C.F. 73.

Date taken out.	For what purpose.			Initials of clerk taking the paper or of attender.	Date returned.	Initials of attender.
	Department.	C. No.	Year.			

CONCERNS BOTH BRITISH INDIA
AND INDIAN STATES.

Public Works (1899.) Department.

RAILWAY BRANCH.

G.O., No. 434-35 Ry.

DATED 17th April 1899.

Includes. 156 R. m. d/ 17-4-99

Proceedings 100/3/20/35

1

[Despatch Abstract.]

Analysis of Working, Madras Railway.

Ordered that copies of the —— (including Kolar Gold Fields and Madras-Ennur section of the East Coast Railways) for the half year ended the 31st December 1898, be forwarded to the Director of Railway Traffic & to the Secy of State for India

Forwarding copy of Pro: embodying the —— (including Kolar Gold Fields & Madras section of the East Coast Rys) for the half ended the 31st Decr 1898.

BACK PAPERS.

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

FURTHER PAPERS.

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

RAILWAY.

Government {1899} of Madras.

PUBLIC WORKS.

Recd. } 1899. *Enclosures*

Regd. } *Spare copies*

G.O., Nos. 434, 435 Ry., 17th April 1899.

APRIL.

Analysis of Working, Madras Railway

Forwarding copy of Proceedings embodying the — (including Kolar Gold Fields and Madras-Ennur section of the East Coast Railways) for the half-year ended the 31st December 1898.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Railway.

Read the following paper :—

From—The Agent and Manager, Madras Railway.
To—The Consulting Engineer for Railways, Madras.
Dated—Madras, 11th April 1899, No. 11605/387.

ORDER—No. 434 Ry., dated 17th April 1899.

Ordered that nine copies of the Analysis of Working of the Madras Railway (including Kolar Gold Fields and Madras-Ennur section of the East Coast Railways) for the half-year ended the 31st December 1898, be forwarded to the Director of Railway Traffic and to the Secretary of State for India.

[Here enter No. 435 Ry., dated 17th April 1899.]

(True Extract.)

FRANCIS J. E. SPRING,
Joint Secretary.

To the Agent and Manager, Madras Railway.
" Examiner, Guaranteed Railway Accounts, Madras.
" Consulting Engineer for Railways.

ENDORSEMENT—No. 435 Ry., dated 17th April 1899.

Forwarded.

(By order.)

FRANCIS J. E. SPRING,
Joint Secretary.

Ex. T. K. Narayana Aiyangar.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

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

No. $\frac{8}{434 \text{ Ry.}}$, dated 17th April 1899.

FORWARDING copy of Proceedings embodying the Analysis of Working, Madras Railway (including Kolar Gold Fields and Madras-Ennur section of the East Coast Railways) for the half-year ended the 31st December 1898.

RAILWAY.

Government {1899} of Madras.

PUBLIC WORKS.

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" Consulting Engineer for Railways.

Ed. T. K. Narayana Aiyangar.

PUBLIC WORKS DEPARTMENT.

LETTER—to

THE RIGHT HONOURABLE THE SECRETARY OF STATE FOR INDIA.

MY LORD,

We have the honour to forward, herewith, a copy of our Proceedings, No. 434 Ry., dated 17th April 1899, embodying the Analysis of Working of the Madras Railway (including Kolar Gold Fields and Madras-Ennur section of the East Coast Railways) for the half-year ended the 31st December 1898.

We have the honour to be,

My Lord,

Your Lordship's most obedient, humble servants,

(Signed) A. E. HAVELOCK.
(") A. T. ARUNDEL.
(") H. M. WINTERBOTHAM.

(By order.)

Joint Secretary.

OOTACAMUND,
17th April 1899.

PUBLIC WORKS DEPARTMENT
DEPA... BRANCH.

Madras Railway Company.

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

ANALYSIS OF WORKING

FOR THE

Half-Year ending 31st December 1898.

Printed by H. Plumbe, at the Lawrence Asylum Press, Mount Road, Madras—1899.

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MADRAS RAILWAY COMPANY.

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

Analysis of Working for the Half-year ended 31st December 1898.

Progressive Number.	Headings.		Remarks.
	No. I.		
	DESCRIPTION OF RAILWAY WORKED.	Ft. In.	
1	Gauge of Railway	5 6	
2	Mean mileage worked ... ... *Miles*	857·67	
3	Number of Stations ... ... *No.*	164	
4	Total length of the following gradients :—		
	(*a*) $\frac{1}{50}$ and less ... ... *Miles*	*Nil.*	
	(*b*) $\frac{1}{51}$ 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.* 1·93 *b.* 1·93	Excluding £7,258-3-4, Capital not bearing interest.
7	Percentage of net earnings on paid up capital ... ,,		
	No. III.		
	OUTLAY, EARNINGS AND EXPENSES.		
	(*Exclusive of Steam-boat Service.*)		
8	Capital outlay per mile open ... ... *Rs.*	*c.* 1,40,964	
9	Total earnings per mile open per week ... ... ,,	233·26	
10	Total working expenses per mile per week ... ... ,,	126·59	
11	Total earnings per train-mile ... ... ,,	3·992	
12	Total working expenses per train-mile ... ... ,,	2·166	
13	Net earnings per train-mile ... ... ,,	1·826	
14	Cost per 1,000 gross ton-miles moved (freight and dead weight) ... ... ,,	7·26	
15	Percentage of total working expenses upon total earnings *Per cent.*	54·27	
16	Percentage of total working expenses upon total earnings, excluding from both sides of the account the charges for carriage of revenue stores ... ,,	53·46	
	(*Inclusive of Steam-boat Service.*)		
17	Percentage of total working expenses on total earnings (for details, see Table No. VII) ... ... ,,	54·27	
	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.*	27,45,864	
	Proportions, *dividing expenditure in ratio of gross ton-mileage (freight and dead load)*— ...		
19	Coaching ... ... ,,	8,94,376	
20	Goods ... ... ,,	18,51,488	

