Do. do. ... 4 do.	4	33-10		10-00	...	...	...	4
Do. do. ... 6 do.	20	11-08	} 8-90	3-00	} 5-08	1	...	19
Do. do. ... 4 do.	155	11-43		8-00		...	...	...
Truck for carrying gas-holders ...	2	8-57	...	4-70	...	...	...	2
Support Wagon for 15 Tons, Crane ...	1	10-86	...	...	...	...	...	1
Total ...	3,099½	6-71	6-71	10-88	10-88	77	...	3,022½
Grand Total ...	3,742½	Nil.	Nil.	Nil.	Nil.	84	...	3,658½

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

Do. do.
* Includes Madras Railway Vehicles
Do. do.
Do. do.

ANALYSIS OF WORKING.
ended 31st December 1896.
DIX II.
Vehicles.

MILEAGE OF				Home vehicles on foreign lines.	Carrying capacity hauled on Home Line.	Ton-mileage of vehicle dead weight hauled on Home Line.
Foreign vehicles on Home Line.		Home vehicles on Home Line.				
Loaded.	Empty.	Loaded.	Empty.			
		*	*		14,640	39,235
		2,531	1,129	.....	3,744,872	4,470,441
.....	.....	449,616	18,493	.....		
.....	.....	39,079	2,530	.....	341,343	1,137,810
} 72,022	150					
		695,136	18,954	.....	11,063,485	7,231,601
} 5,814	375	541,276	55,268	.....	15,023,700	6,844,130
70,201	975					
		6,432,482	166,189	.....	338,564,097	56,526,869
} 32,563	3,375					
		217,590	.....	.....	914,940	2,970,036
63,579	351	46,946	36,327	.....	527,142	452,464
2,292	2,292	166,811	105,407	.....	859,446	2,392,125
7,132	7,132	104,167	26,085	.....	781,512	827,100
.....						
253,603	14,650	8,695,634	430,382	596,494	Nil.	82,891,811
		8,012,758	1,327,546	.....	110,028,781	67,156,786
}						
		2,511,158	1,262,074	.....	56,538,850	29,091,502
} 435,764	421,248					
		33,607	44,575	.....	501,928	387,001
.....						
		12,995	14,329	.....	191,268	158,479
.....	.....	54,309	67,785	.....	772,855	781,402
		3,268	2,614	.....	86,289	42,468
} .....	.....	108,789	24,019	.....	996,060	1,128,868
		4,295	626	.....	31,987	37,252
.....	.....	195,569	178,742	.....	4,001,385	1,946,417
} .....	.....	91,269	58,844	.....	2,702,034	1,118,342
		55,979	54,595	.....	1,326,888	1,042,713
.....	.....	8,383	6,123	.....	104,298	78,332
		4,910	182	.....	34,218	90,638
}						
			2,687,665	.....	13,653,338	23,920,219
.....						
.....						
.....						
435,764	421,248	11,097,289	5,729,719	1,339,148	Nil.	126,980,419
689,367	435,898	19,792,923	6,160,101	1,935,642	Nil.	209,872,230

has been entered the number of vehicles broken up and awaiting renewals.
home line by Coaching Vehicles 51,055-81.
Goods do. 96,108-80.

on K. G. F. Ry. Coaching 102,676.
do. Goods 151,243.
M. E. Railway Coaching 129,972.
do. Goods 129,484.

APPENDICES TO ANALYSIS OF WORKING.

For the Half-year ended 31st December 1896.

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.	
<i>Coaching—</i>				
First Class	916,883	9,546,177	8,975,217	
Second	1,027,859	20,555,442	10,459,930	
Third	6,650,366	338,749,413	56,640,110	
Total passenger vehicles	8,595,108	368,851,032	76,075,257	
Other coaching vehicles	788,901	3,115,906	6,661,785	
Total paying coaching mileage	9,384,009	Nil.	82,737,042	
Total coaching mileage	9,384,009	Nil.	82,737,042	
<i>Goods—</i>				
Loaded vehicles	11,514,506	136,232,164	79,884,024	
Empty vehicles	3,463,302	40,866,495	23,042,875	
Total paying goods mileage	14,977,808	177,098,659	102,926,899	
Brake vans	2,687,665	...	23,920,219	
Total goods mileage, including brakes	17,665,473	177,098,659	126,847,118	
<i>Miscellaneous—</i>				
Free mileage for inspections, &c.	28,807	86,421	288,070	
Grand Total	27,078,289	Nil.	209,872,230	

APPENDICES TO ANALYSIS OF WORKING

For the Half-year ended 31st December 1896.

APPENDIX IV.—Maintenance of Way-Rails.

