UNIVERSAL
LIBRARY
OU_172593
UNIVERSAL
LIBRARY

OSMANIA UNIVERSITY LIBRARY
Call No. 385 (9n 39) R Accession No. G. 11190
Author India. Ministry of Railways
Title Report by the Railway board on Indian railways for 1960-1961. Vol. I
This book should be returned on or before the date last marked below.



GOVERNMENT OF INDIA

MINISTRY OF RAILWAYS

(RAILWAY BOARD)

G. 11190

Report by the Railway Board

ON

INDIAN RAILWAYS

FOR

1960-61

Volume I

PUBLISHED BY THE MANAGER OF PUBLICATIONS, DELHI.
PRINTED BY THE GOVERNMENT OF INDIA PRESS, CALCUTTA, INDIA
1962

PRINCIPAL STATISTICS OF RAILWAY OPERATIONS

TABLE I.—ALL INDIAN RAILWAYS (including Non-Government Railways) (1)

Items	1955-56	1956-57	1957-58	1958-59	1959-60	1960-61
	Year preceding second plan.	Second Plan Period				
Capital at charge (crores) Rs.	975·91	1,078·23	1,228·67	1,362·89	1,438·75	1,527·83
Route kilometrage/mileage as on 31 March. Km.	55,901·53	55,915·13	56,148·19	56,456·83	56,669·66	56,962·19
Route kilometrage/mileage as on 31 March. M.	34,735·60	34,744·05	34,888·87	35,080·65	35,212·92	35,394·71
Gross earnings (crores) Rs. (2) (a)	317·51	350·55	382·95	392·33	424·06	459·38
Total working expenses (crores) Rs. (3)	260·17	280·13	311·17	324·58	337·48	361·88
Operating ratio (per cent) (4)	81·94	79·91	81·26	82·73	79·58	78·78
Number of passengers originating (million)	1,297·36	1,382·54	1,430·29	1,440·87	1,528·60*	1,615·89
Passengers kilometres/miles (million) Km.	62,898·45	67,905·42	69,730·47	68,391·92	74,190·17*	78,183·50
Passengers kilometres/miles (million) M.	39,083·29	42,194·47	43,328·50	42,496·77	46,099·64*	48,580·93
Earnings from carriage of passengers (crores) Rs.	108·75	117·39	120·05	117·58	126·49*	132·52
Average earnings per passenger kilometre/mile, nP. Per Km.	1·73	1·73	1·72	1·72	1·72	1·71
Average earnings per passenger kilometre/mile, nP. Per M.	2·78	2·78	2·77	2·77	2·76	2·75
Freight tonnes/tons originating (8) (million) Tonnes	117·12	127·39	135·83	138·75	147·86	157·37
Freight tonnes/tons originating (8) (million) Tons	115·27	125·38	133·69	136·56	145·54*	154·89
Freight tonne kilometre/ton miles (million) Km.	59,637·64	65,774·17	74,636·30	76,541·00	82,074·59	87,832·89
Freight tonne kilometre/ton miles (million) M.	36,471·85	40,224·69	45,644·40	46,809·23	50,193·33	53,714·89
Earnings from carriage of goods (crores) Rs. (6)	177·92	201·09	225·71	237·04	256·12	281·26
Average earnings per freight tonne kilometre/ton mile, nP. Per Km.	3·54	3·60	3·58	3·66	3·74	3·88
Average earnings per freight tonne kilometre/ton mile, nP. Per M.	5·78	5·89	5·85	5·99	6·11	6·34
Total train kilometres/miles (million) Km.	337·15	350·55	365·26	370·25	381·76	389·20
Total train kilometres/miles (million) M.	209·50	217·82	226·96	230·07	237·22	241·83
Gross earnings (2) per train kilometres/miles, Rs. Per Km.	9·94	10·6	11·2	11·3	11·9	12·6
Gross earnings (2) per train kilometres/miles, Rs. Per M.	16·0	17·0	18·0	18·2	19·1	20·3
Working expenses (3) per train kilometre/mile, Rs. Per Km.	8·20	8·57	9·20	9·44	9·57	10·1
Working expenses (3) per train kilometre/mile, Rs. Per M.	13·2	13·8	14·8	15·2	15·4	16·2
Net earnings (5) per train kilometre/mile, Rs. Per Km.	1·71	2·01	1·98	1·84	2·28	2·51
Net earnings (5) per train kilometre/mile, Rs. Per M.	2·75	3·24	3·19	2·97	3·67	4·04
Net earnings (5) per mean kilometre/mile worked, Rs. Per Km.	10,242	12,575	12,818	12,024	15,312	17,121
Net earnings (5) per mean kilometre/mile worked, Rs. Per M.	16,483	20,238	20,629	19,350	24,642	27,553

1 mile = 1·609344 Kilometres.
1 Kilometre = 0·621371 mile.
*Revised.

TABLE II.—GOVERNMENT RAILWAY SYSTEM (including worked lines)

Items		1955-56	1956-57	1957-58	1958-59	1959-60	1960-61
		Year preceding Second Plan.	Second Plan period.				
Capital at charge (crores) Rs.(7)		929·31	1,033·02	1,169·13	1,294·81	1,370·32*	1,440·18
Route kilometrage/mileage as on 31 March	Km.	55,010·87	55,185·71	55,461·02	55,740·64	55,954·48	56,247·01
	M.	34,182·17	34,290·81	34,461·88	34,636·25	34,768·52	34,950·31
Gross earnings (crores) Rs. (2) (a)		315·91	348·89	381·42	390·77	422·36	457·57
Total working expenses (crores) Rs. (3)		258·84	278·76	309·76	323·23	335·94	360·32
Operating ratio (per cent) (4)		81·93	79·90	81·21	82·72	79·54	78·75
Number of passengers originating (million)		1,275·28	1,359·68	1,410·18	1,422·46	1,509·40*	1,595·68
Passenger kilometres/miles (million)	Km.	62,400·06	67,396·63	69,270·88	68,016,02	73,808·73*	77,787·45
	M.	38,773·60	41,878·33	43,042·93	42,263·12	45,862·62*	48,334·86
Earnings from carriage of passengers (crores) Rs.		107·71	116·33	119·10	116·74	125·61	131·59
Average earnings per passenger kilometre/mile, nP.	Per Km.	1·72	1·72	1·72	1·71	1·71	1·71
	Per M.	2·78	2·78	2·77	2·76	2·75	2·75
Freight tonnes/tons originating (8) (million)	Tonnes	115·88	126·06	134·56	137·39	146·56	155·96
	Tons	114·05	124·07	132·44	135·23	144·25*	153·50
Freight tonnes kilometres/ton miles, (million)	Km.	59,575·74	65,710·54	74,579·58	76,471·57	82,005·81	87,754·12
	M.	36,434·00	40,185·78	45,609·71	46,766·77	50,151·27*	53,666·73
Earnings from carriage of goods (crores) Rs.(6)		177·43	200·58	225·20	236·40	255·43	280·48
Average earnings per freight tonne kilometre/ ton mile, nP.	Per Km.	3·50	3·60	3·57	3·66	3.73	3·87
	Per M.	5·73	5·89	5·84	5·98	6·10	6·33
Total train kilometres/miles (million)	Km.	333·53	346·85	361·72	366·93	378·42	385·73
	M.	207·24	215·52	224·76	228·00	235·15	239·67
Gross earnings (2) per train kilometre/mile, Rs.	Per Km.	10·0	10·6	11·2	11·4	11·9	12·7
	Per M.	16·1	17·1	18·1	18·3	19·2	20·4
Working expenses (3) per train kilometre/mile, Rs.	Per Km.	8·26	8·57	9.26	9·51	9·63	10·1
	Per M.	13·3	13·8	14·9	15·3	15·5	16·3
Net earnings (5) per train kilometre/mile, Rs.	Per Km.	1·72	2·03	1·99	1·85	2·30	2·53
	Per M.	2·77	3·26	3·21	2·98	3·70	4·07
Net earnings (5) per me an kilometre/ mile worked, Rs.	Per Km.	10,328	12,685	12,940	12,138	15,478	17,292
	Per M.	16,621	20,414	20,825	19,535	24,910	27,829

* Revised.

(1) For details of Government and Non-Government Railways please see Appendix D of this Volume.

(2) Gross earnings represent the true earnings in an accounting period irrespective of whether the amounts have been realised or not. Accordingly, the amounts shown do not include suspense.

(3) These figures of working expenses are the administrative figures of railway accounts representing true expenses of the railway system in an accounting period irrespective of whether the expenses have been disbursed. These are accordingly the sum total of the ordinary working expenses and the appropriation to the depreciation reserve fund only; the amount of suspense and 'payments to worked lines' being not included.

(4) The operating ratio shown here represents the percentage of working expenses to gross earnings, as defined in explanations at (2) and (3) above.

(5) Net earnings represent gross earnings *minus* working expenses, as defined in explanations at (2) and (3) above.

(6) Earnings from 'carriage of goods' shown here exclude earnings from demurrage, wharfage, etc. For total goods earnings inclusive of these amounts, please see table under para on 'Traffic receipts' in Chapter II of this Volume.

(7) Includes the capital outlay of worked lines but excludes the capital-at-charge of railway manufacturing units and miscellaneous independent projects such as the Chittaranjan Locomotive Works, the Integral Coach Factory, the Locomotive Component Works, the D. B. K. Railway Project, the Railway Electrification Project, etc. Details of such manufacturing units and independent projects will be found in Statement 2(a) of Volume II of this Report for the respective years.

(8) Excludes the tonnage of railway stores and materials carried in material/ballast trains on open lines by railway constructions/project authorities for construction or independent railway project works in stock owned or hired by them.

(a) Includes earnings from Mormugao Harbour upto 1955-56.

1 mile=1.609344 kilometres. 1 kilometre=0.621371 mile.

TABLE III.—FINANCIAL RESULTS OF WORKING OF GOVERNMENT RAILWAYS ON CASH BASIS AS FOR BUDGET PURPOSES

Items	1955-56	1956-57	1957-58	1958-59	1959-60	1960-61
(1) Capital at charge** (crores) Rs.	9,68·98	10,71·71	12,22·44	13,56·59	14,32·28	15,20·87
(2) Gross traffic receipt† (crores) Rs.	316·29	347·57	379·78	390·21	422·33	456·80
(3) Working expenses (including suspense and payments to worked lines) (crores) Rs.§	258·22	279·27	309·44	321·44	334.62	358·24
(4) Operating ratio (per cent) *i.e.* item 3 × 100 / Item 2	81·64	80·35	81·48	82·38	79·23	78·42
(5) Net revenue receipts (crores) Rs.	50·34	58·38	57·78	59·32	74·55	87·87
(6) Dividend to General Revenues (crores) Rs.	36·12	38·16	44·40	50·39	54·43	55·86
(7) Surplus (+)/Deficit (—) (crores) Rs.	+14·22	+20·22	+13·38	+8·93	20·12	32·01

** Represents capital-at-charge of the Government owned lines and the Government Railway Manufacturing Units and miscellaneous independent projects detailed in Statement 2(a) of the Volume II of this Report.

Does not include the capital outlay of the worked lines of the Government Railway System.

† Gross traffic receipts equal gross earnings *plus* suspense.

§ Represent ordinary working expenses *plus* appropriation to depreciation reserve fund *plus* payments to worked lines *plus* suspense.

INTRODUCTORY NOTE

1. The Railway Board's Annual Report on Indian Railways relates to the financial year, *i.e.*, from 1 April of one year to 31 March of the year following.

Volume I is a narrative report dealing with the various aspects of railway working, such as general administration, financial results, improvements in, and additions to, rolling-stock, commercial and operating methods and results, recruitment, training and welfare of staff, and facilities provided for the convenience of the travelling public.

Volume II contains financial and statistical summaries and statements—covering the main heads of capital and revenue accounts and all other aspects of railway working. .....

2. For statistical purposes, Indian Railways are classified as follows with effect from 1 April 1952:

(i) Government Railways, and

(ii) Non-Government Railways

The details of the railways falling under each category are shown in Appendix D of this volume.

3. For the information of those not conversant with the value of Indian currency and the units thereof, the following details are given:

(*a*) One lakh equals one hundred thousand;

(*b*) One crore equals one hundred lakhs or ten millions;

(*c*) One naya paise equals 1/100th of a rupee.

The approximate value, in English coinage, of a rupee at the present rate of exchange, is one shilling and six pence.

4. Financial statistics shown under principal statistics of railway operation and in the following chapters differ according to the inclusion *or* exclusion of certain items, *e.g.*, suspense, payments to worked lines etc. Gross traffic receipts include, while gross earnings exclude, suspense. Similarly goods earnings include earnings from demurrage, wharfage, etc., while earnings from carriage of goods referred to under the principal statistics of railway operations exclude these items.

5. With the passage of the Standards of Weights and Measures Act, 1956, the yard, the pound, the standard seer and the gallon and the multiples thereof which have hitherto been the ruling units of measurements of distance, weight, and volume, will have to be replaced by the metre, the kilogram and the cubic decimetre (or litre) and their multiples, etc. The Railways decided to introduce the metric systems in the Commercial Department of the Railways, to start with, from 1 April 1960. Statistics are being maintained, with effect from that date in metric units, as the relevant basic data are available in metric units only. To enable a proper comparison being made of the performance of the railways during the future years with those of the earlier ones, the figure in F.P.S. of earlier years, have been converted into metric units. In volume I of this report, the comments and the figures in the text are expressed in terms of metric units. But in tables I, II and III, giving the principal statistics of railway operations, and graphs, in Appendix C of Volume I as well as Volume II of this report, figures are given in both metric and F. P. S. units, to facilitate easy understanding of the relative values. The conversion coefficients adopted for this purpose are given below:

CONVERSION COEFFICIENTS

F. P. S. Units		Metric equivalents
One foot	0·304801	metre
One mile	1·609344	kilometres
One square feet	0·092903	square metre

F. P. S. Units		Metric equivalents
One pint	0·568245	cubic decimetre or litre
One gallon	4·54596	cubic decimetres or litres
One pound	0·4535924	kilogram
One ton	1·016047	tonnes or 1016·047 kilograms
One passenger mile	1·609344	passenger kilometres
One ton mile	1·635169	tonne kilometres
One rupee per foot	3·280829	rupees per metre
One rupee per mile	0·621371	rupee per kilometre
One kilowatt hour per mile	0·621371	kilowatt hour per kilometre
One rupee per sq. foot	10·763915	rupees per sq. metre
One rupee per ton	0·984206	rupee per tonne
One rupee per ton mile	0·611558	rupee per tonne kilometre
One kilowatt hour per ton mile	0·611558	kilowatt hour per tonne kilometre
One pound per mile	0·281849	Kg. per kilometre
One pound per ton mile	0·277398	Kg. per tonne kilometre
One pint per mile	0·353091	C decimetre per kilometre
One pint per ton mile	0·347515	C decimetre per tonne kilometre
One gallon per mile	2·824728	C decimetre per kilometre
One gallon per ton mile	2·780116	C decimetre per tonne kilometre
One degree per mile	0·621371	degree per kilometre
One naya Paisa per mile	0·621371	naya Paisa per kilometre
One naya Paisa per ton per mile	0·611558	naya Paisa per tonne per kilometre
One rupee per gallon	0·219976	rupee per cubic decimetre

CONTENTS

		Page
	Introductory Note	(v)
Paragraph No.		
	CHAPTER I—GENERAL	
1	General features of the year	1
2	General review of working	3
3	Second Five Year Plan	5
4	Efficiency Bureau	7
5	Standing Committee (Developments)	8
6	Directorate of Statistics and Economic and Statistical Investigations	8
7	Study Week on Brahmaputra Bridge construction at Pandu for the engineers from the countries in the ECAFA region, USSR, New Zealand and France	9
8	World Bank loans and other external assistance	9
9	Acquisition of private railways	10
10	Railways and the legislature	10
11	Revision of Railway Separation Convention	10
12	National Railway Users' Consultative Council	11
13	Zonal and Regional/Divisional Railway Users' Consultative Committees	11
14	Amenities to passengers and other railway users	11
15	Staff	11
16	Progress of Hindi	12
17	Publicity and public relations	13
18	Commercial advertising	13
19	Complaints	14
20	Floods and cyclones	14
21	Pulling of alarm chains	14
22	Railway Rates Tribunal	14
23	Implementation of decisions for division of rolling-stock between India and Pakistan	15
24	Loss of man-days as a result of strikes	15
	CHAPTER II—FINANCIAL RESULTS	
	A. Agricultural Conditions and Foreign Trade during 1960-61	
25	Monsoon conditions and agricultural situation in India during 1960-61	16
26	Trade review	17
	B. Financial Results of Indian Railways	
27	Investment	18
28	Financial results of working	20
29	Traffic receipts	21
30	Ordinary working expenses	21
31	Works expenditure	22
32	Net results	23
33	Development Fund	23
	C. General Results of working of All Indian Railways (Including Non-Government Railways)	
34	Analysis of earnings	24
35	Traffic and kilometrage	24
36	Passenger earnings	24
37	Earnings from goods carried	25

Paragraph No.		Page
	CHAPTER III—TRANSPORTATION	
	A. Operating	
38	Operating General	27
39	Operating meetings	27
40	Volume of traffic handled and transportation output	27
41	Augmentation of passenger train services	29
42	Running of air-conditioned express trains	29
43	Withdrawal of second class accommodation from trains	29
44	Punctuality of passenger trains	29
45	Wagon position, broad gauge wagon pool	30
46	Wagon position, metre gauge wagon pool	30
47	Goods traffic, number of wagons loaded	30
48	Working of the revised procedure for clearance of goods traffic introduced with effect from 17 August, 1953	31
49	Transport of coal	32
50	Export traffic	32
51	Clearance of traffic from ports	33
52	Interchange with Pakistan Railways	33
53	Neutral Control examination of wagons at interchange junctions, etc.	33
54	Improvement in marshalling and other yards and their working	34
55	Movement of certain commodities by block trains	36
56	Progress made in introduction of Express Goods Trains	36
57	Introduction of "Crack Goods Trains"	40
58	Operating efficiency	40
59	Unproductive services—shunting kilometres	41
60	Coal supplies and consumption	42
61	Coal economy measures	43
	B. Commercial	
62	Alterations in rates and fares	43
63	Delay in transit of 'smalls' (goods and parcels)	46
64	Underweighment and mis-declaration	46
65	Co-ordination of rail, road and water transport	47
66	Diversion of high rated long distance traffic from rail to road and measures taken to meet road competition	47
67	Closer contact with trade and industry	48
68	Claims for compensation and refunds	48
69	Prevention of claims	52
70	Ticketless travel	52
71	Mela traffic	53
72	Measures to ensure civility and assistance on the part of the railway staff in their dealings with the public	54
73	Measures taken to foster tourist traffic	54
	CHAPTER IV—NEW CONSTRUCTION AND ENGINEERING WORKS	
74	New lines opened during 1960-61	55
75	Lines under construction during 1960-61	55
76	Lines closed during 1960-61	56
77	New surveys sanctioned during 1960-61	56
78	Construction works	56
79	Open line works	57
80	Other important works	59
81	Over and under bridges constructed in replacement of level crossings	59
82	Bridge strengthening and protection programme	60
83	Special organisation on railways for review of bridges	63

Paragraph No.		Page
84	Formation of joint committee of engineers	64
85	Scheme for enlisting co-operation of local villagers in communicating timely information of abnormal occurrences to avert train accidents	64
86	Permanent way renewals and welding of rail joints	64
87	Arrears of track renewals and speed restrictions	69
88	Damage caused to railways by floods and cyclones	71
	CHAPTER V—MECHANICAL AND ELECTRICAL ENGINEERING AND ROLLING-STOCK	
	A. Mechanical Engineering	
89	Renewals and additions to equipment	73
90	Tractive effort of locomotives	75
91	Manufacture of locomotives and boilers in India	75
92	Improvements to workshops, running sheds, carriage and wagon depots	75
93	Progress of new workshops	75
94	Steps taken towards improving productivity	75
95	Extent of dieselisation	76
96	Repairs to rolling-stock in railway workshops and running sheds/transportation repair depot	76
97	Position of overage rolling-stock on railways	78
98	Rolling-stock taken off the line	80
	B. Electrical Engineering	
99	Electrification of railway lines	80
100	Electrification of stations	83
101	Provision of water coolers	83
102	Provision of push buttons in the ladies compartments as a safety measure	83
103	Provision of additional fans, lights and equipments, etc. in coaching stock	83
104	Battery charging sets	83
105	Installation of air-conditioning plants in offices, etc.	83
106	Electrification of staff quarters	83
107	Electric power for railways	84
	CHAPTER VI—SIGNALLING AND TELE-COMMUNICATION	
108	**General**	85
109	Signalling works	85
110	Signal workshops	87
111	Tele-communication	87
112	Indigenous Production	88
	CHAPTER VII—RESEARCH, DESIGNS AND STANDARDIZATION	
113	**General**	89
	A. Research	
114	Civil engineering research	89
115	Mechanical engineering research	90
116	Metallurgical and chemical research	90
	B. Designs And Standardization	
117	Standards committees	90
118	Civil engineering designs and standards	90
119	Signals, designs and standards	91
120	Architectural designs	91
121	Locomotive designs and standards	91
122	Carriage and wagon designs and standards	91
123	Introduction of the metric system	92

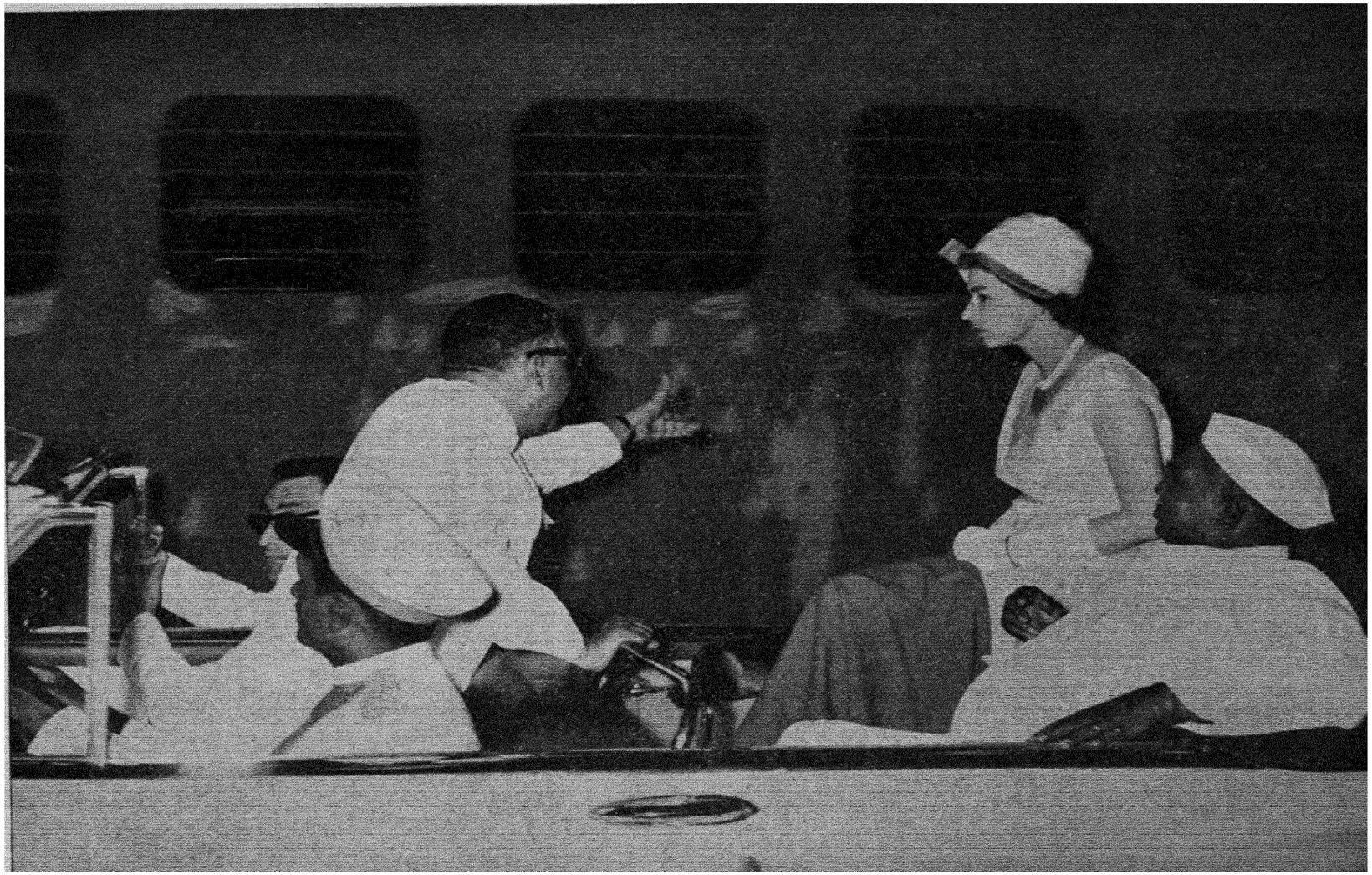
Paragraph No.		Page
	CHAPTER VIII—RAILWAY EQUIPMENT AND STORES	
124	General	93
	A. Purchases	
125	Value of railway equipment and stores ordered	93
126	Payments made for railway equipment and stores	93
127	Purchase of stores within the country	94
128	Purchase of stores from cottage and small-scale industries.	95
129	Purchase of *khadi*	95
	B. Stores Transactions on the Railways	
130	Review of annual statement of stores transactions and stores balances, including overstocks, surplus stores and scrap	95
131	Revision of stocking limits—review of overstocks and surplus stores	96
132	Utilisation and disposal of ferrous scrap	96
	C. Supply position of Vital items	
133	Steel	98
134	Timber—other than wooden sleepers	100
135	Timber—wooden sleepers purchase organisation	100
136	Wooden—cast iron, steel and concrete sleepers	100
137	Working of sleeper treatment plants	102
138	Use of various kinds of sleepers on Indian Railways	103
139	Cement	103
140	Other vital stores	103
141	Development of indigenous manufacture of railway stores	104
	CHAPTER IX—STAFF	
142	General	107
143	Number of staff	107
144	Cost of staff	107
145	Direct recruitment to gazetted railway services	109
146	Promotion to Class I Railway Services	109
147	Railway Staff College, Baroda	109
148	Railway Service Commissions	109
149	Recruitment of scheduled castes and scheduled tribes in non-gazetted railway services	110
150	Technical training facilities for staff	111
151	Relations with labour	111
152	Permanent negotiating machinery for settlement of disputes	113
153	Joint committees of management and staff	113
154	Working of staff councils and advisory committees for welfare works	113
155	Implementation of labour laws	114
156	Service conditions of staff—Pay Commission's recommendations	115
157	Labour welfare	115
158	Railwaymen's Co-operative Credit Societies and Banks	121
159	Railwaymen's Consumer Co-operative Societies	122
160	Railwaymen's Co-operative Housing Societies	123
161	Encouragement to Co-operative Labour Contract Societies	123
162	Provision of quarters for staff	123
163	Activities of the Medical Department	124
164	Miscellaneous	125
	CHAPTER X—SECURITY AND VIGILANCE	
165	General	128
166	Organisation	128
167	Anti-sabotage measures	129
168	Crime	129
169	Vigilance organisation	130

Paragraph No.		Page
	CHAPTER XI—AMENITIES TO PASSENGERS AND OTHER RAILWAY USERS	
170	General	132
171	Improved lower class coaches	132
172	Improvements to coaching stock	132
173	Booking offices, out-agencies, street collection and delivery services	132
174	Waiting rooms and waiting halls	135
175	Additional platforms and sheds	136
176	Reservation facilities	137
177	Catering arrangements	138
178	Sale of cheap food packets	138
179	Arrangements for the sale of milk	138
180	Supply of drinking water	138
181	Action taken to maintain cleanliness of station premises	139
182	Social education	139
183	Steps to alleviate overcrowding in trains	139
184	Actual expenditure out of Development Fund under detailed heads on passengers and other railway users' amenities	140
	CHAPTER XII—ACCIDENTS	
185	Major accidents	141
186	Review of accident statistics	141
187	Claims settled by the *ad hoc* claims commissioners and *ex-officio* claims commissioners	144
	APPENDICES	
A.	Resolution regarding the separation of Railway from General Finance adopted by the Legislative Assembly on 20 September 1924 and Convention Resolutions of 1943, 1949, 1954, 1959 and 1960	145
B.	Officers of the Ministry of Railways (Railway Board) and Attached Offices as on 31 March 1961	151
C.	Graphs—	
	I Total capital at charge, total gross earnings and total working expenses of All Indian Railways	160
	II Number of passenger carried on All Indian Railways	161
	III Number of passenger kilometres/miles on All Indian Railways	162
	IV Average kilometres/miles a passenger was carried on All Indian Railways	163
	V Average rate charged per passenger per kilometre/per mile (in naye Paise), All Indian Railways	164
	VI Average rate charged per tonne kilometre/per ton per mile (in naye Paise), average lead of a tonne/ton of goods, total net tonne kilometres/ton miles and total tonne/tons carried—All Indian Railways	165
	VII Rolling stock in service on All Indian Railways	166
	VIII Average number of wagons/vehicles per train and wagon/vehicle kilometres/miles per wagon/vehicle day—Government Railways	167
	IX Total number and cost of staff on Government Railways	168
D.	List of Railways in India	169
E.	Principal Statistics of Railway working in selected foreign countries	171
F.	Railway-wise details of Plan head expenditure for the year 1960-61	173
	DIAGRAM	
	Total capital outlay, gross earnings, working expenses and length in kilometres	After page [XIII]
	Railway map of India, Railway information corrected upto 31 March 1961	Inside the packet in the back cover

LIST OF PHOTOGRAPHS

	Facing Page No.
Her Majesty Queen Elizabeth visiting the Integral Coach Factory on 20 February, 1961—on her left is Shri Jagjivan Ram, Minister for Railways	1
Inauguration of A. C. Electric Traction on Eastern Railway by the Minister for Railways on 22 December, 1960—Railway Electrification	9
Top level Railway and other high-way Engineers from some of the countries of the ECAFE Region, U.S.S.R., New Zealand and France who visited India to participate in the Brahmaputra Bridge study, are seen at an electric Sub-station at Kumardubi—Eastern Railway	9
Refrigerated Vans built in Matunga Workshop for transport of fish—Central Railway	27
A Special Goods train carrying an oversize heavy consignment for the Oil Refineries at Gauhati—Northeast Frontier Railway	27
A view of the Electric Loco Shed at Asansol—Railway Electrification	32
One of the biggest Exchange Yards of the country at Andal near Asansol—Eastern Railway	34
Traction Power Controller on duty in the remote Control Centre at Asansol—Railway Electrification	40
Permanent Way Engineers inspecting the over flooded railway track at Rohtak—Northern Railway	40
Shri Jagjivan Ram, Minister for Railways, pulling a Miniature Lever which showed green signal to the First Ranchi-Howrah express on the opening of Chandrapura-Muri-Ranchi line—Eastern Railway	55
Shri Jagjivan Ram, Minister for Railways opening, the Khandwa-Hingoli Metre gauge Rail Link at Akola, on 2 January, 1961. This connects Northern and Southern Metre gauge zones—Central Railway	55
View of a deep cutting on the Muri-Ranchi Broad gauge line—Eastern Railway	56
A view of the first train entering rebuilt Bridge No. 10 on the Vriddachalam-Salem Section in September, 1960—Southern Railway	56
Regirdering the Central 250′ span of Ken Bridge on Jhansi-Manikpur Section—Central Railway	60
Regirdering of a Bridge with prestressed concrete spans on Guntakal-Dharmavaram Section—Southern Railway	60
Jhonjhor Bridge under construction on Sambalpur-Titlagarh Project—D. B. K. Railway Project	63
Reconstruction of the bridge, heavily damaged during the floods of August, 1960, between Rupsa and Basta Stations—South Eastern Railway	63
Oscillometer—an instrument to indicate the characteristics of Rolling-Stock, is manufactured in Loco Works, Perambur—Southern Railway	73
Electric Locomotive under erection—Chittaranjan Locomotive Works	73
A view of 75-Ton heavy Reactor loaded on a specially built 16 wheeled Skeletal wagon constructed in Parel Shops—Western Railway	74
A view of the Special type 'Box' wagon with 5 doors opening upwards used for transport of coal—Southern Railway	74
The Carriage Washing Yard as completed and brought into use at Basin Bridge—Southern Railway	75
Trainees at work in the new Signal Engineering Laboratory. The multi-lamp route indicator can be seen in the back-ground—The Indian Railways Signal Engineering and Tele-commuication School, Secunderabad	85
Trainees performing an experiment on the design of Cam-paths of double-wire signal mechanisms with the aid of stroke Analyser equipment designed in the Institution—The Indian Railways Signal Engineering and Tele-communication School, Secunderabad	85
Childrens' corner containing numerous items of interest to children in Central Hospital at Gorakhpur—North Eastern Railway	116
Sewing classes conducted at Carnac bunder for the Railway employees' families—Western Railway	116
Inauguration of the staff canteen at Delhi-Kishanganj—Northern Railway	116
Open Air Theatre "Rabindra Manch"—Chittaranjan Locomotive Works	118
A view of the Staff drawing books from Metre gauge mobile library at Ajmer—Western Railway	119
Free milk distribution centre at Kasturba Gandhi Hospital—Chittaranjan Locomotive Works	119
A view of the children of Railway employees camped in Kashmir—North Eastern Railway	120

	Facing Page No.
A view of the camp of the Railway employees children at Kashmir—Western Railway	120
Front view of the Jagjivan Ram Hospital at Bombay Central having an accommodation of 150 beds—Western Railway	124
Electric cardiogram being taken of a patient at Gauhati Railway Hospital—Northeast Frontier Railway	124
A view of the new station building at Bhagalpur—Eastern Railway	132
New III Class waiting hall at Gwalior Station—Central Railway	132
A view of the Escalator at Delhi main Railway Station—Northern Railway	133
An interior view of a newly built, fully furnished first class coach—Integral Coach Factory, Perambur	133
The new suburban wing of the Howrah station opened on 14 April, 1960—Eastern Railway	135
A view of the remodelled Station building of Kathgodam—North Eastern Railway	135



HER MAJESTY QUEEN ELIZABETH VISITING THE INTEGRAL COACH FACTORY ON 20 FEBRUARY 1961. ON HER LEFT IS SHRI JAGJIVAN RAM, MINISTER FOR RAILWAYS

CHAPTER I

GENERAL

1. General features of the year.—An impressive rise in industrial production and improvement in agricultural output*—specially foodgrains—surpassing the record reached in 1958-59, and a rise in national income and aggregate investment were the highlights of the Indian economy during 1960-61, the final year of the Second Five Year Plan. There was, however, a further rise in the price level; the general index of wholesale prices, with 1952-53 as the base = 100, showed a further rise of 6.6 per cent, *i.e.*, from 117.1 in 1959-60 to 124.8 in 1960-61. The bulk of the rise in the general price level during 1960-61 occurred in the industrial raw 'materials' and 'manufactures' groups, the indices of which increased by 17.5 per cent and 10.9 per cent respectively. The increase in the 'food articles' group was negligible.

The tempo of developmental activity was further stepped up during 1960-61, both in the public and the private sectors. The external payments position showed a distinct deterioration. There was a sharp increase in imports, particularly of food and capital goods. Exports showed only a marginal rise, due partly to a fall in the output of some commodities like raw cotton, raw jute and tea and partly to growing foreign competition.

As regards agricultural production, despite phenomenal floods and heavy rains in parts of Assam, Orissa, the Punjab and Uttar Pradesh and drought conditions in Andhra Pradesh and Mysore, the production of foodgrains reached a new record of 80.5 million tonnes in 1960-61, compared with the partially revised estimates of 75.9 million tonnes for 1959-60, indicating a rise of 6.1 per cent. The output of oilseeds in 1960-61 recorded an increase of 11.0 per cent over the previous year, to reach a figure of 6.64 million tonnes. Amongst commercial crops, while the output of cotton increased substantially by 46.7 per cent—from 36.78 lakh bales in 1959-60 to 53.94 lakh bales in 1960-61—the production of jute showed a decline from 46.05 lakh bales to 40.30 lakh bales, or by 12.5 per cent. Production of sugarcane increased by 13.1 per cent—from 76.4 million tonnes in 1959-60 to 86.4 million tonnes in 1960-61. Production of tea declined from 326.45 thousand tonnes in 1959 to 315.75 thousand tonnes in 1960 indicating a fall of 3.3 per cent.

Industrial production recorded a further marked increase, the general index of industrial production, with base 1951 = 100, reaching 170.3 for 1960 against 151.9 for 1959, or an increase of 12.1 per cent. Over the Second Plan period as a whole, the index of industrial production recorded an increase of 39.1 per cent. More than two-thirds of the increase in industrial output during 1960 was accounted for by capital goods and intermediate products. Taking individual industries, production of steel rose by about 25 per cent in 1960, to reach a figure of 2.2 million tonnes, against 1.76 million tonnes in 1959, the bulk of the increase coming from the two leading units in the private sector. In the public sector projects, further progress was made during the year under review in the opening of new units. Production of pig iron and ferro-alloys also recorded a significant increase of 35 per cent—from 3.1 million tonnes in 1959 to 4.2 million tonnes in 1960. Output of cement rose from 6.9 million tonnes in 1959 to 7.8 million tonnes in 1960, showing an increase of 13 per cent. The production of coal registered a sharp increase—from 47.8 million tonnes in 1959 to 52.6 million tonnes in 1960, or by 10.1 per cent which was substantially higher than the increase of about 4 per cent in each of the previous two years. The production during 1960 was about 8.3 million tonnes short of the target of 60.9 million tonnes envisaged under the Second Plan.

* The production statistics commented upon in this paragraph do not necessarily correspond to the financial year in every case. For example, industrial production statistics are compiled for calendar years, except for sugar which follows the sugar-cane season. The agricultural output figures relate to the crop years ending June, except in the case of sugar-cane for which the season extends from November of the year to October of the next year, and tea for which the figures are maintained for calendar years.

Production of cotton cloth showed a modest rise of 2.5 per cent—to 4,616 million metres in 1960 from 4,500 million metres in 1959. The offtake of mill-made cloth, however, recorded a decline, partly due to a fall in exports. Output of jute goods amounted to 1,084 thousand tonnes in 1960, against 1,068 thousand tonnes in 1959. Although the overall production for the year showed an increase, there has been a decline in output from September, 1960, mainly due to the sealing of looms by jute mills and reduction in working hours due to shortage of raw jute. Owing to a sharp rise in prices of jute manufactures, offtake of jute goods recorded a decline in 1960. Sugar output recorded a further sharp rise in the 1960-61 season, and was about 29—30 lakh tonnes, against 24.85 lakh tonnes in the 1959-60 season, but domestic consumption has been more or less stagnant. Output of salt increased from 3.18 million tonnes in 1959, to 3.44 million tonnes in 1960.

The light mechanical engineering industries showed further substantial increase in production. In the chemical and allied group, significant increases in output were recorded under many of the items, such as superphosphate, sulphuric acid, caustic soda, soda ash, etc. The output of superphosphate rose by 22 per cent—from 2.7 lakh tonnes in 1959 to 3.3 lakh tonnes in 1960, while the output of sulphuric acid increased by 21 per cent—from 3.0 lakh tonnes to 3.6 lakh tonnes.

As regards the foreign trade of India, the external payments position showed a deterioration in 1960-61 as compared to 1959-60, owing to larger import payments and smaller invisible receipts, reflecting the growing impact of the developmental process. Export earnings rose only marginally, while the import bill went up by Rs. 164 crores. Unlike in the last year, the rise in export receipts was mainly the result of the high level of prices of jute manufactures. Imports of capital equipment for projects rose by Rs. 3 crores and of iron and steel and railway stores by Rs. 5 crores each, while food imports increased by Rs. 87 crores entirely under the "P. L. 480 programme". Import payments for mineral oils declined by a twelfth over the previous year. Private imports of metals, machinery and vehicles rose substantially. Also, raw materials like chemicals and dyes and raw cotton had to be imported in larger quantities. On the export front, jute manufactures earned Rs. 25 crores more, metallic ores brought in Rs. 6 crores more, and spices and cashew kernels fetched Rs. 3 crores and Rs. 2 crores more than the previous year. All other major items of exports such as, oilseeds and oilcakes, vegetable oils, cotton raw and manufactures, hides and skins and tea, recorded a decline.

The 'quick estimates' of national income for 1960-61 show an increase of 6.5 per cent in real terms (at 1948-49 prices) over 1959-60—from Rs. 1,17,60 crores to Rs. 1,25,30 crores. The rise in national income during the Second Plan period was 19.6 per cent in real terms—from Rs. 1,04.80 crores in 1955-56 to Rs. 1,25,30 crores in 1960-61, at 1948-49 prices. The rate of increase in the First Plan period was of the order of 18.4 per cent.

Another event of the year under review worth mention was the decennial census conducted during February-March, 1961. According to the provisional figures, the population of India in March, 1961, was 436 million, showing a rise of 77 million over that in 1951. The mean decennial rate of growth in the decade was of the order of 21.5 per cent, which was substantially higher than the rate of growth of 13.3 per cent in the 1941-51 decade.

The operating and financial results of the Indian Railways fully reflect the aforesaid trends in the economic activities of the country. Passenger traffic, measured in terms of passengers originating and passenger kilometres, registered a further increase during the year in tune with the rising trend of the national income. Goods traffic, in terms of tonnes originating and tonne kilometres, also recorded further improvements over the previous year, reflecting the continued rise in the industrial and agricultural output. It has to be remembered, however, that the railway working during the year under review was affected by the country-wide partial strike of some of the Central Government employees for a few days in July, 1960; the year also witnessed extensive floods in many areas of the country, including not only areas liable to floods but also those usually not so liable.

2. General review of working.—Gross earnings* for the year 1960-61 of Indian Railways, including non-Government Railways, amounted to Rs. 4,59.38 crores, against Rs. 4,24.06 crores for the year 1959-60. Compared with the previous year, the earnings from passengers carried increased by Rs. 6.03 crores, or 4.76 per cent, while earnings from goods carried registered an increase of Rs. 25.14 crores or 9.81 per cent in 1960-61. The increase in goods earnings is attributable partly to the increase in the volume of revenue-earning goods traffic and partly to the levy of 5 per cent surcharge on goods traffic other than on military, postal and railway materials and stores as well as on iron ore and manganese ore for export.

The gross traffic receipts† of Government Railways amounted to Rs. 4,56.80 crores. After meeting all charges, including depreciation amounting to Rs. 45.79 crores including also miscellaneous expenditure such as on open line works revenue but excluding interest charges, the net revenue on the results of working for the year amounted to Rs. 87.87 crores, against Rs. 74.55 crores in 1959-60 or about 18 per cent increase in net revenue for an increase in capital at charge of about 6 per cent. In accordance with the terms of the Railway Convention, an amount of Rs. 55.86 crores was paid as 4 per cent dividend on the capital invested out of the general revenues in the railway undertaking, excluding the strategic lines. The surplus for the year amounted to Rs. 32.01 crores as against Rs. 20.12 crores in 1959-60, representing an increase of Rs. 11.89 crores. The improvement in financial results of Indian Government Railways registered in 1959-60—after the deterioration in 1958-59 and to a smaller extent in 1957-58 due to slow growth of industrial production in the country—was thus maintained and even increased further in 1960-61. The operating ratio reflecting broadly the efficiency of financial performance, the return on capital and the net surplus in 1960-61 were the best in the entire period from 1952-53, *i.e.*, from regrouping of railways to 1960-61.

Certain important statistics relating to the traffic handled during 1960-61, compared with 1959-60, for all railways taken together are given below:

PRINCIPAL STATISTICS OF WORKING OF INDIAN RAILWAYS
(INCLUDING NON-GOVERNMENT RAILWAYS)

Items		1959-60	1960-61	Percentage inc. (+) or dec. (—) over 1959-60
Number of passengers originating	(millions)	1,528·6	1,615·9	+5·71
Passenger kilometres	(millions)	74,190	78,184	+5·38
Earnings from passengers	(crores) Rs.	1,26·49	1,32·52	+4·76
Average amount earned per passenger per kilometre	(Naye Paise)	1·72	1·71	—0·58
Average length of passenger journey	(kilometre)	48·5	48·4	—0·21
Freight tonnes originating §	(millions)	147·9	157·4	+6·43
(*a*) Revenue-earning traffic	(millions)	112·0	120·9	+7·89
(*b*) Non-revenue traffic §	(millions)	35·9	36·5	+1·88
Net tonne kilometres	(millions)	82,075	87,833	+7·02
(*a*) Revenue-earning traffic	(millions)	69,120	72,417	+4·77
(*b*) Non-revenue traffic	(millions)	12,955	15,416	+19·0
Earnings from revenue-earning tonnes	(crores) Rs.	2,56·12	2,81·26	+9·81
Average amount earned per revenue-earning tonne per kilometre.	(Naye Paise)	3·74	3·88	+3·74
Average lead of a tonne of goods (both Revenue and Non-Revenue traffic).	(kilometre)	555·1	558·1	+0·54

During the year the number of passengers originating as well as passenger kilometres increased by 5.71 per cent and 5.38 per cent respectively over the previous year. There is, however, a slight drop in the average distance travelled by each passenger in 1960-61 as compared to last year and this

* Gross traffic receipts include, while gross earnings exclude, 'suspense'.

† Rs. 0.79 crore are chargeable to the manufacturing suspense (capital) being depreciation on capital assets of the Chittaranjan Locomotive Works (Rs. 59 lakhs) and the Integral Coach Factory (Rs. 20 lakhs) as explained in Chapter II.

§ Excludes the tonnage of railway stores and materials carried in material/ballast trains on open lines by railway constructions/project authorities for construction or independent railway project works in stock owned or hired by them.

is noticeable in all the classes except the Second Class. Under goods traffic also, there have been increases both under tonnes originating and net tonne kilometres in 1960-61. The average haul of a tonne of goods further increased from 555.1 kilometres in 1959-60 to 558.1 kilometres in 1960-61.

The position on Government Railways is also similar. The number of passengers originating as well as passenger kilometres increased from 1,510 million to 1,596 million and from 73,809 million to 77,787 million respectively.

The total volume of goods traffic inclusive of non-revenue traffic on Government Railways stated in terms of net tonne kilometres recorded, during the year, an increase of 7.01 per cent over the previous year. The increase in revenue earning and non-revenue traffic amounted to 4.76 per cent and 19.0 per cent respectively. The analysis of the traffic according to principal commodity groups during the year as compared with the previous year is given below:

DISTRIBUTION OF TONNE KILOMETRAGE UNDER PRINCIPAL COMMODITY GROUPS (GOVERNMENT RAILWAYS)

	1959-60 per cent	1960-61 per cent
Coal for the public and non-Government railways	23·80	23·40
Grains	11·65	10·96
Oil seeds	1·27	1·32
Other Revenue-earning commodities	47·48	46·75
Total Revenue-earning traffic	84·20	82·43
Railway coal	13·52	15·33
Railway stores and materials	2·28	2·24
Total non-revenue traffic §	15·80	17·57

To handle this increase in traffic, both passengers and goods, the Government Railways had necessarily to put in more transportation output in terms of train kilometres, vehicle and wagon kilometres and improve the operating efficiency all-round. The railways ran 7.81 million more train kilometres (excluding departmental) in 1960-61 over 1959-60—an increase of 2.12 per cent. The passenger train kilometres increased by 1.22 per cent and the goods train kilometres by 3.42 per cent over the previous year.

As compared with 1959-60, the percentage of trains not losing time to the total improved from 84.70 to 85.75 on the broad gauge and from 82.20 to 82.58 on the metre gauge. The average speed of goods train improved from 15.8 kilometres to 16.1 kilometres on the broad gauge and from 13.3 kilometres to 13.7 kilometres on the metre gauge.

The average freight load hauled by each goods train increased on the broad gauge by 25 tonnes—from 631 to 656 and on the metre gauge by 10 tonnes—from 288 to 298. The composite index of engine utilization—net tonne kilometres per locomotive day on line/in use—set up new records on both the gauges in 1960-61.

The number of wagons loaded on the broad gauge during 1960-61, was 6,164,112 an increase of 257,012 wagons, or, 4.35 per cent over the figures for the previous year. On the metre gauge the number of wagons loaded was 3,592,929 or 3.16 per cent more than previous year. The kilometrage performed daily on an average by a wagon had increased from 76.6 to 76.9 kilometres on the broad gauge and from 48.8 to 51.6 kilometres on the metre gauge in 1960-61. As compared with 1959-60, the net tonne kilometres per wagon day recorded increases from 970 to 998 on the broad gauge and from 376 to 405 on the metre gauge.

The percentage of engines under or awaiting repairs decreased from 14.9 to 14.5 on the broad gauge and from 14.4 to 13.8 on the metre gauge during 1960-61, while the percentage of wagons under or awaiting repairs dropped from 3.79 to 3.37 on the broad gauge, it increased from 4.32 to 4.52 on the metre gauge in 1960-61.

§ Excludes the tonnage of railway stores and materials carried in material/ballast trains on open lines by railway constructions/project authorities for construction or independent railway project works in stock owned or hired by them.

The operating performance and operating efficiency of Indian Railways are commented upon in detail in Chapter III of the Report.

3. Second Five Year Plan.—The year under report was the last year of the Second Five Year Plan. It would, therefore, be appropriate to briefly review the performance of the railways during the Second Plan period as a whole.

The railways were set the task of developing necessary capacity for handling 164.6 million tonnes of originating traffic, a large part of which was accounted for by the contemplated developments in basic industries like steel, coal and cement. The railways, in fact, reached the capacity for coping with the rate of movement of the order of 164.6 million tonnes as estimated by the tonnage lifted during the second half of 1960-61. The total originating traffic in 1960-61, however, is placed at 156.0 million tonnes, the shortfall in the originating tonnage as compared to earlier expectations being accounted for mainly by the fact that production in the steel plants and the transport requirements for them did not come up to the planned targets and by the loss of about 3.05 million tonnes of freight traffic as a result of the partial strike of Central Government employees in July, 1960. Judged, however, by the workload, as more properly measured in tonne kilometres, the railways handled 87,754 million tonne kilometres of freight during 1960-61, against 84,743 million tonne kilometres envisaged in the Second Plan, corresponding to the target of 164.6 million tonnes of originating traffic. The increase in tonne kilometres, in spite of the reduction in originating traffic, occurred as a result of longer average lead of movement of raw materials for the steel plants and coal for other consumers, due to a change in the pattern of field-wise production from what was originally envisaged. During the whole Second Plan period, the originating traffic increased by 35 per cent and the tonne kilometres by 47.3 per cent. The corresponding increases in the available locomotive tractive effort, wagon holdings, track kilometrage and in the capital investment were of a much smaller order, indicating clearly a more efficient usage of railway assets.

The year-wise growth of traffic since the end of the First Five Year Plan was as follows:

Year	Originating freight traffic (millions tonnes)	Originating passengers (millions)
1955-56	115·9	1,275
1956-57	126·1	1,360
1957-58	134·6	1,410
1958-59	137·4	1,422
1959-60	146·6	1,510
1960-61	**156·0**	**1,596**

As regards passenger traffic, the railways had anticipated that, during the Second Five Year Plan, the increase would be about 25 per cent, which was the actual increase achieved, against the plan provision of 15 per cent.

Since 1958, when difficulties of foreign exchange and internal resources for the plan as a whole became apparent, the Railway Plan had been under constant scrutiny, with a view to achieving the physical targets of the plan and yet keeping the expenditure within the original allotment despite rise in prices. Adjustments and rephasing of the earlier railway programmes had been made, and it was the endeavour to create just that capacity as was needed to carry the traffic. As a result of this, some of the works have been carried over into the Third Five Year Plan—the main estimates of the railway programme of which were worked out tentatively in 1960-61—along with the works which had been initiated in preparation for the traffic to be handled in the early years of the Third Plan.

One of the major tasks of the railways during the Second Plan was to further overtake the arrears of replacements of their assets within the resources available in continuation of what was done in the First Plan. This

was done to the maximum extent, although there was a slight shortfall in renewals of track due to shortfall in the supply of rails from indigenous sources, necessitating imports which, however, were restrictive.

Some of the important achievements during the year are detailed in the following paragraphs:

Self-sufficiency.—At the Chittaranjan Locomotive Works the production was 173 W.G. broad gauge steam goods locomotives, making a total of 831 locomotives during the Second Plan period and 1,179 locomotives, since the commencement of production in November, 1950.

At the Integral Coach Factory, Perambur, which is equipped to manufacture in single shift 350 unfurnished coaches per annum, second shift working is being gradually introduced. When fully introduced, the capacity will go upto 700-750 coach shells per annum. During the year 1960-61 583 coach shells were turned out of the Factory making a total of 1,720 coaches during the Second Plan period and 1,733 coaches since the commencement of production in October, 1955.

The receipt of rolling stock in 1960-61 was as follows:

	Broad gauge	Metre gauge	Narrow gauge	Total
Locomotives				
Steam	173	99	—	272
Diesel	—	—	—	—
Electric	97	—	—	97
Total	270	99	—	369
Coaches	712	711	32	1,455
Wagons (in terms of 4-wheelers):	11,396	—	1,034	12,430

Track renewals.—Against a planned target of 12,875 kilometres of rail renewals and 12,875 kilometres of sleeper renewals, a total of 9,959 kilometres of rails and 11,364 kilometres of sleepers were renewed, the shortfall being mainly due to difficulties in the supply of rails.

Bridge works.—During the plan, the bridge across the Ganga at Mokameh was completed.

Gandak bridge.—The work on the bridge costing about Rs. 1.93 crores on the river Gandak between Sonepur and Hajipur on the North Eastern Railway was completed and it was opened to traffic on 18 October, 1960.

Brahmaputra bridge.—This bridge costing Rs. 9.88 crores across the river Brahmaputra between Amingaon and Pandu on the Northeast Frontier Railway consists of ten spans of 122.95 metres with 2 approach spans of 33.20 metres. It will carry 2 metre gauge railway tracks on the lower deck and 7.32 metres wide roadway with two foot paths of 1.83 metres width on either side on the upper deck. It will allow a clear height of 12.19 metres above the normal high flood level. During the year, the foundation of the main bridge was completed and 80 per cent of the earth work for the approaches, sidings and yard was done. The work on the linking of track in sidings was in progress.

Electrification.—Upto 1959-60, a total of 143.0 route kilometres (396.5 track kilometres) were electrified.

In addition, the following sections comprising a total route kilometrage of about 218.5 kilometres (634.0 track kilometres) were commissioned during the year under review:

(i) Asansol-Dhanbad including Pradhankanta-Pathardih,

(ii) Dhanbad-Gomoh,

(iii) Asansol-Waria, and

(iv) Dangoaposi-Rajkharswan.

Thus in all during the plan period a total of 361.5 route kilometres (1.030.50 track kilometres) has been electrified.

In addition to the above sections, the work of electrification on another 528.0 route kilometres is in advanced stages of completion.

Staff quarters and staff welfare.—As against a planned target of 54,000 staff quarters during the Second Five Year Plan, about 10,000 quarters were constructed in 1960-61 making a total of 57,000 during the Second Plan period.

New lines.—From the beginning of the Second Plan, *i.e.*, 1956-57 a total of 653.39 kilometres of broad gauge and 611.55 kilometres of metre gauge lines have been opened and about 1,609.34 kilometres of broad gauge and 402.34 kilometres of metre gauge lines, mostly included in the Third Plan, were in various stages of construction.

Total plan provision and actual expenditure.—The following table gives the plan provision and the actual expenditure incurred during five years of the Second Plan.