	a.	*b.*	*c.*
Madras Railway	1·92	1·93	1,42,469
K. G. F. Railway	3·48	3·81	74,018
Madras-Ennur Section	·92	·92	70,905

ANALYSIS OF WORKING

For the Half-year ended 31st December 1898.

Progressive Number.	Headings.		Remarks.
	No. V.		
	COACHING TRAFFIC.		
	Gross Receipts and Train-Mileage—		
21	Receipts from coaching traffic	*Rs.*	18,04,231
22	Coaching train-miles run	*No.*	619,333
23	Average coaching receipts per train-mile ...	*Rs.*	2·91
	Units and Unit-Mileage—		
	Number of units carried one mile—		
24	1st Class	*Unit miles.*	1,598,739
25	2nd „	„	4,365,080
26	3rd or Intermediate Class	„	...
27	4th or Lowest Class	„	119,201,237
28	Total passenger unit mileage	„	125,165,056
29	Other coaching traffic	*Ton-miles.*	1,619,531
	Average sum received for carrying a unit one mile—		
30	1st Class	*Pies.*	11·44
31	2nd „	„	5·10
32	3rd or Intermediate Class	„	...
33	4th or Lowest Class	„	2·11
34	Average for all classes...	„	2·33
35	Other coaching traffic per ton-mile ...	„	33·63
	Average number of units in a train—		
36	1st Class	*No.*	2·58
37	2nd „	„	7·05
38	3rd or Intermediate Class	„	...
39	4th or Lowest Class	„	192·47
40	Total passenger units	„	202·10
41	Other coaching traffic	*Tons.*	2·61
	Vehicles and Vehicle-Mileage—		
	Number of coaching vehicles hauled one mile—		
42	1st Class	*Vehicle miles*	914,285
43	2nd „	„	1,046,242
44	3rd or Intermediate Class	„	...
45	4th or Lowest Class	„	5,676,066
46	Other vehicles	„	798,990
47	Brake vans	„	...
48	Total	„	8,435,583
	Average number of vehicles in a coaching train—		
49	1st Class	*No.*	1·48
50	2nd „	„	1·69
51	3rd or Intermediate Class	„	...
52	4th or Lowest Class	„	9·16
53	Other vehicles	„	1·29
54	Brake vans	„	...
55	Total	„	13·62
	Average earnings per coaching vehicle per mile—		
56	1st Class	*Pies.*	20·01
57	2nd „	„	21·30
58	3rd or Intermediate Class	„	...
59	4th or Lowest Class	„	44·29
60	Other vehicles	„	68·17
	Carrying capacity hauled one mile (excluding brakes)—		
61	1st Class	*Seats.*	10,016,447
62	2nd „	„	20,910,676
63	3rd or Intermediate Class	„	...
64	4th or Lowest Class	„	289,422,605
65	Other vehicles	*Tons.*	3,309,885
	Percentage of freight upon capacity hauled—		
66	1st Class	*Per cent.*	15·96
67	2nd „	„	20·87
68	3rd or Intermediate Class	„	...
69	4th or Lowest Class	„	41·19
70	Other vehicles	„	48·93

ANALYSIS OF WORKING

For the Half-year ended 31st December 1898.

Progressive Number.	Headings.		Remarks.
	Weight of Train and Ton-Mileage—		
	Gross ton-mileage of all coaching trains—		
71	Freight	*Ton-miles.*	9,280,684
72	Dead weight	„	113,909,193
73	Total	„	123,189,877
	Average weight of a coaching train—		
74	Freight	*Tons.*	14·99
75	Dead weight	„	183·92
76	Total	„	198·91
	Cost of Working and Profits—		
77	Average cost of hauling a coaching train one mile...	*Rs.*	1·44
78	Average cost of hauling a coaching vehicle with its load one mile.	*Pies.*	20·36
	Average cost of hauling a coaching unit one mile—		
79	Per passenger unit	*Pies.*	1·24
80	Other traffic per ton	„	10·41
81	Average profit on working a coaching train one mile	*Rs.*	1·47
	Average profit on working a coaching vehicle one mile—		
82	1st Class	*Pies.*	— ·35
83	2nd „	„	·94
84	3rd or Intermediate Class...	„	...
85	4th or Lowest Class	„	23·93
86	Other vehicles	„	47·81
	Average profit on working a coaching unit one mile—		
87	Per passenger unit	*Pies.*	1·09
88	Other traffic per ton	„	23·22
	No. VI.		
	GOODS TRAFFIC.		
	Gross Receipts and Train-Mileage—		
89	Receipts from goods traffic	*Rs.*	32,97,038
90	Goods train-miles run	*No.*	683,639
91	Average goods receipts per train-mile	*Rs.*	4·82
	Units and Unit Mileage—		
92	Tons of goods carried one mile	*Ton-miles.*	76,263,975
93	Average sum received for carrying a ton one mile	*Pies.*	8·30
94	Average number of tons in a train	*Tons.*	111·56

ANALYSIS OF WORKING

For the Half-year ended 31st December 1898.