DETAILS.	Iron double headed weighing.				Steel.		Grand Total Iron and Steel.	Steel flat footed on Ennur line of B. M. Railway 75 lbs. per yard.	30 feet Double headed steel rails 75 lbs. per yard on Ennur line.	Total Steel Rails on Ennur line.	REMARKS.
	65 lbs. per yard.	75 lbs. per yard.	84 lbs. per yard.	Others.	Total.	30 feet Bull headed 75 lbs. per yard.					
1 Miles of rail in way, including sidings ...	345,5480	780,3072	79,6570	...	1,205,5122	108,1462	65,2214	681,7900	11,3848	2,072,0546	21,1356
2 Rails removed, miles ...	15,4492	19,9464	11,3750	...	47,3706	...	...	12,5708	...	...	...
3 Rails laid ...	2,3752	13,3822	1,3176	...	17,0750	27,7046	4658	21,7860	-0796	50,0360	* 4886

Increased mileage of sidings—
 South-West Line ... 1,3906 x 2 = 3,9092
 North-West Line ... 1,5852 x 2 = 3,1704
 Ennur Branch ... 2,443 x 2 = 4,886
 Total Miles... 3,8291 x 2 = 7,6582

* The difference between removed and laid is owing to increased sidings.

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APPENDIX V.—Maintenance of Way-Sleepers.

18

DETAILS.	WOOD.										IRON BOWL SLEEPERS.	ENNER SECTION OF BEZWADA MADRAS RAILWAY.			REMARKS.	
	TRANSVERSE.											Jungle wood.				Iron Bowl Sleepers.
	Teak.					Jungle.		Total.	Creosoted Pine 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 12' x 6'	10' x 10' x 5'	Total.		
1 Number of sleepers in way, in- crease, at the com- ment of the half-year ...	2,373	156	5,445	1,586	7,937	4,006	18,696	40,199	110	3,259,268	135	19,148	19,283	930		
2 Average rate of increase in way at the end of the year ...	18.1815	23.2601	20.2487	15.4499	15.0268	4.0075	4.4669	7.5007	10.6020	25.4249	75	75	75	60		
3 Number removed ...	19	...	59	...	23	318	710	* 1,129	...	* 4,937	...	...	...	...		
4 Number laid ...	11	...	239	7	56	673	967	* 1,923	...	* 16,203	...	...	...	* 930		
5 Percentage of removals on total of each class ...	8007	...	1.0836	...	2698	7.9381	3.7976	2.8085	...	1515	...	...	...	...		
6 Number of sleepers in way, in- crease, at the end of ...	2,365	156	5,675	1,593	7,940	4,361	18,053	40,993	110	3,270,524	135	19,148	19,283	1,860		

* The difference between removed and laid, owing to increased ...

* The difference between removed and laid is owing to increased sidings.

(No. II.)
No. 844

MADRAS RAILWAY.

AGENT AND MANAGERS OFFICE,

Madras, 26th March 1897

To
From

The Agent and Manager.

M. A. B.

The Consulting Engineer for Railways.

SIR,

I have the honour to forward here-
with printed copies of the Analysis of Working
of the Madras Railway (including Kolar Gold-
fields Railway and Madras - Enner section
of the Bezwada - Madras Railway for the half
year ending 31st December 1896 as under:—
30 copies for your Office
6 ... for despatch to the Mysore Govern-
ment.

I have the honour to be,

Sir,

Your most obedient servant,

M. A. B.

The Agent & Manager.

(36 copies.)

C. P. 1392
Recd. 29/3/97

No. 188
Dated
Recd.
The Consulting Engineer
for Railways.
The Agent and Manager.
MADRAS RAILWAY.

(R.) Form No. 3.

No. 216 R dated 31.3.97

PUBLIC WORKS DEPARTMENT,
RAILWAY BRANCH.

PROCEEDINGS OF THE MADRAS GOVERNMENT.

Read the following

Letter from the Agent & Manager
of the Madras Railway } H. E. N: R 44 of 26 March/97
289

Ordered that mine of
of the Analysis of working
of the Madras Railway, (including
the K. G. F. and M. E. Railways)
for the half year ended the
31 Decr 1896, be forwarded
to the Agent & Manager of the D. G. Ry and to the
Examiner of Accounts of the Govt of India.

H. E. N: 217 R of 31 March/97

Forwarded

To The Director General of Ry.
Documents accd:
9 copies of Analysis of working
thereof

H. E. N: 216 R of 31 March/97
To The Rt Honble the Secy of State
for India
My Lord,

We have the honor
to forward herewith, a copy
of our Proceedings N: 216 R

Letter 31st March 1897, embodying the Analysis of working Madras Railway (including the Kolar Gold Fields and the Eastern Railway) for the half year ended the 31st Dec 1896.

YH

JFR
29-3-97

JM
30/3

To
The Resident in Mysore
Bangalore

I am directed to forward for information 6 copies of the Analysis of working Madras R. (including the K. G. F. & M. E. Railway) for the half year ended the 31st Dec/96.

Despatched on 1/4/97

YH

JFR
29-3-97

JM