TOTAL PLAN PROVISION AND ACTUAL EXPENDITURE, 1956-57, 1957-58, 1958-59, 1959-60 AND 1960-61

Second Five Year Plan

STATEMENT SHOWING THE PROGRESS OF EXPENDITURE

(Figures in crores of rupees)

Plan-Heads	Original Plan allotment	Actuals 1956-57	Actuals 1957-58	Actuals 1958-59	Actuals 1959-60	Actuals 1960-61	Total for 5 years (1956-61)
1. Rolling Stock (excluding stock provided as part of electrification projects.)	380	93·75	84·38	75·10	57·20	62·19	372·62
2. Machinery and Plant	**	4·13	4·13	3·54	2·73	2·47	17·00
3. Track renewals	100	19·41	33·66	50·07	43·73	41·97	188·84
4. Bridge works	24	0·75	3·20	6·09	7·76	7·03	24·83
5. Ganga Bridge	9	2·38	2·33	2·45	0·16	(—)0·09	7·23
6. Traffic facilities	186	15·80	30·09	45·79	40·30	41·46	173·44
7. Signalling and Interlocking Works, etc.	25	1·58	2·08	3·79	4·41	5·45	17·31
8. Workshops exoluding those provided as part of electrification projects.	65	3·41	4·76	7·09	6·53	6.31	28·10
9. Electrification (Electric traction) and other electrical works.	65†	4·08	13·78	6·49	10·94	18·48	53·77
10. Staff quarters	50	6·77	8·95	7·26	6·25	8·63	37·86
11. Amenities for Staff		1·36	2·08	2·07	2·81	3·00	11·32
12. Passenger and other Railway users' amenities.	15	3·91	3·24	2·72*	2·37‡	2·47	14·71
13. New lines (excluding electrification and Ganga Bridge projects) and Restoration of dismantled lines	66	8·39	14·05§	13·22	16·59	25·58	77·83
14. Investment in road services	10	1·45	0·46	0·75	1·17	1·51	5·34
15. Other specified works	21·5	5·05	8·71	7·24	5·76	3·63	30·39
16. Increase or decrease in balances under :—							
(*a*) Stores suspense	90¶	18·00	30·52	16·48	—21·37	(—)15·58	28·05
(*b*) Manufacture suspense	..	0·64	1·11	2·24	—1·47	(—)5·65	(—)3·13
(*c*) Miscellaneous advances	..	..	8·58	—0·32	+3·62	(—)8·15	3·73
17. Credits or recoveries :—							
(*a*) Credits for released materials	..	—4·66	—4·10	—5·93	—8·75	—11·18	(—)34·62
(*b*) Other credits	..	—7·25	—0·54	—0·97	—0·98	—1·19	(—)10·93
Total	11,06·5	1,78·95	2,51·47	2,45·17	1,79·76	1,88·34	10,43·69

* Inclusive of Rs. 4 lakhs on replacement account charged to the depreciation reserve fund.
† Excludes Rs. 15 crores for the Posts and Telegraphs and the power supply authorities.
‡ Includes Rs. 1 lakh on replacement account.
§ Includes Rs. 80.43 lakhs paid for the purchase of financial interests of Salem and Tanjore district board lines—a charge against 67-C—Capital contributed by railway companies towards outlay on Indian Railways—discharge of debentures—and excludes Rs. 3.5 crores in respect of Visakhapatam Port transferred to the Ministry of Transport and Communications with effect from 1 October, 1956.
¶ Includes Rs. 40 crores on account of extra provision for imported steel.
** Included under item 8 above.

NOTE.—The shortfall in outlay of about 6 per cent, as compared to the plan provision, was due *inter alia* to the set back in the wagon production in the country on account of the difficulties in procuring matching steel.

NOTE.—The Railwaywise details of expenditure for the year 1960-61 are given in Appendix F on page 173.

4. Efficiency Bureau.—The Bureau continued to engage its attention to studies of certain aspects of railway operation and working. In continuation of their study on the speed of goods trains—broad gauge completed last year—a similar study in respect of the metre gauge system was also prepared by the Bureau. Spot checks on terminal operation at certain

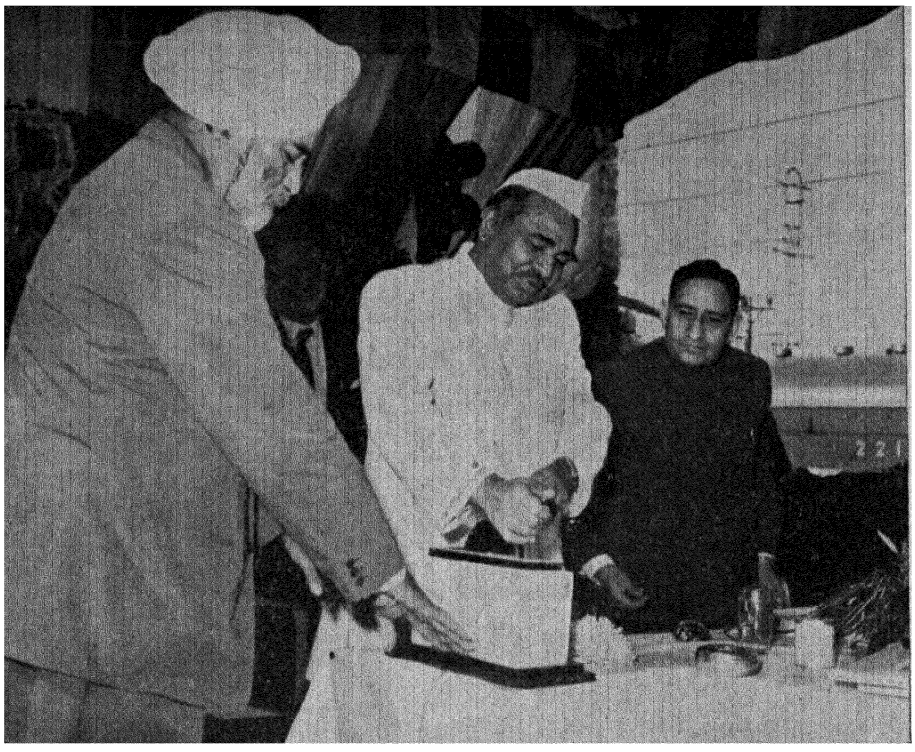
selected stations on the Central, the Western and the Southern Railways; a fresh assessment of relative workload on zonal railways; determining the impact of line capacity works; pooling of engines and yard remodelling on the speed of goods trains; and a study of locomotive performance on the North Eastern Railway were some of the other important investigations completed by the Bureau during the year under review. They also continued to take follow-up action with the zonal railways in regard to certain studies which had already been completed.

5. Standing Committee (Developments).—The Committee consisting of the Additional Member (Mechanical) as Chairman; Director, Statistics and Economic Adviser; Director, Efficiency Bureau; Director, Research, Lucknow and Director, Standards (Mechanical), Simla as members, and the Deputy Director (Traffic), Efficiency Bureau, as Secretary, continued its work of keeping in touch with new developments in other countries as well as the changing needs of our own country, by going through the current technical literature published abroad and in India. In all, 15 different items selected after a study of about 143 issues of 25 different foreign and local technical journals and magazines were examined by the Committee. It was considered that 12 of these were *prima facie* likely to be of use under Indian conditions and they were referred to the concerned Technical Directorates of the Railway Board or the Research Designs and Standards Organisation at Simla/Lucknow for further examination. It has been possible so far to adopt eight of the more important developments which have been found to be suitable under Indian conditions.

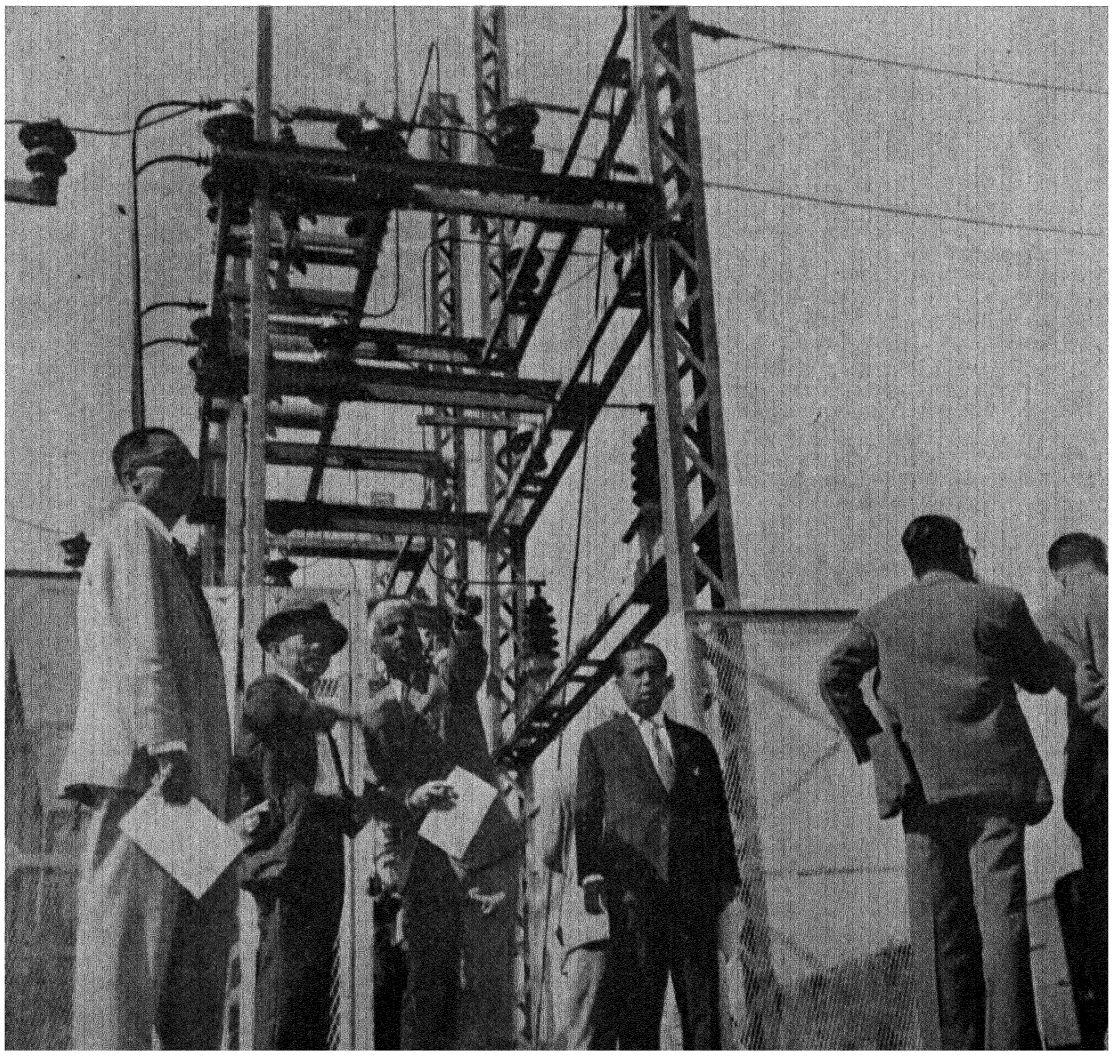
6. Directorate of Statistics and Economic and Statistical Investigations.—In addition to the periodical reviews of earnings and traffic handled, the Statistical Directorate and the Economic Advice Branch of the Railway Board undertook a number of economic and special studies to meet the requirements of scientific planning to enable transportation of ever increasing traffic and to assist the work of the various committees, such as the Convention Committee, the Committee on the Transport Policy and Coordination, etc. A special brochure was brought out as part of the railway budget documents, containing a critical analysis of the performance of the Indian Government Railways in the context of the prevailing economic conditions in the country and a correlation of performance with expenditure. The results of some of the special studies undertaken in the Directorate, such as the economics of the movement of low rated commodities, the economics of passenger and freight transportation, etc., were also included in this brochure.

To make the staff familiar with the relevant values of the metric units and the F.P.S. units during the transitional period, all the periodical and monthly statistical publications issued for departmental use continued to give the results in both the units, either one below the other or side by side. While in the textual portion of the Railway Board's Annual Administration Report, Volume I and its abridged edition, 'Indian Railways', comments on results are being given in terms of metric units, the statistical tables in these publications are being presented in both the units to facilitate easy understanding. So far as Volume II—Statistics of the Board's Annual Report for the year 1960-61 is concerned, this is being brought out in both the units for the second year. To maintain comparability with the performance results of the past years, the various statements for the past several years have been converted into their metric equivalents and a consolidated volume giving the comparative figures for the last decade is being brought out for departmental use.

Improvements in procedure and standardisation of the methods of compilation of different items of statistics as well as the elimination of statistics which have ceased to be of current importance continued to receive attention and these subjects, among others, were discussed at the conference of statistical and compilation officers of the zonal railways held at Bombay in May, 1960. Other subjects discussed at this conference included the mechanisation in compilation and processing of statistical data, delays in



INAUGURATION OF A.C. ELECTRIC TRACTION ON EASTERN RAILWAY BY THE MINISTER FOR RAILWAYS ON 22 DECEMBER, 1960--RAILWAY ELECTRIFICATION



TOP LEVEL RAILWAY AND OTHER HIGH-WAY ENGINEERS FROM SOME OF THE COUNTRIES OF THE ECAFE REGION, U.S.S.R., NEW ZEALAND AND FRANCE WHO VISITED INDIA TO PARTICIPATE IN THE BRAHMAPUTRA BRIDGE STUDY, ARE SEEN AT AN ELECTRIC SUB-STATION AT KUMARDUBI—EASTERN RAILWAY

the submission of statistical returns, inspection of the methods of collection and compilation of various statistics at stations, yards, transhipment sheds, etc.

The statistical inspection unit of this Directorate, which has now been put on a permanent basis, continued its rounds of inspection of the statistical offices at the headquarters and divisional offices of the zonal railways, as also the initial reporting agencies, such as stations, marshalling yards, break of gauge transhipment points, terminal yards, etc., to ensure that the statistics were being compiled in accordance with the procedure laid down. Variations from the stipulated procedures and inaccuracies in compilation were brought to the attention of the railway administrations for corrective action.

7. Study Week on Brahmaputra Bridge construction at Pandu for the Engineers from the countries in the ECAFE region, USSR, New Zealand and France.—During the Railway Sub-Committees meeting of the Economic Commission for Asia and the Far East held in Lahore in December, 1959, delegates from several countries suggested visits by technical officers of the various countries to some of the important construction works in progress in the ECAFE region and in this connection particular mention was made of the construction work in progress for a railway bridge across the Brahmaputra River at Pandu, in which launching of caissons was being carried out in deep water for the first time in this part of the world. The ECAFE secretariat accordingly orgnised a Study Week of the Brahmaputra Bridge construction works in November, 1960. Twenty delegates from different countries including USSR, New Zealand and France participated in the Study Week, which proved extremely useful.

The delegates assembled on 21 November, 1960 at New Delhi, where the inaugural meeting was held. They were then taken by a special train to the various places of railway interest *en-route* to Pandu.—After inspecting the construction work of the Brahamputra Bridge for nearly four days, the delegates dispersed from Calcutta on the evening of 30 November, 1960.

8. World Bank loans and other external assistance—World Bank loan.—During the year 1960-61, the World Bank gave a loan of $ 70 million, equivalent of Rs. 33.33 crores, for the Indian Railways. The loan agreement (fifth Railway Project—262 IN) was signed on 29 July, 1960, and the loan became effective from 13 October, 1960.

Towards the end of the year, *i.e.*, in March, 1961, a team of Canadian Railway Experts deputed by the World Bank arrived in India to make a detailed appraisal of all aspects of the performance of Indian Government Railways. The team concluded its investigations in April, 1961, *i.e.*, after the year under report had ended; but it may be mentioned here, for the sake of completeness, that it was evidently on the strength of a favourable report of this Mission that the World Bank gave a further loan of $50 million (Rs. 23.81 crores) for the Indian Railways for meeting the foreign exchange expenditure during the period from 1 October, 1961 to 31 December, 1962.

The loan covers payments for the acquisition of locomotives (electric and diesel) components and spare parts of rolling stock, other railway equipment and services.

The rate of interest is 5¾ per cent per annum. The loan is repayable in 34 equal half yearly instalments, commencing from 15 January, 1964 and ending on 15 July, 1980.

The withdrawals from the loan upto 31 March, 1961, amounted to $ 14.455 million, equivalent to Rs. 6.88 crores. The balance amount of the loan, equivalent to Rs. 26.45 crores, will be withdrawn in the year 1961-62.

Loans from the United States of America Development Loan Fund.—A loan amounting to $ 50 million, equivalent to Rs. 23.81 crores, was sanctioned by the United States of America Development Loan Fund for the modernisation and expansion of the Indian Railway system. The loan bears interest at the rate of 3½ per cent per annum. Interest is payable semi-annually on all outstanding balances until the loan is repaid, the first

interest payment to be due and payable on a date not later than six months after the first disbursement. The loan is repayable in 39 equal semi-annual instalments, the first instalment being payable six months after the first interest payment is due. The loan came into effect from 6 December, 1960 and covers payments from 8 August, 1960 to 30 June, 1963 and is to be utilised for purchasing and installing centralised traffic control equipment and for providing diesel and electric locomotives.

Other foreign assistance.—During the year, track material and equipment, *e.g.*, rails, fish plates and steel sheet piling valued at $ 1.63 million (Rs. 77.82 lakhs) were received under the Technical Co-operative Mission Operation Agreement No. 86—Orissa Iron Ore Project—and wooden sleepers valued at $ (c) 1.6 million (Rs. 76.19 lakhs) were received from Canada under the Colombo Plan.

9. Acquisition of private railways.—During the year, no private railway was acquired by the Government.

10. Railways and the legislature.—The railway budget for 1961-62 was presented to both the Houses of Parliament on 15 February, 1961. The general discussion on the budget took place from 28 February to 6 March, 1961 in the Lok Sabha and from 21 February to 23 February, 1961 in the Rajya Sabha. As usual, the general discussion covered a variety of subjects having a bearing on railway working, policy and administration.

Notices were received of 464 cut motions to discuss the general policy covering a wide range of subjects including construction of new lines, passenger amenity works, wagons for movement of coal, recognition of unions, staff councils, catering service on railways, nationalisation of light railways, over-crowding in trains, speed of goods trains, punctuality of passenger trains, etc. Three hundred cut motions were actually moved but these were all negatived after discussion.

Out of a total number of 17,089 questions asked in both the Houses of Parliament during the year 1960-61, 1,705 or roughly 10 per cent related to the Ministry of Railways. The questions covered a number of topics, the more important of these relating to construction of new lines, staff matters, passenger amenities, bridges and level-crossings, security measures, etc.

Meetings of informal consultative committees of members of both the Houses of Parliament constituted for the eight zonal railways during the year 1959 continued to be held during the year under review, and the deliberations covered a wide range of subjects of interest and importance to railway users, especially of a local nature. There were two series of such meetings, one in April and the other in December, 1960.

11. Revision of Railway Separation Convention.—In terms of Recommendation No. 17 of the Railway Convention Committee 1954, a Parliamentary Committee was to review the rate of dividend towards the end of the next quinquennium, *i.e.*, in 1960-61 and suggest any adjustment considered necessary in the light of the situation obtaining then. The duration of 1954 Convention was, however, extended by one year, *i.e.*, upto 31 March, 1961, so as to secure synchronization of the plan and the Convention periods in future. Accordingly, a Committee, representing both the Houses of Parliament—and including the Finance Minister and the Minister for Railways—was constituted in pursuance of a Resolution adopted by the Lok Sabha on 22 April, 1960 and concurred by the Rajya Sabha on 28 April, 1960. According to this Resolution, 12 members of the Lok Sabha were nominated by the Speaker to the committee and 6 members of the Rajya Sabha were associated with it. Sardar Hukum Singh, Deputy Speaker of the Lok Sabha, was nominated as chairman of the Committee.

The Committee submitted its report on 30 November, 1960. The Lok Sabha and the Rajya Sabha, after due consideration of recommendations of the Committee, adopted Resolutions on 6 December and 12 December, 1960 respectively. The text of the Resolutions, together with the summary of the principal recommendations of the Committee, is reproduced in Appendix A.

12. National Railway Users' Consultative Council.—During the year, the National Railway Users' Consultative Council held two meetings, one on the 19 and 20 April, 1960 and the other on the 16 and 17 December, 1960. Important matters such as the operating position, railway users' amenities, catering, ticketless travel, use of containers, delays in transit of consignments, claims for compensation and reduction in free time for loading and unloading, were discussed at these meetings.

13. Zonal and Regional/Divisional Railway Users' Consultative Committees.—182 meetings of the Zonal Regional/Divisional Railway Users' Consultative Committees were held on railways during 1960-61. These committees continued to render useful assistance to railway administrations in dealing with local matters affecting the interests of railway users.

Besides these, the passenger amenities committees, time table committees, suburban railway users' consultative committees, bookstall advisory committees, catering supervisory committees and station consultative committees on the various zonal railways functioned usefully during the year.

14. Amenities to passengers and other railway users.—The provision of amenities to passengers and other railway users continued to receive sustained attention with emphasis on providing basic amenities at all stations. The following are the more important measures:

Sleeping accommodation in third class.—In pursuance of the decision to provide sleeping facilities free of additional charge to long distance passengers on all long distance trains, steps were taken to build requisite number of specially designed 3-tier sleeper coaches with equal number of berths and seats during the year under review.

This facility was extended to 20 pairs of trains (14 on broad gauge and 6 on metre gauge) in 1960-61.

Camping Coaches.—The facility of camping coaches already provided at 10 stations, was extended to 3 more stations, *viz.*, Conjeeveram, Palni and Tiruchendur stations of the Southern Railway system.

Accommodation for passengers by distance zones.—The scheme of setting apart of accommodation for third class passengers by distance zones continued to be tried by various railways. In view of certain difficulties reported by railways against satisfactory implementation of the scheme, the matter was reviewed and it was decided that the scheme should continue as an experimental measure for another year.

Arrangements for indicating the position of coaches at station platforms.—Arrangements to indicate the position of I, II and III class and the ladies compartments on the platform were continued at Vijayawada, Itarsi and Nagpur Stations and were further extended to Poona and Madurai stations. These arrangements were found useful to the travelling public.

Advance reservation of retiring rooms at stations.—The scheme of advance reservation of retiring room accommodation, introduced as an experimental measure at a few stations in the previous year was continued and extended to 17 Other stations.

Details of passengers and other railway users' amenities are given in chapter XI on " Amenities for Passengers and Other Railway users ".

15. Staff.—The permanent negotiating machinery set up on Railways with a view to maintaining contact with labour and resolving differences between them and the administration, continued to function satisfactorily during the year at different level. The meetings were, however, discontinued temporarily with the All India Railwaymen's Federation and also with its affiliated unions in July, 1960 following the strike. The joint committees of management and staff at units and higher levels, set up on all railways, with a view to seeking co-operation of the staff in the promotion of efficiency and safety of working, continued to function.

With regard to the recommendations made by the *ad hoc* tribunal, mention of which was made in the last year's report, tentative decisions had been taken in six out of the nine recommendations made.

During the year, 100 appointments, both permanent and temporary, were made in the gazetted cadre by direct recruitment, while 79 class II officers were permanently promoted to class I services in various Departments.

The railway service commissions recommended 5,433 candidates for appointments in class III categories on the railways.

During the year 207 officers received training in the Railway Staff College, Baroda. In addition, 26 officers attended the refresher courses and 17 officers (both gazetted and non-gazetted) who were sent for training abroad were also briefed.

The Medical and Health Organisation on the railways continued to provide satisfactorily medical aid to railway servants and their families. Three new hospitals and eleven new health units/dispensaries were opened during the year. 780 additional beds were provided in the hospitals and health units/dispensaries.

It was decided to supply, free of charge, artificial limbs to railway employees injured on duty. In other cases the cost of such limbs will be met out of the staff benefit fund.

Under the scheme of family planning, railway servants undergoing sterilisation operation (vasectomy or salpingectomy) have been allowed special leave not exceeding six working days.

There has been an alround improvement in the working of the railwaymen's consumer and co-operative societies and they are becoming more and more popular among the railway community. The total number of co-operative credit societies functioning at the end of the year was 26 and that of consumer societies was 167.

There were 4 housing societies functioning at the end of the year with a total membership of 1,015 having their paid up share capital of Rs. 1,32,180.

In addition to the 644 schools functioning at the end of last year, 16 single teacher primary schools and one new middle school were opened during the year under review. Some of the schools which were functioning as primary schools and high schools were also converted to junior basic and higher secondary schools.

Besides carrying forward 1,307 scholarships from the previous year, 993 new scholarships were awarded involving a total expenditure of Rs. 8,78,539 during the year.

Holiday homes for class III and class IV staff at various places continued to be popular. One more holiday home was opened at Yercaud on the Southern Railway. 20 children's camps were organised by the different railways and 2,092 children attended these camps during the year.

16. Progress of Hindi.—Progress in the introduction of Hindi in the office of the Railway Board and on the Railways was maintained during the year under review.

The standardisation of technical railway terminology in Hindi was progressed in consultation with the Ministry of Education. Hindi equivalents of railway terms pertaining to civil and mechanical engineering were finalised and standardisation of designational terms in Hindi was taken in hand.

Further progress was made in the Hindi rendering of railway rule books, etc. The Hindi translation of the Statistical Manual was completed and that of the Engineering Code, the Mechanical Code and the Alphabetical list of station-names was taken in hand. Besides, draft Hindi translations of the General Code, Volumes I and II, the Indian Railway Establishment Code, Volume I and the Goods Tariff, prepared earlier, were sent to the Ministry of Law for vetting. A Hindi translation of the Railway Services (Authorised Pay) Rules, 1960 regarding introduction of new pay

scales recommended by the Pay Commission was circulated to the railways. The Railway Protection Force Rules, 1959 were translated into Hindi.

As usual, official reports presented to Parliament along with the railway budget were published in English and Hindi simultaneously. In all, 13 reports were brought out in Hindi as well as in English.

In pursuance of a decision taken by the Government, training in Hindi was made obligatory for all railway employees who were below 45 years of age on 1 January, 1961. This training is, however, not intended for railway employees below class III grade, industrial establishments and work charged staff. During the year under review, over 5,000 railway employees appeared in the Hindi examinations conducted by the Government. Cash awards were given to some of the top-most successful candidates at these examinations. With a view to accelerating the progress of Hindi on the railways, one Hindi Supervisor was appointed on each railway.

A beginning was also made in the training of staff in Hindi typing and shorthand. The facility provided by the Government for this purpose at Delhi, Bombay, Calcutta and Madras was availed of by railway employees also. The question of extending this facility to other centres was pursued with the Ministry of Home Affairs.

Facilities for the acceptance of Hindi telegrams were available at 79 railway telegraph offices. 30 signallers were trained in Hindi Morse Code in the Northern Railway Training School at Chandausi and in the Central Railway School at Bhusaval.

17. Publicity and public relations.—All the aspects of publicity and public relations work continued to receive the close attention of the Railway Board and the railway administrations. During the year under review, two press conferences were held—one immediately after the presentation of the railway budget to the Parliament and the other a week earlier to explain the position regarding movement of coal to feed big industries and other consumers. These conferences were in addition to the periodical briefing of selected correspondents on important railway matters. 300 press-releases, including 14 feature-articles pertaining to various aspects of railway transportation, were issued. These were supplemented by 1,473 photos and 650 ebonoid blocks covering railway activities. An illustrated brochure titled "Railways Move Country's Coal" was brought out to explain the railways' efforts for increased supply of wagons for movement of coal. This brochure was distributed to the foreign engineers who attended the ECAFE Study Week on the Brahmaputra Bridge held in November, 1960 and to selected press correspondents. Background material was also provided to press representatives about railway electrification schemes, coal movement, construction of new lines and other aspects of development.

In order to project the achievements and development of the Indian Railways, particularly during the Plan period, in other member-countries of the World Bank, a colour-documentary on Indian Railways was produced at the instance of the Bank. Copies of the documentary have also been supplied to some of India's Diplomatic Missions abroad. The film, with suitable adjustments, will soon be released on the commercial circuits in India.

The Railway Week was celebrated as usual from 10 April to 16 April, 1960 to mark the 107th anniversary of the railways. The highlights of the celebrations were the cultural activities and get together functions. On the concluding day, the Railway Minister awarded medals and cash prizes in the form of National Savings Certificates to twelve selected railwaymen for their meritorious work.

18. Commercial advertising.—New media of commercial advertising, as for example, advertisments on the back of passenger tickets, on the railway receipts, on the envelopes, to be supplied free along with monthly tickets, etc., were explored. As a result of these efforts, the income from this source increased from Rs. 20,52,465 in 1959-60 to Rs. 26,50,076 in 1960-61, representing an increase of approximately 29.1 per cent.

19. Complaints.—The complaints organisation on the railways continued to function satisfactorily. At the beginning of the year under review, 5,037 complaints were pending disposal and during the year 44,231 complaints were received. Out of the total of 49,268 complaints on hand, 45,819 complaints were disposed of in 1960-61.

The average time taken in disposing of a complaint where confronted enquiry was arranged, dropped from 67.7 days in 1959-60 to 55.9 days in 1960-61 and in other cases, it dropped from 32.9 days to 25.2 days.

The complaints received were promptly acknowledged, enquiries thereon instituted and results communicated to the complainants. Suitable disciplinary action was taken against the staff held responsible.

20. Floods and cyclones.—The year 1960 witnessed heavy rains and floods resulting in considerable damage to railway property. Details of the damage caused by such natural causes are shown in paragraph 88 of Chapter IV.

The total cost of damage on all the railways including the cost of rebuilding bridges on account of floods and cyclones, was approximately Rs. 59.29 lakhs.

21. Pulling of alarm chains.—The alarm chain apparatus on trains provided for use by passengers in emergencies continued to be frequently misused. There were 48,875 cases of alarm chain pulling during 1960-61 as against 53,334 cases during the previous year. The percentage of unauthorised alarm chain pulling to the total was 80.7 in 1960-61 as against 82 in the previous year.

In 40,065 cases of unauthorised alarm chain pulling during the year, only 745 persons could be apprehended. The major difficulty in apprehending the culprits was that no help was forthcoming from the passengers in the compartment in pointing out the offenders. The railways intensified their efforts to detect and deal with offenders with the assistance of the Government Railway Police and the Railway Protection Force and by posting plain-clothed men in each compartment on the bad areas in the most vulnerable trains. Also measures were taken to educate the public on the ill-effects of unauthorised alarm chain pullings. The co-operation of teachers of schools and colleges was sought in dissuading students from indulging in this malpractice.

22. Railway Rates Tribunal.—At the beginning of the year, the Tribunal had on hand two complaints from the public pending disposal. During the course of the year, the following three new complaints were filed:

(1) *Complaint No. 1 of 1960.*—Filed by the Upper Doab Sugar Mills Limited, Shamli, against the Shahdara (Delhi) Saharanpur Light Railway Company, Limited alleging that the rates for sugarcane from certain stations on the respondent's railway to their Mills at Shamli charged on and from 1 October, 1953 were unreasonable.

(2) *Complaint No. 2 of 1960.*—Filed by Messrs. K. Abdul Rahman Shaib and Company, Madras, against the Union of India owning and representing the Southern Railway alleging that charging of firewood on floor area basis from certain stations on the Southern Railway to Madras in wagon loads was unjustifiable discrimination against the complainant and others.

(3) *Complaint No. 3 of 1960.*—Filed by Messrs. Dalmia Iron and Steel Limited, Calcutta, against the Union of India representing the Eastern, the South Eastern, the Southern, the Central, the Western, the Northern and the Northeast Frontier Railways, alleging that the rates charged for spun cast iron pipes from Sodepur and/or Titagarh to different stations on the respondent's railways were unreasonable and subjected their traffic to undue prejudice.

Besides these complaints, an application under Section 41A of the Indian Railways Act, 1890 was filed by the South Eastern and other railways to revise and revoke the order by the Tribunal in complaint No. 6 of 1952, since considerable material changes had taken place from the time the Tribunal passed the order for the introduction of the special rates of Rs. 6.62 nP and Rs. 6.94 nP per quintal for transport of cast iron pipes from Bisco to Madras and Bombay respectively.

During the year, the Tribunal held sittings at Madras and Bombay. Out of the two complaints pending disposal at the beginning of the year, one was rejected and the other was settled out of court. The three complaints and one application registered during the year were pending disposal before the Tribunal at the end of the year.

In accordance with the disciplinary procedure introduced with effect from 1 May, 1952, seven references from General Managers on the petitions from class III railway staff were pending disposal with the Railway Rates Tribunal at the commencement of the year under review. 47 fresh cases were received during 1960-61. The Tribunal tendered advice in 36 cases, leaving a balance of 18 cases on 31 March, 1961.

23. Implementation of decisions for division of rolling stock between India and Pakistan.—As mentioned in the last year's report, the work is still in progress and its finalisation is likely to take some more time.

24. Loss of man-days as a result of strikes.—The details of the total number of man-days lost as a result of strikes, lock-outs, etc., on the Indian Railways during the year 1960-61 are summarised in the following table:

Railway	Number of man-days lost due to illegal strikes
Central	163,078
Eastern	253,900
Northern	34,364
North Eastern	23,165
Northeast Frontier	33,103
Southern	44,359
South Eastern	170,386
Western	79,692
Chittarnjan Locomotive Works	30,845
Integral Coach Factory	3,836
Railway Electrification	210
Grand Total .	836,938

The high incidence of loss of man-days on the Indian Railways during the year 1960-61 was due to certain sections of railwaymen joining the partial strike by some of the Central Government employees during July, 1960.

CHAPTER II

FINANCIAL RESULTS

A. AGRICULTURAL CONDITIONS AND FOREIGN TRADE DURING 1960-61.

25. Monsoon conditions and agricultural situation in India during 1960-61.—Despite certain bad features, such as erratic rainfall in East Gujarat, Saurashtra, Kutch, Konkan and West Rajasthan, very heavy rains and consequent devastating floods in coastal districts of Orissa and a few districts of the Punjab during August and early September, drought conditions in Telangana area during July and August and some heavy showers accompanied by hails in a few districts of Uttar Pradesh, the Punjab, Orissa and East Madhya Pradesh during February, 1961, the year 1960-61 was on the whole characterised by generally favourable weather conditions and well distributed rainfall, which exercised a very wholesome effect on agricultural production in the country. These had their impact not only on the agricultural output but also on the general economy as a whole, including the financial results and working of the railways.

The south west monsoon, which accounts for nearly 75 per cent of the total annual rainfall and affects the production of *kharif* crops, was generally favourable and well distributed. Although its on-set was weak during early June, it recovered its strength and established itself progressively over the whole country outside Jammu and Kashmir by the end of June. Its chief features during this year were spells of heavy rains followed by a spell of drought in Gujarat State and West Rajasthan ; a protracted drought spell in Telangana area of Andhra Pradesh during July-August, in Rayalaseema north, interior Mysore and parts of Madras during August and floods in parts of Orissa and the Punjab during August and again in the Punjab and Uttar Pradesh during October and abundant rains in the drought-affected areas of Andhra Pradesh, Madras and Mysore during September.

The chief features of this year's post-monsoon season, which provides roughly 13 per cent of the total annual rainfall, were long spells of excessive rain-fall in Madras State and development of a series of low pressure systems in the South Bay of Bengal, as a result of which a few districts of Orissa and West Bengal were hit by cyclonic storm during early October. The weather conditions during this season were generally favourable for the sowing of *rabi* crops, except in a few districts of the Punjab and Rajasthan, where the rains were inadequate.

The winter monsoon which is very vital for the proper growth of *rabi* crops like wheat, barley and gram in Northern India, especially in the Punjab, Uttar Pradesh, Bihar, Madhya Pradesh and Rajasthan brought in heavy showers accompanied by heavy storm during the early part of February in parts of Orissa, Uttar Pradesh, the Punjab and a few districts of Madhya Pradesh which damaged the standing *rabi* crops to some extent. Elsewhere the showers received during this period were beneficial for the *rabi* crops.

As a result of the weather conditions being normally favourable, a significant advance in the agricultural production of both *kharif* and *rabi* crops was achieved during the year. Production of foodgrains had reached a new record of 80.5 million metric tons showing an increase of 6.1 per cent over 1959-60. The increase in food production is accounted for mainly by

the states of West Bengal, Uttar Pradesh, Bihar, the Punjab, Maharashtra, Madhya Pradesh, Madras and Gujarat. The production of the three most important foodgrains, *viz.*, rice, wheat and jowar has surpassed the previous record levels. There has been a fall in the production of other coarse cereals, *viz.*, bajra, maize, ragi and small millets but the production of barley has recorded an increase. The overall production of cereals has gone up by 5.7 per cent and that of pulses by 8.1 per cent over the previous year. Among cash crops, the production of sugarcane has touched an all time record and is placed at 88.3 lakh metric tons in terms of gur, marking an increase of 13.3 per cent over 1959-60. The production of groundnut has also shown an increase of 10.5 per cent over the previous year. In the case of cotton, not only has the ground lost during the previous year been fully covered, but a sizeable advance in production has also been achieved, the estimated output being 53.9 lakh bales marking an increase of 46.7 per cent as compared with 1959-60. A fall of 12.5 per cent has occurred in jute production because of deficient rain at the time of sowing of the crop and generally unfavourable weather conditions during the period of growth. On the whole, the total agricultural production during 1960-61 has registered a substantial gain over that of 1959-60.

The percentage variations as compared with the previous year, in area and production of principal crops, according to the latest available information for 1960-61, are indicated below :

PERCENTAGE VARIATIONS IN ACREAGE AND YIELD OF PRINCIPAL CROPS IN 1960-61 OVER 1959-60

Crop	Acreage Per cent	Yield Per cent
Rice	+ 0·61	+ 8·84
Wheat	— 2·43	+ 5·54
Maize, millet and barley	— 1·75	— 1·27
Gram and other pulses	— 4·11	+ 8·09
Sugarcane	+ 9·85	+13·3
Groundnut	+ 3·89	+10·5
Castor seed	— 2·83	— 7·55
Sesamum	—10·4	—19·8
Rape seed and mustard	+ 1·59	+31·8
Linseed	—11·9	— 4·87
Jute	— 9·26	—12·5
Cotton	+ 0·89	+46·7

26. Trade review.—The foreign trade of India by sea, air and land during 1960-61 recorded an all round increase as compared with the year 1959-60. Imports increased by 11.4 per cent while exports and re-exports rose only marginally. The figures below present an overall picture of the foreign trade of India in 1960-61, as compared to 1959-60.

(In crores of rupees)

	1959-60	1960-61	Increase (+) or decrease (—) in 1960-61 over 1959-60	
			Amount	Percentage
Imports	960.8	1070·2	+109·4	+11.4
Exports	629.9	632·9	+ 3·0	+0·5
Re-exports	9.8	10·0	+0·2	+2·0

Value of imports by sea, air and land.—The total value of imports into India rose from Rs. 960.8 crores in 1959-60 to Rs. 1070.2 crores in 1960-61 or by 11.4 per cent. The increases were due mainly to higher imports of raw

cotton (Rs. 40.5 crores), jute (including jute cuttings and waste) (Rs. 4.2 crores), D.D.T. (Rs. 4.8 crores), iron and steel, joists, girders, angles, universal plated sheets, rails, wire rods and wire steel tubes and fittings welded or drawn (Rs. 39.3 crores), copper and alloys (Rs. 4.2 crores), zinc and zinc alloys (Rs. 3.2 crores), metal working machinery (Rs. 8.8 crores), mining, construction and other industrial machinery (Rs. 35.6 crores), electric machinery, apparatus and appliances (Rs. 3.0 crores) and road motor vehicles (Rs. 3.9 crores). These increases in imports were partially offset by decreases under wheat and spelt (Rs. 8.6 crores), petroleum products (Rs. 19.9 crores), caustic soda (Rs. 6.9 crores) and aircraft (Rs. 5.6 crores).

Value of exports by sea, air and land.—The total value of exports during 1960-61 at Rs. 632.9 crores indicates a rise of only 0.5 per cent over the figure of Rs. 629.9 crores in 1959-60. This increase of Rs. 3 crores was mainly on account of an appreciable rise of Rs. 22.6 crores or 8 per cent achieved by manufacturing goods during 1960-61 which more than compensated the decline in the value of exports of primary products by 4 per cent over the preceding year. The principal items of exports which recorded substantial increases during the year were jute bags and sacks, hessian cloth, fruits and nuts, cashew kernel and oil seeds, oil nuts and oil kernels. The other important commodities which also showed increases were manganese ore, iron ore, pig iron and sponge iron, sugar, essential vegetable oils, spices and black pepper and unmanufactured tobacco. The value of mica, lac, castor oil, coir mats and matting and foot wear exported during 1960-61 also showed slight increases as compared with the previous year. On the other hand, linseed oil and ground-nut oil showed an appreciable fall in exports as compared with the previous year. The other commodities to register a decline in exports were tea, cotton piecegoods, hides and skins, leather, oil cakes, raw cotton, raw wool and other animal hair and fish.

Value of re-exports by sea, air and land.—The total value of re-exports increased from Rs. 9.8 crores in 1959-60 to Rs. 10 crores in 1960-61, *i.e.*, by Rs. 0.2 crores or 2 per cent. There were no noticeable changes under any principal items in the re-exports trade of India during 1960-61.

B. FINANCIAL RESULTS OF INDIAN RAILWAYS

27. Investment.—At the end of March, 1961 the total investment on all railways in India, including non-government railways and lines under construction, from capital (loan account) as well as from railways own resources, amounted to Rs. 18,77.69 crores of which Rs. 18,70.73 crores represented the investment on Government Railways, financed from different sources as under :

TOTAL INVESTMENT ON INDIAN GOVERNMENT RAILWAYS FROM DIFFERENT SOURCES

(In lakhs)

	As on 31 March, 1960* Rs.	As on 31 March, 1961† Rs.
Capital-at-charge (loan account inclusive of premia paid on the purchase of certain companies' Railways)	14,32,28	15,20,87
Depreciation Reserve Fund (on improvement of assets replaced)	82,83	94,31
Development Fund	1,43,23	1,69,84
Revenue	74,34	85,71
Total Investment	17,32,68	18,70,73

*Revised figures.

† Provisional figures, these include transfers without financial adjustments.

The balance of Rs. 6.96 crores was the capital raised by companies and district boards.

The figures of capital-at-charge of Government Railways, *viz.*, Rs. 15,20,86,51 thousands is still provisional, pending closing of pre-partition accounts and finalisation of the balances forwarded on 1 April, 1950 in the case of *ex*-states railways.

By far the greater portion of this amount, namely Rs. 15,20,83,51 thousands is Government Capital, and only a sum of Rs. 3,00 thousands represents the cost of Jorhat Railway originally constructed at the cost of the Assam Government, but vested in the Government of India as a result of the Government of India Act, 1935 from 1 April, 1937.

The investment on Government Railways during the year 1960-61 amounted to Rs. 1,35.14 crores as detailed below :

	(In lakhs) Rs.
Capital (loan account)	89,48
Depreciation Reserve Fund (on improvement of assets replaced)	11,46*
Development Fund	22,85*
Revenue	11,35*
Total	1,35,14*

* Provisional figures.

The capital outlay on non-Government Railways during 1960-61 was Rs. 49.31 lakhs only.

The figures shown above against depreciation reserve fund represent not the entire cost of assets financed from the Fund but *only the cost of the "improvement element" in the replaced assets created since 1950-51,* from which year the entire replacement cost, including the portion due to increased prices as well as the portion representing improvements over the original assets, is charged to the depreciation reserve fund ; prior to 1 April, 1950 the improvement element was being charged to capital. The total cost—charged in the accounts—of assets financed from depreciation reserve fund, after excluding the relative original cost previously charged to Capital—is computed approximately as (A) Rs. 500.04 crores up to 31 March, 1961. As regards the figures shown against development fund and revenue (open line works), *it is necessary to add to them the following* to get the total value of assets financed from development fund and from revenue :

(i) Expenditure on *replacement* of assets created out of development fund for the period from 1 April, 1946—when the fund in its original form was created as 'Betterment Fund'—and up to 31 March, 1955 (from 1 April, 1955, the cost of replacement of assets originally created from development fund is being met from depreciation reserve fund).

(ii) Expenditure on *replacement* of assets originally created from open line works (revenue). Estimating the amounts in respect of the above two items, the total investment on assets from development fund and revenue works out approximately to (B) Rs. 174.04 crorees and (C) Rs. 88.08 crores, respectively. Adding together the aforesaid amounts (A), (B) and (C) to the Capital-at-charge, the aggregate approximate cost of all assets of Indian Government Railways charged in the accounts—whether financed from Capital or from other sources (*viz.*, depreciation reserve fund, development fund and revenue)—was approximately Rs. 2283.03 crores at the end of 1960-61 (against the figure of 'Capital-at-charge' of Rs. 1520.87 crores).

The distribution of the capital outlay in 1960-61 over the different Government Railways is shown in the accompanying statement.

CAPITAL OUTLAY ON INDIAN GOVERNMENT RAILWAYS DURING 1960-61

(Figures in lakhs of rupees)

Railways	Open line			New construction			Grand Total
	Works	Rolling-stock	Total	Works	Rolling-stock	Total	
Central	(—) 47	4,44	3,97	..	..	..	3,97
Eastern	(—) 6,42	3,34	(—) 3,08	5,65	..	5,65	2,57
Northern—							
Commercial	1,66	4,72	6,38	4,76	..	4,76	11,14
Strategic	(—) 1	2	1	1	..	1	2
North Eastern	(—) 28	3,70	3,42	..	..	..	3,42
Northeast Frontier—							
Commercial	5,44	61	6,05	3,72	..	3,72	9,77
Strategic	..	..	..	4,76	..	4,76	4,76
Southern	3,77	3,82	7,59	8	..	8	7,67
South Eastern	6,22	10,43	16,65	3,60	..	3,60	20,25
Western	44	7,20	7,64	46	..	46	8,10
Railway Electrification	..	..	..	10,19	7,35	17,54	17,54
Locomotive Component Works	38	..	38	..	..	..	38
Chittaranjan Locomotive Works	(—) 1,03	..	(—) 1,03	..	..	..	(—) 1,03
Integral Coach Factory	(—) 2,14	..	(—) 2,14	..	..	..	(—) 2,14
Dandakaranya Balangir Kiriburu Railway Projects	..	..	..	3,07	..	3,07	3,07
Miscellaneous	(—) 1	..	(—) 1	..	..	..	(—) 1
TOTAL	7,55	38,28	45,83	36,30	7,35	43,65	89,48

NOTE.—The expenditure shown under 'works' includes entire capital expenditure other than on rolling stock.

28. Financial results of working.—The gross receipts* of the Government Railways (including worked lines) for the year 1960-61 amounted to Rs. 456.80 crores, as compared to Rs. 422.33 crores in 1959-60, representing an increase of Rs. 34.47 crores.

The ordinary working expenses (including suspense) for the year amounted to Rs. 313.15 crores against Rs. 289.52 crores in 1959-60—an increase of Rs. 23.63 crores. The contribution to depreciation reserve fund was Rs. 45.79 crores—Rs. 45 crores on account of the capital assets of the Government Railways chargeable to their working expenses as made annually since 1955-56 and Rs. 0.79 crore on account of the capital assets of the Chittaranjan Locomotive Works (Rs. 0.59 crore) and the Integral Coach Factory (Rs. 0.20 crore) contributed by debit to manufacturing suspense of these productive units. This additional contribution of Rs. 0.79 crore as a charge against the workshop manufacture suspense in the capital account of the Chittaranjan Locomotive Works and the Integral Coach Factory was necessitated in the interest of accurate costing on commercial principles and represent the depreciation charges accruing on plant and machinery, etc., at these works.

Payments to worked lines, as their share of net earnings amounted to Rs. 9 lakhs, against Rs. 10 lakhs in 1959-60. The operating ratio, that is, the ratio of working expenses (excluding suspense but including appropriation to depreciation reserve fund) to gross earnings was 78.75 per cent, against 79.54 per cent in 1959-60. The ratio of working expenses, including payment to worked lines and including suspense to gross receipts was 78.42 per cent, against 79.23 per cent in 1959-60. The net expenditure on miscellaneous transactions during the year, *i.e.*, open line works revenue, cost of Railway Board's establishment and other miscellaneous central establishments like the Research, Designs and Standards Organisation, etc., was Rs. 10.69 crores

* Includes suspense.

against Rs. 13.16 crores in 1959-60. The net revenue for the year was Rs. 87.87 crores, against Rs. 74.55 crores in 1959-60.

The dividend paid to general revenues during the year was Rs. 55.86 crores, against Rs. 54.43 crores in 1959-60. The surplus for the year amounted to Rs. 32.01 crores, against Rs. 20.12 crores in 1959-60, representing an increase of Rs. 11.89 crores. The entire surplus as in the previous year, was appropriated to the development fund.

The interest on the depreciation reserve fund and the development fund balances credited to the funds during the year under review were Rs. 0.85 and Rs. 0.48 crores respectively. An amount of Rs. 3.58 crores, on account of loan obtained from general revenues for developmental works, was also credited to the development fund during 1960-61. The amount withdrawn during the year for renewals and development works amounted to Rs. 64.04 and Rs. 24.30 crores, against Rs. 68.36 and Rs. 25.54 crores in 1959-60 respectively. The net charge to depreciation reserve fund and net accretion to the development fund in 1960-61 were Rs. 17.40 crores and Rs. 11.77 crores respectively, against the net charge of Rs. 20.40 and net accretion of Rs. 9.58 crores respectively in 1959-60. The balances in the depreciation reserve fund, the development fund and the railway revenue reserve fund at the end of the year were Rs. 19.79, Rs. 19.13 and Rs. 53.44 crores against Rs. 37.30, Rs. 8.91 and Rs. 51.60 crores respectively in 1959-60. The interest credited to the railway revenue reserve fund during 1960-61 was Rs. 1.84 crores, against Rs. 1.90 crores during 1959-60. There was no contribution (except interest) to or withdrawal from, the fund during both the years.

29. Traffic receipts.—The total gross receipts* of Indian Government Railways amounted to Rs. 4,56.80† crores, as follows:

GROSS RECEIPTS OF GOVERNMENT RAILWAYS
(INCLUDING WORKED LINES)

(In crores of rupees)

	1959-60	1960-61
Passenger earnings	1,25·61	1,31·59
Other Coaching Earnings	25·41	27·21
Goods earnings‡	2,60·50	2,86·14
Sundry earnings	10·84	12·63
Suspense	—0·03	—0·77
Total	4,22·33	4,56·80

The gross receipts for the year 1960-61 have registered an overall increase of Rs. 34.47 crores over the figures for 1959-60 mainly under goods and passenger earnings.

30. Ordinary working expenses.—A comparison of the ordinary working expenses, excluding suspense under various demand heads for the year 1960-61 with those for 1959-60 is given in the following statement in net figures, that is,—the gross expenditure less credits afforded to revenue heads.

ANALYSIS OF ORDINARY WORKING EXPENSES—GOVERNMENT RAILWAYS
(INCLUDING WORKED LINES)

(In crores of rupees)

Demand heads	1959-60	1960-61	Increase(+) or decrease(—) over 1959-60
4. Administration	34·86	37·51	+ 2·65
5. Repairs and maintenance	94·14	99·75	+ 5·61
6. Operation (staff)	57·91	63·45	+ 5·54
7. Operation (fuel)	57·98	62·80	+ 4·82
8. Operation (other than staff and fuel)	17·71	18·30	+ 0·59
9. Miscellaneous expenses	19·98	23·84	+ 3·86
10. Labour welfare	8·36	9·67	+ 1·31
Total	2,90·94	3,15·32	+24·38

* 'Gross receipts' include while 'gross earnings' referred to later in part C in this chapter exclude '*Suspense*'.

† Includes earnings of worked lines amounting to Rs. 0.55 crore.

‡ 'Goods earnings' include earnings from demurrage, wharfage, etc., while earnings from goods carried referred to in part C of this chapter exclude these items.

The net increase in working expenses in 1960-61 over 1959-60 was mainly due to the payment, including arrears, on account of the implementation of the recommendations of the Second Pay Commission, and in addition due to the net effect of annual increments, increases in the prices of railway stores and materials including coal, and improved medical facilities and other welfare activities. The volume of traffic in terms of passenger kilometres and tonne kilometres increased by 5.39 per cent and 7.01 per cent respectively. The transportation output, in terms of train kilometres, increased by 1.92 per cent in 1960-61 over 1959-60. On the other hand, the total number of staff increased by only 0.54 per cent, thus reflecting the effects of strict and sustained control over expenditure exercised by railway administrations. If unavoidable increases in expenditure as referred to—increase in wages and in prices of materials—are excluded, it will be clear that railways performed the increased quantum of work in 1960-61 over 1959-60 (in goods and passenger traffic) with very little additional expenditure.

The financial results of working of the Government Railways showing the capital-at-charge, gross receipts, working expenses, net revenue receipts and dividend, etc., for the last 3 years are given in the statement below showing how, after the economic recession in the country in 1958-59, which affected adversely the railways' financial results in that year, the finances of the railways picked up again in 1959-60 and improved still further in 1960-61 which showed the best financial results since 1952-53, *i.e.*, since regrouping of the railways more or less in their present form.

FINANCIAL RESULTS OF WORKING OF GOVERNMENT RAILWAYS

(In thousands)

	1958-59	1959-60	1960-61
	Rs.	Rs.	Rs.
Capital-at-charge	13,56,58,84	14,32,28,09	15,20,86,51
Deduct amount of capital contributed by companies	3,00	3,00	3,00
Net Government Capital-at-charge	13,56,55,84	14,32,25,09	15,20,83,51
Gross receipts*	3,90,20,91	4,22,33,53	4,56,80,48
Working expenses including payment to worked lines, suspense and appropriation to depreciation reserve fund	3,21,44,09	3,34,62,29	3,58,24,45
Net traffic receipts	68,76,82	87,71,24	98,56,03
Net miscellaneous expenditure†	9,45,14	13,15,49	10,68,64
Net revenue receipts	59,31,68	74,55,75	87,87,39
Percentage of net revenue receipts on capital-at-charge	4·37	5·20	5·77
Charges against net revenue receipts—			
Dividend to general revenues	50,38,82	54,43,26	55,85,97
Net gain or loss to Government—			
Gain	(+)8,92,86	(+)20,12,49	(+)32,01,42

31. Works expenditure.—The works expenditure during the year amounted to Rs. 188.33 crores, against Rs. 179.76 crores in 1959-60. Of the expenditure of Rs. 188.33 crores, an amount of Rs. 89.48 crores was charged to capital, Rs. 64.04 crores to the depreciation reserve fund, Rs. 23.31 crores (excluding the interest charge of Rs. 0.99 crore paid on loan from general revenues from development works) to the development fund and Rs. 11.50 crores to open line works revenue. The corresponding figures for the previous

* Includes suspense.

† Includes expenditure on open line works revenue, cost of Railway Board's establishments and other miscellaneous central establishments like the Research, Designs and Standards Organisation, etc.

year were Rs. 74.69, Rs. 68.36, Rs. 24.89 and Rs. 11.82 crores respectively. The railway-wise details are given in the statement below :

NET WORKS EXPENDITURE DURING 1960-61

(In crores of rupees)

Railways	Capital	Depreciation Reserve Fund	Development Fund	Open Line Works Revenue	Total
Central	3·97	10·16	5·30	2·45	21·88
Eastern	2·57	9·85	1.60	0.99	15·01
Northern	11·16	8·49	2·49	1·70	23·84
North Eastern	3·42	3·84	2·27	1·03	10·56
Northeast Frontier	14·53	2·50	2·89	0·80	20·72
Southern	7·67	10·98	2·98	1·59	23·22
South Eastern	20·25	7·88	1·95	1·15	31·23
Western	8·10	10·27	3·83	1·79	23·99
Chittaranjan Locomotive Works	(—) 1·03	0·03	..	..	(—) 1·00
Integral Coach Factory	(—) 2·14	..	..	..	(—) 2·14
Locomotive Component Works	0·38	..	..	..	0·38
Railway Electrification	17·54	0·04	..	..	17·58
Dandakaranya Balangir Kiriburu Railway Projects	3·07	..	..	..	3·07
Railway Board	(—) 0·01	..	..	..	(—) 0·01
TOTAL	89·48	64·04	23·31	11·50	188·33

32. Net results.—The net results of working showing a surplus for the three years 1958-59 to 1960-61 are given in the following statement which shows progressive improvement :

(In lakhs)

	1958-59 Rs.	1959-60 Rs.	1960-61 Rs.
Surplus (after payment of dividend to general revenues)	8,93	20,12	32,01

In considering the surpluses for these years, it has to be appreciated that, apart from the steadily increasing price levels of stores, particularly coal, and the increase in repairs and maintenance expenditure also incidental to the expanding railway assets, certain special factors affect the comparison. The results of 1958-59 were depressed by the slowing down in the economic activities in the country, which was a repercussion of the general slump in world trade during that year. Also, the revised freight structure was operative only for the last six months during 1958-59, while the earnings of 1959-60 and 1960-61 reflect the effects of the revised freight structure for the full year. Further, there was a levy of a supplementary charge of 5 nP in the rupee on all freights of goods and coal traffic excluding export ores, military and postal and railways' own traffic during 1960-61. On the expenditure side, the implementation of the Government's decisions on the recommendations of the Pay Commission is not reflected in 1959-60 as the arrears to the tune of Rs. 7 crores pertaining to 1959-60 (for the period from 1 July, 1959) was paid in 1960-61. An amount of about Rs. 16 crores was incurred on this single item in 1960-61. Moreover, the dividend paid to general revenues increased in 1960-61 by Rs. 5.5 crores and Rs. 1.5 crores compared to the year 1958-59 and 1959-60 respectively. It should be remembered, in this context, that the amount charged to the capital-at-charge in any year is inclusive of the amount spent on works-in-progress at the end of the year, which does not earn a return till the works in question are completed and brought into use.

33. Development Fund.—The opening balance in the development fund was Rs. 8.91 crores which was reduced to Rs. 7.36 crores as a result of certain *pro forma* debit adjustments amounting to Rs. 1.55 crores against the fund (instead of anticipated credit adjustments of Rs. 3.32 crores). During the year, the fund received a credit of Rs. 32.49 crores including interest against anticipation of Rs. 14.26 crores, while Rs. 23.32 crores were withdrawn

from it, for meeting expenditure chargeable to the fund against anticipated withdrawals of Rs. 29.08 crores. As the fund was not expected to be in a position to meet the anticipated programme of expenditure chargeable to it, a temporary loan of Rs. 3.58 crores was obtained from the general revenues. The interest charges of Rs. 98 lakhs on the outstanding loans were paid from the fund. The closing balance in the fund on 31 March, 1961 however was a credit of Rs. 19.13 crores, the improved position being due to the increased net surplus in 1960-61—much in excess of anticipations even in the revised estimates. This made it possible to commence the Third Plan without any outstanding liability to the General exchequer from this fund. In fact, it was not even necessary to draw on the revenue reserve fund as was earlier apprehended, to liquidate the liability of the railway development fund to the general revenues.