Progressive Number.	Headings.			Remarks.
	VEHICLES AND VEHICLE-MILEAGE—			
	Number of goods vehicles hauled one mile—			
95	Loaded	*Vehicle Miles*	12,402,379	
96	Empty	... „	4,313,221	
97	Brake vans	... „	2,728,410	
98	Total	... „	19,444,010	
	Average number of vehicles on a goods train—			
99	Freight vehicles	*No.*	24·45	
100	Brake vans	„	3·99	
101	Total	„	28·44	
102	Average earnings per goods vehicle per mile (excluding brakes)	*Pies.*	37·87	
103	Carrying capacity hauled one mile (excluding brakes)	*Tons.*	198,296,595	
104	Percentage of freight upon capacity hauled ...	*Per cent.*	38·46	
105	Average load of a goods vehicle (including both loaded and empty)	*Tons.*	4·56	
106	Average load of a loaded goods vehicle ...	„	6·15	
	WEIGHT OF TRAIN AND TON-MILEAGE—			
	Gross ton-mileage of all goods trains—			
107	Freight	*Tons.*	76,263,975	
108	Dead weight	„	178,756,943	
109	Total	„	255,020,918	
	Average weight of a goods train—			
110	Freight	*Tons.*	111·56	
111	Dead weight	„	261·47	
112	Total	„	373·03	
	COST OF WORKING AND PROFIT—			
113	Average cost of hauling a goods train one mile ...	*Rs.*	2·71	
114	Average cost of hauling a goods vehicle with its load one mile	*Pies.*	21·27	
115	Average cost of hauling a goods unit (*viz.*, one ton) one mile	„	4·66	
115A	Do. do. do. do. including interest on capital expended on open line, &c....	„	9·89	
116	Average profit on working a goods train one mile	*Rs.*	2·11	
117	Average profit on working a goods vehicle with its load one mile	*Pies.*	16·60	
118	Average profit on working a goods unit (*viz.*, one ton) one mile	„	3·64	

ANALYSIS OF WORKING

For the Half-year ended 31st December 1898.

Progressive Number.	Headings.		Remarks.
	No. VII.		
	DETAILED PERCENTAGES OF EARNINGS AND EXPENDITURE.		
	Percentage to Total Earnings—		
119	Coaching Traffic	*Per cent.* 34·69	
120	Goods Traffic	„ 63·38	
121	Sundries, including Telegraph	„ 1·93	
122	Steam-boat Earnings	„	
	Total, Earnings	„ 100·00	
	Percentage of Working Expenses upon Total Earnings—		
123	Maintenance	*Per cent.* 13·92	
124	Locomotive Expenses	„ 20·83	
125	Carriage and Wagon Expenses	„ 4·64	
126	Traffic Expenses	„ 8·48	
127	General Charges	„ 5·38	
128	Miscellaneous Charges	„ 1·02	
129	Steam-boat Expenses	„	
130	Total, Working Expenses	„ 54·27	

ANALYSIS OF WORKING

For the Half-year ended 31st December 1898.

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.	Per mile of line maintained. (857·68)	Per mile of track, including sidings. (1,047·21)	Per total train-mile. 1,302,972)	Per 1,000 gross ton-miles. 378,210,795
			General Superintendence—	Rs.	Rs.	As.	Rs.
IX (A) 1	1 & 2		Engineers' salaries and allowances ...	61·15	50·09	·64	·14
	3 to 5		Subordinate Superintendents' salaries and allowances, including overtime ...	41·71	34·16	·44	·09
	6		Office expenses	38·57	31·59	·41	·09
		131	Total ...	141·43	115·84	1·49	·32
			Maintenance and Renewal of Permanent-way—				
2	1		Wages	174·37	142·81	1·84	·40
	2		Materials	212·04	173·66	2·23	·48
		132	Total ...	386·41	316·47	4·07	·88
			Repairs of Bridges, &c.—Wages and Materials—				
3	1		Bridges and tunnels	8·83	7·23	·09	·02
	2		Miscellaneous	30·66	25·11	·32	·07
		133	Total ...	39·49	32·34	·41	·09
3(A)	...	134	*Conservancy of Rivers*	...	...	...	...
			Repairs of Stations and Buildings—Wages and Materials—				
4	1		Repairs of all, except staff quarters ...	49·85	40·82	·53	·11
	2		Repairs of staff quarters	19·33	15·84	·20	·04
		135	Total ...	69·18	56·66	·73	·15
			Maintenance by Contract—				
5	1		Amount paid to contractors	...	...	...	...
	2		Materials supplied by the Railway ...	...	...	...	...
			Total ...	...	...	...	...
6	...		*New Minor Works*	11·00	9·01	·12	·03
			Unclassified Expenditure—				
7	1		Plantations	1·60	1·31	·02	...
	2		Tools and Plant	5·04	4·13	·05	·01
	3		Loss by exchange	126·79	103·84	1·33	·29
	4		Loss on stores, &c.	...	...	...	...
	5		Freight on stores	63·30	51·84	·67	·14
			Total ...	196·73	161·12	2·07	·44
			Total, Heads 5, 6 and 7	207·73	170·13	2·19	·47
			Less Credits...	...	...	...	...
		136	*Net Total, Other Charges*	207·73	170·13	2·19	·47
		137	*Total Maintenance*	844·24	691·44	8·89	1·91

If done departmentally.

Form No. :. DEPA... NCH.

ANALYSIS OF WORKING

For the Half-year ended 31st December 1898.

No. VIII.—WORKING EXPENSES.

TABLE B.

Locomotive Expenses.

Reference to Revenue Account. Table and main head.	Sub-head.	Progressive number in analysis.	Details.	Per total train-mile. (1,302,972)	Per engine-mile. (1,559,578)	Per 1,000 gross ton-miles. 378,210,795
			General Superintendence—	As.	As.	Rs.
IX (B) 1	1 & 2		Salaries of Superintendents and Assistants, including allowances...	·22	·19	·05
	3 to 5		Do. of Subordinate do. including do. ...	·40	·33	·08
	6		Office expenses...	·26	·22	·06
		138	Total ...	·88	·74	·19
			Running Expenses—			
2	1 & 2		Wages of Drivers and Firemen, including overtime..	1·73	1·45	·37
	3		Fuelling, cleaning and looking after engines ...	·38	·31	·08
	4		Contingent expenses	·01	·01	...
		139	Total ...	2·12	1·77	·45
			Fuel—[In terms of Giridih (Kurhurbaree) Coal].	lbs.	lbs.	lbs.
3	1 to 4		Average quantity consumed	51·26	42·83	176·60
				As.	As.	Rs.
		140	Average price per ton, Rs. 15·86 Do. cost	5·81	4·85	1·25
4	...	141	*Water*—(including wages and stores)	·23	·19	·05
5	...	142	*Oil, Tallow and other Stores*	·32	·27	·07
			Maintenance and Renewals of Engines—			
6	1 & 2		Wages, including overtime	1·51	1·26	·33
	3		Materials	1·75	1·46	·37
		143	Total ...	3·26	2·72	·70
			Maintenance and Renewals of Machinery—			
6a	1 & 2		Wages, including overtime	·05	·05	·01
	3		Materials	·04	·03	·01
		143a	Total ...	·09	·08	·02
7	...		*New Minor Works*	·01	·01	...
8	...		*Payments to other Lines*	...	...	...
			Unclassified Expenditure—			
9	1		Loss by exchange	·34	·29	·07
	2		Loss on stores, &c.	...	...	...
	3		Freight on stores	·40	·33	·09
			Total ...	·74	·62	·16
			Total, Heads 7, 8 and 9...	·75	·63	·16
			Less Credits	·15	·13	·03
		144	*Net Total, Other Charges*	·60	·50	·13
		145	*Total Locomotive Expenses*	13·31	11·12	2·86

ANALYSIS OF WORKING

For the Half-year ended 31st December 1898.

No. VIII—WORKING EXPENSES.

TABLE C.

Carriage and Wagon Expenses.

Reference to Revenue Account. Table and main head.	Sub-head.	Progressive number in analysis.	Details.	Per total train-mile. (1,302,972)	Per 1,000 vehicle miles run by home vehicles. (27,620,385)
			General Superintendence—	As.	Rs.
IX (C) 1	1 & 2		Salaries of Superintendents, including allowances	·06	·16
	3 to 5		Do. of Subordinate do. including do.	·10	·30
	6		Office expenses	·06	·19
		146	Total ...	·22	·65
			Repairs and Renewals of Vehicles—		
2	1 to 3		Coaching vehicles ... {Wages, including overtime ... / Materials	·41 ·47	3·71 4·30
		147	Total ...	·88	(a) 8·01
	1 to 3		Goods vehicles ... {Wages, including overtime ... / Materials	·49 ·69	2·14 3·00
		148	Total ...	1·18	(b) 5·14
			Repairs and Renewals of Machinery—		
2a	1 & 2		Wages, including overtime	·03	·09
	3		Materials	·02	·06
		148a	Total ...	·05	·15
			Cleaning and Oiling—		
3	1		Labour, including wages of oilers, &c.	·24	·71
	2		Stores	·18	·54
		149	Total ...	·42	1·25
4			*New Minor Works*	...	...
			Unclassified Expenditure—		
5	1		Loss by exchange	·19	·57
	2		Loss on stores, &c.	...	...
	3		Freight on stores	·02	·05
			Total ...	·21	·62
			Total, Heads 4 and 5	·21	·62
			Less Credits	...	...
		150	*Net Total, Other Charges*	·21	·62
		151	*Total Carriage and Wagon Expenses*	2·96	8·74

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

Form No. 1. DEPARTMENT. PUBLIC WORKS DEPARTMENT,

ANALYSIS OF WORKING

For the Half-year ended 31st December 1898.

No. VIII.—WORKING EXPENSES.

TABLE D.