C. GENERAL RESULTS OF WORKING OF ALL INDIAN RAILWAYS (INCLUDING NON-GOVERNMENT RAILWAYS)

34. Analysis of earnings.—The total earnings (excluding suspense) of all railways for the year 1960-61, including non-Government Railways amounted to Rs. 4,59.38 crores. Of this, the goods traffic accounted for Rs. 2,81.26 crores or 61.23 per cent, passenger traffic for Rs. 1,32.52 crores or 28.84 per cent and parcels, luggage and other miscellaneous sources of revenue for Rs. 45.60 crores or 9.93 per cent.

35. Traffic and kilometrage.—The more important figures of traffic on all Indian Railways for the years 1958-59 to 1960-61 are summarised in the table below. There has been a progressive increase during these years in the volume of traffic handled.

STATISTICS OF TRAFFIC OF ALL INDIAN RAILWAYS
(INCLUDING NON-GOVERNMENT RAILWAYS)

	Year	Government Railways	Non-Government Railways	Total
Route kilometrage	1958-59	55,741	716	56,457
	1959-60	55,955	715	56,670
	1960-61	**56,247**	**715**	**56,962**
Passengers originating (millions)	1958-59	1,423	18	1,441
	1959-60	1,510	19	1,529
	1960-61	**1,596**	**20**	**1,616**
Passenger kilometres (millions)	1958-59	68,016	376	68,392
	1959-60	73,809	381	74,190
	1960-61	**77,787**	**396**	**78,183**
Tonnes originating* (millions)	1958-59	138	1	139
	1959-60	147	1	148
	1960-61	**156**	**1**	**157**
Net tonne kilometres (millions)	1958-59	76,472	69	76,541
	1959-60	82,006	69	82,075
	1960-61	**87,754**	**79**	**87,833**

36. Passenger earnings.—In comparison with 1959-60, passenger earnings on all Indian Railways increased by about Rs. 6.03 crores or 4.76 per cent and passenger kilometres by about 3,993 million or 5.38 per cent. The number of passengers originating, however, increased by about 87 million or 5.71 per cent. The increase in the number of passengers originating is noticed under all classes except the second class.

The earnings, by classes, for all Indian Railways from passenger traffic for the three years 1958-59 to 1960-61 are summarized in the table below :

PASSENGER EARNINGS BY CLASSES
(ALL INDIAN RAILWAYS INCLUDING NON-GOVERNMENT RAILWAYS)

(Figures in lakhs of rupees.)

Class	1958-59	1959-60	1960-61
Air-conditioned	1,14	1,17	**1,18**
First	7,43	8,03	**8,37**
Second	5,98	5,87	**5,74**
Third	1,03,03	1,12,28	**1,18,52**
Total	1,17,58	1,26,49†	**1,32,52‡**

* Excludes the tonnage of railway stores and materials carried in material/ballast trains on open lines by railway constructions/project authorities for construction or independent railway project works in stock owned or hired by them.

† Includes an arrear debit adjustment on the North Eastern Railway to the tune of Rs. 1,42 lakhs and a credit adjustment of Rs. 57 lakhs on the South Eastern Railway.

‡ Includes debit adjustment of Rs. 1,30 lakhs.

As compared with the previous year, the earnings show increases under all classes except the second class which recorded a drop of 2.22 per cent. The air-conditioned, first and third classes recorded increases of 0.85, 4.23 and 5.56 per cent respectively.

The number of passengers originating and the passenger kilometres by classes for the three years 1958-59, 1959-60 and 1960-61 are furnished below :

VOLUME OF PASSENGER TRAFFIC BY CLASSES
(ALL INDIAN RAILWAYS—INCLUDING NON-GOVERNMENT RAILWAYS)

(Figures in millions)

Class	Number of passengers originating			Passenger kilometres		
	1958-59	1959-60	1960-61	1958-59	1959-60	1960-61
Air-conditioned	0·125	0·142	0·147	107	109†	110
First	25·8	30·5	34·7	1,663	1,828	1,941
Second	11·9	11·5	11·1	1,877	1,841	1,798
Third	1,403·1	1,486·5	1,570·0	64,745	70,412†	74,334
TOTAL	1,440·9	1,528·6	1,615·9	68,392	74,190	78,183

Detailed statistics of the number of passngers originating, passenger kilometres and earnings are given in Summary X and Statements 12 and 36 of Volume II of this Report.

37. Earnings from goods carried.—During the year 1960-61, the earnings from goods carried on all Indian Railways amounted to Rs. 281.26* crores, against Rs. 256.12* crores in 1959-60 an increase of Rs. 25.14 crores or 9.81 per cent.

The total tonnage of goods originating, both revenue and non-revenue traffic, increased by about 9 million or 6.43 per cent. There has been a slight increase in the average lead of goods traffic from 555.1 kilometres in 1959-60 to 558.1 kilometres in 1960-61 with the result that the total tonne kilometres increased by 7.01 per cent.

The average rate charged for carrying one tonne of goods one kilometre also rose from 3.74 naye Paise to 3.88 naye Paise during the year under report.

The tonne kilometres and the tonnage originating for the different commodity groups on the Government Railways during 1959-60 and 1960-61 are summarized below :

VOLUME OF GOODS TRAFFIC (GOVERNMENT RAILWAYS)

	Tonne Kilometres (millions)	
	1959-60	1960-61
A. Revenue earning traffic		
Coal	19,514	20,534
Grains	9,553	9,620
Oil seeds	1,040	1,162
Other commodities	38,944	41,022
Total Revenue-earning traffic	69,051	72,338
B. Non-revenue traffic§		
Railway coal and materials	12,955	15,416
Total Revenue-earning and non-revenue traffic	82,006	87,754

* Excludes miscellaneous goods earnings like demurrage, wharfage, etc.

† Revised figures.

§ Excludes the tonnage of railway stores and materials carried in material/ballast trains on open lines by railway construction/project authorities for construction or independent railway project works in stock owned or hired by them.

	Tonnes originiating (millions)	
	1959-60	1960-61
A. Revenue-earning traffic—		
I. Products of agriculture	21·10	21·40
(a) Foodgrains	12·48	12·66
(b) Others	8·62	8·74
II. Products of animals	0·46	0·48
III. Products of mines	52·46	59·56
(a) Coal for the public and non-government railways	27·78	30·94
(b) Others (including mineral oils)	24·68	28·62
IV. Products of forests	4·32	4·12
V. Manufactures	20·29	21·42
VI. Miscellaneous (including military traffic)	12·08	12·46
Total—Revenue-earning traffic	110·71	119·44
B. Non-revenue traffic (railway coal and materials)§	35·85	36·52
Total—Revenue-earning and non-revenue traffic§	146·56	155·96

The more than proportionate increase in the tonne kilometres of non-revenue traffic is the reflection of the combined effects of a drop in the ballast traffic, which is of a short lead, to the tune of 7.9 per cent and an increase in the volume of railway coal by 10.9 per cent. On the contrary, the slightly lower rate of increase in tonne kilometres compared to the rise in the tonnes originating under revenue-earning traffic is due to the increased quantum of movement of coal and raw materials for the steel plants which are comparatively of shorter lead than the general goods traffic.

The following statement presents details of the earnings from the principal commodities carried by the Government Railways during 1959-60 and 1960-61. It will be observed from the figures that excepting rice and paddy, gram, gram flour and pulses, manganese ore, kerosene oil, petrol, cotton manufactured, jute raw and manufactured, there have been increased receipts from traffic carried in respect of other commodities during 1960-61 as compared with 1959-60.

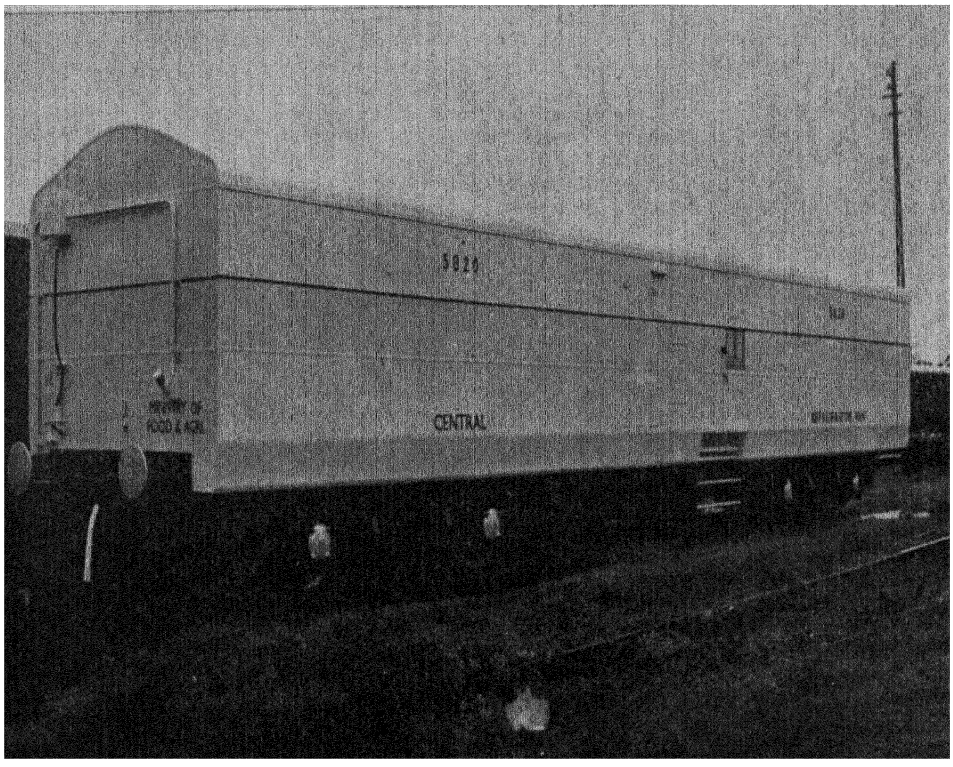
TRAFFIC RECEIPTS FROM DIFFERENT COMMODITIES (GOVERNMENT RAILWAYS)

(In lakhs)

	1959-60 Rs.	1960-61 Rs.
Coal, coke and patent fuel for the public	40,20	44,07
Rice and paddy	8,15	8,03
Gram, gram flour and pulses	8,38	8,13
Wheat and wheat flour	7,76	9,39
Oil seeds	4,57	5,23
Cotton raw (pressed and unpressed)	3,77	4,01
Fruits and vegetables fresh (including sugarcane)	3,36	3,68
Marble and other stones	11,14	14,03
Salt	5,14	5,47
Manganese ore	2,82	2,81
Other ores	10,21	13,12
Oil fuel and other mineral oils	6,66	7,05
Kerosene oil (in bulk and in tins)	5,90	5,71
Petrol (in bulk and in tins)	4,92	4,58
Wood unwrought	5,72	5,90
Sugar, refined and unrefined	5,89	6,92
Cotton manufactured	4,53	4,44
Vegetable oil and other edible oils	3,36	3,39
Cement and cement manufactured products	10,99	12,45
Iron and steel wrought	26,29	31,70
Provisions	3,38	3,87
Tea	1,78	1,83
Jute raw	2,66	1,99
Jute manufactured	1,56	1,47

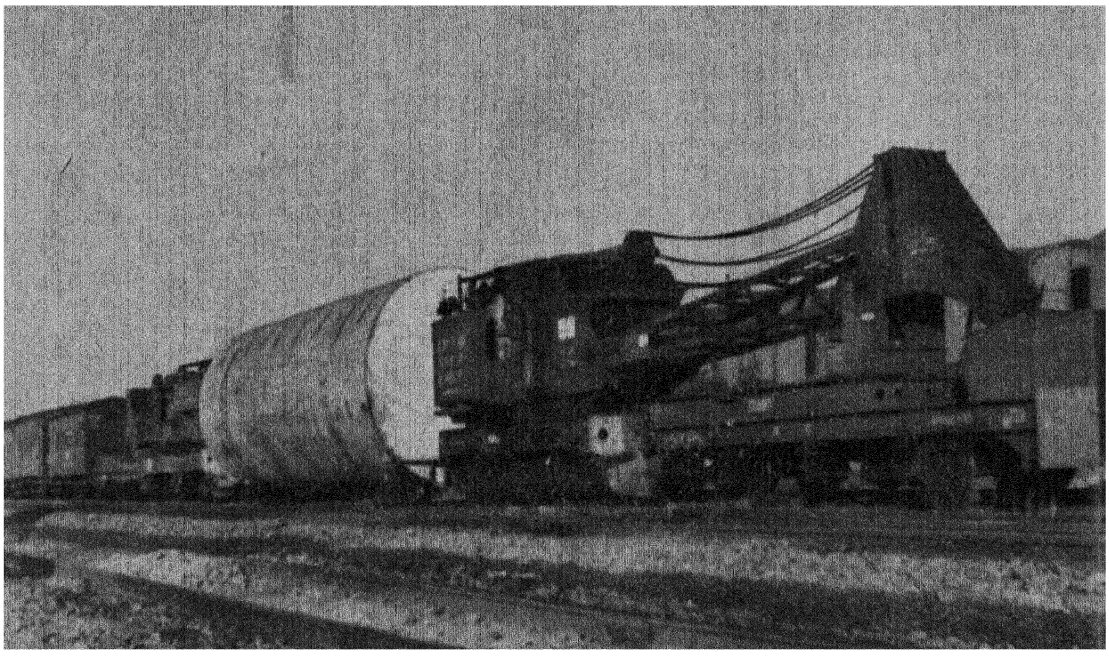
For detailed statistics of goods traffic, reference may be made to Summary X, Statements 13, 29 and 36 of Volume II of this Report.

§ Excludes the tonnage of railway stores and materials carried in material/ballast trains on open lines by railway construction/project authorities for construction or independent railway project works in stock owned or hired by them.



REFRIGERATED VANS BUILT IN MATUNGA WORKSHOP FOR TRANSPORT OF FISH—CENTRAL RAILWAY

A SPECIAL GOODS TRAIN CARRYING AN OVERSIZE HEAVY CONSIGNMENT FOR THE OIL REFINERIES AT GAUHATI—NORTHEAST FRONTIER RAILWAY



CHAPTER III

TRANSPORTATION

A. OPERATING

38. Operating general.—Sustained and co-ordinated efforts were made by the railway administrations to achieve a higher level of operating efficiency by improving speeds of goods trains, wagon kilometres per wagon day, net tonne kilometres per wagon day, etc. The volume of traffic handled maintained an upward trend during the year under review. The number of passengers originating, passenger kilometres, tonnes originating and tonne kilometres have all reached record levels in the last year of the Second Plan. The goods traffic in terms of tonne kilometres was 87,754 millions in 1960-61 as against 84,743 millions originally anticipated (at the end of the Second Plan period). This constituted an increase of 3.6 per cent over the level anticipated. The passenger traffic has also shown a similar trend. It has increased by about 25 per cent in 1960-61 over the level of 1955-56, the last year of the First Plan as against the 15 per cent increase in passenger transport capacity provided for in the Second Plan. The steep rise in passenger traffic is mainly attributable to the phenomenal increase in suburban passenger traffic, which has risen by about 45 per cent during the Second Plan period. The performance during the year under review would have been still better but for the factors beyond the control of the railway administrations such as unusually heavy rains, floods and breaches, strike by a section of the Central Government employees in July, 1960 which accounted for a loss of about 3 million tonnes of originating freight traffic and the civil disturbances in Assam.

Top priority was given for the movement of raw materials and finished products to and from the steel plants as well as the movement of coal to the various other industries. The Indian Government Railways moved 50.4 million tonnes of originating coal during 1960-61 as against 45.3 million tonnes in 1959-60, thus registering an increase of 11.2 per cent over the previous year. Not only the demands of the steel plants for coal were met in full but also the planned movement of coal for other users such as the Railways and the public other than steel plants were more than fully realized. In fact, as against 38.6 million tonnes of coal for other users as originally planned for at the end of the Second Plan, the actual movement by rail has been of the order of 42 million tonnes in 1960-61. To secure maximum and continuous co-ordination in the matter of providing transport facilities to the utmost extent possible for the movement of coal and rail transport for coal a standing inter-departmental committee of Secretaries of the different Ministries concerned of the Government of India was set up in March, 1961.

39. Operating meetings.—During the year under review a meeting of the Chief Operating Superintendents of all the railways presided over by Member, Transportation, Railway Board, was held in May, 1960. Shri Jagjivan Ram, Minister for Railways and Shri Shah Nawaz Khan, Deputy Minister for Railways addressed the meeting on the opening day. The operating performance on the various railways was discussed in detail and steps were formulated for improving rail service to the industries and the public. Interchange junction and transhipment quotas at various points of the railways were also reviewed and higher targets fixed wherever necessary to cope with the increased volume of traffic. The committee took up the question of the passenger train operations particularly for improving punctuality and minimising accidents.

40. Volume of traffic handled and transportation output.—The volume of traffic measured in terms of tonnes originating, tonne kilometres, passengers originating and passenger kilometres have all reached new record levels in 1960-61, the last year of the Second Plan. The goods traffic

has increased by 35 per cent under originating tonnage and by 47.3 per cent under tonne kilometres in 1960-61 over the levels achieved in 1955-56, the last year of the First Plan. The shortfall in the originating tonnage in comparison with the originally anticipated goods traffic of 164.6 million tonnes has been accounted for mainly by the fact that the production in steel plants and transport requirements for them did not come up to the planned targets and by a loss of about 3.05 million tonnes of freight traffic as a result of the partial strike of some of the central government employees in July, 1960. An important reason contributing to the overall shortfall in originating tonnes was that the actual distribution of commodities and pattern of movements as materialising have varied considerably from what was planned. With longer lead movements than was planned, the railways have faced an increased work load even more than was envisaged for lesser originating traffic. The net result is that the goods traffic in terms of tonnes kilometres has actually marked an increase by about 3.6 per cent over the tonne kilometres originally planned for 1960-61.

The passenger traffic in terms of number of passengers originating and passengers kilometres has risen by about 25 per cent during the Second Plan, against the 15 per cent increase in the passengers transport capacity provided for in the Second Plan. Bulk of the increase in the passenger traffic is contributed by the suburban passenger traffic which has gone up by 37 per cent under passengers originating and 44.5 per cent under passenger kilometres during the Second Plan period.

The volume of traffic handled and the transport output in terms of train kilometres, vehicle kilometres and wagon kolometres for the two years 1960-61 and 1959-60 are given in the table below:

VOLUME OF TRAFFIC AND TRANSPORTATION OUTPUT

		1959-60	1960-61	Inc. (+) or dec. (—) per cent over 1959-60
Passenger services—				
Passengers originating (millions)	B. G.	1,060·32*	1,128·94	+6·47
	M. G.	413·32	429·89	+4·01
	Total incl. N. G.	1,509·40*	1,595·68	+5·72
Passengers kilometres (millions)	B. G.	50,758·67	54,191·67	+6·76
	M. G.	21,865·77	22,320·23	+2·08
	Total incl. N. G.	73,808·73	77,787·45	+5·39
Passenger train kilometres** (including proportion of mixed) (thousands)	B. G.	124,852	126,678	+1·46
	M. G.	70,224	70,854	+0·90
	Total incl. N. G.	201,475	203,943	+1·22
Coaching vehicle kilometres (millions)	B. G.	2,016·6*	2,087·8	+3·53
	M. G.	1,225·2	1,249·6	+1·99
	Total incl. N. G.	3,357·1	3,453·3	+2·86
Goods services—				
Tonnes originating§ (thousands)	B. G.	111,701	120,294	+7·69
	M. G.	32,492	33,196	+2·17
	Total incl. N. G.	146,555	155,962	+6·42
Net tonne kilometres† (excluding traffic carried in departmental trains) (millions)	B. G.	69,187·1	73,740·3	+6·58
	M. G.	12,543·4	13,723·9	+9·41
	Total incl. N. G.	82,005·8	87,754·1	+7·01
Goods train kilometres (including proportion of mixed) (thousands)	B. G.	109,276	112,106	+2·59
	M. G.	42,241	44,810	+6·08
	Total incl. N. G.	155,870	161,208	+3·42
Wagon kilometres (millions)	B. G.	5,475·8	5,694·8	+4·00
	M. G.	1,609·7	1,735·9	+7·84
	Total incl. N. G.	7,159·8	7,507·2	+4·85

* Revised.

** Includes the kilometrage of trains conveying passengers and all other traffic booked at coaching rates, empty mileage run by passenger and other coaching stock, the kilometrage of electric locomotives and electric unit suburban trains as well as military specials, but excludes departmental trains.

† Includes kilometrage of trains hauled by electric locomotives but excludes departmental.

§ Excludes the tonnage of railway stores and materials carried in material/ballast trains on open lines by railway construction/project authorities for construction or independent railway project works in stock owned or hired by them.

41. Augmentation of passenger train services.—Passenger train services continued to be augmented to the extent found feasible. A comparison of the figures of passenger train services in 1959-60 and 1960-61 shows that the average passenger train kilometres per day had increased by 5,948 on the broad gauge and by 2,272 on the metre gauge in 1960-61.

42. Running of air-conditioned express trains.—The biweekly air-conditioned express trains between New Delhi on the one end and Howrah, Bombay Central and Madras Central on the other, continued to run during the year under review. From the first week of January, 1961, a first class coach was regularly put on New Delhi—Howrah/Madras Central biweekly air-conditioned expresses in lieu of an ordinary third class coach. The other arrangements in connection with the running of these main trains remained the same as in 1959-60.

43. Withdrawal of second class accommodation from trains.—The second class accommodation continued to be provided on main lines, important branches and links between main lines as in the previous year.

44. Punctuality of passenger trains.—The punctual running of passenger carrying trains was constantly receiving the close attention of the Railway Board and the railway administrations with a view to achieving better results and attaining the targets laid down for the various categories of trains.

Punctuality of mail and important trains recorded further improvement on both the guages during the year. The percentage of trains not losing time was 79.67 on the broad guage and 82.94 on the metre guage in 1960-61, against 79.26 and 81.95 (revised) respectively in 1959-60. The performance of all trains, including electrical multiple unit trains, also showed improvement during the year. The all round improvement in the punctuality performance would have been greater still had it not been for the dislocation of traffic caused by heavy rains, floods and breaches on several railways and resultant imposition of severe engineering restrictions. The execution of large developmental works in connection with the second Five Year Plan and excessive pulling of alarm chain apparatus also affected the performance of trains. On some railways, the position was made difficult by disturbances arising out of Naga troubles, language issue, and central government employee's strike.

The results achieved in terms of percentage of passenger and mixed trains not losing time to the total number of trains run on all Government Railways during 1960-61, compared with 1959-60 may be seen in the following table:

PERCENTAGE OF PASSENGER AND MIXED TRAINS NOT LOSING TIME

Year	All trains (*including* electric multiple unit trains)	Mail and important through trains	Mixed trains	Suburban trains	Other passenger trains
Broad gauge—					
1959-60	84·70*	79·26	87.31*	85·86* 90·32†§	78·32
1960-61	85·75	79·67	87·91	86·64 91·49†§	79·63
Metre gauge—					
1959-60	82·20*	81·95*	81·84*	93·69* 97·00‡	78·85*
1960-61	82·58	82·94	84·98	93·09 97·4‡	78·31

* Revised.

† Electric multiple unit trains of the Central, the Eastern and the Western Railways.

‡ Electric Multiple unit trains of the Southern Railway.

§ Includes electric train performance other than suburban on the Central Railway, *i.e.*, between Kalyan-Karjat and Kasara.

45. Wagon position, broad gauge wagon pool.—The number of public service wagons (in terms of 4-wheelers) in use on all Indian Railways on the broad gauge wagon pool at the end of the year 1960-61 was 219,165 wagons, *i.e.*, 8,198 wagons more than that at the end of previous financial year representing an increase of 3.9 per cent.

46. Wagon position, metre gauge wagon pool.—The number of public service wagons (in terms of 4-wheelers) in use on metre gauge railways on 31 March, 1961 was 94,050, *i.e.*, 280 wagons more than that at the end of March, 1960 showing an increase of 0.3 per cent.

With the opening of Khandwa-Hingoli link the metre gauge railways in the north have been connected with the metre gauge railways in the south with effect from 1 November, 1960. From the same date, the two metre gauge pools in the north and the south have been merged into one pool.

47. Goods traffic, number of wagons loaded.—During the year 1960-61, loadings showed an increase of 4.35 per cent on the broad gauge and 3.16 per cent on the metre gauge, compared with the previous year. The figures of total goods loading (including coal) in terms of 4-wheelers are given below:

LOADING IN TERMS OF 4-WHEELED WAGONS

	1959-60	1960-61	Inc. per cent over 1959-60
Broad gauge	5,907,100*	6,164,112	4.35
Metre gauge	3,482,808*	3,592,929	3·16

* Revised figures.

The performance would have been still better but for certain reasons, which were beyond the control of the railways, such as, floods, breaches and rains resulting in dislocation of trains, the partial strike by certain sections of the central government employees during 1960 and local disturbances in Assam.

The proportion of wagons loaded with 'smalls' traffic to the total number of wagons loaded during 1960-61 compared with 1959-60 registered a decrease on both the gauges as will be seen from the table below:

NUMBER OF WAGONS LOADED WITH 'SMALLS' (GOVERNMENT RAILWAYS)

—	Number		Percentage of wagons loaded with 'smalls' to total number of wagons loaded	
	1959-60	1960-61	1959-60	1960-61
Broad gauge	378,452*	379,987	6·41*	6·16
Metre gauge	322,333*	323,128	9·25*	8·99

* Revised figures.

The daily average number of broad gauge wagons transhipped at important sheds are given below:

	1959-60	1960-61
Arkonam	60*	74
Bhagalpur	58	50
Garhara	139	214
Manduadih	146	135
Sabarmati and Viramgam	305*	313
Sakrigalighat	25	25

* Revised figures.

An event of special significance during the year was the emergence of Garhara as the biggest transhipment point on the Indian Railways. The tempo of the performance will be judged from the fact that during the year from April 1960 to March 1961, the transhipment figures rose from 139 wagons to 214 BG wagons on an average per day, recording an appreciable increase of 56.0 per cent. The volume of transhipment done at Garhara during the year was more than double of what used to be done at Mokameh Ghat.

The decrease *via* Manduadih was due to less offering of traffic from broad gauge on account of diversion of traffic *via* Garhara and that *via* Bhagalpur was due to difficult riverine conditions.

Interchange at Mughalsarai was stepped up further as is evident from the following figures:

DAILY AVERAGE NUMBER OF WAGONS INTERCHANGED AT MUGHALSARAI

	1959-60	1960-61	Percentage increase over 1959-60
Received by Northern Railway	2,245	2,317	3·2
Made over by Northern Railway	2,187	2,318	6·0

Outstanding registrations showed an increase on both the broad and the metre gauges compared with the previous year. The comparative figures are:

(In terms of wagons)

	On 31 March 1960	On 31 March 1961
Broad gauge	47,414	146,102
Metre gauge	22,661	58,360

The number of outstanding registrations was nearly equal to 8 days loading on the broad gauge and 5 days loading on the metre gauge.

The outstanding registrations were high particularly on the Central, the Southern and the South Eastern Railways due to a sharp increase in the registrations of wagons for foodgrains. The total outstanding registrations on account of foodgrains alone on the broad gauge and metre gauge portions of these railways during March 1961 were about 73,100 and 20,700 wagons respectively.

The end of the Second Plan period witnessed a fast tempo of activities in all sections of industry and economy, resulting from efforts to achieve the plan targets. The two existing major steel plants in the private sector completed their expansion programme and started full production during the year. In addition, the three steel plants in the public sector have increased their output in 1960-61. The increasing demand for the movement of raw materials, building and other materials to these steel plants and finished products from these steel plants were met successfully by the Indian Railways. Top priority was given to the movement of coal, especially from the Bengal-Bihar coalfields to the industries in Western India and the distant South resulting in an increase in wagon turn-round.

48. Working of the revised procedure for clearance of goods traffic introduced with effect from 17 August, 1953.—The Preferential Traffic Schedule as revised from 17 August, 1953, continued to be in force, with some minor modifications. This schedule, apart from making provision for movement of all raw materials and finished products for certain basic industries, such as, textiles, cement, iron and steel and sugar, also provides for the movement of all other commodities in an adequate measure by specifying separate quotas for each commodity, so that occasional shortage of transport would not effect adversely the economy of any area.

The following main changes have been carried out in the Preferential Traffic Schedule during the year:

(i) As the movement of raw materials and mill-stores to and finished products from Iron and Steel Industries has assumed great importance in the recent past this traffic in accordance with

the programmes fixed from time to time with the approval of the Railway Board has been upgraded from item 'D' to item 'C' of the Preferential Traffic Schedule.

(ii) All traffic for export by land frontiers to foreign countries, such as, Pakistan, Afghanistan, Nepal, Bhutan, Sikkim, Ceylon, etc., has been upgraded from item 'E' to item 'D' of the Preferential Traffic Schedule.

(iii) Movement of fireclay and silica sand to refractories which are not provided in the quarterly programme of the Iron and Steel Industry, has been upgraded from item 'E' to item 'D' of the Preferential Traffic Schedule.

49. Transport of coal.—During the year under review the control over distribution of coal continued through the Coal Controller's office under the administrative control of the Ministry of Steel, Mines and Fuel (Department of Mines and Fuel). On and from 21 October, 1960, the day-to-day allotment which was previously done by the Coal Controller's office was switched over to the railways who started the work on the basis of 10 days consumerwise bulk allotments made by the Coal Controller's office.

There was a general improvement in loading from all coal fields. In all 2,071,575 wagons were loaded during the year under review as against 1,858,691 wagons in the previous year, recording an increase of 10.3 per cent. From West Bengal and Bihar coalfields alone, 1,634,766 wagons were loaded, representing an increase of 10.00 per cent over the previous year. The percentage of increased loadings from Korea and Rewa, Talcher, Pench and Chanda and Singareni coalfields were 11.0 per cent, 30.0 per cent, 8.3 per cent and 7.7 per cent respectively.

The daily average allotments in the direction above Mughalsarai was 1,795 wagons, against the last year's figure of 1,687 wagons, and the movements reached a record figure in January, 1961 when a daily average number of 1,939 wagons moved through Mughalsarai.

The working of number 18 mechanical berth at K. P. Docks continued during the year and the number of block loads allotted were 287.

In 1960-61, 313 block rakes of coal were moved by the Indo-Pakistan route.

50. Export traffic.—The movement of export traffic to the various ports received constant attention of the railway administrations during the year under review. Consistent with the handling capacity at each port and also keeping in view the transport capacity available on the various sections, programmes for movement of iron and manganese ore were drawn up in consultation with the State Trading Corporation of India. Every effort was made by the railways to implement these programmes to the maximum possible extent. A total of about 2.54 million tonnes of iron ore and 0.91 million tonnes of manganese ore were moved in 1960-61.

The stocks of iron and manganese ore awaiting shipment at the various ports on 31 March, 1961, compared with 31 March, 1960 were as under:

GROUND BALANCES OF MANGANESE AND IRON ORE AWAITING SHIPMENT IN PORTS

Ports	On 31 March 1960		On 31 March 1961	
	Iron ore	Manganese ore	Iron ore	Manganese ore
	Tonnes	Tonnes	Tonnes	Tonnes
Calcutta	8,941	67,262	16,663	59,642
Bombay	508	111,359	8,332	73,562
Madras	10,160	34,546	10,102	22,251
Visakhapatnam	13,412	265,798	2,032	161,958



A VIEW OF THE ELECTRIC LOCO SHED AT ASANSOL--RAILWAY ELECTRIFICATION

51. Clearance of traffic from ports.—The clearance of traffic from the various ports of imported goods including railway materials, machinery, foodgrains, fertilisers and iron and steel continued to receive constant and close attention of the railway administrations serving the ports. Programmes of anticipated arrival and despatch of foodgrains and fertilisers indicating daily average number of wagons required were made out by the Ministry of Food and Agriculture and were implemented by the Railways concerned under high priority.

The volume of iron and steel, railway material, machinery, foodgrains and fertilisers cleared from the important ports during the year 1960-61 is detailed below:

(Figures in tonnes)

Ports	Iron and steel, railway materials, other machinery, etc.	Foodgrains	Fertilisers
Calcutta	633,639	1,017,470	23,507
Bombay	270,969	1,104,131	159,169
Kandla	6,042	331,754	74,970
Madras	86,312	228,224	105,427
Cochin	6,063	82,289	93,330
Visakhapatnam	13,908	306,943	5,239

The requirements of special type of wagons at various ports, such as, BFRs to clear long steel and BFUs to move imported machinery for the different projects were met in full and no difficulties were experienced in arranging movement according to programme. 91.4 tonne and 132.1 tonne carrying capacity BFUs were utilised for the clearance of large heavy machineries infringing standard moving dimensions and requiring special care in loading and movement.

52. Interchange with Pakistan Railways.—Interchange of traffic with Pakistan Railways continued during the year 1960-61 in accordance with the special rules for such traffic. The Indian Railways made over to the Pakistan Railways 98,392 broad gauge wagons including 82,226 loaded and 22,263 metre gauge wagons including 12,215 loaded. A total of 98,405 broad gauge including 39,322 loaded and 22,523 metre gauge wagons including 21,882 loaded was received from the Pakistan Railways. The Pakistan Railways were a creditor to the Indian Railways to the extent of 666 wagons daily in respect of the broad gauge but debtor to the Indian Railways to the extent of 141 wagons daily in respect of the metre gauge.

53. Neutral control examination of wagons at interchange junctions, etc.—The system of neutral control examination of wagons under the Director, Wagon Interchange was in force at the following points:

I. *Interchange junctions*

Broad gauge

Agra Cantt.
Agra East Bank
Ajni (Nagpur)
Chheoki
East Dock Junction
* Ghaziabad
Kanpur (GMC)
* Khanalampura
New Delhi
Waltair

* Neutral control has been continued at these points though these stations ceased to be Interchange Junctions.

II. *Workshops*

Broad gauge	*Metre gauge*
Alambagh	Ajmer
Jagadhri	Golden Rock
Jhansi	Gorakhpur
Kanchrapara	Hubli
Khargpur	
** Kota	
Lallaguda	
Lillooah	
Matunga	
Parel (Mahalaxmi)	
Perambur	

** Shifted from Gangapur city with effect from 10 October, 1960.

III. *Wagon repair depot*

Metre gauge

Mehsana

IV. *Sick lines*

Broad gauge	*Metre gauge*
Lucknow	Gorakhpur
Mughalsarai (Dn. sick line)	
Tondiarpet	

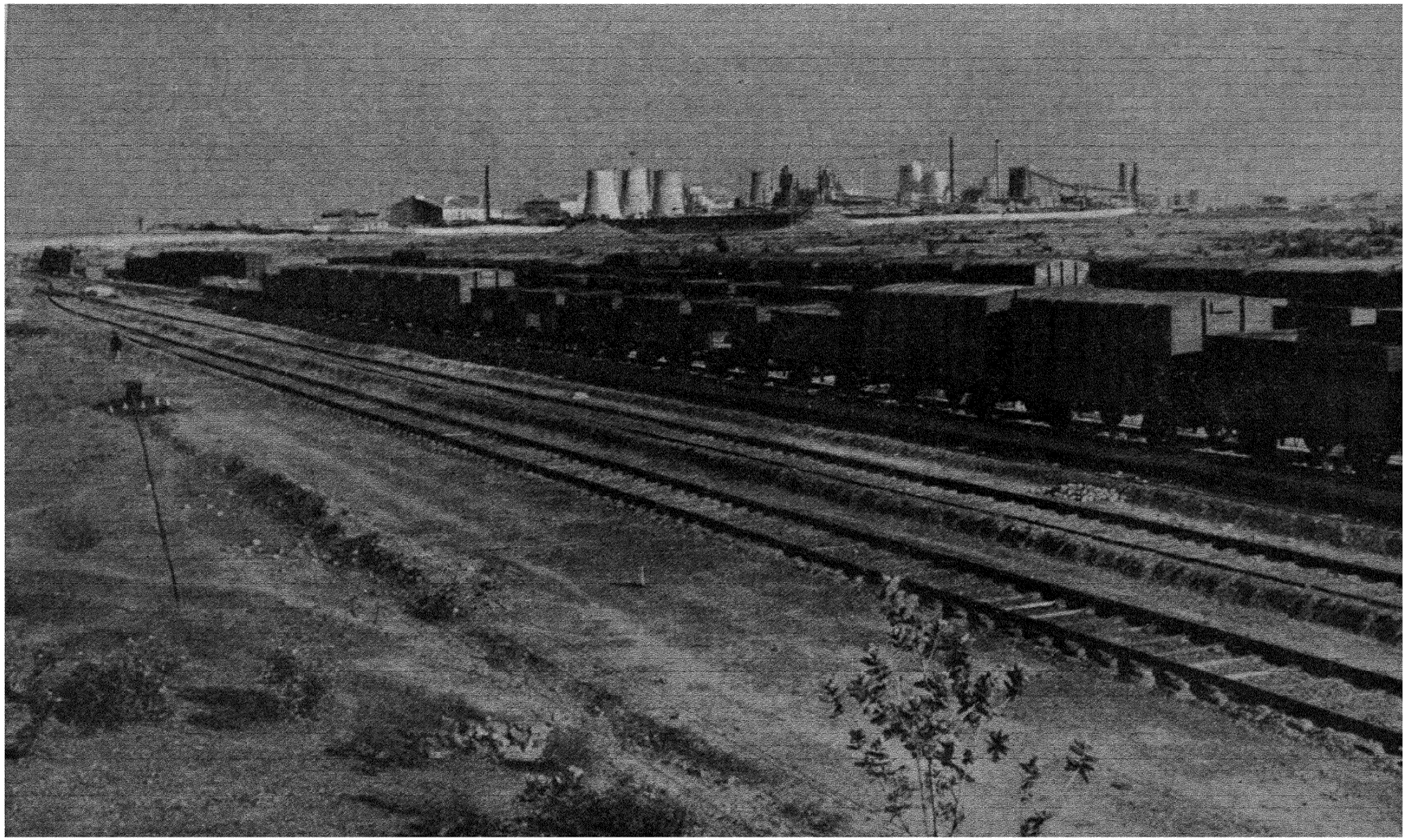
54. Improvement in marshalling and other yards and their working.— In order to deal with increased traffic, additions and alterations were undertaken in the following yards during the year 1960-61:

Central Railway

Ajni
Gwalior
Igatpuri
Itarsi
Jhansi
Kalyan
Katni
Bhusawal
Agra Cantt.
Bhopal
Wardha
Purna

Eastern Railway

Andal
Durgapur Exchange Yard (New Yard)
Gomoh
Howrah (New Yard at Tikiapura)
Mughalsarai



ONE OF THE BIGGEST EXCHANGE YARDS OF THE COUNTRY AT ANDAL NEAR ASANSOL - EASTERN RAILWAY

Northern Railway

Balamau
Chunar
Ghaziabad
Sadulpur
Tughlakabad

North Eastern Railway

Aishbagh
Bareilly
Chupra
Gonda
Mailani
Narkatiaganj
Samastipur

Northeast Frontier Railway

Katihar
Siliguri

Southern Railway

Bagalkot
Cuddalore
Dalmiapuram
Hubli
Madras Central
Shencottah
Talaiyuthu
Tiruchchirappalli Goods
Tiruvarur
Yeswantpur
Arkonam
Belgaum
Bhadravatti
Birur
Chingleput Junction
Conjeevaram
Ghorpuri
Gooty
Guntakal
Hospet
Jalarpet
Madras Beach
Maniyachi
Nandalur
Pakala
Salem
Telgi
Tenali
Timmancherla
Tirunelveli Junction
Vijayawada Junction
Villivakkam
Virudhunagar
Vriddhachalam

South Eastern Railway

Adityapur
Bhaga
Bhilai
Bilaspur
Birmitrapur
Bondamunda
Burnpur
Chirimiri
Chowrashi
Dangaoposi
Gua
Jharsuguda
Khurda Road
Manendragarh
Radhanagar
Rajkharswan
Rayaghada
Sahdol
Talcher
Tatanagar
Waltair
Waltair Store Depot.

Western Railway

Ajmer
Baroda
Bandra
Bulsar
Jaipur
Kota
Phulera
Ratlam
Udhna.

55. Movement of certain commodities by block trains.—Block trains, *i.e.*, trains with full loads of commodities originating from specific areas or stations, continued to be operated as in previous years. The percentage of total wagons moved by such block trains to the total number of wagons loaded on broad gauge excluding coal and coke and railway stores and materials, was 10.96 as against 6.37 during 1959-60. The corresponding percentage on the metre gauge was 6.80 as against 7.07 during 1959-60.

56. Progress made in introduction of Express Goods Trains.—The running of express goods trains was closely watched by the railway administrations to further improve its punctuality. Additional express goods trains were also introduced on important sections and frequency of service was increased on certain routes. Details of express goods trains which ran during the year under review are given below:

From	To	Frequency
	(*a*) *Broad gauge.*	
Central/Southern—		
Bangalore City	Secunderabad	Weekly
Secunderabad	Bangal re City	
Wadi Bunder	Salt Cotaurs	Bi-weekly upto 30 April, 1960 and daily from 1 May, 1960
Salt Cotaurs	Wadi Bunder	
Cochin Harbour Terminus	Wadi Bunder	Weekly
Wadi Bunder	Cochin Harbour Terminus	
Central/South Eastern—		
Bombay (Wadi Bunder)	Shalimar	Daily
Shalimar	Bombay (Wadi Bunder)	
Central/Northern—		
Kazipat	New Delhi	Dai'y
New Delhi	Kazipat	
Eastern/Northern—		
Howrah	Delhi	Weekly
Delhi	Kanpur	
Howrah	Lucknow	
Ghaziabad	Howrah	Daily *via* Allahabad, Mughalsarai, Gaya, Gomoh and Burdwan
Howrah	Ghaziabad	
Ghaziabad	Howrah	*Via* Allahabad and Mughalsarai. Alternate days on Ghaziabad-Kanpur section. Bi-weekly on Kanpur-Mughalsarai section and daily on Mughalsarai-Howrah section
Howrah	Ghaziabad	

From	To	Frequency
	(a) *Broad guage*—contd.	
South Eastern/Southern—		
Shalimar	Salt Cotaurs	Bi-weekly
Salt Cotaurs	Shalimar	
Bangalore City	Shalimar	Weekly
Shalimar	Bangalore City	
Southern/Central/Northern—		
Salt Cotaurs	New Delhi	Daily
New Delhi	Salt Cotaurs	
Bangalore City	New Delhi	Bi-weekly
New Delhi	Bangalore City	
Salt Cotaurs	Amritsar	Daily
Amritsar	Salt Cotaurs	
Cochin Harbour Terminus	New Delhi	Weekly
New Delhi	Cochin Harbour Terminus	
Western/Central/Northern—		
Carnac Bridge	New Delhi	Daily except Sundays
New Delhi	Carnac Bridge	
Carnac Bridge	Amritsar	
Amritsar	Carnac Bridge	
Carnac Bridge	Ludhiana	
Ludhiana	Carnac Bridge	
Carnac Bridge	Jullundur City	
Jullundur City	Carnac Bridge	
Carnac Bridge	Moradabad	Weekly
Moradabad	Carnac Bridge	
Carnac Bridge	Belanganj	Tri-weekly
Belanganj	Carnac Bridge	
Ahmedabad	New Delhi	Weekly
New Delhi	Ahmedabad	
New Delhi	Bombay Central	Daily *via* Mathura and Ratlam
Bombay Central	New Delhi	
Western/Central/Southern—		
Ahmedabad	Bezwada	Weekly
Bezwada	Ahmedabad	
Central—		
Wadi Bunder	Vijayawada	Daily
Vijyawada	Wadi Bunder	
Wadi Bunder	Nagpur	
Nagpur	Wadi Bunder	
Wadi Bunder	Kanpur	
Kanpur	Wadi Bunder	
Eastern—		
Howrah	Mughalsarai	Daily *via* H. B. Chord and Grand Chord. These services are co-ordinated with the Railway at Mughalsarai
Mughalsarai	Howrah	

(a) *Broad guage*—contd.

From	To	Frequency
***Eastern*—contd.**		
Howrah	Mughalsarai	Daily *via* main line
Mughalsarai	Howrah	
Chitpur	Mughalsarai	Daily *via* Dankuni and main line from and to Asansol
Mughalsarai	Chitpur	
Burdwan	Jamalpur	Daily *via* Sahibganj loop
Jamalpur	Burdwan	
***Northern*—**		
Ghaziabad	Amritsar	Daily
Amritsar	Ghaziabad	
Mughalsarai	Khanalampura	Daily *via* Partapgarh, Bareilly and Lucknow
Khanalampura	Mughalsarai	
Khanalampura	Mughalsarai	Alternate days *via* Najibabad, Moradabad, Bareilly Rosa and Lucknow
Mughalsarai	Khanalampura	
***Southern*—**		
Salt Cotaurs	Bangalore City	Bi-weekly
Bangalore City	Salt Cotaurs	
Salt Cotaurs	Cochin Harbour Terminus	
Cochin Harbour Terminus	Salt Cotaurs	
Cochin Harbour Terminus	Mangalore	
Mangalore	Cochin Harbour Terminus	
Tondiarpet Marshalling Yard	Jalarpet	Thrice daily
Jalarpet	Tondiarpet Marshalling Yard	
Tondiarpet Marshalling Yard	Vijayawada	Four times daily
Vijayawada	Tondiarpet Marshalling yard	
Vijayawada	Waltair	Thrice daily
Waltair	Vijayawada	
Arkonam	Gooty	Daily
Gooty	Arkonam	
Guntakal	Arkonam	
Timmanacherla	Arkonam	
Jalarpet	Erode	Thrice daily
Erode	Jalarpet	
Erode	Shoranur	
Shoranur	Erode	
Shoranur	Cochin Harbour Terminus	Twice daily
Cochin Harbour Terminus	Shoranur	
***South Eastern Railway*—**		
Shalimar	Waltair	Bi-weekly
Waltair	Shalimar	
***Western Railway*—**		
Carnac Bridge	Ahmedabad	Daily except Sunday
Ahmedabad	Carnac Bridge	

From	To	Frequency
	(a) *Broad gauge*—contd.	
Western Railway—contd.		
Carnac Bridge	Indore	D. Weekly
Indore	Carnac Bridge	
Surat	Carnac Bridge	Weekly
Carnac Bridge	Surat	Daily except Sunday
Carnac Bridge	Baroda	
Baroda	Carnac Bridge	Weekly
Ratlam	Carnac Bridge	Tri-weekly
Carnac Bridge	Ratlam	
	(b) *Broad guage/Metre gauge.*	
Southern/Central—		
Bangalore City	Wadi Bunder	Daily *via* Ghorpuri transhipment siding
Wadi Bunder	Bangalore City	
Western/Central/Eastern/Northeast Frontier—		
Ahmedabad	Tinsukia	Weekly
Tinsukia	Ahmedabad	
Ahmedabad	Muzaffarpur	
Muzaffarpur	Ahmedabad	
	(c) *Meter gauge.*	
North Eastern Railway—		
Katihar	Achnera	Daily
Achnera	Katihar	
Muzaffarpur	Manduadih	
Manduadih	Muzaffarpur	
Siwan	Manduadih	
Manduadih	Siwan	
Northeast Frontier Railway—		
Katihar	Amingaon	Thrice daily
Amingaon	Katihar	
Pandu	Tinsukia	
Tinsukia	Pandu	
Southern Railway—		
Madras Beach	Tuticorin	Bi-weekly
Tuticorin	Madras Beach	
Hubli	Poona	Daily
Poona	Hubli	
Poona	Harihar	
Harihar	Poona	
Harihar	Bangalore City	
Bangalore City	Harihar	
Tambaram	Tuticorin	
Tuticorin	Tambaram	
Tambaram	Tiruchchirappalli	
Tiruchchirappalli	Tambaram	

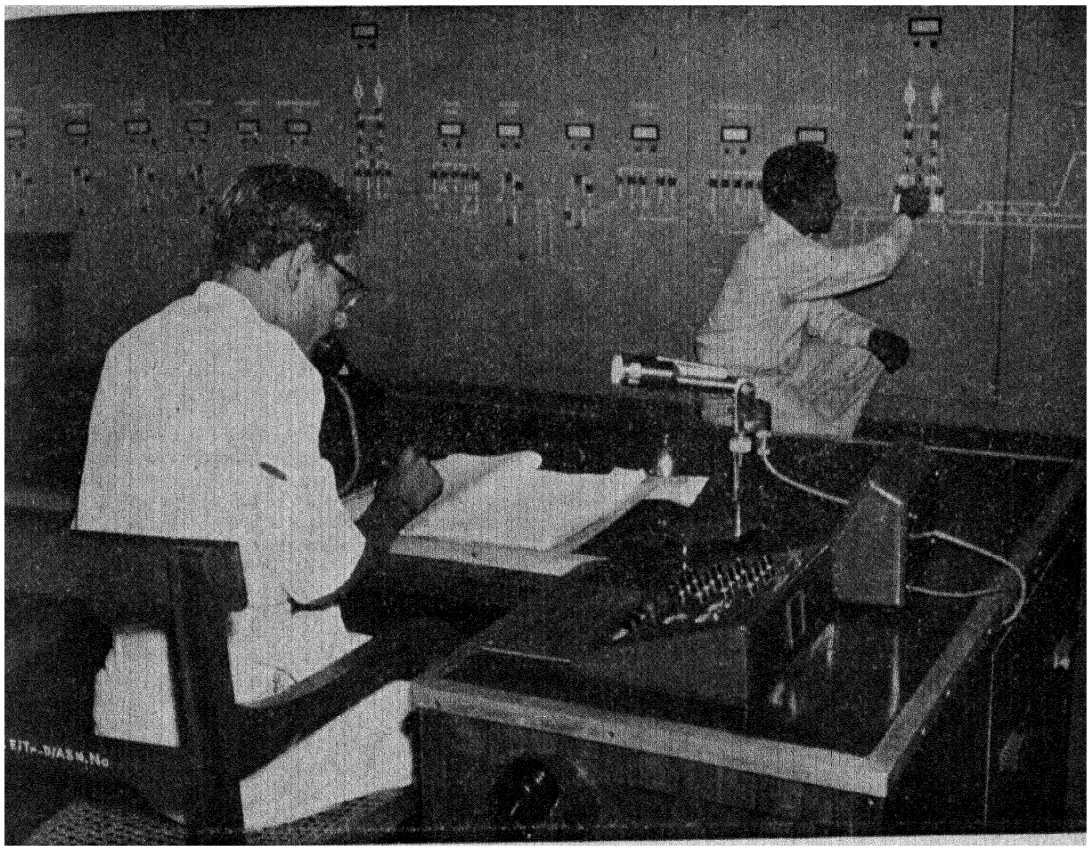
From	To	Frequency
	(c) *Metre gauge*—contd.	
Western Railway—		
Kandla	Jaipur	Weekly
Jaipur	Kandla	
Surendranagar	Jaipur	
Jaipur	Surendranagar	
Asarva	Jaipur	
Jaipur	Asarva	
Ajmer	Jaipur	Daily except Sunday
Jaipur	Ajmer	

57. Introduction of 'Crack Goods Trains'.—In the last year's report it was stated that with a view to stream-lining goods operation and introducing an element of reliability in the goods services crack goods trains and fast goods trains (link trains) were run on certain railways to fixed timings by selected crews, guards and assigned engines. Such trains continued to be run during the year under review also. The running of such trains has achieved good results in the matter of wagon usage, speed of goods trains, engine turn round, saving in engine crew and economy in fuel consumption. A close watch is maintained on the performance of these trains by the railway administrations.

58. Operating efficiency.—The operating efficiency reached a record level in 1960-61, as will be seen from the figures of efficiency indices given in the table on the next page. The composite index assessing engine utilization is the net tonne kilometres per goods locomotive day on line which takes into account all engines in effective use as well as those under repairs and storage from day to day. These indices increased by 5.62 per cent on the broad gauge and 7.27 per cent on the metre gauge in 1960-61 as compared to the previous year. Similarly the net tonne kilometres per wagon day which give the earning potential of a wagon improved by 2.89 per cent and 7.71 per cent on the broad and the metre gauges respectively in 1960-61 over the corresponding figures of the previous year.

The operating performance would have been still better but for certain factors which were beyond the control of the Railway Administrations. The country-wide partial strike of a section of the Central Government employees in July, 1960 and civil disturbances in Assam adversely affected the performance of the Railways. Moreover, the year 1960 witnessed unusually heavy floods in many areas of the country, including not only areas usually liable to floods, such as, in the far North East on the East Coast in the South and on the West Coast in the Bombay and the Saurashtra areas, but also other areas normally not so liable, such as, Rohtak area in the Punjab, Suratgarh-Hanumangarh, Bhatinda-Hanumangarh and Hanumangarh Sadulpur sections of the Bikaner Division, several sections of the Lucknow and Moradabad Divisions, including Lucknow City and Sitapur City and Balamau and Madhoganj section where one bridge was completely washed away. There were also repeated floods on the East Coast line served by the South Eastern Railway resulting in breaches between Jenapur and Haridaspur stations, and collapse of a bridge between Rupsa and Basta stations leading to prolonged interruptions to traffic.

The percentage of loaded wagon kilometres to the total wagon kilometres has dropped on both the gauges in 1960-61 over 1959-60. The drop on the broad gauge was mainly due to the increased supply of empty wagons involving longer hauls from the Northern, the Central and the Southern Railways to the Bengal-Bihar collieries to meet the increased demand for coal in the country. Moreover the increase in empty haulage was partly due to the increased utilization of high capacity special type wagons which moved in close circuit for the carriage of raw materials from the mines to the steel plants without any return load. The factor which contributed to the increased empty haulage on the metre gauge was the



TRACTION POWER CONTROLLER ON DUTY IN THE REMOTE CONTROL CENTRE AT ASANSOL—RAILWAY ELECTRIFICATION

PERMANENT WAY ENGINEERS INSPECTING THE OVER-FLOODED RAILWAY TRACK AT ROHTAK—NORTHERN RAILWAY



increased flow of empties to transhipment points for stepping up of transhipment from broad gauge to metre gauge.

In order to keep up the pace of improvement, the work of the area control organizations and wagon chasing organizations have been intensified on different railways. Extensive use was made of open wagons for loading such commodities as would normally require covered wagons covering them with turpaulins to the extent possible so that the wagons were fully utilized.

	Broad gauge			Metre gauge		
	1959-60	1960-61	Inc. (+) or dec. (—) per cent over 1959-60	1959-60	1960-61	Inc. (+) or dec. (—) per cent over 1959-60
Engine usage—						
Engine kilometres per engine day on line, all services	137	137	—	117	119	+1·71
Engine kilometres per engine day in use, all services	182	182	—	164	169	+3·05
Engine kilometres per engine day in use, goods services only	161	162	+0·62	138	142	+2·90
Percentage of locomotives under or awaiting repairs	14·9	14·5	—2·68	14·4	13·8	—4·17
Speed of goods trains (kilometres per hour)	15·8*	16·1	+1·90	13·3	13·7	+3·01
Net load of goods trains (tonnes)	631	656	+3·96	288	298	+3·47
Net tonne kilometres per goods locomotive day on line	41,918	44,275	+5·62	15,827	16,977	+7·27
Net tonne kilometres per goods locomotive day in use	62,125	65,011	+4·65	25,865	27,782	+7·41
Wagon usage—						
Wagon kilometres per wagon day	76·6	76·9	+0·39	48·8	51·6	+5.7
Net tonne kilometres per wagon day	970	998	+2·89	376	405	+7·7
Turn-round of wagons	11·1	11·2	+0·90	Northern pool. 8·43	§ 8·75	—
				Southern pool. 7·42	7·24 § 7·53	— —
Percentage of loaded to total wagon kilometres	70·0	69·6	—0·57	74·6	73·7	—1·2
Percentage of wagons under or awaiting repairs	3·79	3·37	—11·1	4·32*	4·52	+4·6

* Revised § up to 31 October, 1960.

59. Unproductive services-shunting kilometres.—Unproductive engine kilometres classified under the heads 'other engine kilometrage' and 'shunting kilometres' taken together, which had slightly increased from 23.8 per cent in 1958-59 to 24.0 per cent in 1959-60, has come down to 23.7 per cent in 1960-61 of the total engine kilometrage.

Shunting kilometres, forming the greater portion of such unproductive kilometrage accounted for 15.4 per cent of the total engine kilometres as against 15.6 per cent during the year 1959-60. The following table shows the ratio per 100 train kilometres of passenger and goods shunting kilometres on Government Railways during 1960-61 as compared with 1959-60:

SHUNTING KILOMETRAGE DURING 1959-60 AND 1960-61.
GOVERNMENT RAILWAYS

	1959-60	1960-61	Percentage variation
Shunting kilometres per 100 train kilometres—			
Passenger and proportion of mixed—			
Broad gauge	6·84	6·87	+0·44
Metre gauge	6·34*	7·13	+12·46
Goods and Proportion of mixed—			
Broad gauge	33·3	36·8	—3·92
Metre gauge	44·8	41·1	—8·26

* Revised.