Traffic Expenses.

Reference to Revenue Account. Table and main head.	Sub-head.	Progressive number in analysis.	Details.	Per total train-mile. (1,302,972)	Per cent. of traffic earnings. Abstracts H. and I. (51,01,269)
				As.	Per cent.
			General Superintendence—		
IX (D) 1	(a) 1 & 3		Traffic Manager, Assistants, &c., including travelling allowances	·64	1·03
	(a) 2 & 4		Office establishment and contingencies	·31	·49
			Total ...	·95	1·52
		152		2·39	3·81
	(b)	153	*Station Staff*	·75	1·19
	(c)	154	*Train Staff*	·55	·88
2	1 to 3	155	*Fuel, Lighting, Water and General Stores*	·07	·11
3	...	156	*Clothing*	·47	·76
4	...	157	*Printing, Stationery and Tickets*	·02	·03
5	...	158	*Charges for Delivery and Collection of Goods, &c.*	·03	·05
6	...	159	*Miscellaneous Expenses*	·10	·16
			Payments to other Lines—		
7	1	160	Expenses at joint stations	·07	·11
			Unclassified Expenditure—		
8	1		Loss by exchange	...	...
	2		Loss on stores, &c.	·02	·03
	3		Freight on stores		
			Total, Head 8 ...	·09	·14
				...	...
			Less Credits	·09	·14
		161	*Net Total, Other Charges*	5·42	8·65
		162	*Total, Traffic Expenses*		

ANALYSIS OF WORKING
For the Half-year ended 31st December 1898.
No. VIII.—WORKING EXPENSES.

TABLE E.
General Charges.

Reference to Revenue Account. Table and main head.	Sub-head.	Progressive number in analysis.	Details.	Per total train-mile. (1,302,972)	Per cent. on total earnings. (52,01,569)
IX (E) 1	1 to 4	163	*Home Expenditure*	As. ·41	Per cent. ·64
			Indian Management—		
2	1	164	Agent's Office, including travelling allowances and contingencies	·34	·53
	2		Auditor's Office ditto ditto ...	·89	1·40
	3		Account's Office ditto ditto ...		
	4		Cash Office ditto ditto ...		
		165	Total 2 to 4 ...	·89	1·40
	5	166	Store Department, ditto ditto ...	·15	·23
	6	167	Medical Department, ditto ditto ...	·19	·30
	7		Rents	...	...
	8 to 10		Miscellaneous expenses, including printing, stationery, medicine and contributions to Hospitals	·11	·17
		168	Total 7 to 10 ...	·11	·17
3	1 to 3	169	*Police*	·24	·37
4	...	170	*Advertising*	·04	·06
			Electric Telegraph—		
5	1 to 4		Salaries, &c.	·59	·93
	5		Maintenance (wages and stores)	·28	·43
	6		Government Telegraph Department for rent, maintenance and inspection...	·01	·02
		171	Total ...	·88	1·38
6	...		*Clearing accounts with other Lines*	...	...
			Unclassified Expenditure—		
7	1		Loss on stores, &c.	...	...
	2		Expenses connected with fire-engines	·06	·09
	3		Loss by exchange	·17	·27
	4		Freight on stores	·01	·02
	5		Funeral expenses	...	...
			Total ...	·24	·38
			Total, Heads 6 and 7	·24	·38
			Less Credits	·06	·09
		172	*Net Total, Other Charges*	·18	·29
		173	*Total, General Charges*	3·43	5·37

ANALYSIS OF WORKING
For the Half-year ended 31st December 1898.
No. VIII.—WORKING EXPENSES.

TABLE F.
Steam Boat Service.

Nil.

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. (52,01,569)
IX (G) 1	...	174	*Law Charges*'...	Per cent. ·03
			Compensation—	
2	1		For goods lost or damaged	·06
	2		„ personal injury	...
	3		„ other claims	...
		175	Total ...	·06
3	...	176	*Rates and Taxes*	·23
			Payments to other Lines—	
4	1		Hire of locomotives	...
	2		„ of vehicles	...
	3		Mileage of foreign stock	·01
	4		Rent of stations, &c., jointly occupied	...
	5		Shunting at Joint stations	...
		177	Total ...	·01
6	...		*Contributions to—*	
			Railway Provident Institution	·38
			Miscellaneous	·17
5 & 7	...		*Total, Heads 5 to 7*	·55
			Less Credits	...
		178	*Net Total, Other Charges*	·55
		179	*Total, Special and Miscellaneous Expenses*	·88

MADRAS RAILWAY,
CHIEF AUDITOR'S OFFICE,
25th March 1899.

F. DUNSTERVILLE,
Chief Auditor.

LOUIS S. MOSS,
Agent and Manager.

APPENDICES.

APPENDICES TO ANALYSIS OF WORKING

For the Half-year ended 31st December 1898.

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	4 coupled.	4 coupled.	6 coupled.	4 coupled.	
		2.—Weight on driving axle ...	Tons. 14·90	Tons. 13·40	Tons. 13·55	Tons. 14·27	
		3.—Weight of engine in steam ...	44·13	33 10	38·32	42·10	
		4.—Weight of tender loaded ...	30·13	27·75	30·12	...	
XII	5	1.—Number of locomotives erected and made over to Locomotive Department	41	40	69	18	168
	11	2.—Average number of locomotives constantly under repairs and renewals	11	5	17	4	37
		3.—Number of locomotives laid by as spare ...	4	3	...	...	7
		4.—Ditto lent or hired out to other lines ...	⅓	...	...	...	⅓
		5.—Average number of locomotives 1—(3 + 4)...	36⅔	37	69	18	160⅔
		6.—Total mileage of locomotives (5)	436,179	353,396	637,981	132,022	* 1,559,578
		7.—Average miles run by a locomotive of each class 6 ÷ 5	11,896	9,551	9,246	7,335	9,707
		Per diem ...	64·65	51·91	50·25	39·81	52·76
		8.—Weight of coal, &c., used per engine-mile. } To be separated, if possible, among the classes of locomotives.	lbs. 41·48	lbs. 39·23	lbs. 48·91	lbs. 27·50	lbs. 42·83
		9.—Weight of wood used per engine-mile. }					
			Passenger trains.	Goods trains (ordinary E. trains.)	Mixed trains.		
		10.—Average gross weight of trains hauled...Tons.	130·28	320·27	285·81	...	231·38
		11.—Average speed between stations... Miles per hour.	28·48	17·22	20·44	...	...
		12.—Average through speed... Miles per hour.	19·95	12·38	10·80	...	...
		13.—Average consumption of fuel per engine mile. lbs.	...	...	...	...	42·83

* { Inclusive of 20,771 engine miles run over the Kolar Gold Fields Railway.
Do. 12,207 do. Madras-Ennur line.

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

Description of Fuel.	Actual quantity consumed in lbs.	Rate of conversion.	Quantity consumed in terms of Giridih (Kurhurbaree) coal in lbs.
Kurhurbaree Coal	...	1·00	...
Patent Fuel	28,000	0·80	35,000
Singareni Coal	42,528,864	1·27	33,487,294
Borakur Coal	...	1·15	...
Wood	99,812,950	3·00	33,270,983
Total ...	.....	.....	66,793,277

APPENDIX TO ANALYSIS OF WORKING.
For the Half-year ended 31st December 1898.
APPENDIX II.
Working of Vehicles.

DESCRIPTION OF VEHICLES.	Total number on the list at end of the half-year.	Average Weight in Tons. Of each description of vehicles.	Average Weight in Tons. Of each group.	Average Carrying Capacity. Of each description of vehicles.	Average Carrying Capacity. Of each group.	Average number laid by as spare.	Average number lent or hired out.	Average number working.
Coaching Stock.						*f.*		
Saloon State .. ... 6-wheeled.	2	13·00	...	4·00	...	...	...	2
1st Class Carriages including Saloons..	32	10·71	...	8·00	...	...	...	32
Inspection Carriages ... 6-wheeled.	1	13·85	10·36	3·00	3·00	...	...	1
Do. do. 4 do.	2	8·62		3·00		...	...	2
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
Do. 1st, 2nd and 3rd Class do. Bogie.	1	30·38	...	32·00	...	...	...	1
Second Class Carriages Ordinary ...	70	10·25	...	22·50	...	...	...	69
Third do. do. without Brakes								
Ordinary	358	8·50		51·72				377
Do. do. do. do. Ambulance	28	8·50		55·00		9	...	
Do. do. and Postal Vans Ordinary	7	10·23	8·52	30·00	50·99	...	...	7
Do. do. Carriages with Brakes		7·15		3·50				
Ordinary	8	8·80		42·50		3	...	5
Postal Vans	9	10·55	...	3·25	...	...	...	9
Carriage Trucks	21	5·15	...	6·00	...	1	...	20
Horse Boxes...	46	8·35	...	3·00	...	...	...	46
Luggage Vans (Baggage Vans) ...	24	6·35	...	6·00	...	...	...	24
Total ...	653	8·80	8·80	35·90	35·90	14	...	639
Goods Stock.								
Covered Goods Wagons Ordinary, Iron	395	7·55	6·99	11·75	11·80	...	...	395
Do. do. do. do. Wooden	1,086	6·78		12·00 / 6·00		2	...	1,084
High Sided Wagon Ordinary, Iron 16 Tons, 6-wheeled.	50	8·00	6·25	18·50	12·36	...	...	50
Do. do. Wooden 10 Tons, 4 do.	800	6·15		12·00		3	...	797
Do. do. 8 Tons, 4 do. (In term of 10 ton vehicles) ...	8	5·32		10·00		...	...	8
Low Sided Wagon Ordinary, Wooden.	191	4·95	...	12·00 / 6·00	7·76	1	2·18	188
Coal or Coke Wagons	60	5·80	5·80	7·00	7·00	37	...	93
Fuel Trucks	70	5·80		7·00				
Cattle Wagons ...	50	6·40	...	6·33	...	4	...	46
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	12	7·57	...	6·50	...	2	...	10
Timber Trucks Wooden, Double Bolster	60	5·20	5·20	12·00	10·69	...	...	60
Do. do. do. Single do.	115	5·20		10·00		1	13·34	101
Rail do. do. ... 6-wheeled.	50	7·45	6·74	18·00	14·57	...	...	50
Do. do. do. ... 4 do.	20	4·95		6·00		20	...	...
Travelling Oil Tanks ... 6 do.	12	9·43	...	12·00	...	...	...	12
Do. Water Tanks ...	4	5·40	...	11·50 / 5·75	7·19	...	...	4
Do. Cranes ... 6-wheeled.	3	23·58 / 33·10	17·80	10·00 / 15·00	6·72	...	...	3
Do. do. ... 4 do.	4	11·08		3·00		...	...	4
Brake Vans ... ... 6 do.	20	11·43	8·89	8·00	5·07	2	...	175
Do. ... ... 4 do.	157	8·57		4·70				
Truck for carrying gas-holders ...	5	10·86	...	...	...	...	...	5
Support Wagon for 15 Tons, Crane ...	1	5·00	...	...	...	...	...	1
Total ...	3,180	6·65	6·65	10·99	10·99	72	15·52	3,093
Grand Total ...	3,833	*Nil.*	*Nil.*	*Nil.*	*Nil.*	86	15	3,732