60. Coal supplies and consumption—

(i) *General.*—Efforts were continued in 1960-61 to bring about an improvement in railway coal supplies both in quantity and quality, and to secure as far as possible, under the existing supply arrangements, a more satisfactory and expeditious action on complaints, made by the railways in regard to supplies of coal inferior to the specified grades. In addition to analysis of coal in cases of doubtful quality, a sample survey was also organised on all railways during the last quarter of the year in order to assess the extent of sub-grade supplies.

(ii) *Procurement and inspection.*—The finalisation of the draft contract form for supplies of loco coal was further pursued with the Joint Working Committee of the Coal Industry.

An inspection organisation for inspecting loco coal supplies at loading points in the National Coal Development Corporation collieries of Karanpura and Bokaro coalfields started functioning at Dhanbad in August, 1960. This organization has been placed under the control of the Chief Mining Adviser, Railway Board, Dhanbad. It has also been decided to extend this organization to all other collieries supplying loco coal as soon as the contract system is introduced.

(iii) *Production and despatches by rail.*—Coal mined in various states of India during the year 1960-61 amounted to 55.51 million tonnes against 48.62 million tonnes in 1959-60. The total coal carried on the Government Railways during the year under review was approximately 50.40 million tonnes. Of this, the Eastern and the South-Eastern Railways carried 41.37 million tonnes.

(iv) *Supplies and stocks.*—The stocks of steam coal on the Indian Government Railways remained much below the target of 25.2 days' consumption throughout the year. At the beginning of the year, it stood at 6.9 days and at the end at 7.4 days. The stock touched the peak of 12.8 days on the 20 September 1960 and the lowest of 5.4 days on the 10 June 1960. On most of the railways, the stocks continued to be below the minimum level, the lowest stock reached the level of 3.9 and 3.8 days consumption on the 10 July 1960, on the Central and the Northern Railways respectively.

(v) *Consumption.*—The total quantity of coal consumed on all Indian Railways in 1960-61 as compared with the previous year is given below:

(Figures in tonnes)

	1959-60**	1960-61†
Government Railways*	15,398,757	16,131,656
Non-Government Railways	59,269	63,718
Total	15,458,026	16,195,374

* Includes 3,776 tonnes for the year 1959-60 and 3,698 tonnes for the year 1960-61 consumed by the Chittaranjan Locomotive Works and the Integral Coach Factory.

The gradewise distribution was as follows:

(Figures in tonnes)

	1959-60**	1960-61†
Selected 'A'	1,279,755	1,204,270
Selected 'B'	3,072,847	2,663,254
Grade I	5,531,841	6,007,746
Grade II	727,600	1,507,126
Grade IIIA	2,357	8,425
Grade IIIB	10,954	6,256
Outlying fields coal	4,501,734	4,442,628
Small coal	330,938	355,669
Total	15,458,026	16,195,374

** Revised figures.

† Figures for 1960-61 are provisional.

The reduction in supplies of Selected 'A' and 'B' coals and the increase in lower grade coals were significant. Coking coal continued to be replaced by non-coking ones.

61. Coal economy measures—

(i) *Expert Committee on Coal Consumption on Railways.*—The various measures recommended by the Committee for achieving economy in coal consumption and improving the quality of coal supplied to Railways were processed further during the year under review.

(ii) *Fuel control organization.*—Progress was maintained in building up the strength of the fuel control organizations on the railways during the year.

(iii) *Pilot division.*—The pilot division scheme has since been implemented on all the Zonal Railways. The working of the pilot divisions was carefully studied every month and directives were issued for improvements when necessary.

(iv) *Training of staff.*—The training of running staff on the railways and also in the Central Fuel Training School at Jamalpur, progressed satisfactorily during this year.

(v) *Fuel performance.*—There was a general improvement in the fuel performance in most of the Railways. On the metre gauge passenger service, the performance of the Central and the Southern Railways deteriorated slightly.

(vi) *Departmental committees.*—The Railway Board was represented on the following Committees and Sub-Committees:

(1) Coal Council of India:
  (i) Committee on requirements and utilisation.
  (ii) Committee on production and preparation.
  (iii) Fuel efficiency committee.

(2) Coal Advisory Committee.

(3) Advisory Committee for the various coal survey stations.

(4) Indian Standards Institution:
  (i) Solid mineral fuel sectional committee.
  (ii) Sub-committee on sampling.
  (iii) Sub-committee on standards and sizes.
  (iv) Sub-committee on coke.
  (v) Panel for coke consumed in cupolas.
  (vi) Sub-committee on terminology and classification of coal.

B. COMMERCIAL

62. Alterations in rates and fares—

I. *Goods.*—With effect from 1 April, 1960, the levy of a supplementary charge of 5 nP per rupee on freights of goods and coal traffic, excepting iron ore and manganese ore booked to ports for export, military traffic, postal traffic and railway materials and stores was introduced.

With effect from the same date the metric system of weights and measures was adopted by the Commercial Department of the Indian Railways.

The following were some of the other more important adjustments made in the freight rates during the year under review:

(*a*) The concessional rate of 40 per cent below the tariff rate for cattle applicable over the broad gauge for the carriage of dry cattle and their calves from certain selected stations to up-country stations for grazing purposes was extended for a further period of one year from 1 March, 1961.

(*b*) The concession of 40 per cent below the tariff rates applicable over broad gauge allowed for the transport of stray cattle booked by the Ministry of Food and Agriculture from certain specified stations in the Punjab and Delhi States was extended to bookings from certain additional stations in the Punjab State and from certain selected stations in Uttar Pradesh also.

(*c*) A concessional rate at 40 per cent below the tariff rate applicable over the broad gauge was allowed for the transport of bulls for breeding purposes booked by the Secretary, National Livestock Committee, Ministry of Food and Agriculture from stations in the Punjab and Delhi States to stations in Madras State consigned to the Department of Animal Husbandry.

(*d*) The concession of 50 per cent in the tariff rate granted for cattle dung manure in wagon loads booked by the Government of Bombay from Borivili, Andheri, Goregaon (Aarey Milk Colony Siding) Kurla and Sion to stations on the Western and the Central Railways situated within a distance of 480 kilometres from Bombay and to stations on the Southern Railway situated in the Districts of North Satara, South Satara and Kolhapur within a distance of 480 kilometres from Bombay was continued. During the year, the concession was further extended to bookings to all stations on the Southern Railway situated within a distance of 480 kilometres from Bombay instead of to stations situated in the Districts of North Satara, South Satara and Kolhapur only.

(*e*) A concession of 50 per cent in the tariff rates was allowed for compost manure in wagon loads booked by the Government in Rajasthan from Bikaner to stations on the Northern Railway situated within a distance of 320 kilometres from Bikaner.

(*f*) Station-to-station rates equal to class 27.5A as against the tariff classification of 32.5A, quoted for gypsum intended for reclamation of alkaline lands and booked between certain specified stations were continued and extended to some more stations.

(*g*) Special reduced rates were allowed for the carriage of urea intended for manurial purposes and consigned in wagon loads by the Regional Directors of Food at Ports or by Messrs. Sindri Fertilisers and Chemicals (Private) Limited.

(*h*) The concession of 25 per cent in the tariff rates granted for glass phials booked by goods train from Basi-Kiratpur, Najibabad Nagina on the Northern Railway was extended to bookings from Haldaur on the same Railway.

(*i*) Defective or old iron or steel materials supplied by Railways to electric furnace owners was allowed the benefit of concessional rates equal to 20 per cent less than class 55-B on production of a certificate from the Railway Controller of Stores that the materials were intended for re-rolling or re-melting purposes only.

(*j*) Concessional rates for the transport of fodder to famine affected areas were quoted between certain specified stations on requests received from the State Governments concerned.

Special rates were continued to be quoted for the carriage of jute, half pressed and full pressed, sugarcane, rosin and turpentine, absolute alcohol (intended for industrial purposes) and tea when booked between certain specified stations. A special rate was also introduced for the transport of iron ore from Dhalli Rajhara to Bondamunda.

Measures to stimulate export traffic.—To stimulate export, a rebate of 50 per cent in railway freight rates was allowed on the following additional commodities during the year 1960-61 when booked from certain specified stations to specified ports for export:

(i) Ice cans,

(ii) Steel tubes, black and galvanized,

(iii) Industrial alcohol, denatured,
(iv) Absolute alcohol,
(v) Rectified spirit,
(vi) Power alcohol,
(vii) Window glass and sheet glass,
(viii) Guar gum,
(ix) Guar seeds for manufacture of guar gum for export,
(x) Fire bricks, and
(xi) Starters.

A rebate of 30 per cent in railway freight was allowed for quartzite booked from certain stations on the Southern Railway to Madras for export.

Special rates were also quoted for the movement of magnesite crude from Salem and Karuppur to Madras Harbour and Cochin Harbour Terminus.

The procedure laid down for preventing misuse of the concession continued to be applied.

II. *Coaching*—

(a) *Passenger fares*—

No changes were effected in the passenger fares during the year except the slight adjustments necessitated by the adoption of the metric system of weights and measures by the Commercial Department of the Indian Railways from 1 April 1960.

The minimum fares for passenger traffic were revised as under:—

Air-conditioned class	Rs. 5
First class	Rs. 0.20 nP
Second class	Rs. 0.15 nP
Third class	Rs. 0.10 nP

The sur-charge for third class air-conditioned travel was revised to 1.25 nP per kilometre.

The schedule of railway passenger fare tax was revised as under:

(1) Passengers travelling on season tickets	*Nil*
(2) Passengers travelling for distances up to 25 kilometres (inclusive)	*Nil*
(3) Passengers travelling for distances from 26 kilometres to 49 kilometres	5 per cent of fare
(4) Passengers travelling for distances from 50 kilometres to 805 kilometres	15 per cent of fare
(5) Passengers travelling for distances over 805 kilometres	10 per cent of fare
(6) Passengers travelling on kilometrage coupons	12½ per cent of the cost of the coupons

The rule regarding the rounding off of passenger fares was revised as under:

"The fares should be rounded off to the next higher 5 nP in the case of air-conditioned and I class fares below Rs. 5 and II and III classes, and to the next higher 25 nP in the case of air-conditioned and I class fares over Rs. 5.

(b) *Concessions*—

(i) While concessional return tickets for Dussehra, Diwali and Christmas holidays and for travel to hill stations and to Kashmir were continued, concessional return tickets issued between 15 July to 15 September in previous years were discontinued.

(ii) It was decided to allow the following concessions to foreign tourists during 1961, which was declared "Welcome to India—Visit the Orient Year".

(*a*) Tickets for air-conditioned class at 25 per cent below the basic fare instead of 15 per cent usually allowed to foreign tourists.

(*b*) "Travel As You Like" tickets available for 30 days in air-conditioned class of accommodation and in first class where air-conditioned accommodation is not available at a lump sum of Rs. 495.

(iii) The facility admissible to tuberculosis patients for travelling at concessional rates within their States has been extended for their journeys to and from tuberculosis hospitals/sanatoria/clinics situated in other States also.

(iv) The system of rail travel coupons at concessional fares, admissible to correspondents accredited to the headquarters of the Government of India or the State Government has been extended to the whole-time news camera men accredited to the headquarters of the Government of India at Delhi/New Delhi for their journeys performed over the Indian Railways on the business connected with their *bona fide* work.

(c) *Luggage*—

(i) The minimum distance for luggage has been revised to 40 kilometres.

(ii) With the levy of minimum in units of 5 kilograms, fractions of less than 5 kilograms have been rounded off to the next higher unit.

(iii) The free allowance of luggage for passengers has been revised as under:

Air-conditioned class	60 kilograms
First class	40 kilograms
Second class	30 kilograms
Third class	25 kilograms

(d) *Parcels*—

(i) The special station-to-station rates allowed for vegetables were continued this year.

(ii) Free carriage by goods as well as parcel trains was allowed to relief materials intended for flood relief in Orissa and Rohtak. This concession was also extended to relief materials intended for victims of the disturbances in Assam.

63. Delay in transit of 'smalls' (goods and parcels).—The question of delay in the movement of consignments, particularly smalls (goods and parcels), has been constantly engaging the attention of the Railway Board and of the Railway Administrations. To tackle this problem in all its aspects, the Board directed the railways to set up a standing committee, consisting of 2 senior scale officers, one belonging to the commercial and the other to operating branches of the headquarters office to examine the problem in all its aspects and to take suitable remedial action.

The other more important steps taken in this regard were as under—

(i) Running of special trains between certain pairs of stations where traffic was heavy.

(ii) Progressive extension of quick transit service wherever the offering was reasonable.

(iii) Co-ordination meetings between railways at appropriate levels for planning the clearance of seasonal traffic.

(iv) For the expeditious clearance of parcels, the manufacture of requisite number of bogie parcel vans, has been/is being programmed so that it may be possible to clear parcels by fast trains.

(v) Wherever traffic warranted, subject to line capacity being available, trains for the exclusive clearance of parcel traffic were also run.

(vi) During periods of heavy rush of traffic, especially in the case of perishable traffic, supervisory staff were specially deputed to watch the movements.

64. Underweighment and mis-declaration.—With a view to plugging the leakage of railway revenue caused by underweighment and mis-declaration of goods, vigorous steps were taken to check the evil by conducting test

checks at destination stations and surprise checks enroute by inspectors specially appointed for the purpose. Cent per cent checks at a few selected stations by station staff and by weighment inspectors were conducted on selected dates in a month to determine the extent of leakage of railway revenue. The result of day-to-day regular checks and special cent per cent checks are given below:

Underweighments—

(a) All checks (including regular day-to-day checks) :

(1) Number of consignments checked	1,389,470
(2) Number of consignments found underweighed	68,060
(3) Amount of undercharges collected	Rs. 16,01,989
(4) Percentage of item (2) to (1)	4.9

(b) Cent per cent checks :

(1) Number of consignments checked	571,959
(2) Number of consignments found underweighed	10,821
(3) Amount of under-charges collected	Rs. 76,092
(4) Percentage of item (2) to (1)	1.9

Mis-declaration—

(a) All checks (including regular day-to-day checks) :

(1) Number of consignments checked	700,830
(2) Number of consignments found misdeclared	302
(3) Amount of penalty charges collected	Rs. 26,036
(4) Percentage of item (2) to (1)	0.04

(*b*) Cent per cent checks :

(1) Number of consignments checked	126,269
(2) Number of consignments found misdeclared	78
(3) Amount of penalty charges collected	Rs. 3,420
(4) Percentage of item (2) to (1)	.06

65. Co-ordination of rail, road and water transport.—The progress of the Railways' participation in the State Road Transport Corporations/Undertakings during 1960-61, as compared to the preceeding year, is stated below:

(In lakhs)

Name of Corporation/Undertaking	Amount of capital invested during		Total capital investment as on 31 March 1961
	1959-60	1960-61	
	Rs.	Rs.	Rs.
1. Bombay State Road Transport Corporation	43.50	20.41	6,04.19
2. Saurashtra ,, ,, ,, ,,	nil	46.79	97.76
3. Kutch ,, ,, ,, ,,	12.50		
4. Mandi Kulu Road Transport Corporation	nil	nil	7.42
5. Pepsu State ,, ,, ,,	1.10	2.65	11.43
6. Andhra Pradesh ,, ,, ,,	40.00	23.12	1,13.12
7. Bihar State ,, ,, ,,	30.00	50.00	80.00
8. North Bengal ,, ,, ,,	15.00	nil	15.00
9. Orissa State Road Transport Co. Ltd.,	nil	nil	6.00
10. Provincial Transport Services, Nagpur.	nil	nil	8.47
11 Central Provinces Transport Services, Jabalpur.	nil	nil	9.96
Total	1,42.10	1,42.97	9,53.35

* Reconstituted as Gujarat State Road Transport Corporation.

During the year under review, steps were taken towards co-ordination with the inland water transport and coastal shipping services by continuance of through booking arrangements with inland steam navigation companies and coastal shipping services from specific stations on the Railways.

66. Diversion of high-rated long distance traffic from rail to road and measures taken to meet road competition.—Diversion of high-rated traffic like cotton piece goods, general goods, etc., to road transport on routes parallel to the Railways continued to be noticed.

Measures taken to arrest this diversion of traffic includes :

(i) the opening of more out agencies/city booking agencies;

(ii) introduction of street collection and delivery services in the major cities ;

(iii) extension of quick transit services to more pairs of points;

(iv) running of fast special trains to carry full pressed cotton traffic to Bombay.

The Committee on Transport Policy and Co-ordination which was set up in July, 1959, submitted a preliminary report during the year under review.

This preliminary report presented the factual information that had been collected by the Committee and formulated the main issues thrown up as a result of the studies undertaken by them. The report confined itself to the problems of rail-road co-ordination only. The Committee did not make any recommendations in the preliminary report except in regard to the problem of co-ordination between the railways and the nationalised road transport undertakings in the States operating mainly passenger services, in respect of which the Planning Commission had asked the Committee to make advance recommendations. In this regard, the Committee supported the policy of corporations being constituted with the railways' participation in the management of nationalised road transport undertakings in the States.

67. Closer contact with trade and industry.—The railway administration continued to maintain close contact with the trade and general public mainly through the railway users' consultative bodies at various levels, *viz.*, the Station Consultative Committees, the Regional/Divisional Railway Users' Consultative Committees, the Zonal Railway Users' Consultative Committees and the National Railway Users' Consultative Council at the centre.

Besides the Minister and Members of the Railway Board, who, while on tour, met representatives of various chambers of commerce and trade associations at the places visited and attended to their representations, the railway officers had consultations as necessary with the representatives of trade on the day-to-day problems that arose.

The zonal railway administrations, as members of the important chambers of commerce in their respective areas took part in the meetings of the chambers of commerce. They also held *ad hoc* meetings with the trade associations and the trade generally.

68. Claims for compensation and refunds.—During this year 456,431 claims were settled by the Indian Government Railways, against 445,208 during 1959-60. The number of claims which remained outstanding at the close of the year 1960-61 was 52,506, against 37,862 at the end of the year 1959-60.

The net amount paid by the railways on account of goods or parcels lost or damaged during the year under review was Rs. 3.61 crores, against Rs. 3.75 crores in 1959-60.

The average time taken in the settlement of a claim was 49 days in 1960-61, against 52 days in the previous year.

Incidence of claims.—The number of new claims received and those re-opened was 452,615 in 1960-61, against 438,986 in 1959-60. There has been a slight increase in the number of new claims registered on all Indian Railways.

Incidence of suits arising out of claims for compensation.—The number of suits filed and remaining outstanding at the close of the year were 35,503 and 17,830 respectively, against 39,980 and 16,975 during the year 1959-60.

The statements at pages 49 to 51 pertaining to the year under review show—

(*a*) the number of claims received in respect of goods or parcels lost or damaged, refund of overcharge and the average time taken for settlement ;

(*b*) the number and the value of claims in respect of goods or parcels lost or damaged under the main causes; and

STATEMENT A

Claims received for goods or parcels damaged, lost, refund of overcharge, and the average time taken for settlement—1960-61

Item No.	Particulars	Central	Eastern	Northern	North Eastern]	Northeast Frontier	Southern	South Eastern	Western	Total All Goverment Railways
(1)	Number of claims involving compensation for goods or parcels lost, damaged, or delayed, carried over as unsettled at the close of the preceding year	4,263	5,026	6,633	3,181	5,284	2,929	4,453	6,093	37,862
(2)	Number of claims received (and re-opened) for compensation on account of goods or parcels lost, damaged, or delayed during the current year—									
	(*a*) Total number of new claims received	73,391	58,053	74,373	27,483	20,338	52,415	56,281	72,061	434,395
	(*b*) Total number of cases re-opened	2,498	1,898	2,597	846	1,229	2,929	1,000	5,223	18,220
	(*c*) Total of (*a*) and (*b*)	75,889	59,951	76,970	28,329	21,567	55,344	57,281	77,284	452,615
(3)	Number of claims referred to against (items 1 and 2) settled during the year—									
	(*a*) Total number of cases settled by payments	47,889	33,235	46,422	13,968	12,518	31,023	21,523	53,426	260,004
	(*b*) Total number of cases settled otherwise	28,591	26,788	31,491	15,319	11,471	24,652	33,392	24,723	196,427
	(*c*) Total of (*a*) and (*b*)	76,480	60,023	77,913	29,287	23,989	55,675	54,915	78,149	456,431
(4)	Balance outstanding as unsettled at the close of the year	3,672	4,954	5,690	2,223	2,862	2,598	*25,279	5,228	52,506*
(4)(*a*)	Number of claims pending for more than six months on 31-3-61	64	473	282	41	359	65	9,040	75	10,399
(5)	(*a*) Gross amount paid (as in Statement 'B'—Total) Rs.	52,11,404	76,60,657	62,08,913	25,52,193	36,36,421	29,12,573	45,01,413	66,50,051	3,93,33,625
	(*b*) Amount realised from sale proceeds from auction of unclaimed and damaged goods, etc. Rs	4,24,636	5,91,018	3,91,923	1,49,433	2,39,539	1,07,798	2,91,927	10,42,921	32,39,195
	(*c*) Net amount paid as compensation Rs.	47,86,768	70,69,639	58,16,990	24,02,760	33,96,882	28,04,775	42,09,486	56,07,180	3,60,94,430
(6)	Percentage of sum paid in compensation (item 5) to gross earnings	0·81	1·49	1·5	2·01	3·7	0·72	0·76	1·22	1·18
(7)	Average time taken in settlement of claims shown against items (1) and (2) (days)	34	42	41·8	55	89	44	69	51	49
(8)	Number of applications received for refunds on goods and parcels overcharged	17,300	16,915	24,313	5,053	3,498	34,672	12,225	22,580	1,36,556
(9)	Average time taken in settlement of claims shown against item (8) (days)	35	43·1	44	51	98	47	90	53	51

NOTE.—Gross amount represents the amount paid towards the claims settled without making allowance for sale proceeds from auction of unclaimed and damaged goods, etc., whereas net amount is worked out after taking into consideration sale proceeds, etc.

* Includes 18,460 cases arose as a result of census and subsequent check. These cases have not been accounted for against item (2).

STATEMENT B

Number and Value of Claims Paid 1960-61

Item No.	Particulars		Central	Eastern	Northern	North Eastern	Northeast Frontier	Southern	South Eastern	Western	Total all Govt. Railways
1	2		3	4	5	6	7	8	9	10	11
(1)	Claims paid on account of loss of complete packages/consignments	Number	11,950	11,005	10,920	2,621	2,403	300	4,427	18,629	62,255
		Value (Rs.)	20,73,555	25,07,569	23,20,031	9,03,754	10,83,956	38,062	9,51,233	40,87,071	1,39,65,231
		percentage to Total number	25	30·9	23·5	18·76	16·5	1	16·7	34·9	23·0
		and value	40	32·7	37·4	35·41	29·8	1	21·13	61·5	35·5
(2)	Claims paid on account of theft of complete packages/consignments	Number	892	434	214	117	61	8,186	209	18	10,131
		Value (Rs.)	1,58,192	5,86,926	83,259	95,643	80,473	9,59,139	2,08,998	8,985	21,81,615
		percentage to Total number	2	1·2	4	0·84	0·4	26	0·79	0·3	3·7
		and value	3	7·7	1·3	3·75	2·2	33	4·64	0·1	5·6
(3)	Claims paid on account of pilferages (*i.e.*, other than complete packages/consignments)	Number	25,369	14,810	19,719	10,092	7,639	15,460	10,795	27,801	1,31,685
		Value (Rs.)	15,46,704	14,92,902	12,80,153	9,18,679	10,52,169	18,16,521	8,11,864	14,39,489	1,03,58,481
		percentage to Total number	51	41·5	42·5	72,25	52·6	50	40·72	52·0	48·6
		and value	30	19·5	20·6	36·00	28·9	28	40·25	21·6	26·3
(4)	Claims paid on account of damage by wet	Number	5,046	4,576	1,692	226	2,702	4,868	1,165	4,466	24,741
		Value (Rs.)	5,19,728	16,66,080	2,54,325	75,355	6,99,868	6,82,673	3,77,512	6,74,069	49,49,610
		percentage to Total number	10	12.8	3·6	1·62	18·6	16	4 39	8·3	9·1
		and value	10	21·7	4 1	2 95	19·3	24	8·38	10.1	12·6
(5)	Claims paid on account of delay in transit	Number	1,663	1,386	3,264	178	389	356	231	601	8,068
		Value (Rs.)	2,23,418	5,48,278	3,35,207	2,28,377	2,81,120	40,569	1,00,187	97,612	18,54,768
		percentage to Total number	3	3·9	7·1	1·27	2·7	1	0·87	1·1	3·0
		and value	4	7·2	5·4	8·95	7·7	1	2·23	1·5	4·7
(6)	Claims paid on account of breakage	Number	1,145	1,350	697	22	138	673	146	579	4,750
		Value (Rs.)	1,03,959	1,32,102	76,941	8.928	19,860	60,015	21,489	87,148	5,10,442
		percentage to Total number	2	3·8	1·5	0·16	1·0	2	0·55	1·0	1·8
		and value	2	1·7	1·2	0·35	6·0	2	0·48	1·3	1·3
(7)	Claims paid on account of leakage	Number	2,908	1,126	1,805	225	685	829	189	582	8,349
		Value (Rs.)	4,50,295	2,37,249	3,60,977	42,706	1,24,787	1,02,797	42,575	71,782	14,33,168
		percentage to Total number	6	3·2	3·9	1·61	4·7	3	0·71	1·0	3·1
		and value	9	3·1	5·8	1·67	3·4	4	0·95	1·1	3·6
(8)	Claims paid on account of all other causes	Number	699	959	8,111	487	503	351	9,350	750	21,210
		Value (Rs.)	1,35,553	4,89,551	14,98,020	2,78,751	2,94,188	2,12,797	9,87,555	1,83,895	40,80,310
		percentage to Total number	1	2·7	17·5	3·49	3·5	1	35·27	1·4	7·7
		and value	2	6·4	24·2	10·92	8·1	7	21·94	2·8	10·4
(9)	Total	Number	49,672	35,646	46,422	13,968	14,520	31,023	26,512	53,426	2,71,189
		Value (Rs.)	52,11,404	76,60,657	62,08,913	25,52,193	36,36,421	29,12,573	45,01,413	66,50,051	3,93,33,625

STATEMENT C

Number of Court Cases in respect of Claims and their Disposal—1960-61

Item No.	Particulars	Central	Eastern	Northern	North Eastern	Northeast Frontier	Southern	South Eastern	Western	Total all Government Railways
(1)	Number of suits filed in court (or pending from the previous year) for the recovery of compensation in respect of goods or parcels lost, damaged or delayed	3,381	4,814	3,993	4,321	4,087	1,368	8,963	4,576	35,503
2	Number of suits settled out of court	1,419	1,796	1,006	504	1,033	321	2,793	1,622	10,494
(3)	Number of suits dismissed	329	1,071	867*	545	369	146	805	636	4,768
(4)	Number of suits decreed	364	615	338	1,228	974	83	2,320	594	6,516
(5)	Number of suits pending	1,269	1,332	1,782	2,044	1,711	818	7,150	1,724	17,830

*This includes 522 cases withdrawn.

(c) the number of court cases in respect of goods or parcels lost, damaged or delayed and their disposal.

69. Prevention of claims.—Special claims prevention organisation set up at the Zonal Railways under the supervision of senior scale claims prevention officers continued their activities to direct claims prevention work and instructing staff on claims prevention aspects. Some of the measures adopted to counteract causes leading to occurrence of claims are as under :

(i) emphasis on the need for using water-tight wagons to prevent incidence of damage by wet ;

(ii) special steps to load and move the damageable goods whenever these were loaded in open wagons ;

(iii) provision of armed escorts of goods train carrying valuable goods through unsafe areas ;

(iv) regular packing, labelling and marking checks and periodical observance of "stop rough handling" campaigns ;

(v) in addition to Ellis patent locking of wagons and vans, rivetting of the top and bottom cotters of the wagon doors as an additional safety measure to prevent running train thefts ; and

(vi) intensification of the drive to connect consignments in wagon loads and smalls lying unconnected at stations and in lost property offices.

70. Ticketless travel.—Concentrated efforts to check and eradicate ticketless travel were continued to be made, as in the preceding years both by the normal ticket checking arrangements and by the specially selected squads of ticket checking staff with the assistance of the special railway magistrates functioning in several States.

The following are some of the important measures adopted to combat ticketless travelling :

(i) surprise and special checks through special squads ;

(ii) continuance of the scheme of the special railway magistrates for trying cases under the Indian Railways Act ;

(iii) use of audio-visual methods such as loud-speakers, posters, hand bills, films, etc., to enlist public co-operation in eradicating the evil ;

(iv) incognito checks by officers to report cases, where the station and ticket checking staff indulge in corrupt practices of accepting illegal gratifications from passengers without tickets ; and

(v) authorising non-official members of the National/Zonal/Regional or Divisional Railway Users' Consultative Conucil/Committees to call upon any station master or travelling ticket examiner to check in their presence, tickets of passengers in a carriage or a compartment where they have any reason to believe that passengers were travelling without tickets.

The following figures give details of ticketless passengers detected, those who paid Railway dues including fare and excess charge upon demand and those who had to be prosecuted and the total amount recovered :

	1960-61
(i) Number of passengers detected travelling without ticket	7,555,075
(ii) Amount of fare and excess charges realised Rs.	1,83,23,309
(iii) Number of passengers who paid the fare and excess charges on demand	7,278,718*
(iv) Number of passengers prosecuted	213,372
(v) Number of mendicants ejected but not prosecuted	804,627

*Excludes 62,985 cases of passengers of the following type :

(i) those who furnished wrong addresses and escaped ;

(ii) railway servants reported for departmental action ; and

(iii) those who paid up sometime after detection.

71. **Mela traffic.**—Suitable arrangements, as usual, were made to deal with the additional traffic due to melas and fairs during the year. In addition to the strengthening of the existing trains, special trains were run to cope with the traffic. Extra staff were deputed for booking passengers. Adequate arrangements for sanitation, security, drinking water and lighting were made.

Some of the important melas held during the year and arrangements made therefor were as under :

Central Railway—

Hindola and Janamashtmi fair.—This fair was held at Mathura from 7 July to 16 August 1960, the principal days being 22 July to 7 August and 14 August, 1960. A total number of 91,438 inward and 145,491 outward passengers were dealt with in daily train services, the rakes of which were strengthened.

Ashadhi and Kartiki fairs at Pandharpur.—These two fairs were held during the period 30 June to 10 July 1960 and 26 October to 5 November 1960 respectively. A total number of 92,247 inward and 94,611 outward passengers in Ashadhi fair and 64,734 inward and 67, 834 outward passengers in Kartiki fair were dealt with. In addition to the strengthening of rakes of the daily trains, 143 special trains on narrow gauge section and 38 on broad gauge section were run to clear the *mela* traffic.

Eastern Railway—

Pitripaksha mela.—This mela took place at Gaya from 3 September to 23 September 1960. A total number of 90,978 outward and 57,037 inward passengers were dealt with.

Northern Railway—

Kartiki mela.—This mela was held from 27 October to 6 November 1960 at Garhmukteswar, Kankhathar, Bulwali, Rajghat and Hardwar. The main bathing day was 3 November, 1960. A total number of 160,137 inward and 144,078 outward passengers were dealt with and 81 special trains were run to clear the mela traffic.

North Eastern Railway—

Sonepore mela.—The Kartik Purnamashi mela was held from 31 October to 13 November, 1960, the principal bathing day being 3 November, 1960. In addition to 256,250 outward passengers dealt with, 37 wagons loaded with live stock were received and 76 despatched. To clear the rush of passengers, 92 special trains were run and one extra steamer was put into service during the mela period.

Northeast Frontier Railway—

Rash mela at Cooch Behar, Siva Chaturdashi mela at Sibsagar Town, Barauni Snan mela at Badrpurghat and Ashokastami Snan mela at Silghat Town were held during the year. The rush was cleared by strengthening the existing trains and by running special trains.

Southern Railway—

Chitra festival.—This fair was held at Madurai from 28 April to 15 May, 1960, the principal days being 5 May to 13 May, 1960. A total number of 188,568 inward and 154,087 outward passengers were dealt with, and 19 special trains were run to clear the rush of passengers.

South Eastern Railway—

Govinda Dwadashi mela at Puri.—Rath Jatra and Dol Jatra at Puri, Bhubaneswar and Sakhigopal were the important melas held during the year. Six special trains for **Rath Jatra** festival at Puri and 30 special trains for Dwadashi mela at Puri were run to deal with the heavy rush of traffic.

Western Railway—

Two important fairs were held at Ajmer, *viz.*, (i) Khwaja Urs' fair and (ii) Pushkar fair. To cope with the heavy passenger traffic, additional trains were run and existing trains were strengthened to the extent possible.

72. Measures to ensure civility and assistance on the part of the railway staff in their dealings with the public.—Through the medium of railway gazettes and pictorial illustrations, the need for patience, civility and courtesy on the part of railway staff in their dealings with the public was impressed on the staff. Complaints of discourtesy were promptly enquired into and suitable action taken against the staff found at fault.

The 'Railway Week' was also observed as 'Courtesy Week' and the need for courtesy was conveyed to the staff on various railways.

73. Measures taken to foster tourist traffic.—Special attention continued to be paid to the fostering of tourist traffic, both overseas and inland, during the year.

Additional measures taken during this year with the special object of fostering tourist traffic were as under :

Retiring rooms.—For the convenience of tourists, retiring rooms were provided at Mathura, Allahabad, Hospet and Jharsuguda stations.

From 1 June, 1960, an additional retiring room with two beds was provided at Poona.

Foreign tourists with their tourist identity cards on application made at any railway office or station were permitted to reserve in advance accommodation in retiring rooms at any station, where such accommodation was available.

Camping coaches.—The facility of camping coaches already provided at 10 stations, was extended to 3 more stations, *viz.*, Conjeeveram, Palni and Tiruchendur on the Southern Railway.

Enquiry office.—A new enquiry and reservation office was opened at Aurangabad from 16 July, 1960, for the convenience of visitors to this place of tourist importance.

Concessions.—In pursuance of the declaration of 1961 as "Welcome to India—Visit the Orient Year", the following concessions to foreign tourists on production of a certificate from an authorised officer of the Tourist Department of the Government of India were introduced:

(i) A concession of 25 per cent in air-conditioned class fares instead of 15 per cent usually allowed.

(ii) "Travel As You Like" tickets over the entire Indian Railway system available for thirty days in air-conditioned class and in first class where air-conditioned class was not provided, at a lump sum of Rs. 495.

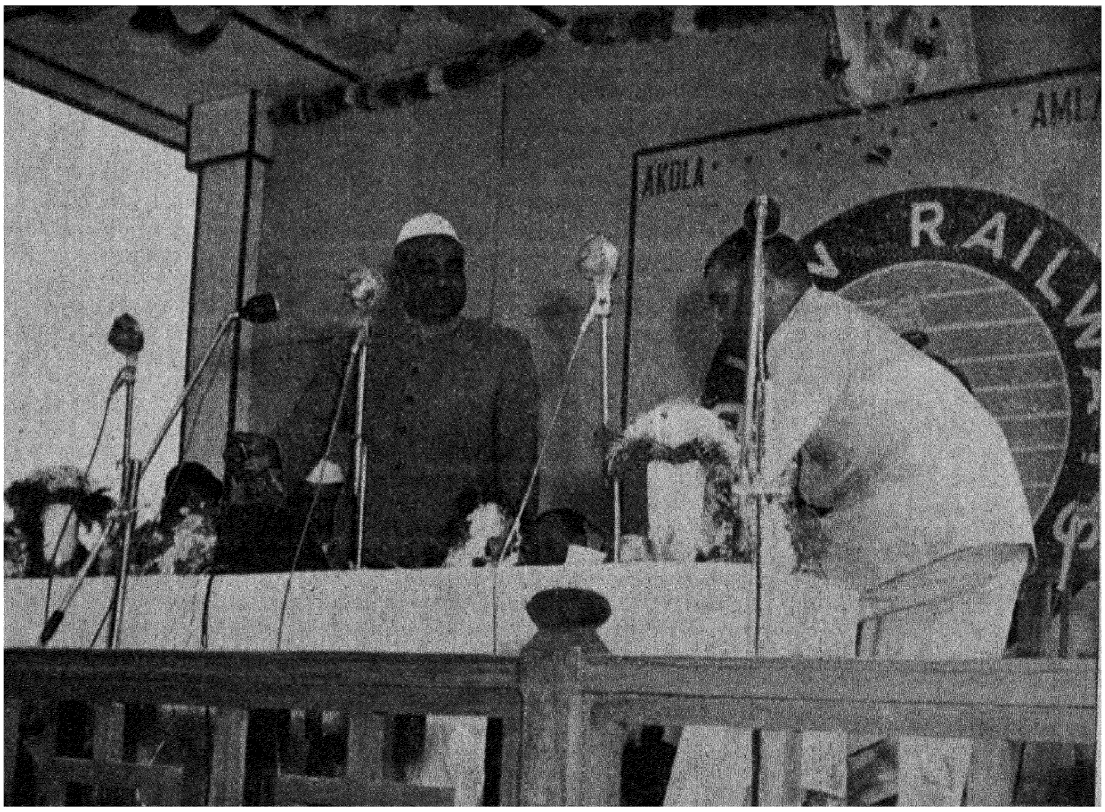
Train services for tourists.—Requisitions received from tourists for allotment of extra coaches were complied with to the maximum extent feasible.

For the convenience of tourist to and from Kashmir in particular, five through service coaches, *viz.*, one fully air-conditioned, one first, one second, one third class coaches and one luggage and brake van were run between Bombay Central and Pathankot by Frontier/Kashmir Mails during the period 14/15 April, 1960 to 30 September/2 October, 1960, besides regular train services, namely, 17 Up/51 Up and 52 Dn/18 Dn Sealdah-Pathankot Express, 59 Up/60 Dn Srinagar Express and 33 Up/34 Dn Kashmir Mails.



SHRI JAGJIVAN RAM, MINISTER FOR RAILWAYS, PULLING A MINIATURE LEVER WHICH SHOWED GREEN SIGNAL TO THE FIRST RANCHI-HOWRAH EXPRESS ON THE OPENING OF CHANDRAPURA-MURI-RANCHI LINE—EASTERN RAILWAY

SHRI JAGJIVAN RAM, MINISTER FOR RAILWAYS, OPENING THE KHANDWA-HINGOLI METRE GAUGE RAIL LINK AT AKOLA ON 2 JANUARY, 1961. THIS CONNECTS NORTHERN AND THE SOUTHERN METRE GAUGE ZONES—CENTRAL RAILWAY



CHAPTER IV

NEW CONSTRUCTION AND ENGINEERING WORKS

74. New lines opened during 1960-61.—The following lines representing an addition of 330.61 kilometres were opened during the year:

Railway	*New Lines*	*Gauge*	*Approximate Kilometrage*
Central	Khandwa—Hingoli Railway Project		
	Amlakhurd—Tukai Thad	M. G.	10·09
	Tukai Thad—Akola	M. G.	108·47
Eastern	Chandrapura—Hatia Railway construction		
	(*a*) Muri—Ranchi*	B. G.	65·08
	(*b*) Ranchi—Hatia* (opened for goods traffic only in March 1961)	B. G.	7·72
	Avoiding line between Ratibati Searsole No. 1 Siding (opened for goods traffic only in October 1960)	B. G.	5·75
	Diversion of Budge Budge Branch between Majerhat—Santoshpur	B. G.	4·34
	Avoiding line between Damodar and Kalipahari (opened for goods traffic only in January 1961)	B. G.	13·39
	Tildanga—Farakka Project (opened for goods traffic only in November 1960.)	B. G.	5·79
Northeast Frontier	Malda Town—Khejuriaghat (opened for goods traffic only in November 1960	B. G.	33·06
South Eastern	Bondamunda—Dumaro (Bondamunda—Bimlagarh—Barsua) (opened for goods traffic only in April 1960)	B. G.	67·59
	Barabil—Panposh Gorge (opened for goods traffic only in April 1960)	B. G.	9·33
		Total	330·61

*worked by South Eastern Railway.

75. Lines under construction during 1960-61.—New lines totalling 1,758.81 kilometres, restoration of dismantled line of length of 16.88 kilometres and conversion from metre gauge to broad gauge to the extent of 285.08 kilometres were either under construction or sanctioned during the year 1960-61. The details are given below:

Railway	*New Lines*	*Gauge*	*Approximate Kilometrage*
Central	Diva—Panvel—Uran	B. G.	54·22
Eastern	Barasat—Hasnabad	B. G.	53·03
	Bukhtiarpur—Rajgir	B. G.	53·88
	Karanpura—Ramgarh Coalfields	B. G.	17·06
	Bondamunda—Nawagaon	B. G.	18·39
	Hatia—Nawagaon	B. G.	142·91
	Sayal 'D' Siding in Karanpura and allied Coalfields	B. G.	0·66
Northern	Robertsganj—Garhwa Road	B. G.	162·33
	Ghaziabad—Tughlakabad including Second Yamuna Bridge	B. G.	25·88
	Madhopur—Kathua	B. G.	8·69
Northeast Frontier	Kalkalighat—Dharmanagar	M. G.	31·27
	Rangapara—Lakhimpur—Murkongshelek Construction (Rangapara—Lakhimpur)	M. G.	172·84
South Eastern	Bauridand—Karonji	B. G.	86·90
	Branch line to serve Korea Coalfields and spur from Karonji to Block II-A in C.I.C	B. G.	37·01
	Champa—Kerba Extension across the Hasdeo river	B. G.	14·00
Western	Udaipur—Himmatnager	M. G.	220·71
Dandakaranya—Bolangir-Kiriburu Railway Projects			
	Kottavalasa—Bailadilla	B. G.	427·29
	Sambalpur—Titilagarh	B. G.	183·46
	Bimlagarh—Kiriburu	B. G.	48·28
	Restoration of dismantled lines		
Northern	Akbarpur—Tanda	B. G.	16·88
	Conversion fom Metre Gauge to Broad Gauge		
Southern	Gudivada—Bhimavaram (Phase I)		65·65
	Vijayawada—Masulipatam (Phase II)		82·88
Northeast Frontier	Katihar—Singhabad		111·05
	Kumedpur Mukuria (near Barsoi)		25·50

76. Lines closed during 1960-61.—Nil.

77. New surveys sanctioned during 1960-61.—The following surveys were sanctioned during the year:

			Approximate Kilometrage
Central	Diva-Panvel-Uran (Traffic survey)	B. G.	54·22
Northern	Pipri-Singrauli Coalfields (Preliminary engineering & traffic survey)	B. G.	64·37
	Kathua-Jammu (Reconnaissance engineering & traffic survey)	B. G.	88·51
Southern	Vejendla-Tasunduru (engineering survey)	B. G.	11·94

78. Construction works.—

Central Railway—

Khandwa-Hingoli—

The construction of Khandwa-Hingoli metre gauge line of 302.48 kilometres was sanctioned on 1 March 1954 for connecting the Northern and the Southern metre gauge systems at an estimated cost of Rs. 12.39 crores. The construction was started from both ends. The progress up to the end of the year 1959-60 was that 183.93 kilometres were constructed and opened to traffic. The sections Amla Khurd-Tukaithad and Tukaithad-Akola (remaining portion of the project) were opened for goods traffic on 7 July 1960 and 1 November 1960 respectively. These two sections were opened for passenger traffic on 2 January 1961 and the vital link connecting the northerr and Southern metre gauge railway systems was thus established for all traffic.

Eastern Railway—

Muri-Ranchi-Hatia—

The portion Muri-Ranchi-Hatia aggregating 72.80 kilometres forms part of the Chandrapura-Muri-Ranchi-Hatia-Nawagaon-Bondamunda project. With a view to dealing with the increased traffic for movement of coal from Bokaro Coalfields to Rourkela and Bhilai Steel Plants and iron ore in reverse direction for the new steel plant to be set up at Bokaro and also to cater to the needs of the heavy machinery plant and foundry forge at Ranchi it was initially decided to construct the portion Chandrapura to Ranchi (136 km. approximately) during the Second Plan. The construction of Chandrapura-Muri portion was started in March 1957. The sections Chandrapura to Muri and Muri to Ranchi were opened to goods traffic on 10 November 1959 and 24 October 1960 respectively.

With the establishment of the heavy machinery and foundry forge at Hatia at a distance of about 6.92 kilometres from Ranchi, the extension of the line from Ranchi to Hatia had also to be taken up during the Second Plan. Sanction to work (including the yard facilities at Hatia) was issued on 9 May 1959. The work has been completed and the line opened to goods traffic on 22 March 1961.

Tildanga-Farakka—

The construction of the Tildanga-Farakka line (5.79 kilometres) was sanctioned on 26 December 1959. The line has since been completed and opened to goods traffic in November 1960 and passenger traffic on 9 April 1961 that is immediately after the close of the year under report (1960-61).

Northern Railway—

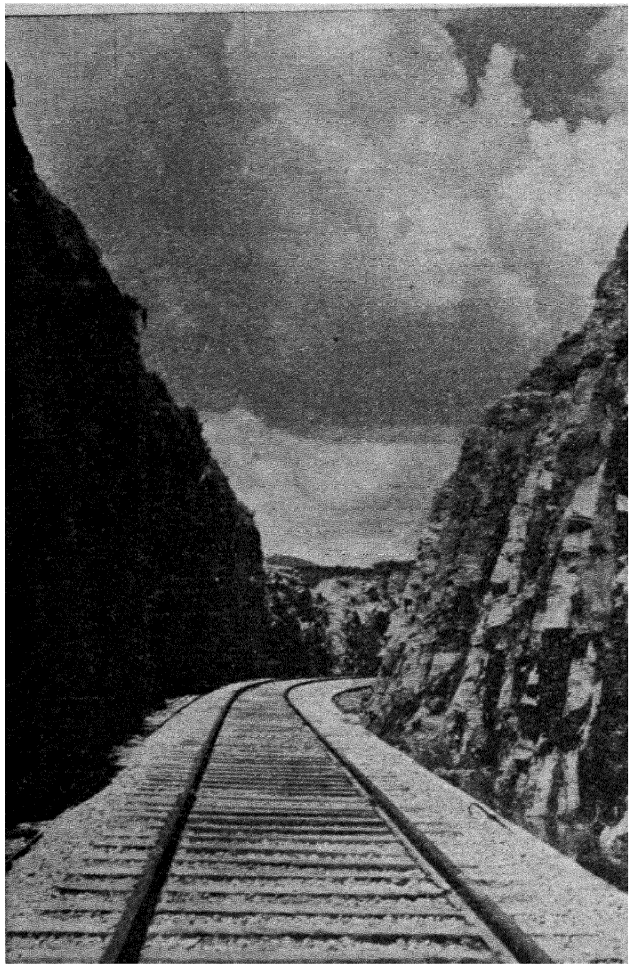
Akbarpur-Tanda Restoration—

In order to help the rehabilitation of the handloom industry in the area, the restoration of Akbarpur-Tanda (16.88 km) broad gauge was sanctioned on 4 August 1960. The restoration has since been completed and the line has been opened to traffic on 30 March 1961.

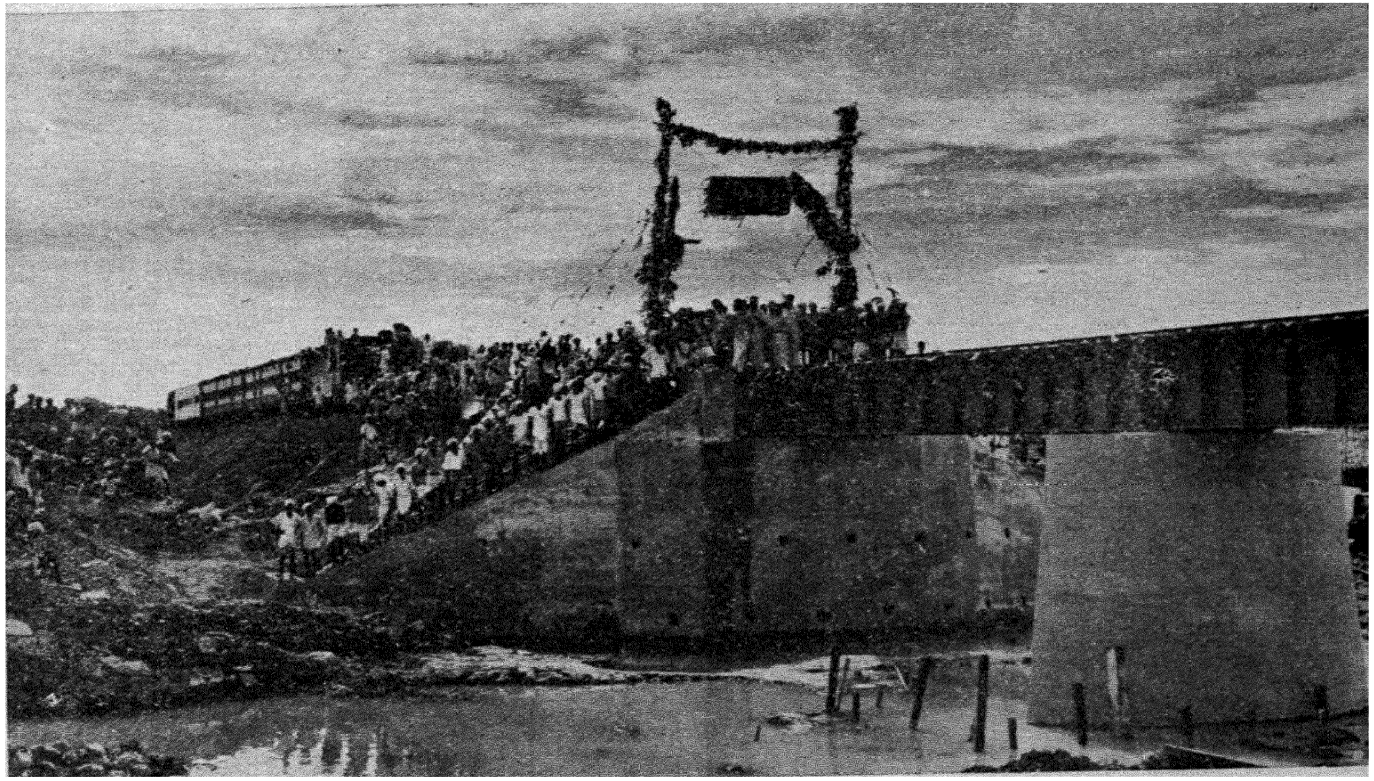
Northeast Frontier Railway—

Khajuriaghat-Malda—

With a view to reducing congestion on the main line to Howrah and also with the expectation that when constructed this line will reduce the lead



VIEW OF A DEEP CUTTING ON THE MURI—RANCHI BROAD GAUGE LINE—EASTERN RAILWAY



A VIEW OF THE FIRST TRAIN ENTERING REBUILT BRIDGE NO. 10 ON THE VRIDDACHALAM-SALEM SECTION IN SEPTEMBER 1960—SOUTHERN RAILWAY

from Calcutta to Malda and beyond, construction of the line 37.26 kilometres in length was sanctioned on 20 November 1959. The line Malda Town Khajuriaghat, has since been completed and opened to passenger traffic on 10 April 1961.

South Eastern Railway—

Bondamunda-Dumaro—

For the carriage of iron ore from the mines at Dumaro to the steel plant at Rourkela, the construction of a new broad gauge line from Bondamunda to Dumaro (67.59 kilometres) was sanctioned in March 1956. The line was opened to goods traffic on 20 April 1960.

Barabil-Panposh Gorge—

For the supply of iron ore from the iron ore ranges near Panposh Gorge to the steel plants at Rourkela and Durgapur, the construction of a broad gauge line 9.33 kilometres long from Barabil to Panposh Gorge was sanctioned on 22 November 1957. The line was opened to goods traffic on 19 April 1960.

79. Open line works.—

I. *Remodelling of yards—*

Central Railway—

Bhusawal—Remodelling of down yard.—The down yard at Bhusawal deals with loaded traffic received from Bombay area. The industrial Development of Maharashtra and Gujarat, the accelerated growth of the city of Greater Bombay and the important part played by the Bombay port will result in heavy traffic during the Third Plan period in the down direction, which Bhusawal will be required to handle. This has necessitated remodelling of the down yard which has been sanctioned at an estimated cost of Rs. 49.84 lakhs.

Eastern Railway—

Mughalsarai-Remodelling of the yard, Phase II.—The existing capacity of the up receiving, marshalling and departure yards at Mughalsarai being inadequate for dealing with the progressively increasing traffic, certain improvements to the yard have been considered essential and the work is being carried out in phases. The first phase, already in progress, provides for fly overs at the ends of the yard, additional lines and lengthening of lines in these yards. The second phase of the remodelling scheme which has been sanctioned is estimated to cost Rs. 30 lakhs. This provides for mechanisation of the up marshalling yard with electrically-operated wagon-retarders and automatic switching of points.

Northeast Frontier Railway—

(i) *Katihar-Remodelling of yard.*—The number of reception and despatch lines, both for goods as well as passenger trains, is not adequate for even the present level of troffic. To handle future anticipated traffic efficiently, the yard at Katihar is being remodelled at a cost of Rs. 31.99 lakhs. The work is in progress.

(ii) *Tinsukia-Remodelling of yard.*—The existing facilities and yard capacity at Tinsukia are inadequate to deal with the traffic which has increased considerably during the last few years. In order to deal with this traffic, it has been decided to remodel the yard and an estimate amounting to Rs. 40.08 lakhs has been sanctioned.

Southern Railway—

(i) *New marshalling yard at Virudhunagar.*—The marshalling yard at Madurai is the principal classification yard for all traffic in Madurai Division. The marshalling yard facilities here have been found totally

inadequate for the volume of traffic to be dealt with. As Madurai yard is situated in the heart of the city, there is practically no room for expansion. It has, therefore, been decided to construct a marshalling yard at Virudhunagar and an estimate amounting to Rs. 27.31 lakhs has been sanctioned.

(ii) *Madras-Remodelling of yard, Phase II.*—At present only the basic needs of the Madras Central yard, *viz.*, more and longer platforms, increased washing facilities in a new coaching yard at Basin Bridge and better facilities for inspection, maintenance, stabling, train examination and repairs, are being provided at a cost of Rs. 1.01 crores. At the time of sanctioning the estimate for these works, the following works were anticipated but were proposed to be taken up later:

(i) covering over parcel platforms,
(ii) covering over passenger platforms, and
(iii) additional stabling lines in the new coaching yard.

In addition to these three works, it has been found that provision of two additional lines of standard length at Salt Cotaurs goods yard is necessary. These facilities are now being provided at a cost of Rs. 22.59 lakhs.

II. *Line capacity works—*

Central Railway—

Itarsi Jabalpur Section.—The capacity of Itarsi-Jabalpur section has to be increased to allow a daily movement of 18.5 trains each way, immediately, against the present capacity of 13 trains, to cope with the anticipated increase in coal loading from the Central India and Bengal—Bihar coalfields, increased receipts of other traffic from the Northern Railway *via* Chheoki and introduction of more passenger trains between Bombay and Allahabad. While partial doubling on this section will be taken up as traffic develops, it was decided to increase the capacity to the maximum extent possible under single-line working by opening four crossing stations in the block sections-Kareli-Narsinghpur, Bankhedi-Salichauka, Bohani-Kareli and Narsinghpur-Karakbel.

An estimate amounting to Rs. 19.35 lakhs has been sanctioned for these works.

South Eastern Railway—

(i) *Kharagpur-Tatanagar Section.*—To deal with the anticipated increase in traffic on this section due to various industrial developments, the capacity of this section has to be increased to allow for 21 trains each way against the available capacity of 14 trains each way. Electrification of the section, scheduled to be completed by June, 1962, will increase the capacity of the section to 18 trains but due to the present length of loops and lack of simultaneous reception and departure facilities, etc., it will not be possible to utilise fully the capacity so created. It has, therefore, been decided to provide additional facilities on this section, such as, extension of loops to (685.80 metres), provision of simultaneous reception facilities, and isolation of shunting lines by short shunting necks, additional platform faces, additional loops, etc. An estimate amounting to Rs. 62.10 lakhs for this work has been sanctioned.

(ii) *Muri-Chandil-Rourkela Section.*—To cope with the movement of coal traffic from the washeries at Kargali and Dugda to the steel works at Rourkela and Bhilai, the capacity of the sections Muri-Chandil, Sini-Kandra and Chakradharpur-Manoharpur between Muri and Rourkela has to be increased to allow for 12,29 and 34 trains each way as against the existing line capacity of 9,20 and 28 trains respectively. It has, therefore, been decided to increase the line capacity of these sections by providing additional crossing stations, extension to loops, automatic signalling, etc. An estimate amounting to Rs. 20.84 lakhs for this work has been sanctioned.