Column *f*.—We have no vehicles laid by as spare, but in this column has been entered the number of vehicles broken up and awaiting renewals.

Average Mileage per diem ran on Home line by Coaching Vehicles 45,883·14.
Do. do. Goods do. 105,748·13
Do. on K. G. F. Ry. Coaching 101,464.
Do. do. Goods 237,961.
* Includes Madras Railway Vehicles M. E. Railway Coaching 131,936.
Do. do Goods 80,758.
Do.
Do.

Mileage of: Foreign vehicles on Home Line. Loaded.	Foreign vehicles on Home Line. Empty.	Home vehicles on Home Line. Loaded.	Home vehicles on Home Line. Empty.	Home vehicles on foreign lines.	Carrying capacity hauled on Home Line.	Ton-mileage of vehicle dead weight hauled on Home Line.
.....	.....	* 1,421	* 737	.....	8,632	28,054
.....	.....	423,241	30,187	.....	4,350,496	5,824,227
80,369	10,015	18,535	2,024	.....	61,677	212,991
.....	.....					
1,745	1,595	707,897	25,393	.....	11,314,637	7,395,765
67,532	2,096	539,476	68,823	.....	15,253,358	6,948,752
2,076	1,575	5,537,441	134,606	.....	289,403,841	48,356,947
.....	.....	.....	.....	.....	914,940	2,970,036
.....	.....	.....	.....	.....	458,004	393,120
64,584	702	216,234	36,391	.....	787,122	2,190,823
75	75	39,793	95,203	.....	992,910	1,050,830
7,007	7,007	153,157	24,392	.....		
.....	.....	141,093			*Nil.*	75,371,545
223,388	23,065	7,778,288	417,756	676,402	118,887,112	70,425,501
.....	.....	8,566,926	1,508,253	.....	64,705,493	33,115,656
451,988	438,352	2,599,273	1,749,061	.....	590,412	376,616
.....	.....	34,202	41,882	.....	362,222	300,127
.....	.....	23,157	28,589	.....	542,924	548,928
.....	.....	39,920	45,850	.....	42,455	20,895
.....	.....	1,189	1,705	.....	936,038	1,060,843
.....	.....	99,841	24,964	.....	29,354	34,186
.....	.....	3,255	1,261	.....	7,227,295	3,515,616
.....	.....	378,054	298,026	.....	2,819,499	1,304,284
.....	.....	116,269	77,245	.....	2,226,936	1,750,001
.....	.....	92,557	93,021	.....	87,589	65,783
.....	.....	7,192	4,990	.....	14,939	39,569
.....	.....	2,201	22	.....	13,833,039	24,255,565
.....	256,830	.....	2,471,580	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	*Nil.*	136,813,570
451,988	695,182	11,964,036	6,346,449	437,454	*Nil.*	212,185,115
675,376	718,247	19,742,324	6,764,205	1,113,856		

APPENDICES TO ANALYSIS OF WORKING

For the Half-year ended 31st December 1898.

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	914,285	10,016,447	9,550,164	
Second	1,046,242	20,910,676	10,646,634	
Third	5,676,066	289,422,605	48,359,500	
Total passenger vehicles	7,636,593	320,349,728	68,556,298	
Other coaching vehicles	798,990	3,309,885	6,697,297	
Total paying coaching mileage ...	8,435,583	*Nil.*	75,253,595	
Total coaching mileage	8,435,583	*Nil.*	75,253,595	
Goods—				
Loaded vehicles	12,402,379	146,985,272	84,189,323	
Empty vehicles	4,313,221	51,311,323	28,273,641	
Total paying goods mileage ...	16,715,600	198,296,595	112,462,964	
Brake vans	2,728,410	...	24,255,565	
Total goods mileage, including brakes	19,444,010	198,296,595	136,718,529	
Miscellaneous—				
Free mileage for inspections, &c. ...	20,559	61,677	212,991	
Grand Total ...	27,900,152	*Nil.*	212,185,115	

APPENDICES TO ANALYSIS OF WORKING

For the Half-year ended 31st December 1898.

APPENDIX IV.—*Maintenance of Way-Rails.*

Details.	Iron, double-headed, weighing			Steel.				Grand Total Iron and Steel.	Ennur Section of Bezwada-Madras Railway.		Remarks.
	65 lbs. per yard.	75 lbs. per yard.	84 lbs. per yard.	30 feet bull-headed 76 lbs. per yard.	30 feet double-headed 75 lbs. per yard.	20 feet and other double-headed 75 lbs. per yard.	Flat-footed on bridges 75 lbs. per yard.	Total.	Steel flat-footed on Ennur Line of B. M. Railway 75 lbs. per yard.	30 feet double-headed steel rails 75 lbs. per yard.	Total.	
1 Miles of rail in way, including sidings ...	319·5240	747·0472	68·1468	187·8816	65·8952	672·4636	12·0230	938·2634	20·0334	1·4090	21·4424	
2 Rails removed, miles	11·8598	20·6436	7·4948	17·3976	...	37·3652	...	54·7628	...	...	...	
3 Rails laid, miles	3·9504	10·3828	3·2562	59·8350	...	18·6124	...	78·4474	...	...	...	

Increased mileage of sidings—
South-West Line ... 0·9156
North-West Line ... 0·0132 0·9288

Decreased in sidings—
North-West Line ... ... 0·2909

Net increase... 0·6379 × 2 = 1·2758 miles.

* The difference between removed and laid is owing to increase in mileage of sidings.

APPENDIX V.—*Maintenance of Way-Sleepers.*

	Details.	Wood. Transverse. Teak. 16'×12"×6"	14'×12"×6"	12'×12"×6"	10'×12"×6"	10'×10"×5"	Jungle. 10'×12"×6"	10'×10"×5"	Total.	Creosoted Pine Sleepers.	Iron Bowl Sleepers.	Ennur Section of Bezwada-Madras Railway. Teak. 16'×12"×6"	Jungle. 10'×12"×6"	10'×10"×5"	Total.	Iron Bowl Sleepers.	Remarks.
1	Number of sleepers in way, including sidings, at the commencement of the half-year ...	2,325	156	5,621	1,586	7,865	4,629	18,851	41,033	110	3,278,535	2	150	19,174	19,326	2,400	
2	Average age of sleepers in way at the end of the half year. Years... ...	19·5853	25·3601	21·7749	17·4204	16·8631	4·2202	5·6789	8·5002	10·3146	27·0816	1·75	2·64	2·75	2·23	2·22	
3	Number removed	16	...	29	...	5	436	795	*1,281	...	*4,886	...	...	...	...	...	
4	Number laid	2	...	13	...	4	560	890	*1,469	25	*8,824	...	...	12	*12	...	
5	Percentage of removals on total of each class ...	·6382	...	·5159	...	·0636	9·4187	4·2173	3·1219	...	·1490	...	...	...	...	...	
6	Number of sleepers in way, including sidings, at the end of the half-year ...	2,311	156	5,605	1,586	7,864	4,753	18,946	41,221	135	3,282,473	2	150	19,186	19,338	2,400	

* The difference between removed and laid is owing to increase in mileage of sidings.

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MADRAS RAILWAY.

AGENT AND MANAGER'S OFFICE,

Madras, 11th April 1899

Dupte

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13 APR. 1899
CONSULTING ENGINEER FOR RAILWAYS
MADRAS

From

The Agent and Manager.
M. R. C.

To

Dupte

The Consulting Engineer for Railways.
Madras.

SIR,

I have the honour to forward herewith printed copies of the Analysis of Working of the Madras Railway (including Kolar Gold Fields' Railway and Madras-Ennore section of the Bezwada-Madras Railway) for the half year ending 31st December 1898. as under:-

30 Copies for your Office
6 . . . . for despatch to the Mysore Govt:

I have the honour to be,
Sir,
Your most obedient Servant,

Edmund
Jr Agent & Manager

Enclo:
(36 Copies)

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" " " 189 , " , "

2P

ORDER. No 434 Ry of 17/4/99

Ordered that nine copies of the Analyses of working of the Madras Railway (including Kolar Gold Fields and Madras Ennore section of the E C Ry) for the half year ended the 31st December 1898, be forwarded to the ~~Govt of India~~ Director of Railway Traffic and to the Secy of State for India.

To

The Agent & Manager M.Ry ✓

" Examiner, Ry Rs Accts Madras ✓

" Cons: Engr: for Ry ✓

[illegible] 17.4.99

Despatched 10/5 [illegible]

H.E. No 435 Ry of 17th April/99

Forwarded. ✓

H.E. No 8/434 Ry of 17 April/99

To

The Rt Honble the Secy of State for India

My Lord,

We have the honour to forward, herewith, a copy of

MADRAS RAILWAY.

From The Agent and Manager.

To The Consulting Engineer for Railways.

Dated 188 No.

Recd.

our Progs No 434 Rys of 17th April 1899, embodying the analyses of working of the M Rys (including Kolar Gold Fields and Madras Eastern section of the E C Ry) for the half year ending the 31st Decr 1898.

D 4/5/99.

(Sd) DR 13.4.99.

2. No 156 Rm D/17th april 99

The Resident in Mysore.

Sir,

I am directed to forward herewith, for despatch to the Mysore Durbar, six copies of the analyses of working of the Madras Railway (including K G F and M E section of the E C Ry) for the half year ended the 31st Decr 1898.

D 17.4.99.

(Sd) DR. 13.4.99.

omit

3 P.

300—30-3-99.