(iii) *Doublings of lines.*—In order to deal with the traffic anticipated as a result of increased production of coal, steel and other major industries, the following doublings were sanctioned during the year 1960-61:

Railway	Doubling of section between	Gauge	Length in kilometres	Estimated cost (in lakhs of rupees)
Central	Bhopal-Habibganj	Broad	6.4	32.14
	Itarsi-Hoshangabad	,,	17.6	94.00
	Habibganj-Misrod	,,	6.4	47.70
	Yerupalayam-Vijayawada	,,	40.0	250.00
Eastern	Patratu-Tori and Kumandih-Barwadih	,,	92.8	580.00
	Patratu-Damodar Branch	,,	5.6	31.00
Northern	Tundla-Mehrawal	,,	84.0	284.93
	Ghaziabad-Dadri	,,	16·8	
	Muzzampur Narain-Banganga Bridge, Harthala-Nagina Khanalampura goods yard-Hindon Cabin	,,	94.78	356.78
North Eastern	Karhagola Road-Katihar	Metre	19.90	64.88
Southern	Bommidi-Thinnapatti	Broad	26.16	161.94
	Arkonam-Ponpadi, Pudi-Renigunta	,,	29.6	144.33
	Manubolu-Talamanchi	,,	45.20	243.41
	Tiruvottiyur-Gummuidipundi	,,	36.8	183.90
South Eastern	Jatkanhar-Dongargarh, Salekasa-Gudma, Mundikota-Tumsa Road, Chachar-kanhan	,,	54.4	380.00
Western	Birwania-Bangrod	,,	24.0	101.55

80. Other important works.—

Brahmaputra Bridge.—During 1960-61, work on the Brahmaputra bridge continued to make good progress. The sinking of wells of all the eleven main piers and two shore piers was completed. The fabrication of girders in the fabricators' workshop was taken in hand. About 80 per cent of earthwork on the approaches was completed. The construction of the marshalling yard, loco-shed and staff quarters in the Narangi area was well in progress.

The overall physical progress of the work upto 31 March, 1961 was 57 per cent. The bridge is scheduled for completion by the end of 1962.

81. Over and under bridges constructed in replacement of level crossings.—Details of the over/under bridges constructed or in progress during the year on the different zonal Railways are given below:—

Central Railway—

Seven road over-bridges were completed on the Delhi-Mathura section. Two road over-bridges—one at Manmad and the other between Malavli and Kamshet stations on the Bombay-Poona section were in progress.

Northern Railway—

Five road over-bridges including the one near Shakurbasti and one under-bridge between Vinay Nagar and the Diplomatic enclave, New Delhi were completed.

The work on road over-bridge across Ambala Cantonment station yard was in progress.

Northeast Frontier Railway—

A road over-bridge between Carron and Chengmari stations was completed.

Southern Railway—

A road under-bridge in Gadag at mile 110/15-16 in place of level crossing at miles 110/12-13 and 110/17-18 was completed.

The work on ten road over/under-bridges in place of the existing level crossings was in progress.

South Eastern Railway—

A road under-bridge in replacement of a level crossing in Gondia junction station was completed.

Western Railway—

A road over-bridge at the south of Bandra station to connect western express highway, was in progress.

82. Bridge strengthening and protection programme.—The important items relating to bridges which were strengthened during the year 1960-61 or such works as were in progress at the close of the year, are given below: —

Central Railway—

The work of regirdering of Betwa Canal bridge (1 span of 36.576 metres) on the Jhansi-Manikpur section, Kareli bridge (1 span of 30.48 metres) on the Itarsi-Allahabad section, Bagain bridge (1 span of 30.480 metres) on the Jhansi-Manikpur section with plate girder spans, has been completed. The regirdering of Ken bridge on Jhansi-Manikpur section and Singla bridge (1 span of 30.480 metres) on the Itarsi-Allahabad section was in progress. The work of replacement of 64 'V' type (6.096 metres W. J. Girders) and 10 'U' type girders on the Secunderabad-Dronachallam section with I.R.S. spans was completed. 63 out of 86 spans of 12.2 metres and 40 out of 41 spans of 6.096 metres were strengthened on the Jhansi-Manikpur section and the remaining work was in progress. The work of replacement of 'V' and 'U' type girders on 7 out of 27 bridges on the Jankampet-Bodhan and the Parbhani-Purli sections has also been completed.

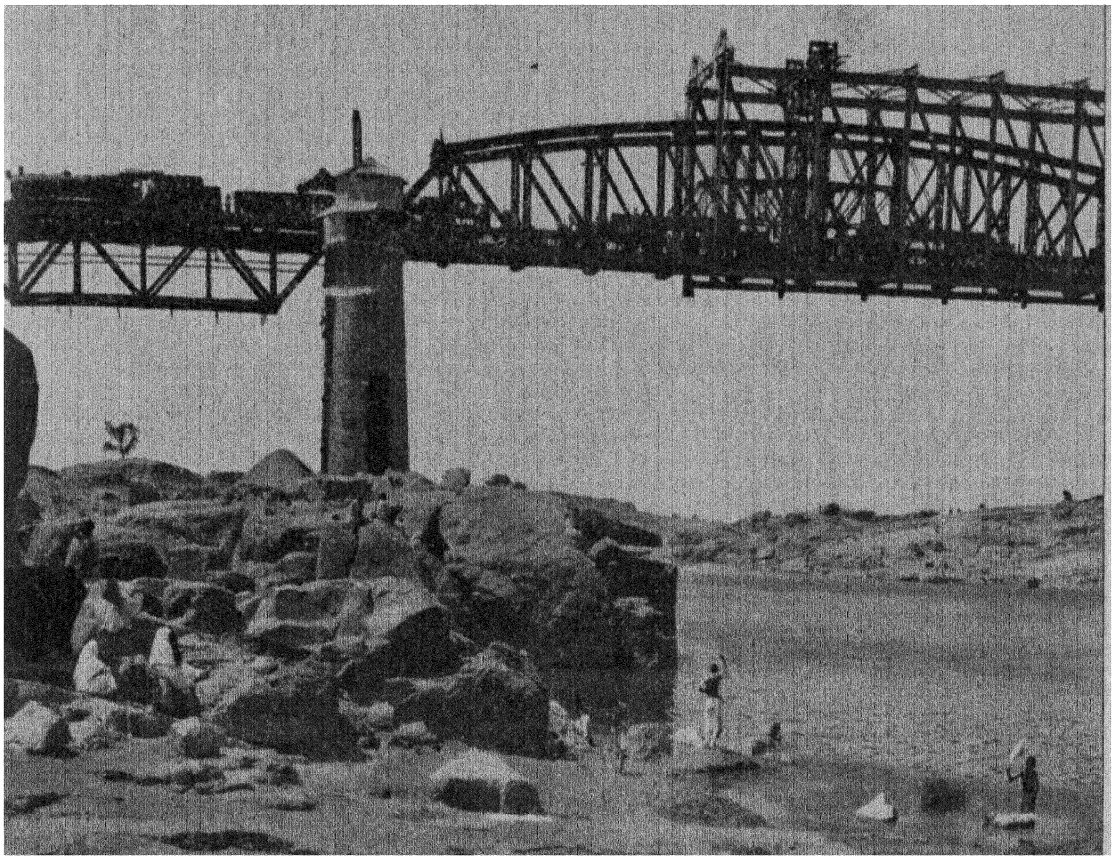
Protection works.—62 bridges were provided with protection works such as provision of drop walls, pitching and toe walls to embankment, etc.

Eastern Railway.—In all 16 bridges have been strengthened and the work of complete rebuilding of 14 bridges is in progress. Rebuilding of wing walls of 4 bridges in Sealdah division and 4 bridges in Howrah division was in progress.

Protection works.—Provision of guard rails on 41 bridges in Sealdah division and on 25 bridges in Dinapur division and of centralised bearings on 4 bridges in Dinapur division was in progress.

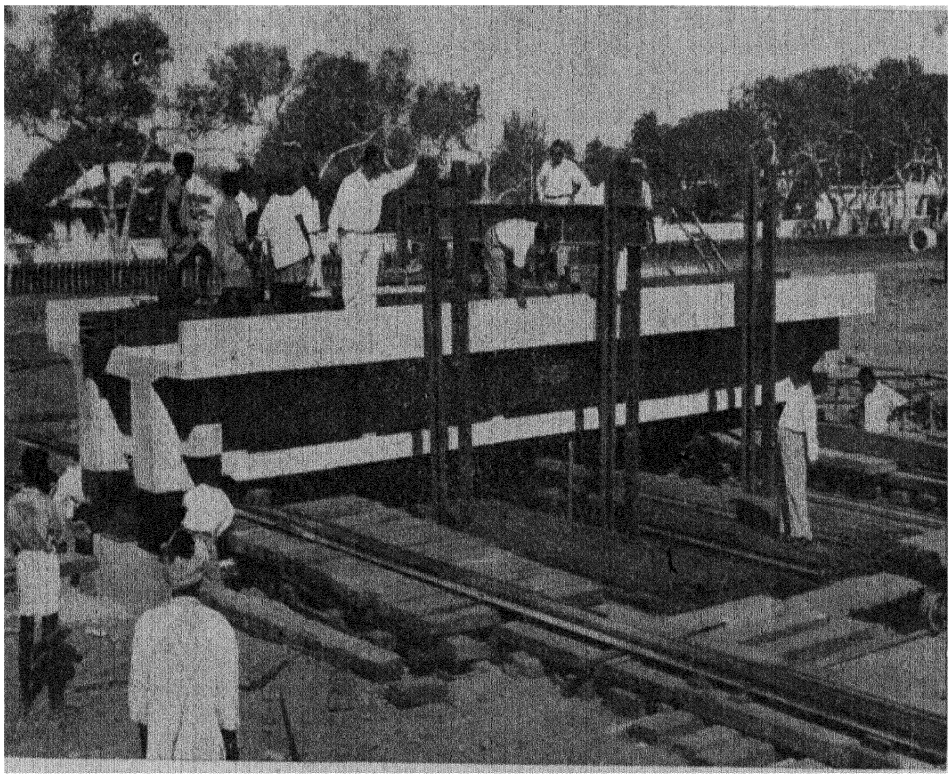
Northern Railway.—Canal crossings for Shahganj Phulpur Azamgarh and Unchahar distributaries of the Sarda Canal system have been provided with shallow type girders and R. C. pipes as also the work of rebuilding-cum-raising of girder bridge No. 126 on the Faizabad loop line. Rebuilding of 22 small bridges and culverts and replacing of 14 arch bridges or small girders bridges, etc., on different sections have been completed. Bridge No. 57-B over Sirhind Feeder on the Bhatinda-Hindumalkote section, girder bridge No. 136 for Makhu Drain on the Ferozepore Cantonment-Jullundur City section, regirdering of bridge No. 1077 (Bhakhara) on main line near Bareilly and raising of girder bridge at 69.202 km on the Delhi-Rewari section have also been completed. Girder bridge No. 107 for Guruhar Sahai Drain, bridge No. 90-A at 28.87 km for Deepsinghwala Drain and bridge No. 185 at 64.239 km for Barkatwah Drain all on the Ferozepore City-Fazilka section have either been replaced with bigger spans or newly provided. New girder bridges No. 108(4 x 6.096 metres) at 54.01 km and 3 x 6.096 metres girders bridge No. 92-B at 45.095 km on Jullundur City-Pathankot section were provided.

The work of rebuilding of bridge Nos. 71, 72, 76, 222 on Jullundur City-Ferozepore Cantonment section; regirdering of bridge No. 1075 (Bygool) on Lucknow-Moradabad section; construction of bridge No. 181 at 88.514 km on Unnao-Balamau section and raising of track and providing 2 x 6.096



REGIRDERING THE CENTRAL 250' SPAN OF KEN BRIDGE ON JHANSI-MANIKPUR SECTION—CENTRAL RAILWAY

REGIRDERING OF A BRIDGE WITH PRESTRESSED CONCRETE SPANS ON GUNTAKAL-DHARMAVARAM SECTION—SOUTHERN RAILWAY



metres girder bridge No. (A) on the Gajraula-Muazzampur Narain section were in progress.

Protection works.—Provision of suitable protection works such as repairs to guide bunds or extensions thereto, approaches, providing of flooring drop and curtain walls and stone aprons, etc., on certain bridges over Ramganga on the Bareilly-Aligarh branch and the Bijnor-Muazzampur-Narain section, have been completed while such works were in progress on bridge No. 75 on the Ludhiana-Ferozepore Cantonment bridge No. 143-A at 72.42 km on the Jullundur City-Pathankot section bridge No. 73 on the Aligarh-Bareilly section; bridges No. 19 (River Gagan) and No. 22 (River Ban) on the Moradabad-Delhi section. Necessary protection works for Gomti bridge No. 469 between Dilkusha and Malhaur on the Faizabad loop section have been taken in hand and apron to protect the piers of the Malviya Bridge at Kashi have also been provided.

North Eastern Railway—

In connection with doubling works, two new bridges have been completed, one of 8 spans of 76.2 metres and of 4 spans of 18.29 metres over River Gandak between Hajipur and Sonepur, and the second of 5 spans, 18.288 metres and 2 spans of 12.2 metres on the river Gomti between Daliganj and Lucknow City. One new canal bridge *viz.*, Sarda bridge on Sarda Feeder canal on the Pilibhit-Tanakpur section, has been constructed. The work on new bridges on Kosi Canals at 23/11-12 km and 48/1-2 km respectively on Purnea-Banmankhi section and extension of bridge No. 282-A on Milani-Pilibhit section by 3 x 6.096 metres and bridge No. 4 on the Mau-Aunrihar section by 1 x 12.2 metres on R.C. pile foundations, were in progress.

The existing under strength girders of bridge No. 1 (Buri Gandak) 7 x 30.428 metres and 1 x 18.228 metres) between Khagaria and Umeshnagar; bridge No. 29 (7 x 24.384 metres) between Colonelganj and Sarju, bridge No. 4 (5 x 24.383 metres) on Gonda-Gorakhpur loop have been replaced by standard girders. Under strength girders were replaced by standard steel spans also on 5 bridges of 12.2 metres spans, 3 bridges of 9.144 metres spans and 8 bridges of 6.096 metres spans. The existing under strength steel girders were replaced by prestressed reinforced concrete girders, on bridge No. 37 and bridge No. 31 on the Gonda-Gorakhpur loop; and bridge No. 2 on Mau-Shahganj section. The preliminary work of regirdering the Elgin bridge (17 spans of 60.96 metres) between Gograghat and Chowkaghat on the Gonda-Lucknow section has also been started. 30 bridges of weak masonry in Fategarh district were rebuilt, whereas rehabilitation work on 113 bridges was in progress.

Protection works.—Guard rails have been provided over 19 bridges. Repairs to the pitching of nose of the right upstream guide bund of bridge No. 37 (Elgin) over the river Ghogra on the Gonda-Lucknow section were completed. Heavy pitching was done to spur 'A' at old Surainmanpur station during the floods when the spur settled down whereas the work of construction of two boulder spurs between bridge No. 46 on the Mansi-Saharsa section and bridge No. 45-A for diverting the flow of river away from the railway line was in progress. Protection works of river Gola near Haldwani was also in progress.

Northeast Frontier Railway—

The work of increasing the waterway of 4 bridges and changing weak spans by metre gauge main line girders, with raising of approaches on 17 bridges on the Katihar-Barsoi-Kishanganj section, changing of girders below metre gauge main line and branch line standard on 18 bridges on Siliguri-Alipurduar section, 15 bridges on Mal Bazar-Changrabandha section, 3 bridges on Alipurduar-Amingaon section and 19 bridges on the Pandu-Furkating section, was completed. Bridge No. 21 between Balakoba and Ambari Falakata on the Haldibari-Siliguri section, bridge No. 105 with 4 spans of 6.096 metres plus 1 span of 7.620 metres four pile bridges, each one with 2 spans of 12.2 metres have *all* been rebuilt. Also six other bridges

have been rebuilt at different places on the Rangiya-Tezpur section. Digaru bridge No. 58 on the Pandu-Lumding section has been replaced by prestressed concrete girders. 7 spans of three bridges have been strengthened on the Lumding-Badarpur section.

The works of changing of weak spans by the metre gauge main line standard and provision of additional waterways and raising of approaches etc., were in progress on eight bridges on the Barsoi-Kishanganj section, four bridges on the Katihar-Jogbani section, one bridge on the Siliguri-Alipurduar section, three bridges on the Mal Bazar-Changrabandha section, 8 bridges on the Rangiya-Tezpur section and bridge No. 19 on the Alipurduar-Gitaldah section and bridge No. 93(18 x 18.288 metres spans prestressed concrete and 3 x 30.480 metres spans of steel girders). The work of changing weak spans of Titamari bridge No. 103 (1 span of 30.480 metres) on the Pandu-Lumding section, Dayang bridge No. 331 (1 x 37.490 metres) and 25 other bridges on the lumding-Furkating section, strengthening of 23 x 18.288 metres spans of ten bridges on the Lumding-Badarpur section; rebuilding of bridge No. 86 (Burimachi) with 6 x 12.2 metres spans on the Kishanganj-Siliguri section ; erection of 1 x 45.72 metres spans of Buri Tista river on the Siliguri-Haldibari section; rebuilding of bridge No. 70 on the Mal Bazar-Changrabandha section and Kaljani bridge No. 3 on the Alipurduar-Cooch Behar section were also in progress.

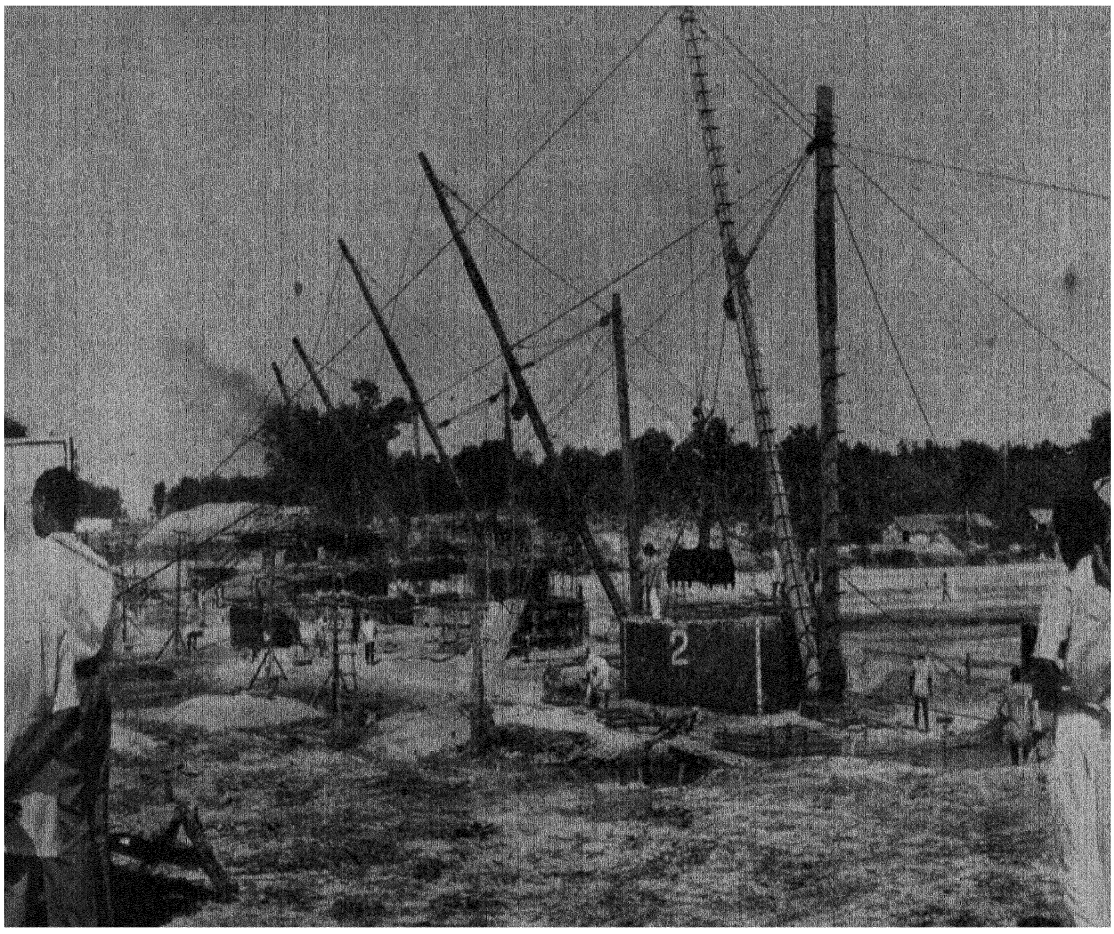
Mahananda bridge at Gulma (3 spans of 30.480 metres), bridge No. 207, bridge No. 161 (Khanibhar), bridge Nos. MK/11 (Gorsi), MK-6(Meria) and MK-7(Singhidhar) and MK-5(Salmara) with 21 spans of 12.192 metres in all, Mahananda bridge at Taibpur (7 spans of 30.480 metres), Ghatia bridge with 3 spans of 30.480 metres, Jaldaka bridge with 8 spans of 45.72 metres, Mal bridge with 3 spans of 28.288 metres, bridge No. 224, have all been rebuilt on the Assam Rail Link route. The construction of Damdim bridge and rebuilding of Neora bridge and bridge No. 252 between Kendukana and Baihata were in progress.

Protection works.—Protection works such as repairs to guide bunds, marginal bunds, etc., have been completed on bridge No. 88 (Kankar) on the Katihar-Kishanganj section; Lish river on the Siliguri-Alipurduar section. Noora Nadi on the Burimari-Mal section; bridge No. 47 (Buri Tista) on the Haldibari-Siliguri section; bridge No. 227 and also bridge No. 159 (Jaldaka) on the Siliguri-Alipurduar section; bridge No. 8 (Balason) on the Kishanganj-Siliguri section; Mahananda bridge No. 2 on the Haldibari-Siliguri section; bridge No. 174 (Dhansiri) on the Rangiya-Tezpur section; Torsa bridge No. 28, Gangadhar bridge No. 1, Dharla bridge No. 68-G and bridge No. 352 (Modati) on different sections. Boulder pitching along the river Kopili and banks of bridge No. 31 on the Senchea-Moirabari section, bridge No. 100 on the Chaparmukh-Silghat Town section and provision of cement concrete blocks, etc., to bridge No. 269 (Dyang) and sausages for bridge Nos. 459 and 473 on the Lumding-Badarpur section have been completed. Such protection works on bridge No. 131 at Lava on the Katihar-Singabad section; Lish river bridge No. 52 (Tista) and bridge No. 378 (Laska) on the Siliguri-Alipurduar section; bridge No. 305 (Gabru) on the Rangiya-Tezpur section, bridge No. 48 (Kaljani) on the Alipurduar-Gitaldah section, bridge Nos. 228, 229 and 231 and also Aie river on the Alipurduar-Amingaon section were all in progress.

Repairs were carried out to spurs and aprons damaged by the Tista river along with widening of formation with proper slope on the river side protection works to Kuji Diana bridge 4 x 18.288 metres spans between Carron and Changmari stations were also done by providing cement floor and armoured guide bunds.

Southern Railway—

The reconstruction of 254 bridges has been completed and the work on 53 bridges is in progress. The regirdering and strengthening of bridge No. 76 (8 spans of 30.48 metres) on Gadag-Sholapur section and regirdering of bridge No. 45 (Ponnar) on Guntakal-Dharmavaram section and 23 spans



JHONJHOR BRIDGE UNDER CONSTRUCTION ON SAMBALPUR-TITLAGARH PROJECT—D. B. K. RAILWAY PROJECT

RECONSTRUCTION OF THE BRIDGE, HEAVILY DAMAGED DURING THE FLOODS OF AUGUST, 1960, BETWEEN RUPSA AND BASTA STATIONS—SOUTH EASTERN RAILWAY



of 12.19 metres spans on Mayavaram-Tiruvarur section have been completed, while regirdering of bridge No. 91 (Bhima) 14 spans of 45.72 metres on Gadag-Sholapur section, 48 spans of 12.19 metres of bridge No. 346 (Pamban Viaduct) on Mandapam-Dhanushkodi section; 14 spans of 18.29 metres on Vijayawada-Waltair section, bridge No. 1201 (Pysavali) on Calicut-Mangalore section, bridges Nos. 69, 80 and 104 on Guntakal-Dharmavaram section and rebracing and provision of centralised bearing to 288 spans of 12.19 metres on the Madras-Waltair section were in progress.

South Eastern Railway—

The work of strengthening of 15 spans of 45.72 metres of bridge No. 391 (Baitarani), 9 spans of 12.2 metres of bridge No. 382 (Rebo) and bridge No. 1389, all on the Kharagpur-Waltair section, was completed. Strengthening work of 47 spans of 45.7 metres of bridge No. 124 (Brahmani), bridge No. 557 (Kuakhai), bridge No. 553 (Katjuri) all on Khargpur-Nagpur section; 82 spans of 30.5 metres of bridge No. 544 (Mahanadi) and bridge No. 539 (Birupa) on Kharagpur-Waltair section, bridge No. 432 (Evelyn) on Kharagpur-Gomoh section was in progress. Replacing the existing weak girders (of spans below 3.7 metres) by RCC slabs on 7 bridges on Rupsa Talband narrow gauge section, regirdering of 19 spans (21.3 metres) of Vamshidhara bridge No. 1354 and 2 spans of 12.2 metres of bridge No. 1553 at 830.072 km on Kharagpur-Waltair section was also in progress.

Protection works.—Guard rails were provided on 200 bridges. 70 bridges with shallow foundations have been protected by providing flooring with drop walls and down stream apron. Boulder pitching has also been done around the piers of 73 bridges as a protective measure against deep scour.

Western Railway—

The work of rebuilding of 15 culverts and rebuilding of wing walls of 3 culverts on different sections was completed while the work of rebuilding of 27 culverts and wing walls to 8 culverts on different sections was in progress.

The construction of two new canal crossings on the Baroda-Ahmedabad section, one on the Anand-Godhra section, one on the Anand-Cambay section; six on the Kota-Bina section (in connection with the Chambal project); one on the Palanpur-Gandhidham section; was completed while provision of two canal crossings on the Baroda-Ahmedabad section, one on the Anand-Godhra section, two on the Anand-Cambay section one on the Vasad-Kathana section, two new canal crossings on the Nadiad-Bhadran section, one on the Nadiad-Kapadvanj section was in progress. The work of regirdering of 176 spans of different measurements and replacement of existing girders by RCC slabs on bridge No. 347 on the Ajmer-Phulora section was also completed. The regirdering of Ozat bridge (7 x 30.4800 metres and 3 x 40.538 metres spans) on the Jetalsar-Veraval section was nearing completion.

Protection works.—The work of raising Gambhir bridge on the Bayana-Agra section was nearing completion.

83. Special organisation on railways for review of bridges.—The special organization set up in 1957 on each Railway for review of bridges continued to function during the year. In addition to the detailed review of vulnerable bridges, collection of rainfall data and river gauging surveys of the catchment of the selected streams were arranged on every railway to determine the possible discharge from small catchments. Detailed investigations were undertaken by certain railways into the cases of breaches and washouts which occurred during the year in order to ascertain the causes and to devise permanent remedial measures. The more important items of work done at the instancec of this organization are detailed below:

Central Railway—

41 streams were gauged, 19 stage discharge curves prepared, 5 units hydrographs prepared and 28 catchment areas surveyed to obtain requisite

hydrological details. 167 bridges were reviewed, remedial measures decided upon for 54 making the total of 599 cases reviewed and 342 finally decided so far.

Eastern Railway—

Remedial measures required in 226 cases of problem bridges were finalised. 16 rivers were gauged. 392 completion drawings were collected during the year making a total of 3148 out of 6753 bridges. Draft inspection register for bridges was revised.

Northern Railway—

Investigations in the case of 28 problem bridges with past history were undertaken, out of which 24 cases were finalised. Estimates were prepared for 52, field data for completion plans were collected for 1352 and completion plans were prepared for 907 bridges.

During the year, observations were completed on 34 bridges for collection of rainfall run off data. Survey of catchment areas of 7 bridges and flood gauging charts of 15 bridges were also completed. Detailed studies of flood discharges for the various state drainage schemes and urgent problems in connection with safety of railway bridges due to floods were undertaken and their remedial measures finalised.

North Eastern Railway—

Gauging of 20 typical rivers to determine the maximum discharge possible for small catchment and review of the remaining bridges, out of 472 problem and 1962 vulnerable bridges, were made.

Northeast Frontier Railway—

The short term plans of the Khosla Committee Report were being implemented.

Southern Railway—

The short term plans of the Khosla Committee report were being implemented. 21 streams were selected for conducting gauging operations. Hourly intensity of rainfall in the catchments as well as the hourly discharges at the bridge site were recorded for the preparation of stage area, stage velocity and stage discharge curves.

South Eastern Railway—

Short term plans of the Khosla Committee recommendations were being implemented.

Western Railway—

Proposals for modifications of the existing bridges on the Palampur-Gandhidham section were finalised. Survey of 70 bridges and selection of 16 bridges for gauging of flood were taken in hand.

84. Formation of Joint Committee of Engineers.—The joint committees of engineers of Railways, Public Works Departments, Irrigation and Forest Department, etc., continued to function during the year.

Periodical meetings of these Committees were held at which problems of mutual interest were discussed.

85. Scheme for enlisting co-operation of local villagers in communicating timely information of abnormal occurrences to avert train accidents.—The scheme for reporting to the nearest railway authorities, of any unusual occurrences such as heavy local rainfall or floods, threatened breaches of tanks or lakes, etc., by villagers living upstream of or close to railway lines has since been finalised in consultation with the State Governments and is in operation.

86. Permanent way renewals and welding of rail joints.—The amount spent on track renewal works, the kilometrage covered, number of points and crossings renewed and the types and total number of sleepers used for complete track renewals, through sleeper renewals and casual/spot

renewals of sleepers are presented in the accompanying tables. The extent of kilometrage where welding of rail joints has been done is also shown separately.

A.I.—The amount spent on track renewal works during 1960-61 is as under:

(Figures in thousands)

	Rs.
Central Railway—	
(a) Complete track renewals	6,40,76
(b) Rail renewals	40,12
(c) Sleeper renewals	12,81
(d) Ballast	22,96
Total .	7,16,65
Eastern Railway—	
(a) Complete track renewals	3,96,89
(b) Rail renewals	1,20,38
(c) Sleeper renewals	46,41
(d) Ballast	16,60
Total .	5,80,28
Northern Railway—	
(a) Complete track renewals	3,28,60
(b) Rail renewals	46,95
(c) Sleeper renewals	57,90
(d) Ballast	22,00
Total .	4,55,45
North Eastern Railway—	
(a) Complete track renewals	1,36,60
(b) Rail renewals	1,15,06
(c) Sleeper renewals	76,47
(d) Ballast	10,15
Total .	3,38,28
Northeast Frontier Railway—	
(a) Complete track renewals	61,58
(b) Rail renewals	38,77
(c) Sleeper renewals	45,51
(d) Ballast	3,00
Total .	1,48,86
Southern Railway—	
(a) Complete track renewals	2,47,90
(b) Rail renewals	1,00,14
(c) Sleeper renewals	1,21,27
(d) Ballast	46,73
Total .	5,16,04
South Eastern Railway—	
(a) Complete track renewals	2,57,61
(b) Rail renewals	1,19,42
(c) Sleeper renewals	1,72,21
(d) Ballast	16,47
Total .	5,65,71

	(Figures in thousands) Rs.
Western Railway—	
(*a*) Complete track renewals	4,70,95
(*b*) Rail renewals	1,44,76
(*c*) Sleeper renewals	1,75,05
(*d*) Ballast	16,81
Total .	8,07,57
All Railways—	
(*a*) Complete track renewals	25,40,89
(*b*) Rail renewals	7,25,60
(*c*) Sleeper renewals	7,07,63
(*d*) Ballast	1,54,72
GRAND TOTAL .	41,28,84

A.II.—The track renewals carried out on different railways during the year are given below:

Railways	With new materials			With second-hand materials		
	Broad gauge kilometres	Metre gauge kilometres	Narrow gauge kilometres	Broad gauge kilometres	Metre gauge kilometres	Narrow gauge kilometres
(i) *Complete track renewals*—						
Central	282·79	105·03	—	47·72	—	45·14
Eastern	179·26	—	—	41·94	—	—
Northern	190·76	58·77	11·62	2·77	30·91	—
North Eastern	—	170·19	—	—	—	—
Northeast Frontier	—	8·71	—	—	—	9·82
Southern	53·96	113·23	—	7·35	15·18	—
South Eestern	130·92	—	—	62·12	—	—
Western	217·54	70·01	—	35·24	23·34	—
Total .	1,055.23	525·94	11·62	197·14	69·43	54·96
(ii) *Through rail renewals*—						
Central	1·91	—	—	—	—	16·42
Eastern	5·86	—	—	28·57	—	—
Northern	61·51	3·22	—	—	—	—
North Eastern	—	86·90	—	—	189·70	—
Northeast Frontier	—	35·20	—	—	8·21	—
Southern	82·80	38·95	—	—	0·47	—
South Eastern	18·28	—	8·16	—	—	—
Western	42·65	36·38	—	—	1·61	—
Total .	213·01	200·65	8·16	28·57	199·99	16·42
(iii) *Through sleeper renewals* —						
Central	97·59	0.72	6·03	2·20	—	16·09
Eastern	151·69	—	—	18·60	—	—
Northern	60·14	20·41	—	—	—	—
North Eastern	—	1·42	—	—	—	—
Northeast Frontier	—	23·34	—	—	0·80	—
Southern	63·13	115·02	3·54	0·14	3·09	—
South Eastern	119·09	—	11·99	—	—	—
Western	39·43	92·13	—	—	—	—
Total .	531·07	253·04	21·56	20·94	3·89	16·09

Railways	With new materials			With second-hand materials		
	Broad gauge kilometres	Metre gauge kilometres	Narrow gauge kilometres	Broad gauge kilometres	Metre gauge kilometres	Narrow gauge kilometres
(iv) *Casual rail renewals (in metric tonnes)*—						
Central	1,529·15	49·79	31·50	3,654·72	128·02	117·86
Eastern	773·04	—	—	1,776·72	—	—
Northern	199·96	3·25	—	—	—	—
North Eastern	—	211·49	—	—	—	—
Northeast Frontier	—	41·25	—	—	47·82	—
Southern	1,186·56	1,019·83	—	901·38	171·99	3·82
South Eastern	1,064·82	—	650·27	—	—	—
Western	1,320·86	609·63	—	—	—	—
Total .	6,074·39	1,935·24	681·77	6,332·82	347·83	121·68
(v) *Casual Sleeper renewals (in numbers)*—						
Central	34,307	10,342	5,570	32,805	14,878	2,137
Eastern	39,647	—	—	29,506	—	—
Northern	3,400	35,000	—	—	—	—
North Eastern	—	2,16,640	—	—	7,040	—
Northeast Frontier	—	1,52,750	4,808	—	10,296	—
Southern	38,050	1,45,072	3,288	30,732	49,325	182
South Eastern	1,00,670	—	43,959	43,125	—	1,03,366
Western	49,440	2,15,410	66,018	—	—	—
Total .	2,65,514	7,75,214	1,23,643	1,36,168	81,539	1,05,685

(vi) *Points and crossings renewals (in units)*—

(a) *Number of new crossing put in*—

	1 in 8½			1 in 12			1 in 16		
	Broad gauge	Metre gauge	Narrow gauge	Broad gauge	Metre gauge	Narrow gauge	Broad gauge	Metre gauge	Narrow gauge
Central	247	11	—	125	15	—	—	—	—
Eastern	218	—	—	51	—	—	3	—	—
Northern	113	23	7	98	14	—	—	—	—
North Eastern	—	319	—	—	352	—	—	—	—
Northeast Frontier	—	41	—	—	44	—	—	—	—
Southern	89	96	—	52	151	—	1	—	—
South Eastern	285	—	36	175	—	21	—	—	—
Western	258	119	10	268	161	16	—	—	—
Total .	1,210	609	53	769	737	37	4	—	—

(b) *Number of new points put in*—

Railways	Broad gauge	Metre gauge	Narrow gauge
Central	372	26	—
Eastern	197½	—	—
Northern	211	37	7
North Eastern	—	724	—
Northeast Frontier	—	85	—
Southern	54	175	—
South Eastern	406	—	92
Western	405	211	26
Total .	1,645½	1,258	125

(c) *Number of sets of steel turn out sleepers—*

	Broad gauge	Metre gauge	Narrow gauge
Central	204	—	—
Eastern	148	—	—
Northern	105	—	—
North Eastern	—	—	—
Northeast Frontier	—	—	—
Southern	26	—	—
South Eastern	348	—	—
Western	176	—	—
Total .	1,007	—	—

A. III.—Total number and kind of new sleepers used for complete track renewals, sleeper renewals and casual spot renewals of sleepers.

(Figures in numbers)

	Broad gauge	Metre gauge	Narrow gauge
Central Railway—			
(a) Wooden	123,991	21,653	49,282
(b) Cast iron	376,321	115,103	—
(c) Steel	2,250	1,571	—
Total .	502,562	138,327	49,282
Eastern Railway—			
(a) Wooden	94,315	—	—
(b) Cast iron	459,970	—	—
(c) Steel	16,145	—	—
Total .	570,430	—	—
Northern Railway—			
(a) Wooden	76,381	74,324	11,463
(b) Cast iron	220,293	35,408	—
(c) Steel	28,693	8,805	—
Total .	325,367	118,537	11,463
North Eastern Railway—			
(a) Wooden	—	208,974	—
(b) Cast iron	—	137,645	—
(c) Steel	—	43,281	—
Total .	—	389,900	—
Northeast Frontier Railway—			
(a) Wooden	—	147,652	4,808
(b) Cast iron	—	21,088	—
(c) Steel	—	—	—
Total .	—	168,740	4,808
Southern Railway—			
(a) Wooden	159,798	415,430	7,820
(b) Cast iron	64,137	145,850	—
(c) Steel	19,790	21,692	—
(d) R. C. C.	4,469	3,986	—
Total .	248,194	586,958	7,820

(Figures in number)

	Broad gauge	Metre gauge	Narrow gauge
South Eastern Railway—			
(*a*) Wooden	139,302	—	62,540
(*b*) Cast iron	279,425	—	—
(*c*) Steel	43,219	—	—
Tot .	461,946	—	62,540
Western Railway—			
(*a*) Wooden	207,409	247,110	87,138
(*b*) Cast iron	212,756	109,710	—
(*c*) Steel	6,775	40,260	—
Total .	426,940	397,080	87,138
All Indian Railways—			
(*a*) Wooden	801,196	1,115,143	223,051
(*b*) Cast iron	1,612,902	564,804	—
(*c*) Steel	116,872	115,609	—
(*d*) R. C. C.	4,469	3,986	—
Tota .	2,535,439	1,799,542	223,051

A. IV.—Welding of rail joints:

Considerable progress has been made in welding rail joints during the year on the Indian Railways. The details are given below:

(Figures in track kilometres)

Railway	Length of track welded upto 1 April 1960	Length of track welded during the year		Total length of track welded upto the end of the year
		(*a*) by thermit process	(*b*) by flash butt process	
Central	460·89	189·90	94·95	745·74
Eastern	415·52	9·37	119·41	544·30
Northern	424·91	69·14	14·05	508·10
North Eastern	98·31	—	—	98·31
Northeast Frontier	5·34	—	—	5·34
Southern	68·33	97·45	—	165 78
South Eastern	35·02	39·03	—	74·05
Western	1,276·39	304·32	—	1,580·71
Total .	2,784·71	709·21	228·41	3,722·33

87. Arrears of track renewals and speed restrictions —

(i) *Arrears of track renewals.*—The arrears of track renewals on 31 March 1961, taking all gauges amounted to 6,291.43 kilometres of Complete track renewals, 2, 178.81 kilometres of through rail renewal and 2,165.21 kilometres of through sleeper renewals. The details are as follows:

(Kilometres).

(a) *Complete track renewals*

Railway	Arrears on 31 March 1961		
	Broad gauge	Metre gauge	Narrow gauge
Central	988·14	236·57	199·56
Eastern	524·69	—	—
Northern	635·03	304·66	32·69
North Eastern	—	618·45	—
Northeast Frontier	—	161·18	—
Southern	71·86	270·19	—
South Eastern	752·40	—	540·42
Western	431·84	505·65	18·10
Total .	3,403·96	2,096·70	790·77

(Kilometres).

(b) *Through rail renewals*

Railway	Arrears on 31 March 1961		
	Broad gauge	Metre gauge	Narrow gauge
Central	72·42	—	—
Eastern	104·17	—	—
Northern	368.27	141·96	2·09
North Eastern	—	955·69	—
Northeast Frontier	—	31·22	—
Southern	27·26	187·12	—
South Eastern	74·19	—	61·66
Western	30·50	122·26	—
Total .	676·81	1,438·25	63·75

(c) *Through sleeper renewals*

Central	22·53	30·58	16·09
Eastern	405·41	—	—
Northern	29·53	157·70	3·60
North Eastern	—	—	—
Northeast Frontier	—	—	—
Southern	141·06	294·49	—
South Eastern	447·83	—	313·75
Western	86·10	216·54	—
Total .	1,132·46	699·31	333·44

(*ii*) *Speed restrictions.*—The speed restrictions on account of the condition of track on different railways were as follows:

For existing class of locomotives

(In track Kilometres)

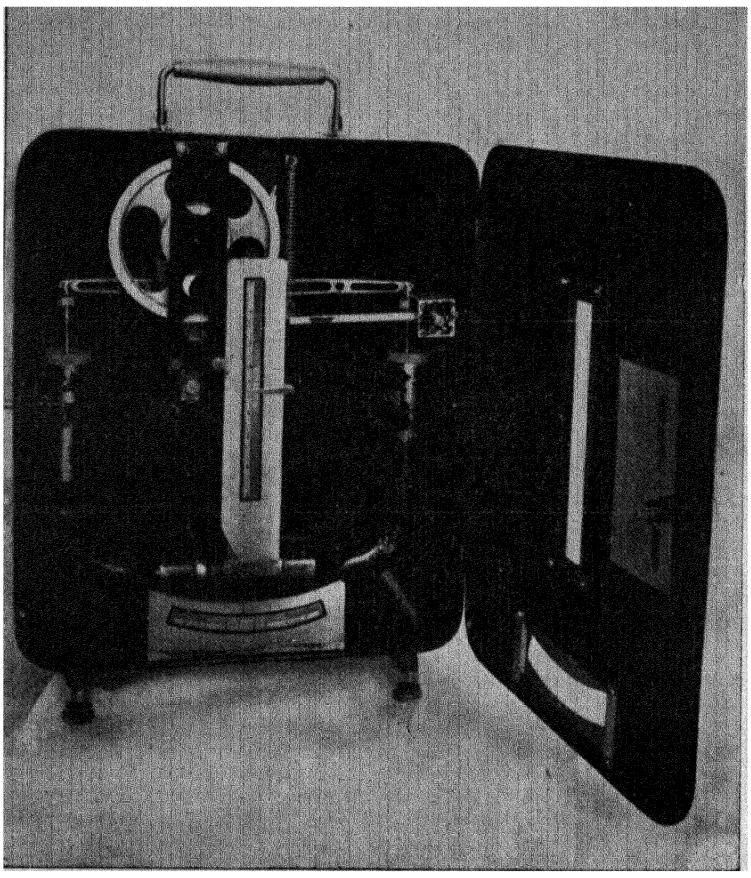
Railway	Speed restrictions on 31 March 1961		
	Broad gauge	Metre gauge	Narrow gauge
Central	—	80·47	188·29
Eastern	135·35	—	—
Northern	—	188·02	—
North Eastern	—	744·41	—
Northeast Frontier	—	105·41	—
Southern	69·20	150·88	—
South Eastern	29·56	—	187·09
Western	4·12	448·30	—
Total .	238·23	1,717·49	375·38

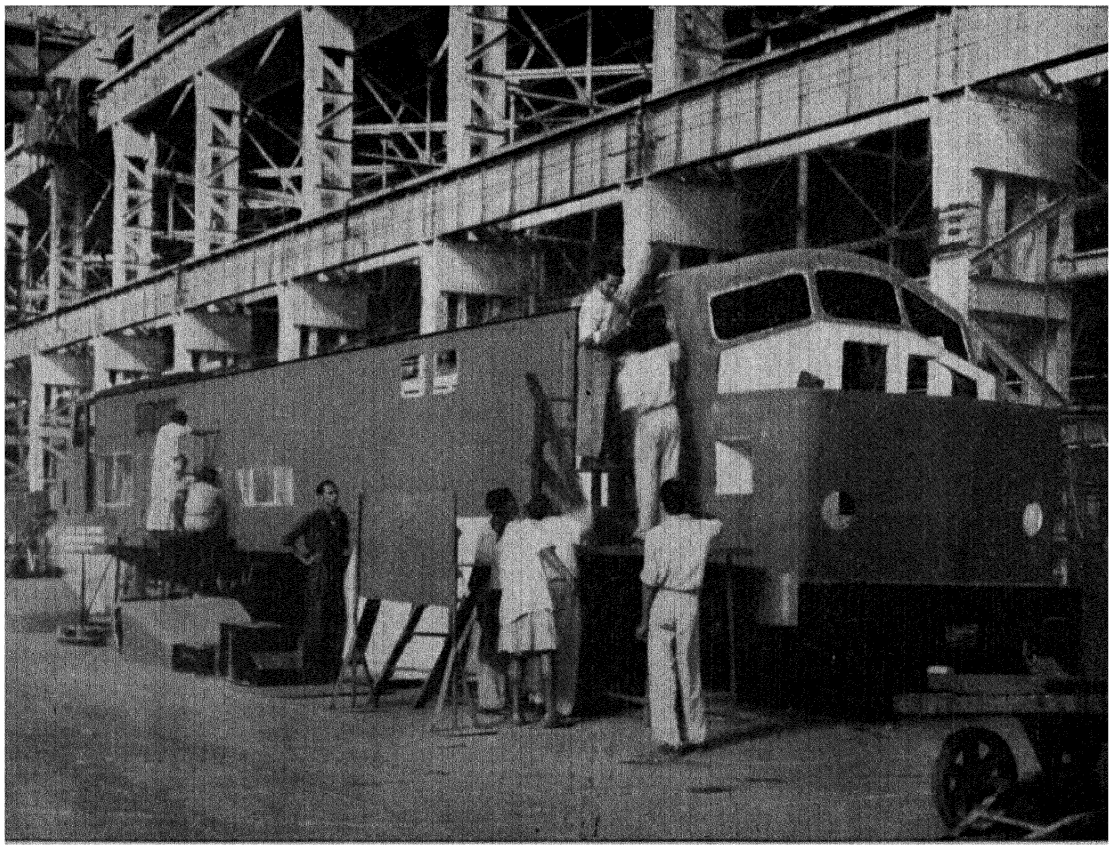
88. Damage caused to Railways by floods and cyclones.—Details of the more important damages costing over Rs. 10,000 or where detention to traffic exceeds one day, are given below:—

Section effected	Character and extent of damage	Date of of damage	Approximate duration of interruption to through communication (in days)	Approximate cost of repair to damages (In rupees)
1	2	3	4	5
	Central Railway			
Gwalior-Shiopur Kalan	Track flooded near Km. 21/1-0	12-8-60	2	
	Eastern Railway			
Rampur Dumra-Link	Bank slipped due to heavy rains near Km. 445 3	1-9-60	1	1,88,000
Tal Link	Bank slipped due to heavy rains near Km. 3 11	1-9-60	9	
		26-9-60	6	
	Northern Railway			
Kanpur-Tundla	Protection apron and return wall of bridge number 85 damaged.	29-8-60	Single line working introduced.	11,300
Jullundur-Ferozepur Cantt.	Bank near Km. 59 01 breached	24-8-60	4	13,600
Ludhiana-Dhuri-Jakahal-Hissar.	Breach at Km. 75.7 to 76 6 and 89 34 Km.	23-8-60	4	8,000
	Heavy subsedences of track from Km. 131 to 132.			
	Piers No 10 and 11 of bridge W D. 181 tilted.			
-do-	Villagers cut the Track near Km. 102/3-4 and 119-120, 1/3 to 3/3 Km.	23-8-60	3	1,58,200
Pratapgarh-Lucknow-Gangaganj-Harchandpur.	The embankment washed away near Km. 1003/12-13	11-7-60	2	10,700
At Lucknow	Boundary wall of central power house g.i.sheet and ac sheet roofing and purdah walls of both room of R. P. F. training centre blown off by cyclone.	26-5-60	..	19,800
At Sultanpur	6 units type I quarter, primary school and loco shed damaged by cyclone.	26-5-60	..	
Faizabad Loop line, Faizabad-Lucknow section Malhaur-Dilkusha.	Due to heavy rains and floods in Gomti river, breaches occurred at 1087/5 to 1090/9 Km. 1087-1088/7, 1088/7 to 1088/12 to 1089/14 and Km. 1089/16 to 1090/5 and bridge number 468 damaged	10-10-60	7	5,500
Shahjahanpur-Lucknow	Lucknow and approach of bridge No 898 eroded	6-10-60	Single line working introduced.	10,000
Resa-Sitapur	Track washed away at 13 13, 17-22, 24-68, 45-60, 69-14 Km and bridge No 59 damaged.	6-10-60	4	35,300
Balamau-Sitapur	Both the return walls on Dn stream of Bridge No. 25, completely washed away and wing walls damaged and breaches at 39 44 Km.	6-10-60	4	37,700
Balamau-Madhoganj-Unao	Bridge No. 181 completely washed away	8-10-60	12	10,00,000
Bikaner-Hanumangarh Bhatinda-Hanumangarh Sadhulpur-Hanumangarh Suratgarh-Hanumangarh	Several breaches near 96 56 to 101·7 Km, 90 60 km. 0·54 to 5·15 Km and 118·17 to 120·7 Km respectively.	8 to 29-9-60	..	4,00,000
Rewari Delhi-Section	Breaches near Km. 70/14 to 71/4	30-8-60	3	
Rajpur-Bhatinda	Cuts made by villagers near 70, 52, 50, 05, 50 and 47 5 Km.	22-8-60	1	50,000
Jind-Bhatinda	Flood water overtopped bridge No. 299 and passing of trains not permitted and cuts made by villagers near 218·21, 202·9, 203·18, and 203·59 Km.	25-8-60	28	35,000
Delhi-Jind Rohtak-Samar Gopalpur.	Breaches between Km. 69.20 to 70·03 Km.	26-8-60	28	16,000
Rohtak-Gohana	Flood water overtopped bridge No. 66	27-8-60	20	
	North Eastern Railway			
Daliganj Badshahnagar	Track breaches near 771·1 Km. due to heavy rains	10-10-60	4	18,000
Barauni-Katihar	Track breached at 133/6-7 Km. due to on rush of spill water from the Ganga river.	20-8-60	16	1,72,400
Mansi-Saharsa	The approach bank and pitching on south abutment of bridge No. 47 slipped due to heavy scour on down stream side.	22-10-60	..	13,800
-do-	Severe erosion of the bank by Kosi river between bridges No. 46 and 45.	18-10-60	..	1,63,400
Manakapur-Ayodhyaghat	Passenger halt at Ayodhyaghat had to be dismantled and track shifted due to floods in Sarju river, eroding the left bank.	10-7-60 and 2-9-60	..	14,000
	North-east Frontier Railway			
Kishanganj-Siliguri Jn.	Guide bund of bridge No. 8 slipped due to floods	28-5-60	..	18,000
Alipurduar-Siliguri Jn.	Right bund of bridge No. 159 (Jaldacca) damaged	19-7-60	..	21,500

Section effected	Character and extent of damage	Date of damage	Approximate duration of interruption to through communication (in days)	Approximate cost of repairs to damage (In rupees)
1	2	3	4	5
Alipurduar-Siliguri Jn.	Lish river upstream side spur at 30·74 Km. got breached, the water flowed parallel to the Rly. bank at 26·82 to 29·77 Km. percolated through the same and also overtopped the bank.	22-9-60 to 28-9-60	1	49,000
Siliguri-Haldibari	Pier No. 1 of bridge No. 47 tilted	27-9-60	7	20,000
Siliguri-Alipurduar Jn.	NCMC culvert No 228 collapsed and track near 126·33 Km. settled.	14-9-60	1	33,000
Pandu-Lumding	184 Kacha quarters damaged by cyclone	23-4-60 to 19-1-61	..	77,500
Furkating-Lumding	50 -do- -do-	10-5-60	..	11,300
Mariani-Tinsukia	157 -do- -do-	4-5-60 to 6-3-61	..	87,500
Dibrugarh-Lode and Makum Salkhdaghat.	102 -do- -do- -do-	13-5-60 to 18-3-61	..	66,800
Maishashan-Dullabcharra	54 -do- -do- -do-	23-4-60 to 25-3-61	—	17,600
Lumding-Badarpur	176 K. P. quarters -do-	3-3-61 to 5-3-61	..	77,000
Alipurduar-Amingaon	139 Semi & Pacca quaters -do-	6-4-60 to 16-3-61	—	1,01,700
	Southern Railway			
Minjur-Anupambattu	Breaches at 5 places due to heavy discharge from Poondi reservoir and heavy rainfall in catchment area.	11-11-60	1	16,800
Birur-Talaguppa	Several breaches at Km. 213/3 to 212/14, and 27/2-3 and bridge No. 33 washed away due to floods and rains.	27-10-6	4	45,100
	Southeastern Railway			
East Coast Line	Bridge No. 464 washed away and bridge No. 239 damaged.	16-8-60	15	22,42,000
-do-	Bank of bridge No. 455 washed away	16-8-60	14	
-do-	Breaches at Waltair end of bridge No. 463	16-8-60	15	
-do-	Bank breached at several places between 352·446 to 362.102 Km.	16-8-60	21	
	Western Railway			
Bhavnagar-Jatalsarvaraval	Due to heavy rains, the yard of Chowkiserath was completely washed away. The girders of bridge No. 6 were carried away and the third pier of the bridge was sheared at Plinth level.	2-7-60	13	2,50,000
Jetalsar-Dhasa	Bridge No. 9 was overtopped by floodwater and its wing wall partly damaged and approaches were also scoured and breached at several places.	2-7-60	3	1,50,000
Shahpur-Sardiya	Track between Saratvanthali and Meghpur completely washed away.	2-7-60	17	1,52,000
Jatalsar-Veraval	Track washed away at several places	2-7-60	3	42,000
Talala-Veraval	Track washed away at several places	2-7-60	1	155,000
Mahuva-Mahuva Bunder	Track washed away at 128·949 to 129·016 Km.	2-7-60	3	400

OSCILLOMETER—AN INSTRUMENT TO INDICATE THE CHARACTERISTICS OF ROLLING-STOCK IS MANUFACTURED IN LOCO WORKS, PERAMBUR—SOUTHERN RAILWAY





ELECTRIC LOCOMOTIVE UNDER ERECTION—CHITTARANJAN LOCOMOTIVE WORKS

CHAPTER V

MECHANICAL AND ELECTRICAL ENGINEERING AND ROLLING STOCK

A. MECHANICAL ENGINEERING

89. Renewals and additions to equipment.—

Locomotives.—The new locomotives ordered in India and abroad during the year 1960-61 totalled 381 as follows:

(*a*) Broad gauge	
Steam	187
Diesel Electric	40
Electric	78
(*b*) Metre gauge	
Diesel Electric	60
Electric	16
(*c*) Narrow gauge	*Nil*
Total .	381

Out of these, orders for 142 diesel electric and electric locomotives have been placed abroad as detailed below:

	Description of the stock	Name of the firm
40 broad gauge	Diesel Electric Locomotives	Messrs. General Motors Overseas, U.S.A.
30 metre gauge	Do.	Messrs. Overseas Diesel Corporation, U.S.A.
30 metre gauge	Do.	Messrs. General Motors Overseas, U.S.A.
42 broad gauge	25 K.V. A.C. Electric Locomotives.	"GROUP", Europe.

Orders for 42 broad gauge electric locomotives have been placed on the Group. Five of these locomotives would be received fully assembled ready for service, five will be received in knocked down condition for assembly at the Chittaranjan Locomotive Works and the remaining 32 electric locomotives will be manufactured in the Chittaranjan Locomotive Works, the electrical and brake equipment being supplied by the Group. The above locomotives have been ordered against 1960-61 and 1961-62 rolling stock programmes and against the requirements of electrification projects.

Orders for the remaining 239 (187 broad gauge steam—107 WG, 50 WP, 30 WT; 36 broad gauge and 16 metre gauge electric locomotives) were placed on the Chittaranjan Locomotive Works.

The total number of new locomotives placed on line during the year was 374 as detailed below:

	Replacement account	Additional account	Total
(*a*) Broad gauge	79	188	267
(*b*) Metre gauge	58	47	105
(*c*) Narrow gauge	2	—	2
Total .	139	235	374

Coaching stock.—(*a*) In addition to utilising the carriage-building capacity in railway workshops, orders were placed on indigenous manufacturers for the supply of 1,021 broad gauge coaching vehicles. The distribution of these orders was as follows:

Indigenous	(In units) Broad gauge
All-steel integral light weight passenger coaches on the Integral Coach Factory, Perambur .	650
64 A.C. Electric Multiple Unit (4-car) coaches on the Integral Coach Factory, Perambur. .	256
All-steel integral light weight fully furnished passenger coaches on Messrs. Hindustan Aircraft Limited, Bangalore	115
	1,021

(*b*) 769 broad gauge, 513 metre gauge and 30 narrow gauge coaching vehicles were placed on line during the year, the details of which are given below:

(In units)

	Broad gauge		Metre gauge		Narrow gauge	
	Replacement account	Additional account	Replacement account	Additional account	Replacement account	Additional account
I. Manufactured at railway workshops—						
(a) Passenger coaches—						
(i) Upper class and composite	—	11	11	13	7	—
(ii) Lower class and composite	29+2*	67	30	141+8*	23	—
(b) Other coaching vehicles	18+1*	37	13	57+10*	—	—
II. Manufactured at Hindustan Aircraft Limited—						
(i) All-steel conventional III class	48	—	—	—	—	—
(ii) All-steel integral III class	189+2*	—	—	—	—	—
III. Manufactured at the Integral Coach Factory, Perambur and furnished in the Integral coach factory and railway workshops—						
(i) All-steel integral III class	70	90	—	—	—	—
(ii) All-steel integral sleeper III class	2	94	—	—	—	—
(iii) All-steel integral TLRs	47+3*	10	—	—	—	—
IV. Manufactured by Messrs. Jessop and Company Limited—						
(i) All-steel III class coaches furnished by the firm	—	—	27	152	—	—
(ii) All-steel III class coaches furnished in railway workshops	—	—	5	3+28*	—	—
(iii) All-steel motor and parcel vans	4*	10*	13	48	—	—
(iv) Electric multiple unit stock	—	57	—	—	—	—
Total	403+12*	366+10*	99	414+46*	30	—
	769+22*		513+46*		30	

* Indicates vehicles placed on line during the last year but not accounted for in the last Year's Report.

Goods wagons.—(*a*) The number of wagons ordered during the year under report is given below:

	(In terms of 4-wheelers)		
	Broad gauge	Metre gauge	Narrow gauge
Number ordered	38,847	2,990	400

The number ordered comprises 34,447 general service wagons, 1,266 tank wagons and 3,134 other special type wagons including brakevans on the broad gauge and 490 general service wagons, 2,400 tank wagons and 100 special type wagons on the metre gauge, whereas all the 400 wagons ordered on the narrow gauge were general service wagons. All these wagons were ordered on indigenous firms. This includes 2,000 BOX type broad gauge bogie open wagons (equivalent to 5,000 four-wheelers) ordered on selected railway workshops. The unavoidable shortfall in wagon production is referred to in the footnote below the statement showing actual Second Plan expenditure against Plan provision at page 7.

(*b*) The number of wagons placed on line during the year is given below:

	Broad gauge		Metre gauge		Narrow gauge	
	Additional account	Replacement account	Additional account	Replacement account	Additional account	Replacement account
Number placed on line	8,695	762	544	114	—	388
Indigenous	8,498	762	528	112	—	390
Foreign	197	—	16	2	—	8

The category-wise break up of the above figures is as under :

	Broad gauge		Metre gauge		Narrow gauge	
	Additional account	Replacement account	Additional account	Replacement account	Additional account	Replacement account
General service wagons	7,876	302	35	—	—	380
Tank wagons	388	9	434	9	—	—
Other special types including brakevans	431	451	75	105	—	8

90. Tractive effort of locomotives.—The average tractive effort per locomotive on the broad gauge of Government Railways showed an increase during 1960-61 as compared to 1959-60 in respect of steam, diesel electric and electric locomotives; but remained unchanged in respect of diesel hydraulic and mechanical locomotives. On the metre gauge, it showed an increase on steam locomotives but remained unchanged on electric as well as diesel hydraulic and mechanical locomotives. The detailed figures for the different classes of locomotives are shown in the following table:

AVERAGE TRACTIVE EFFORT PER ENGINE IN KILOGRAMS

Class of Locomotives	Broad gauge		Metre gauge	
	1959-60	1960-61	1959-60	1960-61
Steam	14,432*	14,523	8,141*	8,196
Diesel Hydraulic and Mechanical	13,457	13,457	9,454	9,454
Diesel Electric	19,651	19,699	—	—
Electric	15,996	16,527	4,808	4,808

*Revised figures.

91. Manufacture of locomotives and boilers in India.— *Locomotives*- The Chittaranjan Locomotive Works produced 173 WG class broad gauge steam locomotives during 1960-61 bringing the total production since its inception to 1179. The outturn of locomotives at the Chittaranjan Locomotive Works was maintained at an average rate of 14 locomotives per month.

The Tata Engineering and Locomotive Company Limited turned out 99 metre gauge locomotives during the year as against 106 during the previous year.

Boilers—The Chittaranjan Locomotive Works manufactured 169 locomotive boilers during the year which have been fitted to the locomotives produced by them. They also produced 9 WP/WG class and 2 XD class locomotive boilers as spares during the year. Since the commencement of boiler production at the Chittaranjan Locomotive Works, 1,000 locomotive boilers have been manufactured upto 31 March, 1961.

92. Improvements to workshops, running sheds, carriage and wagon depots.—Remodelling and expansion of a large number of running sheds and locomotive, carriage and wagon workshops were undertaken during the Second Plan period to cope with the additional rolling stock. The cost of works executed including machinery and plant during 1960-61 amounted to approximately Rs. 8.66 crores.

93. Progress of new workshops.—A steel foundry as an adjunct to the Chittaranjan Locomotive Works with an initial capacity of 7,000 tons of castings per annum with scope for expansion upto 10,000 tons per annum at an estimated cost of Rs. 3.7 crores has been sanctioned in order to meet the requirements of the Chittaranjan Locomotive Works and the Railways. Subsequently, however, in view of latest developments it has been considered advantageous and more economical to set up the steel foundry with the optimum capacity of 10,000 tons of castings per annum, in the first instance itself. Preliminary work in connection with construction of workshop structures and procurement of machinery and plant is in hand. The foundry is expected to commence production in 1963.

The physical progress of the work on the permanent furnishing unit, attached to the Integral Coach Factory, Perambur, which was taken in hand during 1958-59, was 55 per cent at the end of the year 1960-61. This scheme which is estimated to cost approximately Rs. 3.7 crores, is designed to provide ultimately adequate capacity for furnishing all the shells produced by the Integral Coach Factory.

Introduction of the second shift in the Integral Coach Factory, which was initiated during 1958-59, registered further progress. The number of shells turned out rose from 448 in 1959-60 to 583 during 1960-61.

94. Steps taken towards improving productivity.—The system of payment by results which was introduced in some sections of the Integral Coach Factory, Perambur, from 2 January 1960, has since been extended to cover

the majority of the production shops and it is expected that all the production shops will be brought within the scope of the incentive scheme during the first half of the next year. The outturn before introduction of the incentive scheme was 38 shells per month. It was stepped up to 50 shells per month with only 12 per cent increase in staff strength. There is likelihood of further increase in production when the entire shop will be covered by the incentive scheme.

A start has been made with the introduction of the incentive scheme in repair workshops of the various railways and approximately 1,200 men have been brought under its purview. Plans have been prepared for the progressive introduction of the incentive scheme in all the major workshops and it is expected that they will be brought within its scope within the next two or three years.

Although the full effect of the incentive scheme has yet to be felt, there is already a noticeable improvement in the standard of productivity in the sections in which the scheme has been introduced. The earnings of the men are also progressively going up.

In order to utilise the capacity that is being generated as a result of the introduction of the incentive scheme, new lines of production are being undertaken. Orders have already been issued to undertake manufacture of various types of wagons and cranes in selected railway workshops. This has incidentally helped to save foreign exchange which would otherwise have been required for importing machine tools for undertaking manufacture of these wagons, cranes, etc.

95. Extent of dieselisation.—There were 181 diesel locomotives (146 broad gauge, 27 metre gauge and 8 narrow gauge) in operation on different services on the Indian Railways at the end of 1960-61. Seven broad gauge diesel shunting locomotives fitted with 'Suri Transmission', and 40 broad gauge and 60 metre gauge diesel electric main line locomotives were on order.

Of the 146 broad gauge diesel locomotives, 100 main line locomotives were in use on the Eastern and the South Eastern Railways. It has been possible to move heavier trains loaded with coal and raw materials to steel plants with the help of these locomotives.

The progress of dieselisation of other sections which are working to saturation point depends on the availability of diesel oil in the country, development of indigenous manufacture of diesel locomotives and the financial resources of the railways.

96. Repairs to rolling stock in railway workshops and running sheds/transportation repair depots.—(a) *Locomotives*—The percentage of locomotives (all traction) under or awaiting repairs in workshops as well as in sheds and transportation repair depots has registered an overall improvement on both the gauges in 1960-61 as compared with the corresponding figures of 1959-60. Only in respect of broad gauge locomotives under or awaiting repairs in mechanical workshops, the position has slightly deteriorated. The percentages are given below:

AVERAGE NUMBER OF LOCOMOTIVES (ALL TRACTION) UNDER OR AWAITING REPAIRS DAILY

Gauge	Year	Mechanical workshops		Sheds and Transportation repair depots	
		Number*	Percentage of average to total number on line	Number*	Percentage of average to total number on line
Broad	1959-60	245†	3·87†	698	11·0
	1960-61	251	3.92	677	10.6
Metre	1959-60	209	5·89	300	8·46
	1960-61	207	5·75	290	8·06

* Includes figures for diesel and electric locomotives.

† Revised figures.

The total number of locomotives (all traction) given periodical overhaul (inclusive of other repairs) during 1960-61 was more on both the gauges as compared to the corresponding figures during 1959-60. The details are given below :

NUMBER OF LOCOMOTIVES GIVEN PERIODICAL OVERHAUL AND OTHER REPAIRS IN MECHANICAL WORKSHOPS ON INDIAN RAILWAYS

		Broad			Metre		
		P.O.H.	Other repairs	Total	P.O.H.	Other repairs	Total
Steam locomotives	1959-60	1,614	533	2,147	859	834	1,693
	1960-61	2,303	484	2,787	666	488	1,154
Diesel locomotives	1959-60	6	19	25	1	—	1
	1960-61	8	47	55	6	—	6
Electric locomotives	1959-60	18	—	18	—	—	—
	1960-61	17	—	17	—	—	—
Total all traction	1959-60	1,638	552	2,190	860	834	1,694
	1960-61	2,328	531	2,859	672	488	1,160

(b) *Carriages and wagons.*—The percentage of passenger coaches under or awaiting repairs in mechanical workshops registered an increase in 1960-61 on both the gauges as compared with 1959-60. The percentage in the sick lines and transportation repair depôts on the broad gauge remained the same and on the metre gauge registered a slight improvement.

The percentage of other coaching vehicles under or awaiting repairs in mechanical workshops during 1960-61 remained the same on the broad gauge and on the metre gauge it showed a slight deterioration. Whereas in the sick lines and transportation repair depôts the position during 1960-61 slightly deteriorated on the broad gauge, on the metre gauge it registered an improvement as compared with 1959-60.

The percentage of wagons under or awaiting repairs both in mechanical workshops and in sick lines and transportation repair depôts in 1960-61 improved on the broad gauge, whereas on the metre gauge the position deteriorated as compared with 1959-60. The percentages are given below :

CARRIAGE AND WAGONS—AVERAGE NUMBER UNDER OR AWAITING REPAIRS DAILY

Particulars		Years	Mechanical workshops		In sick lines and transportation repair depots	
			Number	Percentage average to total number on line	Number	Percentage average to total number on line
Passenger carriages (in units)	B. G.	1959-60	582	6·29	165	1·78
		1960-61	635	6·48	174	1·78
	M. G.	1959-60	422	4·97	211	2·49
		1960-61	456	5·19	211	2·40
Other coaching vehicles (in units)	B.G.	1959-60	132	5·40	34	1·39
		1960-61	134	5·40	40	1·61
	M. G.	1959-60	70	4·02	33	1·90
		1960-61	79	4·16	34	1·79
Wagons (in terms of 4-wheelers)	B. G.	1959-60	1,894	0·97	5,480	2·82
		1960-61	1,679	0·83	5,121	2·54
	M. G.	1959-60	1,120	1·27	2,705*	3·05*
		1960-61	1,197	1·33	2,880	3·19

* Revised figures.

The total repair outturn of passenger coaches and other coaching vehicles on both the broad gauge and the metre gauge improved during 1960-61 except in the case of the broad gauge other coaching vehicles, where the position slightly deteriorated as compared with 1959-60.

In the case of wagons, the outturn during 1960-61 registered deterioration on both the gauges as compared with 1959-60. Details are given below:

CARRIAGE AND WAGON REPAIR OUTTURN

Particulars		Broad gauge			Metre gauge		
		P. O. H.	Other repairs	Total	P. O. H.	Other repairs	Total
(i) *Passenger coaches*—							
1959-60	in units	6,761	1,602	8,363	4,933	1,271	6,204
	in terms of 4-wheelers	13,502	3,199	16,701	9,525	2,499	12,024
1960-61	in units	6,990	1,733	8,723	5,392	1,309	6,701
	in terms of 4-wheelers	13,973	3,460	17,433	10,404	2,576	12,980
(ii) *Other coaching vehicles*—							
1959-60	in units	1,745	676	2,421	1,173	259	1,432
	in terms of 4-wheelers	2,353	1,170	3,523	1,645	421	2,066
1960-61	in units	1,548	785	2,333	1,172	293	1,465
	in terms of 4-wheelers	2,178	1,257	3,435	1,701	501	2,202
(iii) *Wagons*—							
1959-60	in units	47,802	18,330	66,132	20,527	7,624	28,151
	in terms of 4-wheelers	50,118	20,371	70,489	23,620	9,746	33,366
1960-61	in units	31,502	25,670*	57,172	21,340	5,583	26,923
	in terms of 4-wheelers	33,706	28,443*	62,149	24,138	7,182	31,320

NOTE.—The figures for 1960-61 are provisional.

* The drop in outturn of wagons is due to suspension of P.O.H. of general service broad gauge wagons during the period 1 September 1960 to 30 April 1961 in order to increase the availability of general service wagons for the traffic pool.

97. Position of overage rolling stock on railways.—The percentage of overage stock to total stock in service as on 31 March 1961 was as under:

		Broad gauge	Metre gauge	Narrow gauge
(i)	Locomotives	25·38	18·98	33·99
(ii)	Coaching stock (in terms of units excluding electric multiple unit stock and rail cars)	35·62	29·00	61·10
(iii)	Wagons (in terms of units)	10·29	12·25	50·23

Details of the position for each railway are shown below :

OVERAGE STOCK IN SERVICE ON 31 MARCH 1961
LOCOMOTIVES

Railway	Gauge	Total stock in service	Number overage	Percentage of overage to total stock in service.
Central	Broad	1,373	308	22·43
	Metre	124	16	12·90
	Narrow	93	19	20·43
Eastern	Broad	1,534	533	34·75
	Narrow	4	—	—
Northern	Broad	1,361	448	32·92
	Metre	335	54	16·12
	Narrow	56	27	48·21
North Eastern	Metre	857	206	24·04
Northeast Frontier	Metre	462	45	9·74
	Narrow	31	20	64·52
Southern	Broad	658	111	16·87
	Metre	982	217	22·10
	Narrow	8	—	—
South Eastern	Broad	1,004	136	13·55
	Narrow	120	53	44·17
Western	Broad	649	134	20·65
	Metre	881	153	17·37
	Narrow	97	20	20·62
TOTAL	Broad	6,579	1,670	25·38
	Metre	3,641	691	18·98
	Narrow	409	139	33·99

COACHING STOCK (in Terms of Units)
excluding electric multiple unit stock and rail cars

Railway	Gauge	Total stock in service	Number overage	Percentage of overage to total stock in service
Central	Broad	2,575	960	37·28
	Metre	308	147	47·73
	Narrow	384	277	72·14
Eastern	Broad	3,742	1,267	33·86
	Narrow	22	6	27·27
Northern	Broad	3,140	1,701	54·17
	Metre	986	283	28·70
	Narrow	156	129	82·69
North Eastern	Metre	3,151	766	24·31
Northeast Frontier	Metre	1,557	406	26·08
	Narrow	81	39	48·15
Southern	Broad	1,928	483	25·05
	Metre	3,044	962	31·60
	Narrow	30	27	90·00
South Eastern	Broad	1,770	575	32·49
	Narrow	460	295	64·13
Western	Broad	1,495	232	15·52
	Metre	2,773	864	31·16
	Narrow	407	168	41·28
TOTAL	Broad	14,650	5,218	35·62
	Metre	11,819	3,428	29·00
	Narrow	1,540	941	61·10

WAGONS

(In terms of units)

Railway	Gauge	Total stock in service	Number overage	Percentage of overage to total stock in service
Central	Broad	44,958	6,134	13·64
	Metre	2,926	613	20·95
	Narrow	1,044	731	70·02
Eastern	Broad	60,126	5,786	9·62
	Narrow	8	1	12·50
Northern	Broad	38,025	1,888	4·97
	Metre	6,556	1,594	24·31
	Narrow	281	152	54·09
North Eastern	Metre	27,416	3,113	11·35
Northeast Frontier	Metre	10,336	1,197	11·58
	Narrow	462	200	43·29
Southern	Broad	16,868	868	5·15
	Metre	19,082	2,837	14·87
	Narrow	98	32	32·65
South Eastern	Broad	36,069	6,094	16·89
	Narrow	2,285	1,210	52·95
Western	Broad	19,568	1,417	7·24
	Metre	20,584	1,295	6·29
	Narrow	1,506	529	35·13
TOTAL	Broad	215,614	22,187	10·29
	Metre	86,900	10,649	12·25
	Narrow	5,684	2,855	50·23

98. Rolling stock taken off the line.—Rolling stock taken off the line during the year consisted of 116 locomotives, 391 coaches (in units) and 3385.5 wagons (in terms of 4-wheelers) distributed among the different gauges as under :

ROLLING STOCK TAKEN OFF THE LINE

	Broad	Metre	Narrow	Total
Locomotives (Steam)	62	50(*a*)	4(*b*)	116
Coaches (in units)	217(*c*)	156	18	391
Wagons (in terms of 4-wheelers)	2492·5(*d*)	786(*e*)	107(*f*)	3385·5

(*a*) Includes 4 locomotives sold to outsiders.
(*b*) Includes 2 locomotives sold to outsiders.
(*c*) Includes 2 coaches converted to Goods Stock.
(*d*) Includes 248 wagons sold to outsiders and 186 converted to coaching stock.
(*e*) Includes one wagon transferred to Pakistan.
(*f*) Includes 64 wagons sold to outsiders.

B. ELECTRICAL ENGINEERING

99. Electrification of railway lines.—Against an electrification programme of about 2321 route kilometers (1442 miles) included in the Second Plan, priority was given for completion of electrification of the sections Durgapur-Moghalsarai including Pradhankanta-Pathardih, Asansol-Sini-Tatanagar-Rourkela-Rajkharswan-Dangoaposi, Khargpur-Tatanagar, Sealdah-Ranaghat and Dum Dum-Bongaon on the Eastern and the South Eastern railways. In addition to the suburbon electrification on 3,000 volts DC on the Eastern Railway of the Howrah-Burdwan main line and the Sheoraphuli-Tarakeshwar branch (143 route kilometers) that was completed in 1958-59, electrification on 25 KV AC system was completed on 218.5 route kilometers and the following sections were energised during the year:

Eastern	Date of energisation	Route km	Track km
Asansol-Dhanbad including Pradhankanta-Pathardih Branch and Hirapur Exchange Yard.	21 November 1960	143·5	465·4
Dhanbad-Gomoh	1 February 1961		
Waria-Asansol	31 March 1961		
South Eastern			
Rajkharswan-Dangoaposi	11 August 1960	75·0	168·6

Railway Electrification Administration.—The Railway Electrification Administration continued under the charge of a General Manager and Chief Engineer. One delegation of top ranking engineers of this administration attended the International Railway Congress Association Conference at Brussels and another, the British Transport Conference in London. The Societe Nationale Chemnis De Fer Francais continued to be the technical associates for AC electrification and maintained their organisation in Calcutta headed by an Engineer-in-Chief. The work of this organisation was supplemented by visiting engineers from France for tackling special problems and also by their offices in Paris.

This administration has been directed to carry out the work of electrification on Moghalsarai-Kanpur section of the Northern Railway. They are also required to act as technical advisers for AC electrification on the Central and the Southern Railways.

Main line electrification schemes.—Apart from the sections already electrified as indicated above, the progress of work in the remaining sections was as folows:

A. Gomoh-Gaya and Asansol-Sini-Tatanagar-Rourkela

(i) *Overhead equipment.*—The design for overhead equipment was completed except for the yards at Gaya, Ondal, Tatanagar, Bondamunda and Rourkela and Asansol avoiding line. Out of 29,000 foundations and

masts to be provided, 24,625 foundations (85 per cent) were laid and 23,581 masts (81 per cent) were erected. Copper conductors were strung over 1364 out of 1848 track kilometers.

The galvanising plant at Chittaranjan worked satisfactorily. Upto 31 March, 1961, 21,518 steel masts for AC electrification were galvanised.

(ii) *Locomotives.*—Out of 100 AC mixed traffic type locomotives ordered on the Group in Europe, and 10 ordered on Mitsubishi, Japan, 109 were received. 82 of these locomotives were got ready for commercial service and 20 for tests and trials.

Orders were placed on the Group for the supply and progressive indigenous manufacture of 42 AC freight locomotives/equipments. Out of these, 5 will be received fully erected and 5 in knocked down condition to be assembled at Chittaranjan. Mechanical components for 32 of the remaining locomotives will be manufactured at the Chittaranjan Locomotive Works. For manufacture in future of electric traction equipment of AC freight locomotives, the draft agreement with the European Consortium-Group was finalised.

(iii) *Electric loco-sheds.*—Construction of two major loco-sheds, one at Asansol and another at Tatanagar and a medium loco-shed at Ondal was completed.

(iv) *Locomotive training school at Asansol.*—The following staff received training in this school during the year under review:

	Theoretical	Practical
Drivers C-grade	166	50
Assistant drivers	83	66
Maintenance personnel	11	11

(v) *Power supply arrangements.*—Out of twelve 132/25 kv substations to be erected by power supply authorities, four were commissioned permanently and one temporarily. Construction work at the remaining substations and also connected works, such as provision of 25 kv feeders from substations, etc., are in progress.

(vi) *Civil engineering works.*—Modifications to 12 road and 19 foot over-bridges and provision of niches in 6 tunnels were completed.

(vii) *Signalling and tele-communication work.*—Modifications to signalling and tele-communication equipment to suit 25 kv AC traction system were completed on the South Eastern Railway except in Chakradarpur-Rourkela section. On the Eastern Railway, work was completed in Durgapur-Gomoh section and is in progress in Gomoh-Hazaribagh Road section.

B. Gaya-Moghalsarai and Kharagpur-Tatanagar

(i) *Over head equipment.*—52 per cent of the foundations were cast and 18 per cent of the masts erected in Gaya-Moghalsarai section. In Kharagpur-Tatanagar section, 43 per cent of the work on masts and their foundations was completed.

(ii) *Electric loco-shed.*—90 per cent work on construction of Moghalsarai loco-shed was completed.

(iii) *Civil engineering works.*—The studies of alterations required for all existing over head structures like foot over-bridges, road over-bridges, platform sheds, carriage watering arrangements, through girder-bridges, etc., were completed. Work of raising 34 foot over-bridges and one road over-bridge was completed. 98 per cent of the design work regarding construction of loco-sheds, maintenance depots, remote control centres, quarters, etc., has been completed. 79 staff quarters were constructed.

(iv) *Power supply arrangements.*—Orders were placed for remote control equipments. 70 per cent work on modification of aerial low-tension distribution lines has been completed.

(v) *Signalling and tele-communication works.*—Survey for laying cables, shifting of signalling point rods, wire transmission, etc., at all stations has been completed. Insulation for point rods has been provided at 21 stations.

C. Sealdah-Ranaghat and Dum Dum-Bongaon

(i) *Overhead equipment.*—Survey of the track has been completed 70 per cent of wiring and lay-out plans were finalised. Tenders for supply and erection, etc., of overhead equipment were received and were under consideration.

(ii) *Power supply arrangements.*—Orders for remote control equipment were placed.

(iii) *Civil engineering works.*—The layouts of all fixed structures have been studied to decide modifications required. Work on 26 foot over-bridges has been completed. Track under one fly over-bridge has been lowered.

(iv) *Signalling and tele-communication works.*—Survey for laying of cables, shifting of points, wire transmission, etc., at all the stations has been completed. Insulation for point rods was completed at 24 stations. Preliminary electrical signalling work has also been completed at 25 stations. Orders for route relay interlocking equipment for Dum Dum and Kakurgachi, and for modification to automatic signalling equipments between Sealdah and Agarpara were placed.

D. Sealdah South to Canning, Diamond Harbour, Budge Budge, Ranaghat-Krishnagar and Kalinarayanpur-Santipur

Track survey was completed. Wiring plans and section diagrams for all the stations have been completed. Study of all the existing over-head structures like foot over-bridges, road over-bridges, fly-over, etc., has been completed and preliminary works commenced. Survey of tele-communication work was in progress.

E. Howrah-Kharagpur Section

Track survey has been completed. Studies were in progress regarding civil engineering and other works.

F. Progress of Electrification Work on other Sections

On the Moghalsarai-Kanpur section of the Northern Railway, survey of 191 route kilometers out of 346 has been completed. For the Igatpuri-Bhusaval section of the Central Railway, Civil engineering works have already been completed. Investigations regarding the degree of unbalance in the power supply system are in progress. In the Tambaram-Villupuram section of the Southern Railway, 80 per cent of the preliminary civil engineering work was completed. It was decided to electrify these sections on 25 kv AC system. Draft abstract estimate and project report were under preparation.

Indigenous manufacture of rolling stock.—A start in the manufacture of electric locomotives indigenously, was made by the Chittaranjan Locomotive Works. Work on manufacture of ten 1,500 V DC locomotives was in progress, the electrical equipment being supplied by the English Electric Company.

It was decided to manufacture broad gauge AC electric multiple units at the Integral Coach Factory, Perambur. It was also decided to entrust the manufacture of 1,500 V DC electric multiple units required by the Central and the Western Railways, to Messrs Jessops, Calcutta. Out of the 18 coaches of 3-units each electric multiple units on order with the firm, 6 coaches were received during the year.

100. Electrification of stations.—Further progress was made in the work of providing electric lighting at station buildings, platforms, waiting halls, approach roads and circulating areas during the year 1960-61.

265 stations have been electrified during this year as detailed below:

Railway	Number of stations electrified
Central	26
Eastern	28
Northern	45
North Eastern	51
Northeast Frontier	3
Southern	55
South Eastern	22
Western	35
Total	265

The total number of electrified stations on the railways as on 31 March, 1961 was 2,362; of these, 511 were electrified during the First Plan and 1,044 during the Second Plan.

101. Provision of water coolers.—Fifty one electric water coolers were provided in 1960-61, bringing the total number of coolers on the Indian Railways to 884 at the end of the year under review. The programme for the provision of water coolers at railway stations, workshops, offices, etc., has been slowed down due to the difficult foreign exchange position.

102. Provision of push-buttons in ladies compartments as a safety measure.—The railway administrations were instructed in February, 1960 to provide, as an experimental measure, a push-button switch under the alarm chain handles in all ladies compartments, both in upper and lower classes, which would operate an electric alarm bell and a red light in the guard's compartment and amber red light outside on both sides of the ladies compartment. This arrangement was to be carried out on all rakes of one mail and one express train on each railway except the Northeast Frontier and the Southern Railways where travel conditions were comparatively safer. Except on the Central and the South Eastern Railways, where the work is in progress, the other Railways completed the work during the year and the equipment has been in service on those railways. There were, however, no reports that the equipment was required to be operated in an emergency so far.

103. Provision of additional fans, lights and equipments, etc., in coaching stock.—The progress of fitting fans in third class coaches was maintained and 6,518 fans were fitted during 1960-61.

115 old coaches were equipped with generating equipments.

All standard first class coaches are designed to provide one fan per berth, but due to paucity of funds and shortage of generating capacity in the coaches, provision of fans in some of the non-standard first class coaches is still short of the specified standard. 5,519 additional fans were provided in such first class coaches to bring this amenity to the prescribed standard. Additional reading lights were provided in 376 first class coaches.

104. Battery charging sets.—One hundred and eighty one battery charging sets were installed at stations during the year for the efficient maintenance of train lighting batteries, bringing the total number in operation to 683 sets at the end of the Second Plan period.

105. Installation of air-conditioning plants in offices, etc.—175 additional air-conditioning plants were installed during 1960-61 making a total of 712 air-conditioners upto the end of 1960-61.

106. Electrification of staff quarters.—In pursuance of the accepted policy of electrification of staff quarters, the railway administrations completed electrification of 20,778 quarters during 1960-61.

107. Electric power for railways.—In 1960-61, Indian Railways maintained 164 power stations with a total installed capacity of 208,420 KW. The energy generated by the railway power houses and purchased from other power supply authorities during 1960-61 was as under:

(a) Total energy generated by railway power houses	526,367,920	KWH
(i) Energy consumed for railway work including losses in transmission and distribution	455,940,199	,,
(ii) Energy supplied to railway staff	3,492,690	,,
(iii) Energy sold to public	66,935,031	,,
(b) Total energy purchased from other power supply authorities	395,901,645	,,
(i) Energy consumed for railway work including losses in transmission and distribution	374,847,408	,,
(ii) Energy supplied to railway staff	14,590,809	,,
(iii) Energy sold to public	6,463,428	,,

The total energy generated and purchased during the year was 922,269,565 KWH showing an increase of 10 per cent over last year.

CHAPTER VI

SIGNALLING AND TELE-COMMUNICATION

108. General.—During 1960-61, the existing signalling and tele-communication equipment and arrangements on the railways continued to be maintained efficiently and further alround improvements were achieved. A large number of works were executed to improve the signalling and safety arrangements. Many new works were also carried out in several sections for increasing the line capacity. High tempo was maintained in the progress of tele-communication works, both in radio as well as line communication.

For promoting safety, interlocking of non-interlocked stations was given high priority. To keep down the cost for less busy sections and at the same time to expedite the pace of the work, rudimentary interlocking was evolved which is cheaper and simpler, but at the same time eliminates the human element from non-interlocked working. As many as 160 non-interlocked stations were interlocked to various standards of interlocking and rudimentary interlocking was provided at 212 stations in the year under review. Fitting of detectors in non-interlocked stations to ensure the correspondence of signals with points was initiated as an additional safety item and 452 stations were accordingly equipped in the year under review. This brought the total number of stations on the broad gauge to 2,758 and on the metre gauge to 2,209 where interlocking devices have been installed leaving a balance of only 56 broad gauge stations and 206 metre gauge stations for completion in the next year.

The drive for achieving self-sufficiency in mechanical signalling material in the country was further intensified, private firms as well as railway workshops, with their combined capacity, are now able to meet the full demand for mechanical signalling material. The designs and specifications of signalling material, both mechanical and electrical, have been standardised to a great extent. This has facilitated manufacturing of such materials in the country.

Nine probationary assistant signal and tele-communication engineers completed their training and were put to working posts. Five probationary assistant signal and tele-communication engineers are undergoing training. At the Indian Railways School of Signal Engineering and Tele-communication, Secunderabad, in addition to giving initial training to 3 probationary assistant signal and tele-communication engineers, refresher courses were conducted for 7 assistant signal and tele-communication engineers and district signal and tele-communication engineers. Training was imparted to 84 apprentice signal block and tele-communication inspectors and 44 signal and tele-communication inspectors and 1 draftsman at the school. The capacity of the school was increased from 124 to 142 trainees in the course of the year.

109. Signalling works.—A large number of signalling and safety works as well as works in connection with improving line capacity were carried out. The line capacity works carried out during the year included opening of new crossing stations, provision of additional loops, lengthening of loops, re-modelling of existing station yards and opening of new lines and doublings. The important signalling works completed during the year were intermediate block signalling with colour light signals between Delhi and Ghaziabad on the Northern Railway, route relay interlocking at Madras Fort station on the Southern Railway, where the operating panel manufactured at railway's own workshop was used and provision of multiple aspect upper quadrant signalling at a number of stations on main trunk routes of the Northern, the Central, the Western, the Southern, the North Eastern and the Northeast Frontier Railways. Besides these, many other important works, viz., power signalling at Basin Bridge, Veyasarapady, Washermanpet and Korukkupettai with automatic signals between stations on the Southern Railway, mechanisation of Moghalsarai Hump Yard on the Eastern Railway, and automatic signalling

between Howrah and Serampore on Up main line on the Eastern Railway, were started. Other signalling works included interlocking of non-interlocked stations, raising of the standard of interlocking from I to II or III, interlocking of level crossings, provision of token instruments on single line sections, provision of lock and block working on double line sections, etc. The expenditure incurred on purely signalling and tele-communication works was Rs. 5.52 crores and that on signalling portion of line capacity works was Rs. 4.39 crores. Some of the major works executed during the year were as under.

Central Railway.—Interlocking of 14 non-interlocked stations mostly on the Grand Trunk Route was completed ; standard of signalling was raised at 19 stations ; 41 level crossing gates were interlocked ; interlocking of last stop signals with token instruments was provided at 54 stations. 62 non-interlocked stations were provided with modified non-interlocking ; 21 new crossing stations in addition to 9 stations in the newly opened lines and 5 stations in the newly doubled lines were opened ; loops were extended at 19 stations and additional loops were provided at 18 stations. Signalling works in connection with remodelling of 3 yards were also completed.

Eastern Railway.—20 non-interlocked stations were interlocked; 20 stations were provided with token instruments; one large station was provided with track circuit and two yards were remodelled. Signalling work was completed at 15 new stations including 10 new crossing stations.

Northern Railway.—Three intermediate block posts equipped with colour light signals were provided on Delhi-Ghaziabad section. 34 non-interlocked stations and 9 level crossing gates were interlocked ; standard of interlocking was raised at 15 stations ; worn-out signalling gears were replaced at 33 stations. Signalling works were completed for opening of 26 new stations including 12 crossing stations. Loops were extended at 16 stations and additional loops were provided at another 16 stations.

North Eastern Railway.—Interlocking of 7 non-interlocked stations; raising of the standard of interlocking at 16 stations and provision of modified non-interlocking at 25 stations were completed during the year 1960-61. Signalling and interlocking works were completed for opening 7 new crossing stations; doubling between Sonepur-Hajipur, Katareah-Thana Bihpur; yard remodelling at 13 stations, and extension of existing loops at 17 stations.

Northeast Frontier Railway.—Interlocking of 9 non-interlocked stations with multiple aspect upper quadrant signals ; provision of token instruments at 13 stations and provision of detectors at 60 non-interlocked stations were completed. Signalling works in connection with the opening of 7 new crossing stations and remodelling of 2 stations were completed.

Southern Railway.—32 non-interlocked stations and 29 level crossing gates were interlocked ; 15 stations were provided with token instruments. Last stop signal was interlocked with token instruments at 8 stations and modified non-interlocking was provided at 18 stations. Signalling works were completed at 12 new crossing stations and also at another 18 stations for bringing doubling into use. Loops were extended at 46 stations and additional loops were provided at 16 stations.

South Eastern Railway.—3 non-interlocked stations and 5 level crossings were interlocked; standard of interlocking was raised at 26 stations; token instruments were provided at 20 stations on single line section and lock and block was provided at 41 stations on doubling lines. Besides these, signalling and interlocking works were completed at 7 new crossing stations and 4 new stations in connection with opening of new lines, 42 stations in connection with doubling and 6 stations were remodelled; loops were extended at 9 stations and additional loops were provided at 13 stations.

Western Railway.—41 non-interlocked stations were interlocked: standard of interlocking was raised at 20 stations ; token instruments were provided at 36 stations ; 5 level crossing gates were interlocked; 63 non-interlocked stations were provided with modified non-interlocking and 288 non-interlocked stations were provided with detectors.

In addition, signalling and interlocking works were completed at 15 new crossing stations and at 22 stations in connection with doubling ; 3 yards were remodelled; loops were extended at 4 stations and additional loops were provided at 24 stations.

110. Signal Workshops.—Production of signalling material in railway signal workshop has been considerably stepped up. The total production during the year exceeded Rs. 134 lakhs in value.

The Southern Railway's workshop at Podanur, the Central Railway's workshop at Secunderabad, the Eastern Railway's workshop at Howrah and the Northern Railway's workshop at Ghaziabad have all stepped up the production of electrical signalling material like colour light signals, single and double line block instruments, route indicators, reversers, etc., which were so long being imported. This has resulted in the saving of foreign exchange to the extent of Rs. 21,36,290 during the year.

According to the advice given by the production expert, whose services were obtained through the United Nations Technical Assistance Administration with a view to organising the production of electrical equipment in railway workshops regularly on large scale, plans have been finalised for expanding the Central Railway's workshop at Mettugudda and the required machinery is being procured.

111. Tele-communication.—A large number of tele-communication works were carried out on all the railways and the total expenditure incurred was Rs. 62.51 lakhs. The major works carried out included replacement of some of the existing wireless sets, provision of new wireless links, automatic telephone exchanges and additional teleprinter circuits. Some of the important works carried out are indicated below :

I. *Wireless.*—(i) Five new wireless links were added to the high frequency wireless telegraphy/telephony links between Bhusaval and Secunderabad, Bombay-Hubli and Madras, Bombay-Sholapur and Madras, Bombay and Bhusawal and Bombay and Udaipur.

The replacement work programmed during the Second Five Year Plan of the old type of military radio communication equipment has been almost completed. Opportunity was also taken to introduce equipment with improved technique like single side band so that economy and flexibility of operations are assured.

(ii) *Very high frequency links.*—The field survey for the biggest directional radio multi-channel project on the South Eastern Railway was completed and the installation of the link has been taken up.

II. *Telephone exchanges.*—The total auto exchange lines on the Indian Railways is about 9,000 at the end of the Second Plan and the number of exchange lines is expected to be doubled during the Third Plan.

III. *Teleprinter channels.*—31 teleprinter circuits covering a length of approximately 10,000 kilometres were made available for transmitting long distance telegraph traffic. A beginning has also been made for providing teleprinter channels connecting major adjacent marshalling yards for furnishing load information for assisting the planning in the marshalling yard ahead. The yards which have been so far connected are Khargpur-Shalimar and Arkonam-Tondiarpet. 3 teleprinter circuits connecting (i) Howrah-Gaya, (ii) Gaya-Allahabad, and (iii) Delhi-Ambala were commissioned during the year.

IV. *Section control, deputy control and trunk circuits.*—Section control arrangements covering a length of approximately 2,000 kilometres were provided on different sections by the Indian Government Railways bringing the total number of circuits to 232 covering a distance of 48,800 kilometres at the end of the Second Plan period.

Besides the section control circuits, additional deputy control circuits were provided covering a length of 2,132 kilometres. These circuits include the circuits connecting Jhansi-Kanpur on the Central Railway, Bikaner-Rewari-Delhi on the Northern Railway, Bhatni-Sonepore-Muzaffarpur,

Muzaffarpur-Samastipur-Barauni and Lucknow Junction-Gonda on the North Eastern Railway, and Ajmer-Palanpur, Ratlam-Ujjain-Bhopal, Bulsar-Bhusawal on the Western Railway. At the end of the year there were 74 deputy control circuits covering a length of 19,600 kilometres.

Trunk circuits including the long distance carrier connecting Delhi and Calcutta covering a distance of a length of about 2,900 kilometres have been added during this year.

The average efficiency of the major tele-communication circuits during the year under review on the Indian Railways was as under :

	Per cent.
Section control	93.72
Deputy control	93.38
Trunk circuits	93.39

V. The number of telegraph, teleprinter and wireless traffic worked on the Indian Railways during the year was as under :

	(Figures in lakhs)
Telegraph (including service, paid and posts and telegraphs service messages)	373.62
Teleprinter	18.81
Wireless	41.65
Radio telephony calls	3.00

VI. *Public telephones at railway stations.*—Considerable progress has been made in providing public telephones at all railway stations located in close proximity to towns provided with telephone exchanges. Telephones have so far been installed at about 1,150 stations, which include 219 stations during the year under review.

112. Indigenous Production.—The Signal Stores Committee continued to assist the firms producing indigenous signalling equipment in solving their difficulties, both technical and procedural. An Inspection Organisation was formed under the control of the Railway Board for carrying out inspections of electrical signalling material being manufactured in the country and to assist the indigenous firms in developing the manufacture of new items as also to ensure supply of quality material. Orders for electrical signalling material of the value of nearly Rs. 2 crores were placed against the global tender issued earlier by the Railway Board. Common user items, viz., circuit controllers, indicators and repeaters, electric signal reversers, key transmitters, direct current track and line relays were ordered for indigenous development. With the placement of these orders, an important step was taken towards the development of the manufacture of electrical signalling material in the country with the ultimate object of creating a potential for large scale supplies and obtaining self-sufficiency in this regard.

The supply position of common user items of mechanical signalling equipment has been generally satisfactory and there is plenty of capacity developed with the various firms and railway signalling and tele-communication workshops to meet all the demands. The manufacture of more specialised items like interlocking frames, double wire and catch handle and some of the other double wire equipment was also developed satisfactorily and their supply position considerably improved.

CHAPTER VII

RESEARCH, DESIGNS AND STANDARDIZATION

113. General.—In view of the urgent need for research on numerous fresh technical problems arising from the large-scale expansion in railway activities in recent years and in view of the advantages that would accrue from closer co-operation with the various well-equipped national laboratories and non-railway research institutes in the country, the Central Board of Railway Research was re-constituted to include a number of eminent scientists in control of research activities, and representatives of industries mainly engaged in the manufacture of railway equipment. The inaugural meeting of the enlarged Central Board of Railway Research was held during the year and three sub-committees were set up to deal with civil engineering and building research, mechanical and electrical engineering research, and metallurgical and chemical research. Each of the three sub-committees met once during the year.

The Research, Designs and Standards Organisation continued to give consultation service to the Ministry of Railways, the Director of Inspection and the manufacturers of railway equipment in India and abroad. It continued to undertake the inspection of locomotives and boilers at the Tata Locomotive and Engineering Company Limited and the Textile Machinery Corporation Limited. It also represented the Ministry of Railways on various committees and organisations, such as, the Indian Standards Institution, the Council of Scientific and Industrial Research and the Central Boiler Board. Consultation service to non-railway bodies, including Damodar Valley Corporation, Neyveli Lignite Corporation, Andhra Pradesh Electricity Board, Indian Refineries, Mysore Iron and Steel Works, Heavy Electricals, Maharashtra and Gujrat Electricity Boards, was rendered by the Diesel Wing of the Research, Designs and Standards Organisation by undertaking for them the preparation of specifications, technical assessment of tender documents, and approval of detailed drawings. Special project studies were also made for Visakhapatnam Port and Dandakaranya Project by the Diesel Wing. Technical notes on matters of interest to railways continued to be issued.

A Bridges and Floods Directorate was created in accordance with the recommendations of the Committee set up by the Ministry of Railways under the chairmanship of Dr. A. N. Khosla for investigating and reviewing the methods of estimating the maximum flood discharge from catchment areas in order to determine the waterway and other connected factors required for the design of bridges, and this Directorate was placed under the Research, Designs and Standards Organisation. Useful data was collected and analysed and railways were given guidance on matters pertaining to hydraulics and hydrology, including the supply of maps showing the rainfall intensity of various durations.

The Civil and Mechanical Engineering Standards and Designs Directorates were shifted from New Delhi/Chittaranjan to Simla.

Training was given to 21 Special Class Apprentices and Probationary Assistant Mechanical Engineers for a period of 6 to 8 weeks in each case in the Design and Calculation Section of the Organisation.

A. RESEARCH

114. Civil engineering research.—To ascertain the factor of safety at collapse, a few more steel, reinforced concrete and prestressed concrete masts for carrying overhead lines for the Electrification Project were tested under static load. Locomotive coal ash was successfully used for making lime mortars in the construction of jack arch roofing elements for Type I quarters and in the walling of vacuum brake testing laboratory. Soil samples for the construction of Brahmaputra bridge piers, steel foundry shops at Chittaranjan

Circular Canal Bridge No. 1, Calcutta, Locomotive Component Works, Varanasi, etc., were tested and recommendations on the safe bearing pressures intimated to these Administrations.

115. Mechanical engineering research.—Continuous rating tests were carried out on WDM_1 class diesel-electrical locomotive to measure the temperature rise in the windings. Rating and performance tests were carried out on a WT new type broad gauge steam locomotive. Comparative fuel consumption trials were undertaken with WP locomotives using washed and unwashed grade I coal. Drafting conditions of WP type broad gauge passenger and YP type metre gauge passenger steam locomotives were adjusted to burn non-coking coals efficiently.

The lateral stability tests on WDM_1 locomotive and comparative rail stress tests with WP and WDM_1 locomotives were completed during the year. Buffing tests were carried out on broad gauge bogie BOX wagon to check its back-stop design. Comparative riding quality trials of all-coil I. C. F. bogies were also undertaken during the year under review. A few prototypes of light-weight broad gauge motor trolley were manufactured to replace costly imported trolleys.

116. Metallurgical and chemical research.—Indigenous substitutes like cashew-nut-shell-liquid (CNSL)-based chlorinated products, epoxy resins, phosphated Bhilawan nut shell liquid products and heat resisting paints were developed. Eight more patents were filed during the year. To replace expensive and toxic red lead primer based on imported lead, a formulation was developed using waste red mud with CNSL medium. More than 3,000 locomotives are receiving treatment with compositions based on indigenous tannins, soda ash and trisodium phosphate on bad water sections of the Indian Railways. A pilot plant for reclaiming used axle oil has been set up at Lilloah on the Eastern Railway. A process for refining used diesel engine lubricating oil has also been developed. Impact tests carried out on wagons fitted with spheroidal graphite cast iron bearings were found to be satisfactory.

B. DESIGNS AND STANDARDIZATION

117. Standards committees.—The Designs and Standards Wings convened and co-ordinated the annual meetings of six standards committees relating to bridges and structures, track, signalling and interlocking, locomotives, carriage and wagon and electrical standards. The chemists and metallurgists committee as well as the standing corrosion committee also held meetings during the year. Standardization of railway equipment to improve the performance and to facilitate its production in the country continued in an increasing measure.

118. Civil engineering designs and standards.—The design of 52 kilograms per metre (105 lbs. per yard) broad gauge rail section was finalised and issued to the Railways for adoption to permit running of heavier loads at greater frequency and higher speeds on trunk routes. Drawings were prepared for 1 in 20 broad gauge 44.6 kilogram per metre (90 lbs. per yard) turnout with built up and cast manganese crossing and 1 in 16 broad guage 44.6 kilogram per metre (90 lbs. per yard) turnout with cast manganese crossing, to facilitate trains passing over turnouts and loop lines at higher speeds.

Designs were prepared for broad gauge main line standard girder span 61.00 metres (through type) and metre gauge main line girder span 30.5 metres (underslung type) and broad gauge main line standard girder span 45.7 metres (underslung type) to take double track and foot-paths on either side, to suit the new second Yamuna Bridge at Delhi. Technical advice continued to be given to railways and others. Amongst the important items dealt with were: prestressed-concrete bridge girders, concidal shell roof for the Locomotive Component Works, Varanasi, and precast RCC trusses for the Integral Coach Factory, Perambur.

119. Signals, designs and standards.—Designs were prepared for electro-mechanical signalling equipment, such as, electric lever lock and circuit controllers, luminous signal repeaters, luminous indicators, electric detectors, tablet block instruments, and direction type route indicators. Standardization or drawings and specifications for electrical signalling equipment was progressed. The production of mechanical signalling equipment to Indian Railways Standards designs markedly increased, attended by more competitive prices and consequent economy in respect of railway supplies. Numerous modifications to Indian Railways Standards drawings were made to facilitate indigenous manufacture and the employment of indigenous materials.

120. Architectural designs.—The Architectural Wing undertook the designs of several important station buildings and other structures. Among the station buildings, the design for Bhuvaneshwar incorporated the Orissa style of architecture, and those for Nalanda and Rajgir stations included features of Buddhist style of architecture. In the design for the station building at Malda Town, due allowance has been made for seismic forces. Designs were given for an apprentices' hostel for the Technical Institute at Lucknow to accommodate 200 students, and a Holiday Home at Srinagar with the exterior harmonising with the local rural surroundings and architectural style. A suitable design was prepared for the Railway Pavilion in the Indian Industrial Fair 1961, New Delhi. A 200 bed hospital has been designed for Pandu on up-to-date lines providing medical units on functional basis.

121. Locomotive designs and standards.—Drawings were finalised for a completely welded boiler and a welded underframe with a welded-cum-riveted tank for the tender for WP/WG locomotives. Investigations and studies were made for the introduction of a heavy passenger steam locomotive and a twin WG locomotive unit with a common 6-wheeled bogie tender for heavy freight service. The design for a 20.4 tonnes (20-ton) broad gauge crane was finalised and the work in connection with a 20.4 tonnes (20-ton) metre gauge and a 20.4 tonnes (20-ton) narrow gauge crane commenced for indigenous manufacture. Specifications were revised for YP/YG metre gauge locomotives to be built by the Tata Locomotive and Engineering Company, Limited and WG broad gauge locomotives to be built by the Chittaranjan Locomotive Works.

The design of WCM5 1500 V DC 3600 horse power locomotives under construction at the Chittaranjan Locomotive Works was finalised incorporating modifications and alterations as required by the Chittaranjan Locomotive Works to facilitate manufacture. The designs of a mechanical torque converter, a pneumatic fatigue alarm, a variable speed fan drive and power equipment layout for diesel railcars were undertaken.

The development of the Suri-Transmission and the 650 horse power locomotive was completed during the year along with Messrs. Maschinenban Kiel Aktienesellschaft, West Germany. The first 650 horse power diesel locomotive fitted with this transmission went into operation in Germany in January 1961 where it has been running since then. The total number of specifications issued for different types of locomotives was eight for the Indian Railways and non-railway parties. The Design Code for the diesel calculation section was compiled and is being constantly kept under review in order to keep it up-to-date. Besides, technical examination of the various offers against tenders for broad gauge 25 KV AC freight type locomotive was also made.

122. Carriage and wagon designs and standards.—Detailed specifications, general furnishing drawings and layouts for the I and III class composite metre gauge coaches, luggage and brake vans, for production at the works of Messrs. Jessops were finalised. Complete requirements and detailed specifications for the 4-car D. C. Electric Multiple Unit trains for the Bombay area as also those for the intermediate trailers for production at the works of Messrs Jessops were finalised. The broad requirements and layout designs for the various sizes of postal vans both broad and metre gauges were finalised with the Postal Department. The design of the double link

suspension for the four-wheel coaching vehicles was finalised and preliminary riding quality tests made. Investigations of the changes in the layout required for the partial air-conditioned coaches to improve air-conditioning efficiency on both broad and metre guages, were also completed.

On the wagon side, designs of BCX type broad gauge bogie covered wagon and MBTPZ type metre guage bogie petrol tank wagon were finalised, and the design of liquid petroleum gas (LPG) tank wagon was taken in hand. At the same time, studies connected with the application of roller bearings, centre buffer couplers and vacuum brake improvements were progressed further. In order to enable the wagon builders to achieve optimum production a Liaison Cell was set up at Calcutta to study their requirements on the spot and expedite technical decisions.

Investigations were undertaken on improving the capacity of dynamos on metre gauge coaches and for electrical wiring in trough for coaches. Safety measures were devised for ladies' compartments.

123. Introduction of the metric system.—Twelve specifications pertaining to track items were converted into metric units ; this included the revised specification for rails. The Arc Bridge Code and the IRS specification B_3 were converted into metric units. Steel Bridge Code was completely revised and simultaneously converted into metric units.

In accordance with the decision to adopt Metric Screw Thread System in replacement of the existing British Standard Whitworth Screw Thread System, 543 metric part drawings were prepared during the year.

On the wagon side, considerable progress was made in metric conversion work and a start was made in the preparation of technical pamphlets for the guidance of railways using new designs of wagons.

CHAPTER VIII

RAILWAY EQUIPMENT AND STORES

124. General.—Total purchases of railway stores during 1960-61 registered a drop of about 10 per cent, being Rs. 178 crores as against Rs. 197 crores in the preceding year due to the intensive drive on the railways for reduction of stores suspense and balances. Although the amount spent on purchase of stores declined, the percentage of purchase of indigenous stores to the total increased from 82.50 per cent in 1959-60 to 85.06 per cent in 1960-61.

The manufacture of railway wagons suffered a set back during 1960-61 on account of shortage of supply of steel and certain components, the manufacture of which was being developed for the first time in the country. With a view to boosting up the wagon output, arrangements were made to import certain components and steel sections which were in short supply, and the capacity in the railway workshops was also harnessed to assist in the manufacture of roller bearings, axle boxes, etc., to meet the requirements of wagon manufacturers.

With a view to improving the quality and timely supply of uniforms to staff, it was decided to set up garment cutting factories on all the Zonal Railways.

Further progress in the development of indigenous manufacture of stores was made during the year. A three-coach broad gauge mobile show-room was taken round to industrial centres away from the capitals of States to display items which were imported and in short supply, so as to interest the industry in the development of such items.

A. PURCHASES

125. Value of railway equipment and stores ordered.—A statement showing the value of railway equipment and stores ordered through the various sources, *viz.*, (i) Ministry of Works, Housing and Supply, (ii) Other Ministries, (iii) Railway Board and (iv) Railways direct during 1960-61 as compared with the value of similar orders placed during 1959-60 is given below. The Railway Board continued to purchase during the year certain important rolling stock items like locomotives (diesel and electric), coaches, wagons, wheels, tyres and axles. Orders were also placed by the Railway Board for signalling materials and for the import of wooden sleepers and specials from Burma.

VALUE OF RAILWAY EQUIPMENT AND STORES ORDERED

(In lakhs of rupees)

Year	Total value of equipment and stores ordered	Value of equipment and stores ordered through the Ministry of Works, Housing and Supply	Value of equipment and stores ordered through other ministries	Value of equipment and stores ordered by the Railway Board	Value of stores and equipment ordered by railways direct
(1)	(2)	(3)	(4)	(5)	(6)
1959-60					
(a) Value	1,77,46.49	42,61·57	33,19·23	40,81·09	60,84·60
(b) Percentage	100·00	24·01	18·70	22·99	34·30
1960-61					
(a) Value	**2,30,36·27**	**28,21·55**	**35,98·92**	**1,12,60·22**	**53,55·58***
(b) Percentage	**100·00**	**12·25**	**15·62**	**48·88**	**23·25**

*The amount includes Rs. 13,19.83 lakhs for the purchase of steel. The corresponding figures against 1959-60 is Rs. 13,57.19 lakhs which is included in the figures of Rs. 60,84.60 lakhs under column 6.

126. Payments made for railway equipment and stores.—The payments made on account of purchases of equipment and stores by the railways during the year 1960-61 amounted to Rs. 1,77,86.67 lakhs as against Rs. 1,97,41.17 lakhs during 1959-60, thereby registering a decrease of Rs. 19,54.50 lakhs. The amount under the class of stores—rolling stock (complete units) has shown an increase, and the rest of the heads decreased. The major decrease, however, was under permanent way materials and track tools, parts and fittings of rolling stock and building material.

The statement below summarizes the details of the payments made on account of purchases during 1960-61 and the corresponding figures for 1959-60.

PAYMENTS MADE FOR RAILWAY MATERIALS DURING THE YEAR 1960-61

(In lakhs of rupees)

Classes of stores	Imported materials			Indigenous materials	Total	
	Purchased direct	Purchased through agents in India	Total imported materials		1960-61	1959-60
(a) Bridge works and its parts ittings and special fastenings.	2·29	1·07	3·36	66·11	69·47	1,97·47
(b) Engineering plant and components including all hand and power machinery.	0·41	12·29	12·70	49·81	62·51	59·36
(c) Workshop machinery, plant and equipment including pneumatic machinery and tools.	12·23	33·05	45·28	57·63	1,02·91	1,28·51
(d) Permanent way materials and track tools.	5,43·89	78·14	6,22·03	27,25·55	33,47·58	43,09.30
(e) Rolling-stock—parts and fittings only (excluding electrical equipment and material).	1,33·21	1,94·63	3,27·84	9,62·47	12,90·31	29,57·53
(f) Building materials—water mains, sewage system and track and yard enclosing, signal and interlocking materials.	8·78	41·43	50·21	7,45·94	7,96·15	11,19·95
(g) Small tools, hand tools, hardware, copper, tin, zincware, leather, canvas, metals, painters, stores, timber, fuel oil, furniture, crockery, etc.	1,49·42	3,07·99	4,57·41	65,47·62	70,05·03	71,28·77
(h) Electrical fittings, wireless equipment, electric traction equipment, telegraph and telephone equipment.	6·00	67·12	73·12	5,26·15	5,99·27	7,80·45
(i) Rolling-stock, locomotives of all types, wagons, coaches including electric multiple units complete and other miscellaneous items, spare boilers and cranes, etc., complete units only.	2,67·26	7,87·18	10,54·44	31,78·31	42,32·75	25,78·55
(j) All other stores	—	10·90	10·90	2,69·79	2,80·69	4,81·28
TOTAL .	11,23·49	15,33·80	26,57·29	1,51,29.38	1,77,86·67	1,97,41·17

127. Purchase of stores within the country.—Although the total quantum of indigenous purchases decreased from Rs. 1,62.87 crores during 1959-60 to Rs. 1,51.29 crores in 1960-61, the overall percentage of indigenous to the total purchases increased from 82.50 to 85.06. The details of purchases made in the two years are shown below :

PURCHASE OF STORES

(In lakhs of rupees)

Year	Materials imported direct	Materials imported through agents in India	Total	Indigenous materials	Total imported and indigenous	Percentage of column No. 5 to column No. 6
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1959-60	16,71·55	17,82·47	34,54·02	1,62,87·15	1,97,41·17	82·50
1960-61	11,23·49	15,33·80	26,57·29	1,51,29·38	1,77,86·67	85·06

128. Purchase of stores from cottage and small-scale industries.—The value of purchases of stores falling under the category of cottage and small-scale industries products made by the railways during 1959-60 and 1960-61 are given below:

PURCHASE OF COTTAGE AND SMALL-SCALE INDUSTRIES PRODUCTS

Railways	1959-60	1960-61
	Rs.	Rs.
Central	32,61,000	23,02,000
Eastern	54,13,563	61,26,000
Northern	5,00,503	1,52,631
North Eastern	3,28,000	3,31,000
Northeast Frontier	1,92,000	2,64,500
Southern	18,74,000	7,70,000
South Eastern	8,40,274	4,10,900
Western	31,02,000	21,37,000
Chittaranjan Locomotive Works	14,64,500	42,17,000
Integral Coach Factory	3,31,811	18,07,300
Locomotive Component Works	—	16,989
Railway Electrification	—	1,02,017
Dandakaryana Balangir Kiriburu Railway Projects	—	1,69,599
TOTAL	1,73,07,651	1,88,06,936

129. Purchase of Khadi.—The Railways continued to make maximum use of *Khadi* and the purchases made during the year 1960-61 exceeded those made during the year 1959-60 by Rs. 6,64,837.

TOTAL VALUE OF PURCHASES OF *Khadi* DURING THE YEARS 1959-60 AND 1960-61

Railways	1959-60	1960-61
	Rs.	Rs.
Central	8,76,371	5,80,873
Eastern	17,37,785	16,84,721
Northern	19,53,169	34,32,754
North Eastern	89,000	76,000
Northeast Frontier	7,21,200	2,51,800
Southern	1,60,278	3,27,799
South Eastern	5,91,199	2,99,294
Western	6,49,643	7,91,998
Chittaranjan Locomotive Works	19,800	14,000
Integral Coach Factory	24,262	25,378
Locomotive Component Works	—	419
Railway Electrification	—	1,541
Dandakaranya Balangir Kiriburu Railway Projects	—	967
TOTAL	68,22,707	74,87,544

NOTE.—Additional expenditure incurred on account of use of *Khadi* in lieu of Mill made cloth during 1960-61 was approximately Rs. 19.43 lakhs.

B. STORES TRANSACTIONS ON THE RAILWAYS

130. Review of annual statement of stores transactions and stores balances including overstocks, surplus stores and scrap.—The position of overall stores suspense on the Government Railways separately under capital 9100-9400 and 9500 during 1960-61 is summarised in the table on the next page. Railway-wise details of the transactions under capital 9500 are contained in statement number 39 of Volume II of this report.

There has been a reduction of Rs. 14.37 crores in the overall stores suspense during 1960-61 primarily due to continuance of the special drive launched by the Railway Board in 1959-60 and may be attributed to the following measures:

(*a*) keeping a vigilant watch on the stocking limits of various items of stores,

(*b*) systematic working off of the surplus and overstocks of stores, and

(*c*) maintaining a close watch on the purchases and issues of stores.

STORES SUSPENSE*—GOVERNMENT RAILWAYS

(In thousands of rupees)

Railways	Opening balance at the beginning of the year (1-4-1960)			Receipts during the year	Issues during the year	Closing balance at the end of the year (31-3-1961)		
	Balances without adjustment	** Adjustments	Total (as per appropriation accounts)			Balances without adjustment	** Adjustments	Total (as per appropriation accounts)
1	2	3	4	5	6	7	8	9
Central	16,61,97	39,48	17,01,45	21,75,21	24,58,87	13,78,31	39,02	14,17,33
Eastern	12,34,49*	79,09	13,13,58	19,68,87	21,13,84	10,89,52	98,47	11,87,99
Northern	12,32,94	1,18,12	13,51,06	11,04,95	13,31,57	10,06,32	62,73	10,69,05
North Eastern	8,11,82*	95,10	9,06,92	8,16,80	8,72,61	7,56,01	86,01	8,42,02
Northeast Frontier	3,66,94	69,43	4,36,37	4,61,18	5,05,18	3,22,94	32,37	3,55,31
Southern	10,64,27*	61,67	11,25,94	12,73,76	14,14,29	9,23,74	45,38	9,69,12
South Eastern	11,64,55	46,20	12,10,75	14,95,24	16,38,37	10,21,42	67,91	10,89,33
Western	9,28,72*	87,42	10,16,14	21,23,65	22,77,63	7,74,74	67,12	8,41,86
Chittaranjan Locomotive Works	5,22,59	—11,00	5,11,59	8,38,18	9,65,01	3,95,76	—7,99	3,87,77
Integral Coach Factory	2,54,04*	34	2,54,38	3,11,67	3,52,33	2,13,38	—49	2,12,89
TOTAL	92,42,33	5,85,85	98,28,18	1,25,69,51	1,39,29,70	78,82,14	4,90,53	83,72,67
Other Railway Projects (Railway Electrification, Diesel Locomotive Works, Dandakaranya Balangir Kiriburu Projects, Ganga Bridge Project and Brahamputra Bridge Project)	82,38	111	83,49	2,25,05	2,16,25	91,18	4,37	95,55
GRAND TOTAL (Cap. 9,500)	93,24,71*	5,86,96	99,11,67	1,27,94,56	1,41,45,95	79,73,32	4,94,90	84,68,22
(Cap. 9,100 to 9,400)	5,28,48	—	5,28,48	—	—	5,73,73	—	5,73,73
Total stores suspense (Cap.9,100 to 9,500)	98,53,19	5,86,96	1,04,40,15	1,27,94,56	1,41,45,95	85,47,05	4,94,90	90,41,95

* Provisional figures.

** Adjustment *i.e.*, store in transit stock adjustment Account difference between figures of General books price ledgers, etc., including another adjustments affecting cap. 9,500.

131. Revision of stocking limits—review of overstocks and surplus stores.—As a part of the drive instituted for effecting reduction in the stores balances, the railways were asked to revise stocking limits of the items of stores so as to bring them in line with the current market conditions eliminating, wherever possible, unnecessary safety margins. Based on these stocking limits, railways declared their overstocks.

Disposal of overstocks.—The value of overstocks as on 1 April, 1959 was Rs. 7.91 crores which included Rs. 3.28 crores under the element of steel. The corresponding figures on 1 April, 1960 were Rs. 8.11 crores and Rs. 2.52 crores respectively. By continuing the drive it was possible to bring these figures down to Rs. 5.41 crores and Rs. 1.14 crores on 31 March, 1961.

The value of surplus stores (obsolete and obsolescent) on hand on 31 March, 1961 was Rs. 3.19 crores as against Rs. 3.73 crores on 31 March, 1960 and Rs. 4.04 crores on 1 April, 1959. More than 50 per cent of the surplus stores was held under locomotive, carriage and wagon spares. The railway-wise details may be seen in the table on the next page.

132. Utilisation and disposal of ferrous scrap.—The present policy of maximum utilisation of ferrous scrap for railway purposes was vigorously pursued. Melting scrap arising were fully utilised by supply to foundaries and furnaces manufacturing railway stores and also to ordnance factories.

STATEMENT OF SURPLUS STORES (EXCLUDING SCRAP) ON GOVERNMENT RAILWAYS AS ON 31 MARCH 1961

(Figures in Lakhs)

Class	Description	Central	Eastern	Northern	North-Eastern	North-east Frontier	Southern	South Eastern	Western	Chittaranjan Locomotive Works	Integral Coach Factory	Total as on 31 March 1961	Total as on 1 April 1960
A.	Bridgework and its parts	0·37	..	0·67	1·35	0.02	0·20	..	-	..	..	2·61	2·53
B.	Engineering Plant	0·90	0·67	0·90	0·03	0·63	0·24	0·07	0·07	0·13	..	3·64	3·87
C.	Workshop machinery	1·45	0·34	0·74	0·36	0·09	0·31	0·70	0·44	0·12	1·35	5·90	9·25
D.	Permanent way material and track tools	0·39	1·01	10·60	..	..	4·74	11·52	0·02	0·21	..	28·49	25·75
EA 1.	Steam locomotives and their parts	31·99	25·52	38·81	5·66	1·87	14·76	1·12	19·73	2·30	..	141·76	157·59
EB 1.	Railway carriage and wagon underframes and components.	3·80	4·29	8·13	..	3·02	1·37	1·04	1·50	..	..	23·15	26·13
EB 2.	Railway carriage and wagon body components	3·23	2·22	1·96	0·10	0·28	0·96	0.60	0·84	..	..	10·19	13·27
EVB.	Automatic vacuum brake equipment	0·35	0·63	0·19	..	0·29	0·07	0·01	0·28	..	..	1·82	2·58
EB 6.	Trimmings etc., for furnishing railway carriage interiors.	0·11	0·05	0·01	..	..	0·04	..	0·06	..	..	0·27	0·21
F1.	Building materials, etc.	0·77	0·59	0·48	0.01	0·21	0·17	0·02	0·03	0·87	0·07	3·22	3·80
F 2.	Signal and interlocking materials	0·43	0·26	0·08	0·57	0·05	0·23	1·91	..	..	..	3·53	3·17
GB 1.	Hardware, copper, tin, etc.	1·89	0·88	1·15	0·63	0·45	0·48	0·01	0·48	3·50	0·02	9·49	10·38
GB 3.	Leather canvas and Indian rubber	0·15	0·09	0·12	0·01	0·02	0·12	..	0·06	..	0·04	0·61	0·98
GB 4.	Metals	6·49	2·99	2·40	5·48	1·78	1·60	3·32	1·18	3·09	0·07	28·40	33·76
GB 5.	Painters stores	0·19	0·05	0·04	..	0·03	0·12	..	..	0·02	..	0·45	0·48
GB 6.	Timber	0·73	0·31	0·03	..	..	0·02	..	0·43	..	..	1·52	0·96
GB 7.	Fuel and fuel oil	..	..	..	..	..	..	..	..	..	..	..	..
Ha (a to f)	Electrical and train and locomotive lighting plants and materials, etc., and telegraph and telephone equipment and electric traction equipment.	3·92	8·57	2·44	1·09	0·95	1·98	0·07	1·64	0·33	0·03	21·02	29·61
	All other stores not detailed	3·25	3·38	7·56	2·12	0·75	2·29	0·09	2·45	10·68	0·35	33·02	43·40
	Total	60·41	51·85	76·31	17·41	10·44	29·80	20·48	29·21	21·25	1·93	319·09	372·72

The utilisation of scrap wheel-sets was intensified by the issue of detailed instructions to the railway administrations.

The supply of steel scrap to steel plants was made to the extent of 49,800 tonnes.

On the whole, roughly 1.9 lakh tonnes of ferrous scrap were utilised during the year 1960-61, which was about 8,000 tonnes more than the previous year.

The details of the disposal of condemned rolling stock during 1960-61 were given in statement A.

STATEMENT A

DISPOSAL OF CONDEMNED ROLLING STOCK SUCH AS LOCOMOTIVES, COACHING STOCK, WAGONS AND OTHER MISCELLANEOUS ITEMS DURING THE YEAR 1960-61

Type of Stock	Balance as on 1 April 1960		Receipts during the year		Disposal during the year		Balance as on 31 March 1961	
	Quantity (Nos.)	Value (Rs. in thousands)	Quantity (Nos.)	Value (Rs. in thousands)	Quantity (Nos.)	Value (Rs. in thousands)	Quantity (Nos.)	Value (Rs. in thousands)
Locomotives	491*	73,18·10	45	4,55·05	158	20,05·75	378	57,67·40
Coaches and coaching stock	328	4,27·55	285	5,71·00	364	3,95·10	249	6,03·45
Wagons	7,057	1,18,32·80	2,340	35,94·00	7,467@	1,34,45·10	1,930	19,81·70
Underframes	690	17,82·24	467	6,12·00	763	5,88·02	394	18,06·22
Boilers	363*	10,40·30	49	3,09·20	128	3,89·80	284	9,59·70
Tenders	57	7·00	8	0·96	11	1·32	54	6·64
Cranes and Boilers	25	66·20	11	20·56	6	17·00	30	69·76
Other miscellaneous items	103*	92·00	82	30·00	42	72·00	143	50·00
TOTAL	9,114*	2,25,66·19	3,287	55,92·77	8,939	1,69,14·09	3,462	1,12,44·87

NOTE.—Where Railways have not given value, approximate assessed value has been given.

* Revised figures.

@ Includes 119 condemned wagons recommissioned by the Central Railway and 719 wagons recommissioned by the Northern Railway under extensive utilisation scheme of 1960-61.

Non-ferrous and miscellaneous scrap.—The balance of non-ferrous and miscellaneous scrap on 1 April, 1960 was valued at Rs. 1,54.97 lakhs and Rs. 32.54 lakhs respectively. Non-ferrous scrap valued at Rs. 2,15.40 lakhs was utilised by the Railways for their own use and a quantity worth Rs. 58.84 lakhs was disposed of to others. The value of miscellaneous scrap disposed of during 1960-61 was Rs. 61.78 lakhs. The balance of non-ferrous and miscellaneous scrap on 31 March, 1961 was valued at Rs. 1,89.92 lakhs and Rs. 29.47 lakhs respectively. The particulars of accumulation and disposal of ferrous, non-ferrous and miscellaneous scrap during 1960-61 are given in Statement B at page 99.

C. SUPPLY POSITION OF VITAL ITEMS

133. Steel—(*a*) *Identifiable Steel.*—The indigenous availability of rails continued to be extremely poor during the year 1960-61. Against the railways' requirements of 4.46 lakh tonnes of rails which also included the back-log from the previous year, the Iron and Steel Controller could plan only about 1.35 lakh tonnes on indigenous sources. However, the actual supply from indigenous sources was only to the extent of 0.83 lakh tonnes. To meet the shortfall a quantity of 3.07 lakh tonnes was covered by orders for import. Against the arrangements made for import, about 2.08 lakh tonnes have been received during 1960-61. The balance quantity is expected to be received in India in two to three months' time.

The Technical Co-operation Mission aid was also utilised to procure the following items for Dandakaranya Balangir Kiriburu Projects, and the full supplies have been received during 1960-61 :

(i) Rails	26,290 tonnes
(ii) Fish plates	1,003 ,,
(iii) Steel sheet piling	1,03 ,,

(*b*) *Non-identifiable steel.*—Against the outstanding quantity of approximately 0.72 lakh tonnes of steel arranged against United States Development Fund loan of $ 30 million from import, a quantity of 0.51 lakh tonnes only has been received during 1960-61.

STATEMENT B

PARTICULARS OF ACCUMULATIONS AND DISPOSAL OF SCRAP DURING THE YEAR 1960-61

Railways	Ferrous Scrap								Non-ferrous								Miscellaneous		
	Balance as on 1 April 1960		Scrap utilised during the year 1960-61				Balance as on 31 March 1961		Balance as on 1 April 1960		Scrap disposed of during 1960-61				Balance as on 31 March 1961		Balance as on 1 April 1961	Scrap disposed of during 1960-61	Balance as on 31 March 1961
			For railway's own use		Issued to furnaces and foundries, steel plants, ordnance factories and otherwise disposed of						For railway's own use		To others						
	Qty. (tonnes)	Value (lakhs of Rs.)	Qty. (tonnes)	Value (lakhs of Rs.)	Qty. (tonnes)	Value (lakhs of Rs.)	Qty. (tonnes)	Value (lakhs of Rs.)	Qty. (tonnes)	Value (lakhs of Rs.)	Qty. (tonnes)	Value (lakhs of Rs.)	Qty. (tonnes)	Value (lakhs of Rs.)	Qty. (tonnes)	Value (lakhs of Rs.)	Value (lakhs of Rs.)	Value (lakhs of Rs.)	Value (lakhs of Rs.)
Central	70 250	62·81	20,192	16·39	21,966	33·78	63,122	52·89	2,950	13·28	2,733	17·81	353	10·53	3,264	15·62	1·55	2·59	1·40
Eastern	19,834 11,505*	73·00	20,829	35·00	14,833	27·00	21,062 11,505	73·00	2,159	20·99	1,651	24·22	522	10·26	2,238	24·95	4·90	24·81	4·77
Northern	48,193 2,301*	78·91	16,858	26·65	12,588	16·28	56,365	88·56	1,775	36·57	2,143	50·24	118	0·89	1,984	43·77	2·14	6·73	2·65
North Eastern	5,617	12·16	2,785	4·03	1,331	1·77	8,356	17·79	548	9·71	748	16·64	10	0·17	1,062	11·19	1·92	3·96	0·91
Northeast Frontier	3,294	6·34	1,488	0·22	602	0 67	4,831	8·64	126	2·35	260	5·67	6	0·10	200	3·40	0·31	1·42	0·54
Southern	25,792	45·68	16,955	23·06	18,703	19·07	26,727	52·48	1,610	21·50	2,266	45 27	649	17·60	1,640	30·56	1·89	3·10	2·00
South Eastern	18,410	22·11	5,032	8·27	7,821	8·72	31,430	46·53	974	17·87	513	15·75	197	6·53	988	22·46	11·34	6·24	9·13
Western	24,370	42·09	11,359	23·70	7,201	8·62	22,817	40·43	1,384	27·84	3,030	36·43	1,107	9·31	1.357	32·64	7·14	10·74	6·2 0
Chittaranjan Locomotive Works	9,448	15·02	4,210	4·65	5,397	3·16	10,955	23·17	284	2·93	293	2·24	88	2·51	421	4·00	1·23	1·87	1·39
Integral Coach Factory	642	1·20	449	0·77	1,694	1·21	972	2·01	70	1·93	39	1·13	37	0·94	45	1·33	0·12	0·32	0·48
TOTAL	239,656	359·32	100 157	142 74	92 636	120·28	253 112	405·50	11,880	1.54·97	13,676	2,15·40	3,087	58·34	13,249	1,89,92	32·54	61·78	29·47

*P.W. Scrap

SUMMARY OF OPENING AND CLOSING BALANCES

Classification of Scrap	Opening balance on 1 April 1960		Closing balance on 31 March 1961	
	Quantity (thousands tonnes)	Value (lakhs of Rs.)	Quantity (thousands tonnes)	Value (lakhs of Rs.)
Ferrous Scrap	239·656	359 32	258·112	405·50

(c) SUPPLY OF STEEL FROM INDIGENOUS SOURCES AND IMPORTED

(Figures in lakhs of tonnes)

Description	Backlog as on 1-4-1960	Quantity indented/ requirement during the year	Quantity supplied up to 31-3-1961		
			Indigenous	Imported	Total
(a) Non-identifiable	1·87	2·08	0·36	1·14	1·50
(b) Identifiable	0·97	3·78	0·84	2·36	3·20
(c) Pig Iron	1·10	2·14	2·26	—	2·26
TOTAL	3·94	8·00	3·46	3·50	6·96

134. Timber—Other than wooden sleepers.—The main source of supply of timber during the year was the State Forest Departments. As, however, there was paucity of good quality of teak in the country, about 18,124 tonnes of teak were imported from Burma. In order to utilise the maximum quantity of indigenous teak and hard wood logs, it was proposed to relax certain specification.

The table below shows the quantity indented on the Director General of Supply and Disposal and the quantity inspected/received by the railways after inspection during the year 1960-61.

Period	Quantity indented (In tonnes)	Quantity inspected/received (In tonnes)
2nd Qr/60	18,913	6,452
3rd Qr/60	3,031	8,296
4th Qr/60	5,412	9,916
1st Qr/61	8,691	10,341
TOTAL	36,047	35,005

135. Timber—wooden sleepers purchase organisation.—The General Managers of Indian Railways were as hitherto authorised to act on behalf of the Railway Board in planning the maximum procurement of wooden sleepers from their respective zones and negotiation with the State Governments as shown below :

Railways	States
Northern	Himachal Pradesh, Jammu and Kashmir, Punjab and Rajasthan
North Eastern	Uttar Pradesh and Nepal
Northeast Frontier	Assam, Bhutan, Manipur, Northeast Frontier Agency and Tripura
Southern	Andaman and Nicobar islands, Andhra Pradesh, Kerala, Madras and Mysore
South Eastern	Bihar, Madhya Pradesh, Orissa and West Bengal
Western	Maharashtra and Gujarat

136. Wooden, cast iron, steel and concrete sleepers.—The number of wooden sleepers procured by the six railways concerned and the number of cast iron, steel and concrete sleepers received by the various railways during the year ending 31 March 1961 are indicated below:

(A) WOODEN SLEEPERS

Railways	Broad (Nos.)	Metre (Nos.)	Narrow (Nos.)	Specials (c/meters)
Northern	1,060,655	233,889	—	—
North Eastern	234,752	182,039	29,353	6,372
Northeast Frontier	233,857	456,081	43,031	3,232
Southern	399,191	644,590	76,015	6,288
South Eastern	44,709	66,867	28,085	11,830
Western	—	101,601	36,589	—
TOTAL (Indigenous)	1,973,164	1,685,067	213,073	27,722
TOTAL (Imported)*	329,830	—	—	—
GRAND TOTAL	2,302,994	1,685,067	213,073	27,722

* Received as aid from Canada under the Colombo Plan.

(B) CAST IRON SLEEPERS

Railways	Broad (Nos.)	Metre (Nos.)
Central	433,589	87,124
Eastern	936,042	—
Northern	190,726	149,530
North Eastern	—	441,537
Northeast Frontier	—	78,642
Southern	113,305	55,714
South Eastern	985,638	—
Western	433,331	111,745
TOTAL	3,092,631	924,292

(C) STEEL SLEEPERS

Railways	Broad (Nos.)	Metre (Nos.)	Specials (sets)
Central—			
(Indigenous)	—	—	170
Eastern—			
(Indigenous)	39,300	—	589
Northern—			
(Indigenous)	—	—	353
North Eastern—			
(Indigenous)	—	44,681	7
(Imported)	1,236	—	—
Northeast Frontier—			
(Indigenous)	—	—	—
Southern—			
(Indigenous)	—	—	—
South Eastern—			
(Indigenous)	—	—	288
(Imported)	—	—	407
Western—			
(Indigenous)	—	37,420	848
TOTAL—			
(Indigenous)	39,300	82,101	2,255
(Imported)	1,236	—	407
GRAND TOTAL	40,536	82,101	2,662

(D) CONCRETE SLEEPERS

Railways	Broad		Metre	
	Through sleeper (Nos.)	Block sleeper (No. of pairs)	Through sleepers (Nos.)	Block sleepers (No. of pairs)
Eastern	8,000	—	—	—
Northern	5,160	6,370	—	—
Western	200	800	400	600

The average price of first class wooden sleepers on various railways purchased from State forest departments and private contractors was as under:

Railways	Broad F.O.R. per sleeper	Metre F.O.R. per sleeper	Narrow F.O.R. per sleeper
	Rs.	Rs.	Rs.
Northern—			
(Deodar)	31·80	15·90	—
(Chir)	16·16	8·08	—
(Fir)	17·59	8·63	—
(Kail)	19·95	9·97	—

Railways	Broad F. O. R. per sleeper	Metre F. O. R. per sleeper	Narrow F. O. R. per sleeper
	Rs.	Rs.	Rs.
North Eastern—			
(a) State forests—			
(Sal)	20·00	8·87	5·33
(Coniferous)	15·37	6·87	—
(Misc. Hardwood)	13·00	6·50	—
(b) Trade—			
(Sal)	—	11·00	6·65
(Misc. Hardwood)	15·00	8·50	—
Northeast Frontier—			
(a) State Forests—			
(Sal)	23·69	11·33	7·52
(Evergreen)	18·54	8·86	5·92
(b) Trade—			
(Sal)	22·54	10·78	7·15
(Evergreen)	17·64	8·43	5·62

Southern—	Broad high grade	Broad low grade	Metre high grade	Metre low grade	Narrow high grade	Narrow low grade
(a) State Forests—						
Andhra	20·00	—	9·50	—	6·30	—
Kerala	20·00	17·30	10·30	8·65	6·85	5·75
Madras	20·60	16·48	9·79	7·98	6·49	5·25
Mysore (Belgaum)	20·00	17·00	9·50	8·00	6·30	5·30
(Coorg and Shimoga)	20·60	17·30	10·30	8·65	6·85	5·75
(b) Trade	20·40	—	9·70	—	6·30	—
South Eastern—						
State (forest sal)	21·11	—	9·30	—	5·67	—
Trade (sal)	20·66	—	9·37	—	6·25	—

Western—	Broad	Metre Rs.	Narrow Rs.
Trade (sal)	—	11·50	7·00
(Jamba)	—	9·50	7·00

137. Working of sleeper treatment plants.—At Dhilwan creosoting plant on the Northern Railway, 412,103 broad gauge and 127,204 metre gauge sleepers of coniferous species were treated during the year with a 40 per cent creosote oil and 60 per cent fuel oil mixture. Chir sleepers were treated by the rueping process and deodar, Kail and fir by the full-cell process. In addition, 4,612 of chir poles were treated during the year with a mixture of 50 per cent creosote and 50 per cent liquid fuel oil for the Electricity Department, Punjab Government and 113,651 (756 cubic metres), wooden bricks of 25.40 C.M. × 20.32 C.M. × 12.70 C.M. size for the Railway for purposes of flooring.

The details are given in the statement below:

STATEMENT SHOWING SLEEPERS TREATED IN CREOSOTING PLANT AT DHILWAN DURING 1960-61

	Chir		Deodar		Kail		Fir	
	Broad	Metre	Broad	Metre	Broad	Metre	Broad	Metre
No. of sleepers treated	65,770	21,086	226,830	64,170	36,479	12,450	83,024	29,498
Cost of treatment per sleeper	3·52	1.79	2·88	1·48	3·32	1·90	3·51	1·83
Average absorption of mixture per cubic meter in K. grams	6·09	7.12	4·20	4·45	6·31	6·70	6·40	6·59

At Clutterbuckganj plant on the North Eastern Railway, 538,877 broad gauge 118,058 metre gauge 619 narrow gauge sleepers and 5,664 off cuts of chir, fir, kail and miscellaneous hard wood species were treated during the year with a 40 per cent creosote oil and 60 per cent fuel oil mixture. Chir sleepers were treated by rueping process, fir by full-cell process and the miscellaneous hard wood by lowry process. The average absorption was 6.36 kilograms per cubic metre for chir, 5.72 kilograms per cubic metre for fir and 6.31 kilograms per cubic metre for miscellaneous hardwood sleepers. The cost of treatment per sleeper was Rs. 3.75 for broad gauge, Rs. 1.80 for metre gauge and Rs. 1.31 for narrow gauge.

At the Naharkatiya plant on the Northeast Frontier Railway, 126,192 broad gauge, 168,924 metre gauge and 13,665 narrow gauge sleepers of 21 species were treated during the year with a 40 per cent creosote oil and 60 per cent fuel oil mixture. The average absorption was 7.0 kilograms per cubic metre and the cost of treatement per sleeper was Rs. 5.84 for broad gauge, Rs. 2.77 for metre gauge and Rs. 1.99 for narrow gauge.

At the Olavakkot plant on the Southern Railway, 181,310 broad gauge, 173,888 metre gauge, 24,912 narrow gauge and 297 special sleepers of 28 species were treated by full-cell process during the year with a 40 per cent creosote oil and 60 per cent fuel oil mixture. The average absorption was from 6.3 to 9.54 kilograms per cubic metre and the cost of treatment per sleeper was Rs. 4.06 for broad gauge, Rs. 1.95 for metre gauge and Rs. 1.43 for narrow gauge.

138. Use of various kinds of sleepers on Indian Railways.—The relative position of the various kinds of sleepers may be seen from the following percentages based on the total number of sleepers in track (excluding sidings) on the Indian Railways.

RELATIVE POSITION OF VARIOUS KINDS OF SLEEPERS ON 31 MARCH 1961

	Wooden per cent	Cast Iron per cent	Steel per cent	Concrete per cent
Broad gauge	15·43	58·16	26·40	0·01
Metre gauge	58·60	9·29	32·11	—
Narrow gauge	76·78	1·37	21·85	—

139. Cement.—During the year under review, the allotment made to the Railways by the Ministry of Commerce and Industry was 615,118 tonnes against demands totalling 694,288 tonnes. Compared to the previous year, the total allotment was 151,160 tonnes higher, but the actual supplies amounted to 486,179 tonnes only.

140. Other Vital Stores.—

Points and crossings.—There is now sufficient indigenous capacity and the full requirements for the year 1960-61 together with the entire backlog have been fabricated and supplied to the Railways.

Fishbolts and nuts, tie bars, keys, cotters, loose jaws, bearing plates, dog and round spikes and junction fishplates.—There is enough capacity in the country and long term contacts were placed by the Director General of Supply and Disposal. The supply position of fishbolts and nuts, tie bars, round spikes, and dog spikes and junction fishplates was fairly satisfactory. The fabrication of cotters and mild steel keys was hampered due to late receipt/coverage of indents. The supply of bearing plates also fell short on account of receipt of defective bars from the fabricators.

Wheels, tyres and axles.—Due to limited indigenous capacity and increase in requirements, the shortfall was being met by imports.

Fire bricks.—The supply position has been fairly satisfactory.

Creosote oil.—In the early part of 1960-61, shortage of creosote oil was experienced for want of adequate production by Coal Tar Distillers' Association on account of shortage of crude coal tar. Consequently on the commissioning of bye-product plants at Rourkela, Durgapur and Bhilai of

Messrs Hindustan Steel Company Ltd., adequate flow of creosote oil was maintained.

Vacuum and steam pressure gauges.—There had been a heavy backlog due to limited capacity. Adequate indigenous capacity has been developed and no difficulty is likely to be experienced.

Springs India Rubber.—Although there is ample indigenous capacity for the fabrication of these springs, the manufacturers had been experiencing difficulty to maintain regular and adequate supplies for want of steel plates. The supply of steel plates has been chased and now there is no complaint of short supply.

Paper and blank card tickets.—Indigenous supply of paper is very limited and railways requirements are not met in full.

The supply of blank card tickets has also been inadequate for want of necessary and suitable quality of ticket boards.

C. I. Pipes.—There had been a dearth in supply as the main producers were fully booked for some years. Efforts were made to ensure supplies to the railways to the extent of 15 per cent of their quota, committed for supply against the contract concluded by the Directorate General of Supplies and Disposals.

141. Development of indigenous manufacture of railway stores.—The Indian Railway equipment Advisory Committee at the centre and the Regional Committees at Delhi, Calcutta, Bombay and Madras continued to function during the year. Sub-Committees of Regional Committees visited industrial centres within their areas to locate idle capacity.

Showrooms depicting imported and short supply items which were opened in almost all the States under the auspices of the Director of Industries of State Governments continued to function. A three coach broad gauge mobile showroom was built during the year and was taken round to industrial centres away from the capitals of States to display items which were imported and in short supply so far as railways are concerned. This showroom completed its tour of the western region and commenced its tour of the south. Samples, booklets and drawings were displayed in this showroom to apprise entrepreneurs of railways' requirements.

Wagon manufacture.—During the period under review three firms, *viz.*, Messrs Southern Structurals Limited, Madras, Messrs Britannia Engineering Company, Mokameh and Raymon Engineering Works, Santragachi, having either completed the educational order or developed regular production, were declared as established wagon builders bringing the total of such firms to 13. Another firm, Messrs Hindustan General Industries put up their prototype wagon, which has since been passed and the firm was commencing series production.

Due to poor progress made towards the establishment of their wagon factory, the licence of another new entrepreneur, Messrs National Engineering Industries of Sawai Madhopur was rescinded by the Ministry of Commerce and Industry and consequently, the Railway Board withdrew the educational order placed on them.

The rest of the firms were in various stages of development.

Coach construction.—The Integral Coach Factory achieved production of 54 coaches per month in March 1961 which is equal to 648 coaches per year which is very near the target of 750 coaches per year. The furnishing annexe, however, is still working to 35 per cent of the shell output and progress towards establishing a balanced output from the furnishing side continues.

The Hindustan Aircraft Limited established production of integral type coaches, having completed all outstanding orders for conventional coaches. During the year they achieved their target of 25 coaches per month.

Electric multiple unit coach construction.—It was decided that the Integral Coach Factory should be entrusted to develop manufacture of A. C. electric multiple unit coaches required for the Calcutta area. Accordingly, the Integral Coach Factory was instructed to draw up a phased manufacturing programme for building 623 broad gauge A. C. electric multiple unit coaches during the third plan. An initial order for 64 four-car A. C. electric multiple unit sets was placed on the Integral Coach Factory.

Further progress was made by Messrs Jessop and Company towards the completion of the initial order of 104 D.C. electric multiple unit coaches for the Bombay area. Accordingly, a further order was placed during the year for 100 D.C. electric multiple unit stocks consisting of 21 three-car sets, 35 trailers and two motor coaches.

Rail cars.—It was decided that the requirements of broad, metre and narrow gauge rail cars should be undertaken by the Integral Coach Factory. Accordingly, an order for 31 two-car sets of broad gauge and 33 two-car sets of metre gauge integral type railcars fully furnished with engine, transmission and drive has been placed on the Integral Coach Factory.

Electric locomotives.—Substantial progress having been made by the Chittaranjan Locomotive Works towards the manufacture of the mechanical portion of 10 D.C. electric locomotives, to be equipped with imported electrical equipment, further orders have been placed for the manufacture of the mechanical portion of electrical locomotives as follows:

(*a*) 11 broad gauge D.C. locomotives for the Bombay area.

(*b*) 16 metre gauge A.C. locomotives for the Madras area.

(*c*) 25 broad gauge freight type A.C. locomotives for the Calcutta area.

Necessary action is being initiated by the Chittaranjan Locomotive Works in calling for tenders for the electrical equipment and progressive manufacture of the mechanical portion at the Chittaranjan Locomotive Works.

Diesel locomotives.—During the year, the Government decided that the diesel locomotives factory should be set up in the public sector. Accordingly, an *ad hoc* committee was appointed for the submission of a project report in broad details. The report was furnished in February 1961, envisaging an investment of Rs. 12.7 crores. The Railway Board and the Planning Commission have approved the project. The question of selection of site and the setting up of the project administration was under examination.

During the year under review, the Tata Locomotive and Engineering Company came up for approval for setting up capacity for the manufacture of diesel shunters. This was permitted.

Centre buffer couplers.—The manufacture of knuckle type centre buffer coupler suitable for fitment to broad gauge traffic wagons was set up during the year to the extent of 400 wagon sets per month by two indigenous manufacturers. A third manufacturer was still developing capacity to meet the entire requirements of the railways.

Brake regulators.—A phased development of manufacturing capacity for brake regulators of the SAB type was approved by the Government. Messrs J. Stone and Company who had been granted a licence, established a production of 350 regulators per month. By the end of next year, their capacity is expected to rise to 500 per month.

Shock absorbers.—All necessary clearances were given to Messrs Escorts Ltd., who had been granted a licence to manufacture shock absorbers suitable for railway coaches, for the importation of capital equipment. They are due to go into production towards the end of 1961-62.

Wheels and axles.—The production of wheelsets in the only wheel, axle and tyre plant at the Tatas suffered a severe setback during the year

due to non-availability of the right type of steel. Production towards the end of the year was at the rate of 180 sets per month. The wheel plant representatives envisaged an increase during 1961-62 to 450 sets per month. In regard to narrow gauge wheelsets, the question of standardising either chilled cast iron or chilled cast steel wheel was still under examination by Research, Designs and Standards Organisation.

Motor trolleys.—During the year, production was set up for broad and metre gauge motor trolleys in Alambagh workshops of the Northern Railway under the supervision of the Railway Testing and Research Centre, Lucknow. Later, during the year, it was decided that permanent capacity should be set up by the Central Railway in Parel workshops to meet the requirements of railways. Action was initiated on these lines.

Electrical signalling equipment.—Encouraging response was received from the indigenous manufacturers in collaboration with foreign firms against a development tender issued by the Railway Board for 173 items of electrical signalling equipment. Accordingly, substantial orders were placed on six selected indigenous firms for supply of this equipment, partly indigenous and partly imported. Each of the firms envisage a phased manufacturing programme progressively increasing the indigenous content.

Miscellaneous items.—Efforts continued for the development of capacity in the railway workshops and in the private sector for a number of items for which there was either no capacity in the country, or if it existed, was not adequate to meet the railways requirements. Among the items may be mentioned steam cranes, mechanical stokers, speedometers for locomotives, diesel locomotive spare parts, water gauge glasses, insulating material, pantographs for electric locomotives, silent blocks for coaches, turbo generators for steam locomotives, etc.

CHAPTER IX

STAFF

142. General.—The ban imposed particularly in connection with the creation of ministerial and class IV posts in offices and recruitment of such staff for a period of one year from 6 February 1960, was extended for another year. However, in cases where the railway administrations felt difficulty in carrying on the day-to-day work due to increased volume of work relaxations were sanctioned. The orders themselves provided for exceptions in regard to operational staff required for handling the increase of traffic, staff for developmental works, etc.

The principles and procedure for retaining employees in service beyond the age of superannuation were codified. According to these orders, staff in technical categories could generally be given extension of service upto the age of 57, instead of re-employment as hitherto.

Most of the recommendations of the Second Pay Commission on scales of pay and general service conditions, which had been accepted by the Government of India, were implemented by the Railways. Upto the end of the year under review, 1,099,785 employees had opted for the authorised scales of pay.

Rules governing the pension scheme introduced on the Railways in the year 1957 were liberalised in certain respects. The railway employees in consequence were given a fresh opportunity to opt for one or other form of retirement benefits. The last date for option has been extended upto 31 December 1961. Up to the end of the year 1960-61, 18,510 employees (both Gazetted and non-Gazetted) had opted for pension.

In the field of sports, the Railways won the national weight lifting championship for the fifth year in succession. They also annexed the national titles in hockey, volleyball and table tennis (women's section).

143. Number of staff.—The total number of employees, permanent and temporary, taking all the railways (including non-government railways), the office of the Railway Board, and other offices subordinate thereto together and, including staff employed on construction works, was 1,166,482* at the end of 1960-61 as compared with 1,160,021* at the end of 1959-60. Of this number the non-government railways accounted for 5,768 employees at the end of 1960-61 as against 5,561 at the end of previous year.

As compared with the previous year, there was a small increase in the total number of staff employed on the Indian Government Railways—5,511 on the open line and 743 on construction. This increase works out to 0.54 per cent against 1.92 per cent increase under train kilometres, 5.72 per cent increase under passengers originating 5.39 per cent increase under passenger kilometres, 6.42 per cent increase under tonnes originating and 7.01 per cent increase under tonne kilometres. The aforesaid co-relation indicates how increase in staff and in staff expenditure was kept down to what was absolutely essential for the increased quantum of work handled by the Railways.

144. Cost of Staff.—The statement on the next page shows the number and cost of all staff, classes I, II, III and IV, permanent and temporary, open line and construction, employed on Government Railways during 1959-60 and 1960-61. The labour employed by contractors is not included.

The total cost of staff, including those on loan from the Indian Audit and Accounts Service, increased by Rs. 15.62 crores during the year over that in the previous year. The increase in cost is chiefly due to the implementation of the decisions of the Government of India on the various recommendations made by the Second Pay Commission.

* These figures exclude all casual labour.

NUMBER AND COST OF STAFF ON GOVERNMENT RAILWAYS DURING 1959-60 AND 1960-61

Railway	Year	NUMBER OF STAFF ON 31 MARCH (*In units*)						Staff on loan from the Indian Audit and Accounts Service	†COST OF STAFF DURING THE YEAR ENDING 31 MARCH (*In thousands of Rupees*)			
		OPEN LINE			CONSTRUCTION							
		Classes I & II	Classes III & IV	Total	Classes I & II	Classes III & IV	Total		Classes I & II	Classes III & IV	Total	Total including staff on loan from the Indian Audit and Accounts Service
Central	**1961**	**498**	**194,158**	**194,656**	**41**	**1,331**	**1,372**	..	**71,41**	**33,02,53**	**33,73,94**	**33,73,94**
	1960	514	194,437	194,951	31	1,466	1,497	..	71,40	31,12,87	31,84,27	31,84,27
Eastern §	**1961**	**448**	**172,079**	**172,527**	**45**	**955**	**1,000**	..	**58,62**	**31,41,90**	**32,00,52**	**32,00,52**
	1960	466	171,556	172,022	39	747	786	..	60,56	28,93,92	29,54,48	29,54,48
Northern	**1961**	**569**	**176,359**	**176,928**	**25**	**498**	**523**	1	**64,80**	**29,51,87**	**30,16,67**	**30,16,78**
	1960	561	175,097	175,658	25	470	495	..	61,33	27,32,72	27,94,05	27,94,05
North Eastern	**1961**	**320**	**82,401**	**82,721**	**6**	**658**	**664**	1	**34,33**	**13,93,42**	**14,27,75**	**14,27,81**
	1960	317	82,989	83,306	9	328	337	..	32,92	12,81,93	13,14,85	13,14,85
Northeast Frontier	**1961**	**255**	**56,942**	**57,197**	**54**	**1,908**	**1,962**	..	**28,06**	**9,98,60**	**10,26,66**	**10,26,66**
	1960	219	54,827	55,046	36	1,769	1,805	..	24,76	8,81,67	9,06,43	9,06,43
Southern	**1961**	**475**	**159,732**	**160,207**	**49**	**1,583**	**1,632**	2	**57,72**	**28,93,70**	**29,51,42**	**29,51,76**
	1960	473	161,843	162,316	37	1,350	1,387	3	55,51	26,58,02	27,13,53	27,13,73
South Eastern	**1961**	**418**	**123,914**	**124,332**	**81**	**2,231**	**2,312**	..	**59,38**	**21,71,73**	**22,31,11**	**22,31,11**
	1960	464	122,207	122,671	166	2,862	3,028	1	61,18	20,16,92	20,78,10	20,78,21
Western	**1961**	**512**	**158,884**	**159,396**	**1**	**436**	**437**	..	**59,69**	**26,66,23**	**27,25,92**	**27,25,92**
	1960	501	156,850	157,351	1	374	375	..	57,46	24,60,91	25,18,37	25,18,37
Chittaranjan Loccmotive Works	**1061**	**67**	**8,483**	**8,550**	..	..	..	..	**7,58**	**1,67,55**	**1,75,13**	**1,75,13**
	1960	54	8,465	8,519	..	..	..	..	6,52	1,48,35	1,54,87	1,54,87
Diesel Locomtive Works	**1961**	**14**	**247**	**261**	..	..	..	..	1,45	5,78	**7,23**	**7,23**
	1960	..	..	..	..	..	..	..	..	..	..	..
Railway Electrification	**1961**	..	..	..	**89**	**1,255**	**1,344**	..	**10,66**	**26,72**	**37,38**	**37,38**
	1960	..	..	..	**99**	1,555	1,654	..	10,89	29,15	40,04	40,04
Integral Coach Factory	**1961**	**45**	**7.237**	**7,282**	**7**	**300**	**307**	..	**5,45**	**1,36,86**	**1,42,31**	**1,42,31**
	1960	38	6,786	6,824	**8**	307	315	..	5,33	1,16,03	1,21,36	1,21,36
Dandakaranya Balangir Kiriburu Railway Projects	**1961**	..	..	..	**67**	**802**	**869**	..	**3,63**	**9,00**	**12,63**	**12,63**
	1960	..	..	..	..	..	..	..	..	..	..	..
Railway Board and other Railway offices	**1961**	**365**	**3.865**	**4,230**	..	..	..	1	**54,59**	**97,92**	**1,52,51**	**1,53,16**
	1960	355	3,757	4,112	..	..	..	1	50,47	88,55	1,39,02	1,39,69
Total Government Railways	**1961**	**3,986**	**1.144.301**	**1,148,287**	**465**	**11,957**	**12,422**	**5**	**5,17,37**	**1,99,63,81**	**2,04,81,18**	**2,04,82,34**
	1960*	3,962	1,138,814	1,142,776	451	11,228	11,679	5	4,98,33	1,84,21,04	1,89,19,37	1,89,20,35

* Revised figures.

† The figures of cost of all Railways represent pay, allowances, passages, provident fund contributions, gratuities, pensionary benefits and the grain shop concessions.

§ Includes figures of the Ganga Bridge Project.

145. Direct recruitment to gazetted railway services.—One hundred appointments, permanent and temporary, as detailed below, were made in the gazetted railway services by direct recruitment during the year:

Department	Number of appointments		
	Permanent	Temporary	Total
Civil Engineering	14	19	33
Signal Engineering	4	—	4
Electrical Engineering	6	—	6
Transportation (Traffic) and Commercial	18	—	18
Mechanical Engineering and Transportation (Power)	10	—	10
Accounts	6	2	8
Stores	7	—	7
Medical	5	1	6
Personnel	—	—	—
Others	6	2	8
Total	76	24	100

146. Promotion to Class I Railway Srvices.—During the year, seventy-nine Class II officers were permanently promoted to Class I Services in the various Departments. This number includes the *ex*-State Railway officers promoted against the 16⅔ per cent special quota reserved for them.

(*b*) Absorption of Temporary Assistant Officers in Class I Railway Service.—During the year, thirty-one temporary assistant officers were permanently absorbed in class I Service in the various departments against vacancies specifically reserved for them.

147. Railway Staff College, Baroda.—During the year under review, twentytwo training courses were held for officers of various departments, in which a total of one hundred seventyeight probationers and twentynine temporary officers were trained. Besides these courses, two refresher courses, which were attended by altogehter twentysix senior officers of the Transportation (Traffic) and Commercial and Civil Engineering Departments respectively, were also conducted. Seventeen officials (11 gazetted and 6 non-gazetted), who were sent for training abroad, were also briefed at the College.

The training courses included case studies and group discussions on personnel management.

One hundred officers from the various railway departments were invited to give lectures on subjects of which they have made a special study. Lectures on general subjects such as general economics, five year plans, international organizations continued to be given by eminent educationists of the local university.

Eighteen instructional tours for the trainee officers were organized.

148. Railway Service Commissions.—The Railway Service Commissions with headquarters at Allahabad, Bombay, Calcutta and Madras continued to conduct recruitment of class III staff for the Indian Railways, except the Northeast Frontier Railway who did their recruitment themselves through specially constituted departmental committees. Some of the important statistics relating to the recruitment of staff during the year under review are given below :

	Technical	Non-technical
(a) Number of posts indented by the railways	2,152	3,538
(b) Number of applications received	38,820	1,49,576
(c) Number of candidates called for test/interview	21,105	56,533
(d) Number of candidates recommended	2,072	3,361

The commissions did not generally experience any dearth of qualified technical staff. However, difficulties were experienced in the recruitment of scheduled castes and scheduled tribes candidates. A rough assessment of

class III technical staff required by the Indian Railways, except the North-east Frontier Railway, during 1961-62 which will be available by direct recruitment, or training of apprentices, is as follows:

	Civil engineering	Mechanical engineering	Electrical engineering	Signal and telecommunication engineering
Degree holders	37	5	27	—
Diploma holders	141	51	157	65

The amount collected by sale of application forms and the expenditure incurred on the Railway Service Commissions during 1960-61 are given below :

(Figures in thousands)

	Amount from sale of application forms	Expenditure
	Rs.	Rs.
Railway Service Commission, Allahabad.	57	2,34
Railway Service Commission, Bombay.	24	3,36
Railway Service Commission, Calcutta.	70	3,05
Railway Service Commission, Madras.	26	2,43
Total	1,77	11,18

149. Recruitment of scheduled castes and scheduled tribes in non-gazetted railway services.—The number of candidates belonging to scheduled castes and scheduled tribes indented for by the railways for the class III category and the number recommended by the Railway Service Commissions during the year 1960-61 are shown below:

Railway Service Commission	Number indented		Number recommended	
	Scheduled Castes	Scheduled Tribes	Scheduled Castes	Scheduled Tribes
Allahabad	352	51	139	3
Bombay	420	272	191	42
Calcutta	530	331	558	151
Madras	136	24	138	11
Total	1,438	678	1,026	207

The selection of candidates of scheduled tribes has been on the low side while the position in regard to scheduled castes has been satisfactory except in the case of the service commissions at Allahabad and Bombay. The shortage of candidates from scheduled castes as well as scheduled tribes has been persisting in the case of technical categories.

In order to make up the deficiency of scheduled castes and scheduled tribes, the General Managers of Indian Railways continued to exercise the special powers vested in them, *i.e.*, the powers to select candidates from these communities with relaxed standards of suitability, without reference to the Railway Service Commissions. These selections supplemented those made by the Railway Service Commissions. In the case of the Railway Protection Force, standards of physical fitness have been relaxed for scheduled caste and scheduled tribe candidates. In the category of Rakshaks, there has been much improvement in the recruitment of scheduled castes and scheduled tribes as a result of of this relaxation.

The recruitment position of scheduled castes and scheduled tribes on the railways as a whole shows signs of marked improvement as will be borne out by the figures given below :

Category	Number of posts reserved		Number actually recruited	
	Scheduled Castes	Scheduled Tribes	Scheduled Castes	Scheduled Tribes
Class III	674	1,058	1,122	313
Class IV	2,271	1,930	3,790	1,205

Where vacancies are reserved for scheduled tribes but no candidates from these communities are forthcoming, the Railways are recruiting scheduled castes where available against the deficiency under scheduled tribes.

150. Technical training facilities for staff.—The Railway Technical Training Schools Committee appointed to survey the facilities provided in training schools on Railways and to recommend measures to be taken to standardise the curriculum and the syllabus of training and later also required to go into the Question of surveying such facilities and recommending measures for further improving the training of Gazetted Officers on the Indian Railways submitted their report on 8 March 1961. The recommendations made by the Committee are under examination. The 50 training schools for class III and class IV staff already in existence continued to function satisfactorily. The practical training facilities provided in workshops, sheds and the divisional training centres for class IV staff were also continued.

The Indian Railways School of Signal Engineering and Tele-communication, Secunderabad, which caters to the needs of officers and staff of all railway administrations, was brought under the direct control of the Railway Board.

A statement showing the number of apprentice mechanics, trade apprentices and apprentice train examiners recruited and trained during the year 1960-61 is given on the next page.

151. Relations with labour.—During the year, the relations between the railway administrations and organised labour generally remained cordial. In June, 1960, however, some sections of the central government employees including a section of railway employees gave notice of a general strike from the midnight of 11-12 July, 1960. Their demands related mainly to the recommendations made by the Jagannadha Das Pay Commission. An Ordinance known as the Essential Services Maintenance Ordinance, 1960 was promulgated on 8 July, 1960 which, *inter alia* classified railway service as an essential service and provided that if the Central Government was satisfied that in the public interest it was necessary or expedient to do so, it might by general order or special order prohibit strikes in any essential service specified in the order. The ordinance also provided that upon the issue of such an order by Government, no person employed in any essential service shall go or remain on strike and any strike declared or commenced whether before or after the issue of the order by persons employed in such service shall be illegal. On the same date, namely, 8 July, 1960, Government issued an order under the aforesaid ordinance prohibiting strikes in certain essential services, which *inter alia* included the railway service. In spite of this, some sections of railwaymen joined the strike. The unions affiliated to the All India Railwaymen's Federation were party to this strike while the unions affiliated to the National Federation of Indian Railwaymen opposed the strike and persuaded employees not to join the strike. The strike lasted for five days at the end of which it was withdrawn unconditionally. During this period, most of the railway services were maintained despite partial dislocation of work in certain areas and in certain workshops. Only about 8 per cent of the operational staff on the Railways on an average abstained from work. On the whole, the average abstention figure during the strike period was nearly 16 per cent.

Subsequent to the strike, the facilities granted to the All India Railwaymen's Federation, which had been a party to the strike, for negotiations and meeting with the Railway Board were withdrawn temporarily. The recognition of some railway unions affiliated to the All India Railwaymen's Federation was also withdrawn temporarily.

In connection with the implementation of the recommendations of the Jagannadha Das Pay Commission, organised labour were given an opportunity to express their view point. The National Federation of Indian Railwaymen availed of this opportunity and a number of meetings were held between them and the Railway Board. The points raised by them were duly taken into consideration by Government in issuing orders relating to the recommendations of the Pay Commission.

STATEMENT SHOWING THE NUMBER OF APPRENTICE MECHANICS, TRADE APPRENTICES AND APPRENTICE TRAIN EXAMINERS RECRUITED AND TRAINED DURING THE YEAR 1960-61

Railway	Theoretical/ Practical training	Capacity	Apprentice Mechanics			Trade Apprentices			Apprentice Train Examiners			Total		
			Number recruited during the year	Number completed training during the year	Number under training on 31-3-61	Number recruited during the year	Number completed training during the year	Number under training on 31-3-61	Number recruited during the year	Number completed training during the year	Number under training on 31-3-61	Number recruited during the year	Number completed training during the year	Number under training on 31-3-61
Central	Theoretical and Practical.	2,409	81	42	184	23	329	1,086	193	80	123	297	451	1,393
Eastern	Do.	1,950	10	99	215	—	208	311	40	11	21	50	318	547
Northern	Do.	1.475	—	2	314	18	400	1,163	59	8	51	77	410	1,528
North Eastern	Do.	311	34	19	128	112	—	489	49	20	56	195	39	673
Northeast Frontier	Do.	239	7	3	27	62	—	226	4	2	4	73	5	257
Southern	Do.	2,158	3	151	200	1	417	835	2	88	79	6	656	1,114
South Eastern	Do.	980	11	17	128	71	420	119	13	35	47	95	472	294
Western	Do.	2,229	26	16	161	7	346	1,388	9	9	77	42	371	1,626
Chittaranjan Locomotive Works Chittaranjan	Do.	500	28	22	70	56	111	310	—	—	—	84	133	380
Integral Coach Factory Perambur	Do.	342	—	13	40	—	193	116	—	—	—	—	206	156
Locomotive Component Works Varanasi.	Do.	136	—	—	—	153	—	263	—	—	—	153	—	263
Total .		12,729	200	384	1,467	503	2,424	6,306	369	253	458	1,072	3,061	8,231

152. Permanent negotiating machinery for settlement of disputes.—The permanent negotiating machinery set up on railways with a view to maintaining contact with labour and resolving disputes and differences which may arise between them and the administration, continued to function during the year 1960-61. At the first and second tiers of the machinery, periodical meetings were held between the National Federation of Indian Railwaymen and the All India Railwaymen's Federation with the Railway Board and also between the recognised unions affiliated with the two Federations with the respective railway administrations. The meetings with the All India Railwaymen's Federation were, however, discontinued as also the meetings with its affiliated unions in July 1960, after they had participated in the all-India strike of the central government employees in July 1960.

At the first tier of the machinery, *viz.*, on the zonal railways 20 meetings were held at headquarters level and 587 meetings were held at district/divisional/workshop level during the year. 11,857 items, were discussed at these meetings and 85 per cent of these items were finalised during the same year.

At the second tier of the machinery, that is, at the Railway Board's level, two periodical meetings were held with the National Federation of Indian Railwaymen and one with the All India Railwaymen's Federation and in all 88 items were discussed with the two Federations. Besides, a few *ad hoc* meetings with the representatives of the National Federation of Indian Railwaymen were also held.

The *ad hoc* tribunal's recommendations which were held over for consideration pending the examination and issue of orders on the Pay Commission's recommendations, received the attention of the Railway Board during the year under review. The tribunal had made nine recommendations in all. In six of these cases, tentative decisions had been taken during the year.

153. Joint committees of management and staff.—There are at present over 350 joint committees on the different railways. Such committees of staff and officers at major yards, stations, running sheds set up by the railways to enlist the co-operation of the staff in many spheres to inspire in them a sense of common endeavour have been functioning satisfactorily. At these joint committees functioning at various levels, railwaymen can make suggestions for improving efficiency, effecting economies, ensuring safety of travelling public and providing amenities for passengers, etc.

154. Working of staff councils and advisory committees for welfare works.—Staff councils on railways proved useful in promoting better understanding between the administration and the staff.

Advisory committees for welfare works, through which representatives of labour are associated in the formulation of welfare schemes, functioned satisfactorily.

The number of staff councils and committees and the number of meetings held by them during the year under review are given in the statement below:

Railway	Staff Councils		Advisory Committees for Welfare Works	
	Number of Councils	Number of meetings held	Number of Committees	Number of meetings held
Central	36	82	1	1
Eastern	66	112	1	—
Northern	55	84	1	—
North Eastern	13	40	1	1
Northeast Frontier	22	22	1	1
Southern	57	80	1	1
South Eastern	13	15	1	3
Western	27	94	1	—
Chittaranjan Locomotive Works	1	4	1	1
Integral Coach Factory	1	4	—	—

155. Implementation of labour laws.—

Hours of employment regulations.—The total number of staff governed by the provisions of the Indian Railways Act relating to hours of employment under different classifications during 1960-61 is given below:

Intensive	2,189
Continuous	958,504
Essentially intermittent	123,006
Excluded—	
(i) Regular staff	45,032
(ii) Casual labour	140,408
Total	1,269,139

Infringements and irregularities in the working of the hours of employment rules, when brought to the notice of railway administrations by the officers of the industrial relations machinery, were investigated and action taken to avoid recurrence.

The classification of staff continued to receive attention and whenever it was found that a change in the classification was called for on account of altered working conditions, this was effected.

Payment of Wages Act, 1936.—The number of regular railway employees and departmental casual labour governed by the Payment of Wages Act on the Railways during 1960-61 was 1,323,664.

Infringements and irregularities in the working of the Act, when brought to the notice of the administrations by the officers of the industrial relations machinery, are invariably investigated and action taken to avoid recurrence.

Minimum Wages Act, 1948.—The Railways are concerned with the fixation of minimum wages in respect of the following two categories mentioned in items 7 and 8 of Part I of the Minimum Wages Act, 1948:

(i) employment on the construction or maintenance of roads or in building operations; and

(ii) employment in stone breaking or stone crushing.

In 1951, 1952 and 1954, the Ministry of Labour fixed minimum rates of wages in respect of these two scheduled employments on railways. In the absence of a specific direction how to fix 'minimum wages' under the Act, minimum wage rates were fixed based on the rates notified by the respective State Governments and where the State Governments had not fixed such rates, the rates fixed in an adjoining State or the rates prevailing in the locality were taken into account. The question of revising the existing notified rates of minimum wages is receiving attention.

Factories Act, 1948.—Factories using power and employing 10 or more persons are registered under the Factories Act, 1948. During the year 1960-61, there were 226 such factories on the railways, which included major workshops, electrical power houses and sub-stations, printing presses, etc.

The number of staff of different categories in these factories was as shown below:

(i) Supervisory class III staff	8,313
(ii) Artisan staff—	
skilled	89,408
semi-skilled	34,914
un-skilled	44,942
(iii) Other staff—	
class III	5,810
class IV	6,089

Eighty nine canteens have been provided in these factories.

The irregularities under the Factories Act, 1948, brought to the notice of the Railway Administrations by Inspectors of Factories of States were investigated and steps taken to rectify them promptly.

Overtime payment made to the workers in these factories under the departmental orders and the provisions of the Factories Act amounted to Rs. 35,05,956 and Rs. 38,25,714 respectively in 1960-61.

Workmen's Compensation Act, 1923.—The claims for compensation on account of injuries and deaths by accidents arising out of and in the course of employment received due attention. All efforts were made to conform to the prescribed time-limit for payment of compensation under the Act.

The following is the position in regard to the number of accidents which took place during the year 1960-61, the number of accidents in which compensation was paid and the amount of compensation paid:

Nature of accident	Number of accidents which took place during the year 1960-61	Number of accidents in which compensation was paid	Amount of compensation paid
			Rs.
Death	352	248	6,16,011
Permanent disablement	501	403	3,64,757
Temporary disablement	34,449	24,528	7,89,323

The following payments were also made in 1960-61 as compensation on account of accidents which had taken place earlier.

Nature of accident	Number of accidents in which compensation was paid	Amount of compensation
		Rs.
Death	190	5,53,250
Permanent disablement	305	1,99,474
Temporary disablement	11,399	3,57,409

156. Service conditions of staff- ***Pay Commission's recommendations.***— The Jagannadha Das Pay Commission recommended that leave salary may be calculated on the basis of the average of the rates of pay admissible during each of the 10 months in which an employee was on duty immediately prior to the month in which leave commences, but in the case of employees who proceed on leave from posts the maximum pay of which does not exceed Rs. 100 p.m. leave salary may be based on the rate of pay drawn immediately before proceeding on leave. This has been accepted by the Central Government with slight modification and orders have been issued. The acceptance of this has particularly benefited the staff who hold appointments in officiating capacity. Orders liberalising the quantum of leave salary admissible during leave on half average pay and commuted leave have also been issued.

The Government have accepted in principle the general recommendation of the commission that in respect of promotions upto class I level, it should be ensured that an employee gets at least one increment in pay as a result of promotion.

The commission had also referred to the inadequacy of the quantum of conveyance allowances and daily allowances. These have been reviewed and the rates revised.

The Railway Board have accepted the recommendations of the commission regarding overtime allowance generally, and issued orders.

Passes and P.T.Os.—It has been decided that privilege passes and privilege ticket orders may be issued to officers and staff of the Railway Audit Department irrespective of their date of joining that department on the same scale as admissible to railway servants under the rules applicable from time to time.

157. Labour welfare.—

(i) (a) *Railway schools.*—Railway schools continued to function satisfactorily. In 1960-61, the mixed railway high schools at Bilaspur and Nainpur on the South Eastern Railway and the railway high school at Abu Road on the Western Railway were upgraded to higher secondary

schools. The English medium primary school at Bilaspur was upgraded to middle school standard. A new middle school was opened during the year at Garhara on the North Eastern Railway. 16 additional single-teacher primary schools (five each on the Northern and the Northeast Frontier Railways and six on the South Eastern Railway) were opened during the year. The four single-teacher primary schools at the Chittaranjan Locomotive Works were converted into junior basic schools.

The total number of schools functioning on the Railways, the number of pupils on rolls and the income from and expenditure on schools are given in the statement on the next page. The total number of primary schools including single-teacher schools increased from 587 in 1959-60 to 602 in 1960-61. Correspondingly, the number of children in the primary schools increased from 45,045 in 1959-60 to 48,878 in 1960-61.

(b) The twelve subsidised hostels set up in the major linguistic areas in the country for providing board and lodging at subsidised rates to the children of railway employees drawing pay up to a specified limit continued to function. The existing capacity of the hostels, and the number of children admitted during 1959-60 and 1960-61 are indicated in the statement below:

Location	Railway	Existing capacity	Number of children admitted	
			During 1959-60	During 1960-61
Poona	Central	40	39	39
Secunderabad	Central	30	29	17
Patna	Eastern	50	50	50
Lucknow	Northern	33	23	24
Muzaffarpur	North Eastern	28	12	27
Trichinopoly	Southern	60	44	44
Mysore	Southern	24	22	17
Olavakkot	Southern	60	31	43
Khargpur	South Eastern	25	19	25
Cuttack	South Eastern	25	19	25
Anand	Western	65	47	51
Ajmer	Western	60	37	56
		500	372	418

(ii) *Staff Benefit Fund.*—With a view to affording greater scope for expansion of the welfare activities within the objectives of the Staff Benefit Fund, the *per capita* annual contribution from railway revenues to the Staff Benefit Fund of the Zonal Railways was increased from Rs. 2 to Rs. 4 from 1 April 1958 and the contribution in respect of the smaller units was fixed on *ad hoc* basis from that date. To enable some of the objectives of the fund to be fulfilled in a greater measure, particularly to provide more relief to the staff suffering from tuberculosis, who often have to remain on leave without pay for long periods and to promote sports activities, the *per capita* annual contribution of the Zonal Railways has been raised to Rs. 4.50 nP from 1 April 1960. The Staff Benefit Fund Committee at the headquarters/divisional level consisting of representatives of recognised unions, staff and the administration is responsible for the management of the fund.

Particulars of the expenditure incurred during the year under the various heads are given in the statement on the next page.

(iii) *Canteens.*—In addition to the canteens statutorily required to be provided under the Factories Act, 1948, the railways have provided, as a measure of staff welfare, canteens at places where there is concentration of staff. 12 canteens were added during the year under review and the total

STATEMENT I

Railway	Number of Schools								Number of Pupils							
	Intermediate		Secondary/High		Middle		Primary		Intermediate		Secondary/High		Middle		Primary	
	1959-60	1960-61	1959-60	1960-61	1959-60	1960-61	1959-60	1960-61	1959-60	1060-61	1959-60	1960-61	1959-60	1960-61	1959-60	1960-61
Central	—	—	1	1	3	3	66	66	—	—	1,640	1,591	1,145	1,237	4,615	5,247
Eastern	1	1	4	4	5	5	109	109	907	830	2,454	2,716	1,346	1,572	5,365	5,099
Northern	1	1	3	3	—	—	82	87	794	784	780	817	—	—	4,148	4,460
North Eastern	—	—	1	1	—	1	53	53	—	—	423	470	—	250	3,520	3,947
Northeast Frontier	—	—	5	5	—	—	29	34	—	—	3,429	3,219	—	—	2,761	3,093
Southern	—	—	1	1	8	8	38	38	—	—	1,469	1,497	3,285	2,701	4,682	5,795
South Eastern	—		10	10	5	6	84	89	—	—	8,260	8,283	2,352	2,542	9,032	9,117
Western	—	—	4	4	1	1	115	115	—	—	1,217	1,384	172	212	9,460	10,308
Chittaranjan Locomotive Works	—	—	2	2	—	—	11	11	—	—	985	1,164	—	—	1,462	1,812
TOTAL	2	2	31	31	22	24	587*	602*	1,701	1,614	20,657	21,141	8,300	8,514	45,045	48,878

* This does not include one single-teacher school at the Railway Staff College, Baroda and another at the Diesel Locomotive Works, Varanasi.

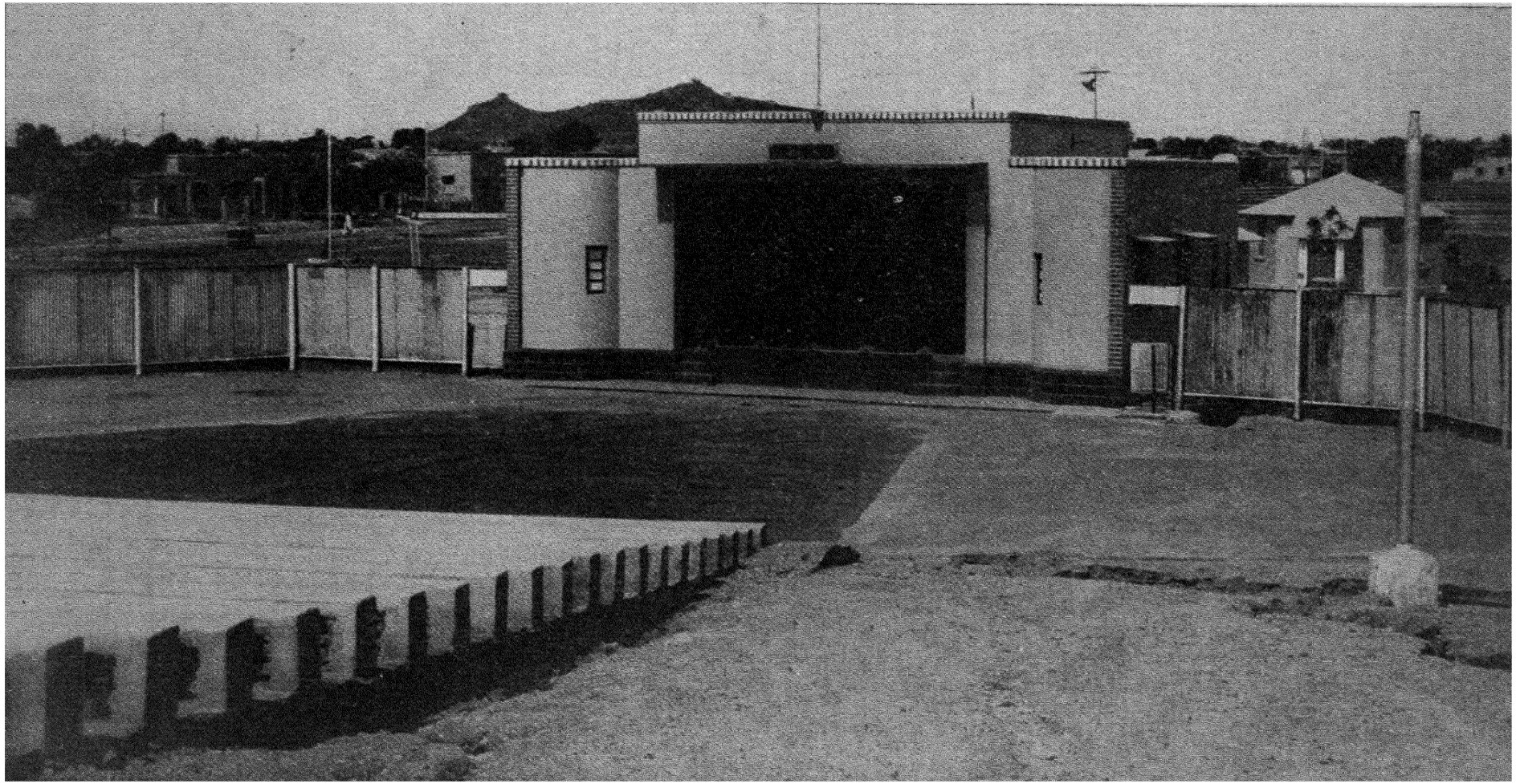
STATEMENT II

(*Figures in thousands*)

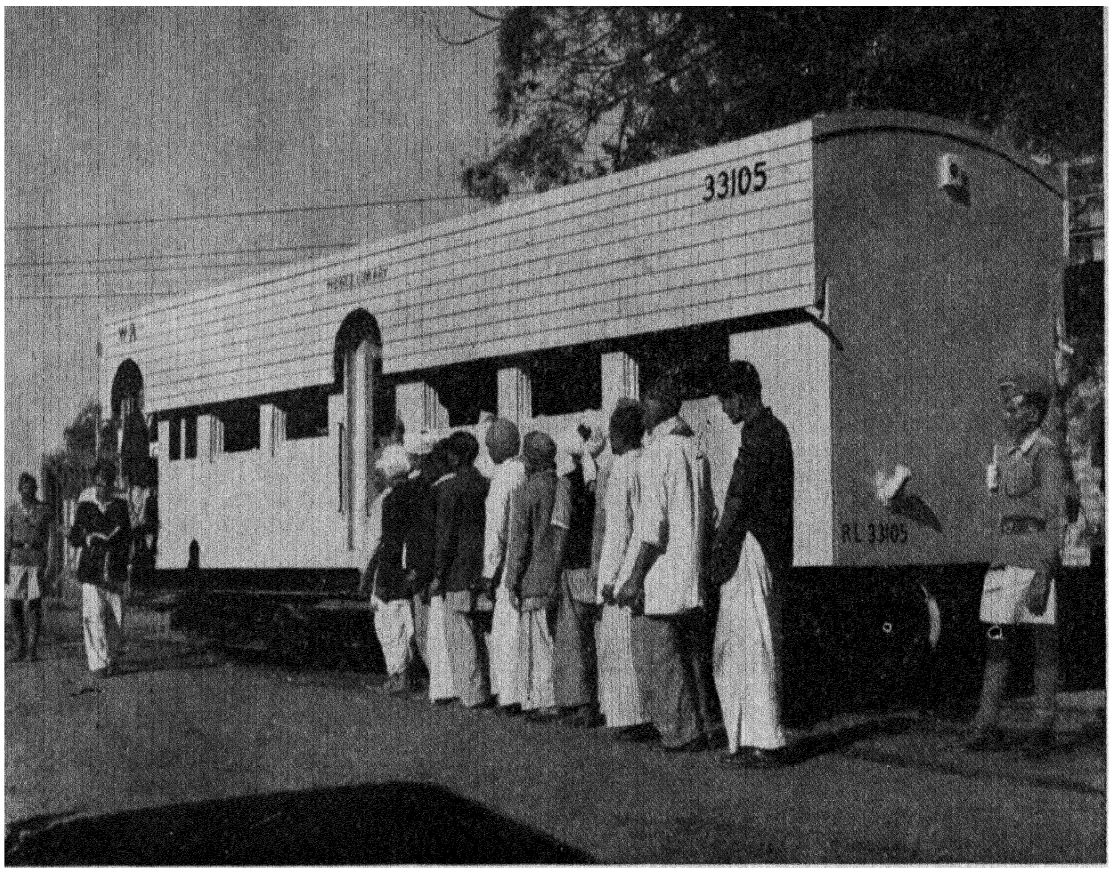
Railway	Grants-in-aid		Income				Total		Expenditure gross	
			School-fees		Miscellaneous					
	1959-60	1960-61	1959-60	1960-61	1959-60	1960-61	1959-60	1960-61	1959-60	1960-61
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Central	80	70	98	73	—	10	1,78	1,53	6,11	6,32
Eastern	36	24	1,85	1,78	4	7	2,25	2,09	8,11	8,52
Northern	37	42	2,83	3,49	44	—	3,64	3,91	10,33	9,77
North Eastern	22	23	24	23	—	—	46	46	1,21	1,46
Northeast Frontier	5	4	1,48	1,25	11	3	1,64	1,32	4,00	4,46
Southern	1,48	1,56	91	1,36	7	7	2,46	2,99	7,26	8,17
South Eastern	42	40	3,27	3,04	25	1,22	3,94	4,66	14,13	18,64
Western	68	78	1,95	88	2	—	2,65	1,66	7,00	7,80
Chittaranjan Locomotive Works	35	41	62	35	—	—	97	76	2,39	2,44
TOTAL	4,73	4,78	14,13	13,11	93	1,49	19,79	19,38	60,54	67,58

STATEMENT SHOWING THE EXPENDITURE FROM THE STAFF BENEFIT FUND ON THE RAILWAYS DURING 1960-61

		Central	Eastern	Northern	North Eastern	Northeast Frontier	Southern	South Eastern	Western	Chittaranjan Locomotive Works	Integral Coach Factory	Total
Relief of distress of staff and their families—												
(1) Grants given to employees on account of loss suffered by them in floods, etc.	Rs.	—	68,666	—	2,500	4,565	4,580	23,545	—	275	160	1,04,291
(2) Payments made to dependents of railway employees	Rs.	—	—	—	—	600	67,855	—	3,555	—	—	72,010
Schemes for sickness—												
(3) Grants given to sick employees on long leave without pay (not for medical treatment)	Rs.	1,50,014	2,41,802	3,45,812	1,07,033	—	72,064	1,28,269	2,18,750	1,261	2,023	12,67,028
(4) Relief given for medical treatment	Rs.	—	1,433	23,680	7,368	—	1,239	25,699	119	1,267	10,004	70,809
(5) Relief in any other form	Rs.	23,407	23,751	85,609	11,882	1,03,801	1,90,341	15,801	40,096	16,184	38	5,10,910
Education of staff and their children—												
(6) Schools run by railway employees	Rs.	25,189	—	—	—	—	—	6,713	—	—	300	32,202
(7) Other private schools	Rs.	2,349	—	—	1,000	1,748	—	—	4,100	—	—	9,197
(8) Scholarships	Rs.	1,88,293	1,62,273	1,88,468	87,243	48,142	1,43,097	60,655	1,10,820	15,880	4,020	10,08,891
(9) Other assistance	Rs.	1,860	1,03,831	8,300	—	615	54,549	91,332	86,387	4,366	5,942	3,57,182
(10) Vocational training centres	Rs.	—	2,902	20,180	—	1,819	2,990	—	—	—	1,500	29,391
(11) Handicraft centres		—	—	33,100	—	—	17,082	—	15,162	950	—	66,294
(12) Grants for capital expenditure		—	—	—	—	—	—	—	—	—	—	—
Recreation and amusement of staff and their children—												
(13) Grants to sports associations	Rs.	90,000	89,910	87,000	60,000	27,500	81,328	71,708	1,00,000	11,000	9,000	6,27,446
(14) Cultural activities	Rs.	—	11,650	5,300	—	—	—	1,000	3,171	568	—	21,689
(15) Grants to institutes and recreation clubs	Rs.	14,703	61,540	60,000	19,414	11,700	20,548	20,516	31,819	10,070	1,100	2,51,410
(16) Children's sports and fetes	Rs.	4,000	8,000	—	—	—	20,470	1,900	11,613	1,600	415	47,998
(17) Allotment of capital expenditure for clubs, institutes, etc.	Rs.	10,293	10,584	6,875	—	77,733	8,016	20,000	71,210	—	—	2,04,711
Miscellaneous expenditure—												
(18) Boys scouts associations	Rs.	22,500	22,500	25,000	13,250	2,800	18,000	12,000	2,000	1,200	2,450	1,21,700
(19) Other items	Rs.	18,15	48,294	70,549	1,24,137	8,362	12,521	17,772	1,03,489	3,975	10,175	4,17,428
TOTAL	Rs.	5,50,762	8,57,136	9,59,873	4,33,827	2,89,385	7,14,680	4,96,910	8,02,291	68,596	47,127	52,20,587

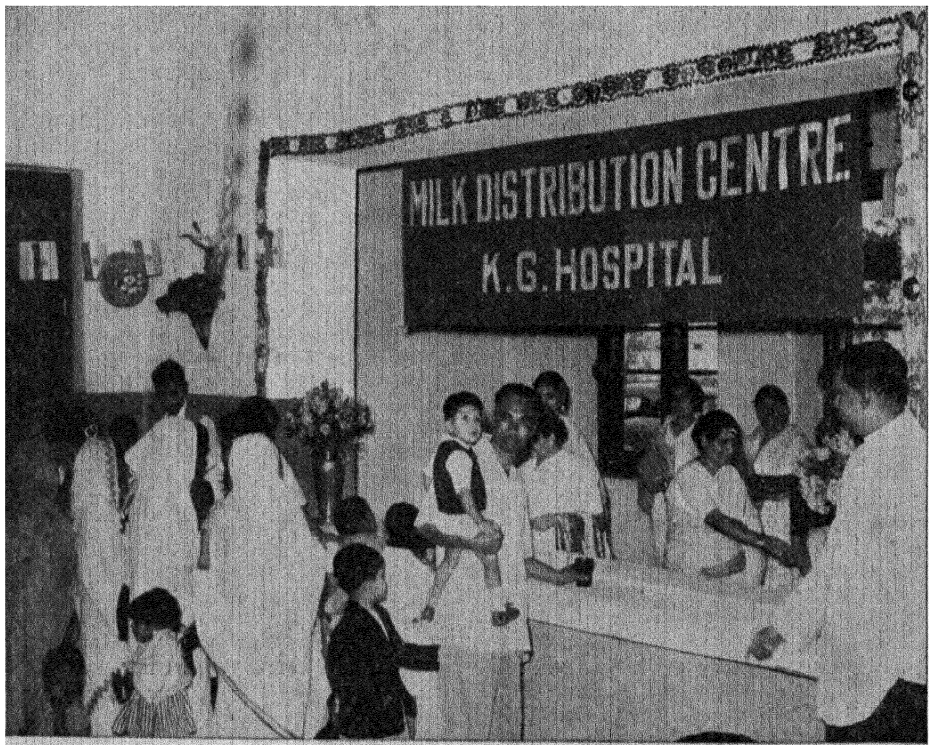


OPEN AIR THEATRE "RABINDRA MANCH"—CHITTARANJAN LOCOMOTIVE WORKS



A VIEW OF THE STAFF DRAWING BOOKS FROM METRE GAUGE MOBILE LIBRARY AT AJMER—WESTERN RAILWAY

FREE MILK DISTRIBUTION CENTRE AT KASTURBA GANDHI HOSPITAL—CHITTARANJAN LOCOMOTIVE WORKS



number of canteens on railways rose to 234. The statement below shows the position of the canteens railway-wise during 1959-60 and 1960-61.

NUMBER OF CANTEENS AS ON 31 MARCH

Railway	Departmental		Consumer co-operative societies		Canteen Committees of staff		Contractors		Total	
	1960	1961	1960	1961	1960	1961	1960	1961	1960	1961
Central	6	4	12	16	22	26	1	—	41	46
Eastern	—	—	4	2	31	30	—	—	35	32†
Northern	—	—	1	1	41	46	—	—	42	47
North Eastern	3	2	6	9	3	3	3	—	15	14*
Northeast Frontier	2	2	2	2	2	2	—	—	6	6
Southern	5	4	5	5	12	17	3	3	25	29
South Eastern	—	1	1	1	21	20	—	—	22	22
Western	—	—	8	8	17	19	6	6	31**	33
Chittaranjan Locomotive Works.	—	—	—	—	2	2	—	—	2	2
Integral Coach Factory	—	—	2	2	1	1	—	—	3	3
TOTAL	16	13	41	46	152	166	13	9	222	234

*One canteen ceased functioning.

†The reduction in number is due to some Restaurants attached to Consumer Co-operative Stores for expansion of business having been erroneously shown as "Canteens" during the previous year.

**Revised.

(IV) *Sports activities.*—District, divisional, inter-district and inter-divisional tournaments were held as usual by all the railways, while the Railway Sports Control Board conducted various inter-railway tournaments and meets at different Centres.

Railwaymen and railway teams maintained their high reputation in the field of sports. The Indian contingent which participated in the World Olympics at Rome in 1960 included eleven railwaymen. An employee of the Eastern Railway had the honour of captaining the Indian Football Team in the Olympics at Rome.

Railways were the National Winners in Hockey, Weight-lifting, Volley-ball and Table-Tennis (women). They were runners-up in Boxing, Badminton, Kabbaddi, Table-Tennis and Cycling. Three employees of the Central Railway won National Championships in Boxing in their own weights. Employees of the Central and the North Eastern Railways annexed the National Singles Title in Table Tennis and Badminton for women.

During the Annual Railway Athletic Championship Meet in 1960, 8 new Indian Railway records for men and 4 for women were created. 13 records in Weight-lifting and 7 in Swimming were improved. The over-all championship for combined proficiency in all sports was won by the Eastern Railway.

(v) *Institutes and clubs.*—With a view to extending some of the facilities provided in the railway institutes to the railway staff posted at way-side stations, mobile libraries, which are stocked with adequate number of books in the regional languages on various subjects, have been set up on four railways and the matter in regard to establishing such libraries on the remaining four railways is under consideration.

Institutes and recreation clubs on the railways functioned satisfactorily during the year.

(vi) *Holiday homes.*—Holiday homes for class III and class IV staff at various places proved to be popular. Nearly 3,000 employees made use of these holiday homes during the year under review. One more holiday home at Yercaud on the Southern Railway was opened during the year.

The All Railways holiday home at Kashmir was very popular and was fully utilised during the 1960 season.

(vii) *Children's Camps.*—Twenty children's camps were organised by the different Railways in 1960-61 for the benefit of the children of railway employees. These camps are very popular and a total number of 2,092 children attended these camps. Expenditure on these camps is primarily met from the Staff Benefit Fund and the amount payable by parents is kept low so as to bring the benefit within the reach of the lower paid staff. These camps provide an opportunity for the children to mix together and participate in various activities such as debates, elocution, variety entertainments, sports, etc., and also afford opportunity to the children to see the country outside their normal surroundings.

(viii) *Scholarships for technical education of children of railway employees.*—Under this scheme nearly 1,000 scholarships ranging from Rs. 15 to Rs. 50 per month and in special cases up to Rs. 70 per month are awarded every year in addition to the scholarships continuing from the preceding years. This scheme is financed from the Staff Benefit Fund and has been of considerable benefit to staff. The number of scholarships granted during the year under review is given below:

Railway	Number of scholarships continuing from previous years	Number of scholarships awarded during 1960-61	Total expenditure incurred Rs.
Central	165	175	1,89,488
Eastern	157	135	88 550
Northern	224	150	1,46,400
North Eastern	129	77	78,243
Northeast Frontier	70	50	46,297
Southern	244	150	1,43,097
South Eastern	127	115	59,344
Western	162	125	1,10,820
Chittaranjan Locomotive Works	22	12	12,280
Integral Coach Factory	7	4	4,020
TOTAL	1307	993	8,78,539

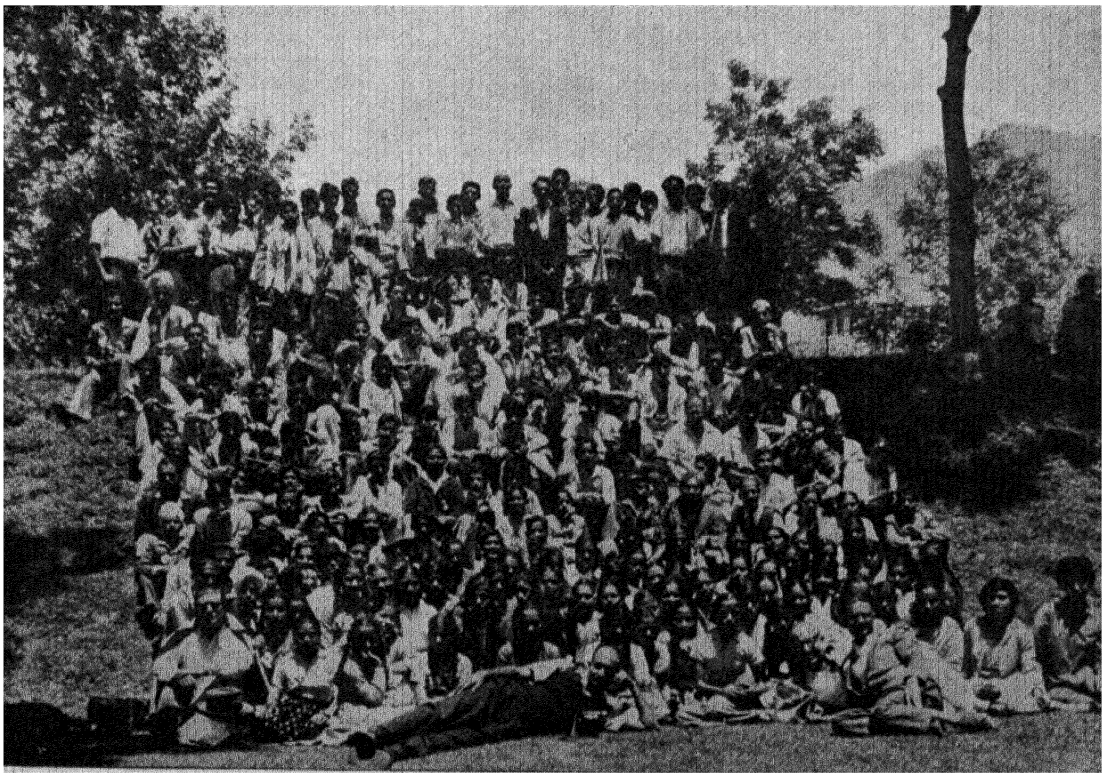
(ix) *Scouting.*—Scouting activities on the railways maintained their tempo and the strength of the association showed an increase in 1960-61. Several training camps, service camps and rallies were held as usual during the year.

(x) *Labour Welfare Organisations.*—The Welfare Organisation on the Railways functioned satisfactorily during the year. Besides helping the staff in personal matters such as expeditious payment of settlement dues, attending to complaints in connection with sanction of increments and leave, etc., the Welfare Inspectors rendered help to the staff and their families in several other ways. They went round the staff colonies to take note of the complaints and grievances and helped in redressing them by approaching proper authorities. Regular visits were made to the institutes, children's parks, handicraft centres, running rooms, schools and hospitals and help was rendered to the staff who were sick and on long leave without pay in getting maintenance allowance from the Staff Benefit Fund. Help was also rendered to the families of deceased staff in distress. The organisation also arranged cinema shows, children's camps and other cultural activities for the benefit of the staff and their families. The promotion of co-operative societies and small savings schemes received the due share of attention from this organisation.

(xi) *Vocational Training Centres for Staff.*—Training centres for imparting technical training to staff during their off-duty hours and voca-



A VIEW OF THE CHILDREN OF RAILWAY EMPLOYEES CAMPED IN KASHMIR – NORTH EASTERN RAILWAY



A VIEW OF THE CAMP OF THE RAILWAY EMPLOYEES CHILDREN AT KASHMIR—WESTERN RAILWAY

tional training to children of railway employees set up on the railways functioned satisfactorily. This scheme aims at imparting technical training to unskilled and semi-skilled workers during their off-duty hours with a view to improving their prospects of promotion to higher grades and it also provides for imparting vocational training to children of railway employees to infuse in them a bias for technical jobs. Expenditure on this scheme is met from the Staff Benefit Fund.

During the year there were twenty-two such training centres on the railways, where training was given to over two hundred employees and over three hundred children of railway employees.

(xii) *Handicraft Centres.*—Handicraft centres set up on the railways for the benefit of the families of railwaymen functioned satisfactorily. This scheme provides for training to women members of railwaymen's families in handicrafts such as weaving, knitting, spinning, tailoring of garments, etc., during their spare time, the idea being to help them in learning some trade to augment the family income. Expenditure on this scheme is met from the Staff Benefit Fund. During the year under review, an *ad hoc* grant of Rs. 40,000 was sanctioned from the railway revenues to the Staff Benefit Fund of the railways for the purchase of sewing machines for these centres. With a view to encouraging these centres, orders were placed at some of the centres by the Railway Administrations for the supply of simple articles such as fabrication of school uniforms, pillow cases, bed-sheets, dusters, napkins, pugrees, caps, blouses, pyjamas, kurtas, envelopes, file boards, etc. The monthly income of the individuals varied from centre to centre ranging from Rs. 10 to Rs. 51 per month. During the year under review there were 224 such centres on the railways as against 154 in 1959-60.

158. Railwaymen's Co-operative Credit Societies and Banks.—There were 25 co-operative credit societies of railway employees at the beginning of the year. The Northern Zone Railway Employees' Co-operative Thrift and Credit Society Limited, New Delhi, was registered during the year. The number of registered societies at the end of the year was thus 26. The total membership at the end of the year was 6,48,087 as against 6,17,606 at the beginning. The paid-up share capital of these societies rose from Rs. 430.87 lakhs to Rs. 463.24 lakhs during the year. Nearly 58 per cent of the railwaymen are members of these societies. The average share capital paid by them amounted to Rs. 71 per head. The following statement shows the comparative progress of these societies during the last two years.

(Figures in lakhs of rupees)

	1959-60	1960-61
(a) Owned capital—		
Share capital	430·87	463·24
Reserve fund	106·90	116·30
Other funds	153·72	201·52
(b) Borrowed capital—		
Deposits from members	1285·97	1312·17
Deposits from non-members	634·68	753·39
Other borrowings	182·44	197·34
(c) Total working capital	2794·58	3043·96

The following statement shows the loan transactions of the societies with members during the year:

(Figures in lakhs of rupees)

Loans outstanding at the beginning of the year	2693·31
Issued during the year	1789·15
Repaid during the year	1613·21
Outstanding at the end of the year	2869·24

The total amount of loans issued during the year was about Rs. 79 lakhs more than that issued in the previous year. A sum of Rs. 93.48 lakhs was overdue under member's loans at the end of the year which works out to 3.3 per cent of the total amount of loans outstanding. The total liquid resources of the societies including cash and bank balances and investments in Government and other securities amounted to Rs. 253.73 lakhs or about 12 per cent of the total deposits held by them.

All the societies worked at a profit during the year under review, the total net profit earned being Rs. 36.94 lakhs. The rate of interest charged on members' loans was generally between five and seven per cent. In four societies, the interest charged exceeded 8 per cent.

18 societies declared dividend on shares to members, the rate of dividend ranging from 2½ per cent to 7½ per cent. The societies had in all employed 1524 staff and their total wage bill amounted to about Rs. 37 lakhs during the year. Nine societies paid bonus to their employees, to the extent of Rs. 73,961.

In view of the representations received from the railway employees' co-operative credit societies and others regarding the waiver of fees that were being levied by the railways on account of recovery work done by them on behalf of such societies, the Railway Board have decided that the fees should be waived provided the societies concerned agree to create a welfare fund for the benefit of their members and paid staff and credit to the fund annually an amount not less than the fees levied by the railway for the recovery of their dues. The railway administrations have been permitted to waive the fees in respect of the societies which set up a welfare fund in accordance with the rules framed for the purpose by the Board.

159. Railwaymen's Consumer Co-operative Societies.—The number of societies actively functioning on the railways increased from 159 to 167 during the year. The following statement shows the comparative progress made by them in respect of membership, share capital, working capital and business turnover during the last two years.

		1959-60	1960-61
1	Number of members	74,494	78,179
2	Paid up share capital	(Rs. in lakhs) 13·65	14·64
3	Reserve fund	,, 3·37	3·86
4	Total working capital	,, 24·68	25·29
5	Purchases	,, 150·40	164·43
6	Sales	,, 159·46	174·69

The membership increased by nearly 3,700 while the share capital recorded an increase of about Rs. 1 lakh. The total sales of all the societies increased by Rs. 15.23 lakhs.

Of the 167 societies, 150 worked at a total gross profit of Rs. 10.46 lakhs, which works to an average of 6 per cent on the turnover. Of these, 123 societies earned a net profit amounting to Rs. 2.95 lakhs after meeting their administrative and establishment charges. 44 societies paid dividend on shares amounting altogether to Rs. 28,005. 14 societies gave in addition, rebate on purchases to the share-holders to the extent of Rs. 17,455. 21 societies gave bonus to their employees to the extent of Rs. 4,127. The societies had employed 1055 staff and the total wage bill during the year amounted to Rs. 6.91 lakhs as against Rs. 6.46 lakhs during the previous year.

The railways gave subsidy to 23 societies during the year to the extent of Rs. 29,476 towards the cost of their management.

While most of the societies had operated only one store each, 23 societies had altogether 40 branches.

Till the end of the year, 154 societies were provided with railway buildings on concessional rent while 7 societies had hired private buildings. Six societies had their own buildings.

160. Railwaymen's Co-operative Housing Societies.—There were 3 railwaymen's Co-operative housing societies at the beginning of the year. The Southern Railway employees co-operative house building society limited, Tiruchirappalli started functioning during the year. Thus, the number of housing societies at the end of the year was 4. They had 1015 members with a paid-up share capital of Rs. 1,32,180; the total working capital of these societies including deposits from individuals and loans from Government and other bodies amounted to Rs. 7.35 lakhs at the end of the year. 3 Societies disbursed loans to members to the extent of Rs. 1.41 lakhs; the total amount of loan outstanding at the end of the year being Rs. 4.22 lakhs. Including 23 buildings constructed by the members with the help of the societies during the year, the total number of buildings constructed till the end of the year was 109. Besides, 63 buildings were constructed by the societies on behalf of members to the value of Rs. 4.87 lakhs and 5 buildings to the value of Rs. 30,661 were under construction at the end of the year. Of the 4 societies, 3 have invested Rs. 2.21 lakhs in purchasing land measuring 20.77 hectares (51.92 acres) for developing into house sites for allotment to members.

On the North Eastern Railway, a new co-operative housing society was registered during March, 1961. This society is yet to start working.

161. Encouragement to Co-operative Labour Contract Societies.—During the year, 13 co-operative labour contract societies undertook railway handling contracts at 17 stations. These societies had 3,269 members with a paid-up share capital of Rs. 30,752 at the end of the year as against 2,466 members and Rs. 27,806 respectively in the beginning of the year. The annual value of the contracts given to them during the year amounted to Rs. 9.89 lakhs as against Rs. 9.92 lakhs in the previous year. The railways disbursed a sum of Rs. 9.78 lakhs to the societies towards the execution of contracts against their bills during the year.

As a further facility to co-operative societies, railways were directed that co-operative societies of actual workers should be required to furnish only 10 per cent of the earnest money stipulated in the terms of tender, subject to a minimum of Rs. 500 and a maximum of Rs. 1,000.

The experiment of entrusting handling contracts to co-operative societies of actual workers is proving successful and more and more societies are coming forward to take up such contracts. The Railway Board have requested the railways to see that whenever feasible, coal handling work is also entrusted to labour co-operatives.

162. Provision of quarters for staff.—In pursuance of the policy of providing quarters for the essential staff who are required to live near the site of their work and for the non-essential staff at places where private accommodation is not readily available, 10,475 quarters were constructed on Indian Railways during the year 1960-61. The details of the quarters provided on individual railways are as under:

Railway	Type I	Type II	Type III	Type IV	Barracks	Officers' Quarters	Total
Central	1,276	141	35	—	6	26	1,484
Eastern	484	267	19	8	3	12	793
Northern	634	377	16	15	2	—	1,044
North Eastern	480	295	38	15	7	2	837
Northeast Frontier	894	670	21	—	19	32	1,636
Southern	1,218	276	42	1	7	—	1,544
South Eastern	388	157	19	1	5	1	571
Western	1,132	819	96	18	2	8	2,075
Chittaranjan Locomotive Works	418	—	—	—	11	—	429
Integral Coach Factory	—	60	—	—	—	2	62
Total	6,924	3,062	286	58	62	83	10,475

163. Activities of the Medical Department.—The medical and health organisations on railways continued to look after the health of and provide medical aid to railway employees and their families. During the year under review, there has been further expansion of the medical facilities and services as indicated below:

	Number of units added during the year.
Medical and health personnel	80
Hospitals	3
Health units	11
Beds in railway hospitals and health units, etc.	780
Tuberculosis beds in railway hospitals and chest clinics	70
Tuberculosis beds in sanatoria	109
Equipment :	
(i) X-ray units	9
(ii) Mass miniature camera x-ray units	8
(iii) Electro-cardiogram	12
(iv) Diathermy short-wave units	10
(v) Surgical diathermy units	2
(vi) Infra-red ray units	10
(vii) Ultra-violet ray units	2

As a result of this expansion, the daily average outdoor attendance has gone up from 69,994 to 74,448 ; the total indoor patients treated from 182,767 to 207,721 and the total number of operations performed from 141,338 to 156,267. It has also resulted in increases in cost of providing the medical services from 339.5 lakhs to 416.8 lakhs and health services from 272.1 lakhs to 304.4 lakhs.

The medical attendance and treatment rules have been liberalised to the following extent:

(*a*) Railway passes and daily allowance have been granted to staff, suffering from special diseases like tuberculosis and cancer, sent for periodical medical check-ups after completion of treatment.

(*b*) The list of hospitals recognised for the purpose of medical treatment of railway employees and their families suffering from cancer has been expanded.

(*c*) The condition of prior approval of the Chief Medical Officer for engagement of special nurses, for referring cases to recognised non-railway institutions, for treatment of cancer, polio and mental diseases has been removed and the certificates of the authorised medical attendant, namely the medical officer-in-charge of the hospital are now considered sufficient for the purpose.

Dental treatment in respect of extraction, scaling and gum treatment and root canal treatment, has been extended free to all railway employees, irrespective of their pay, and to their families.

It has been decided to supply, free of charge, artificial limbs to railway employees injured on duty and in other cases the cost of such limbs has been decided to be met out of the Staff Benefit Fund.

Under the scheme of family planning, railway servants undergoing sterilisation operation (Vasectomy or Salpingectomy) have been allowed special casual leave not exceeding six working days.

The work of implementing the national malaria eradication scheme and observance of a national cleanliness day were carried on all railways as part of the programmes of the Government of India.

With a view to detection and prevention of infectious and/or communicable diseases, it was decided to examine periodically food handling staff on Railways and subject the drinking water to periodical chemical and bacteriological examination.

Preventive measures against infectious diseases normally and during fairs and festivals were undertaken in co-operation with civil authorities as usual. The sanitation of stations and railway colonies remained satisfactory.

The health of the staff and their families remained satisfactory during the year. A comparative statement summarising the activities of the Medical Department on Railways during the year 1960-61 as compared with 1959-60 is given in the next page.

164. Miscellaneous.—The recommendation of the Estimates Committee of the Lok Sabha to the effect that the procedure in vogue on the Japanese Railways of awarding certificates, if there is no accident for three months and to award a medal, if there is no accident for a whole year, be adopted on the Indian Railways also in respect of certain important marshalling yards, was accepted with certain modifications, and orders were issued that a running shield called the "Divisional/District Safety Shield" be awarded to that yard/station of each division/district of the railway, where the incidence of accidents is the lowest, and that two safety shields be allotted to each division/district—one for major yards/stations and the other for minor yards/stations. In addition, a running shield called the "Inter-Divisional/District Safety Shield" is to be awarded to the division/district where the frequency of accidents is lowest.

The Standing Screening Committees (Inventions and Suggestions) set up on the railways are functioning satisfactorily. During the year many useful suggestions/inventions were accepted for implementation and the employees concerned were suitably rewarded.

The railways also continued to take advantage of the offers extended under the various international plans and agreements for deputing staff for technical training outside India. During the year under review 26 employees (officers and technical staff) were so deputed.

COMPARATIVE STATEMENT OF MEDICAL AND HEALTH SERVICES ON INDIAN RAILWAYS FOR THE YEARS 1959-60 AND 1960-61

Particulars	Central Railway		Eastern Railway		Northern Railway		North Eastern Railway		Northeast Frontier Railway	
	1959-60	1960-61	1959-60	1960-61	1959-60	1960-61	1959-60	1960-61	1959-60	1960-61
Number of railway staff	196,448	196,028	172,808	173,527	176,153	177,452	83,643	83,386	56,851	59,159
Cost of medical services Rs. (in thousands)	48,95	55,32	51,38	70,39	55,29	62,25	26,35	30,96	27,87	35,22
Cost of health services Rs. (in thousands)	42,58	44,04	40,69	47,76	53,23	59,84	22,72	24,28	27,37	31,52
Cost of medical and health services Rs. (in thousands)	91,53	99,36	92,07	1,18,15	1,08,52	1,22,09	49,07	55,24	55,24	66,74
Cost of medical services per head per annum Rs.	24·9	28·2	29·7	40·6	31·4	35·1	31·5	37·1	49·0	59·5
Cost of health services per head per annum Rs.	21·7	22·5	23·6	27·5	30·2	33·7	27·2	29·1	48·1	53·3
Cost of medical and health services per head per annum Rs.	46·6	50·7	53·3	68·1	61·6	68·8	58·7	66·2	97·1	112·8
Number of—										
(i) Hospitals	10	11	8	8	9	9	8	8	9	7
(ii) Health units/dispensaries	56	59	57	60	86	88	35	34	44*	46
(iii) beds—										
(a) General beds in Hospitals	500	587	659	743	535	535	430	476	257	257
(b) T. B. beds in hospitals and chest clinics	43	61	85	113	20	20	65	65	10	20
(c) Maternity beds in hospitals and maternity centres	58	111	84	112	40	40	56	62	20	52
(d) Emergency beds in health units/dispensaries	49	60	94	94	248	254	45	45	22	50
(e) Total number of beds	650	819	922	1,062	843	849	596	648	309	379
Daily average attendance at hospitals and health units/ dispensaries	11,145	11,844	6,582	8,390	12,750	13,553	3,865	4,276	3,847	3,707
Equipment—										
(a) X-Ray units (static, mobile and portable)	18	12	11	12	10	16	4	6	6	6
(b) Mass miniature camera X-Ray units	2	3	4	4	—	4	1	1	2	2
(c) Electro-cardiograms	3	7	3	3	3	3	4	4	1	4
(d) Diathermy-shortwave units	10	11	7	8	7	7	5	7	6	5
(e) Surgical diathermy units (Pantostat)	2	3	2	2	4	4	1	1	—	—
(f) Infra-red ray units	30	35	11	11	12	12	8	9	5	6
(g) Ultra-violet ray units	13	14	7	7	8	9	4	5	4	4
(h) Massage and Rehabilitation units	1	2	—	—	1	1	2	3	—	—

*Revised

COMPARATIVE STATEMENTS OF MEDICAL AND HEALTH SERVICES ON INDIAN RAILWAYS FOR THE YEARS 1959-60 AND 1960-61—*contd.*

Particulars	Southern Railway		South Eastern Railway		Western Railway		Chittaranjan Locomotive Works		Total	
	1959-60	1960-61	1959-60	1960-61	1959-60	1960-61	1959-60	1960-61	1959-60	1960-61
Number of railway staff	163,706	161,841	125,700	126,644	157,726	159,833	8,519	8,550	1,141,554	1,146,420
Cost of medical services Rs. (in thousands)	45,44	54,05	32,61	40,35	46,28	62,24	5,33	6,00	3,39,50	4,16,78
Cost of health services Rs. (in thousands)	26,68	31,03	31,01	31,19	24,99	31,25	2,80	3,53	2,72,07	3,04,44
Cost of medical and health services Rs. (in thousands)	72,12	85,08	63,62	71,54	71,27	93,49	8,13	9,53	6,11,57	7,21,22
Cost of medical services per head per annum Rs.	27·7	33·4	25·9	31·9	29·3	38·9	62·6	70·2	29·7	36·3
Cost of health services per head per annum Rs.	16·3	19·1	24·6	24·6	15·8	19.6	32.9	41·3	23·8	26·5
Cost of medical and health services per head per annum Rs.	44·0	52·5	50·5	56.5	45·1	58·5	95·5	111·5	53·5	62·9
Number of:										
(i) Hospitals	10	10	8	9	11	14	1	1	74	77
(ii) Health units/Dispensaries	73	74	48*	48	66	67	4	4	469*	480
(iii) Beds—										
(a) General beds in Hospitals	640	646	338	372	306	554	50	50	3,715	4,220
(b) T. B. beds in hospitals and chest clinics	67	71	15	15	12	22	6	6	323	393
(c) Maternity beds in hospitals and maternity centres	40	40	71	73	92	112	14	14	475	616
(d) Emergency beds in health units/dispensaries	75	95	7	7	111	110	—	—	651	715
(e) Total number of beds	822	852	431	467	521	798	70	70	5,164	5,944
Daily average attendance at hospitals and health units/ dispensaries	10,332	10,460	7,775	8,098	13,056	13,508	642	612	69,994	74,448
Equipment:										
(a) X-Ray units (statics, mobile and portable)	13	13	11	13	18	22	2	2	93	102
(b) Mass miniature camera X-Ray units	—	3	3	3	3	3	1	1	16	24
(c) Electro-cardiograms	2	3	2	3	4	7	—	—	22	34
(d) Diathermy-shortwave units	3	9	5	5	11	12	1	1	55	65
(e) Surgical diathermy units (Pantostat)	3	2	—	—	1	3	1	1	14	16
(f) Infra-red ray units	5	5	24	26	49	50	3	3	147	157
(g) Ultra-violet ray units	4	4	7	5	40	41	1	1	88	90
(h) Massage and Rehabilitation units	—	—	—	—	1	1	1	1	6	8

*Revised.

CHAPTER X

SECURITY AND VIGILANCE

165. General.—Within the frame work of the powers conferred under the Railway Protection Force Act, 1957, the Railway Protection Force has continued to function satisfactorily in regard to better protection and security of railway property and such other property as were entrusted to railways as carriers. Adequate preventive measures were taken to deal with criminals within the railway premises including workshops and stores depots. With the industrial development in the country and consequent increase in traffic, the responsibilities of the Railway Protection Force also increased necessitating some expansion in the strength of the Force.

The Force has continued to deal with security arrangements most effectively and were successful in combating crime and criminals. Co-operation with the State police and other sister departments has enabled the disposal of a number of important cases and close liaison with and active support to the police, continued for prevention and detection of crime. The Force has also continued to assist the civil and military authorities as necessary.

With a view to tackling the beggar problem and checking entry of unauthorised persons inside the railway premises, a special squad with a small staff was formed on some railways at certain important stations and this had a very salutary effect.

The dog squad on the Southern Railway continued to function with a strength of 4 dogs. Dogs were successfully associated in the investigation of an important theft case of house breaking in which property worth Rs. 10,000 was stolen. These dogs also earned distinction in the dog shows held at Bombay, Madras and Bangalore and won 18 prizes besides a championship certificate. The Central, the Western and the South Eastern Railways have also formed dog squads comprising of two dogs on each railway. Two dogs from the Western Railway with one sub-inspector and two handlers and one dog from the Central Railway received training on the Southern Railway.

Railway Protection Force has again participated in the Republic Day Parades both at the centre as well as in state capitals. In connection with the Railway Week celebrations at Delhi, a torch light tattoo was staged by members of the Force from all the railways. This tattoo was a great success.

166. Organisation.—The organisational set up of the Force has not undergone any change. The administration on the railways has remained with the Chief Security Officers under the supervision of General Managers and the Force continued to discharge their duties satisfactorily. The members of the Force have had to work under severe strain during the period of the strike by some of the Central Government employees in July 1960 and earned appreciation from civil authorities in assisting them in the maintenance of law and order. In addition to this, the Force on the Northeast Frontier Railway helped the State Government in Assam during the language disturbances and in combating the Naga trouble there by providing escorts to the trains for the safety of travelling public.

Training of men in the Force has continued to receive sustained attention. Initial training is being imparted to untrained members of the Force on almost all railways. The standard of this training is *at par* with that of police and military schools with greater emphasis on practical work. A new building named as 'Jagjivan Ram Railway Protection Force Training School' was completed and inaugurated in November 1960 at Lucknow on the Northern Railway.

The number of members who received training during the year under review is shown below :

Initial course	Refresher course	Promotion course	Instructional course
3,188	801	518	28

Booklets on law, guide and duty hints and commercial subjects were published for the benefit of the members of the Force by the Southern Railway during the year under review. These books have been found to contain useful material and arrangements are being made to publish them in the regional languages for the benefit of the staff.

Guarding of vulnerable installations, patrolling of important yards and escorting of goods and parcel trains in notorious sections were continued to be performed by the Armed Wing. Firing in self-defence by the Armed Wing staff had to be resorted to on 29 occasions during the year both on the open line and in station yards. In most cases the offenders shot dead, or injured were identified as confirmed and habitual railway criminals. The action of the Force in opening fire has been justified by the civil authorities almost in all cases.

"The Fire Services" under the executive control of the assistant security officer of the Region continued to work satisfactorily in dealing with cases of fire not only within the railway premises but also in the civil area. The members of this branch continued to receive training in special courses organised from time to time by the Ministry of Home Affairs at the Fire Services College, Nagpur.

167. Anti-sabotage measures.—There was no serious case of passenger train wrecking due to sabotage during the year. However, 113 cases of tampering with the railway track or signal wires were reported. The Chief Security Officers are extending their fullest co-operation and assistance in anti-sabotage measures whenever required by the State Police. During the strike in July 1960, patrolling of the track was introduced on certain railways and flying squads organised in the affected sections with a view to apprehending the culprits and liquidating their gangs.

168. Crime.—Despite the rise in traffic and certain unfavourable economic conditions in the country, crime position on the railways has remained static. There have been a number of detections leading to the arrests of criminals, and the amount of property recovered has been quite substantial.

In addition to the usual preventive measures for crime control, the Railway Protection Force intensified checks at transhipment, loading and unloading points. Steps were also taken to check cases of mis-declaration, underweighment, etc. Arrangements were made to depute staff in cognito to watch the suspected staff at goods, parcel offices, etc. Irregularities on the part of the staff so detected were reported to the departments concerned for suitable action.

The staff in the Central Crime Bureau of the Railway Board were deputed to organise raids and detect cases of inter-railway and inter-State importance. In one case, a notorious gang of criminals responsible for committing thefts from brake vans was detected and in another case, large quantities of coal and iron materials removed with the connivance of railway staff were recovered from the junk dealers.

The statement below gives the comparative figures of crime for the three years 1958-59, 1959-60 and 1960-61.

COMPARATIVE FIGURES OF THEFTS AND PILFERAGES FOR THE YEARS 1958-59, 1959-60 AND 1960-61

Year	Number of cases reported and registered	Value of property involved (in Rupees)	Value of property recovered (in Rupees)
(a) Running train thefts—			
1958-59	1,746	9,88,153	3,00,895
1959-60	1,351	9,04,488	2,80,086
1960-61	1,392	9,57,272	3,00,084
(b) Yard thefts—			
1958-59	1,046	3,90,185	1,25,687
1959-60	899	4,00,243	1,38,312
1960-61	743	3,67,610	1,21,693

Year	Number of cases reported and registered	Value of property involved (in Rupees)	Value of property recovered (in Rupees)
(c) Goods shed and platform thefts—			
1958-59	742	1,64,620	53,643
1959-60	704	1,74,979	52,753
1960-61	638	1,81,346	42,514
(d) Pilferages (Part consignments) in railway premises and from wagons—			
1958-59	3,443	11,24,068	21,702
1959-60	2,149	12,91,750	35,336
1960-61	3,697	19,64,561	21,812
(e) Theft of railway property from workshops and stores depots—			
1958-59	842	1,28,110	82,868
1959-60	802	2,29,028	80,853
1960-61	851	1,44,281	29,909
(f) Theft and damages to carriages ande lectrical fittings—			
1958-59	87,822	24,60,679	1,68,096
1959-60	68,471	25,55,635	2,13,882
1960-61	41,968	23,61,406	2,37,959
(g) Theft of cash in transit, embezzlement or mis-appropriation—			
1958-59	51	4,16,646	2,62,773
1959-60	58	68,975	12,450
1960-61	21*	84,968*	3,054*

*Excluding Nothern Railway figures being not available.

The crime on passenger trains also received due attention from the Railway Protection Force. Although the maintenance of law and order within the railway premises and in running trains is the responsibility of the State police, the Force played its part in supplementing the efforts of the Government Railway Police in this respect. The Inspector Generals of Police of the States were again requested to tighten up their security arrangements in running trains and railway premises. A meeting between the Chief Ministers of the States and the Railway Minister was held in January 1961, when special stress was laid on the prevention of heinous crimes in passenger trains. At this meeting, it was also agreed that the strength of the Government Railway Police should be augmented wherever needed. The mechanical device fitted in the ladies' compartments of some important trains for operation in case of emergency is still being experimented with. More details of this device are given in para 102 of this report.

The Public Co-operation Committee which was set up to devise ways and means to combat crime on railways had its final meeting during the year and its report is under preparation.

169. Vigilance Organisation.—The two branches—administrative and investigating—of the Vigilance Organisation of the Railway Board worked satisfactorily during this year. As in previous years, the Vigilance Directorate maintained effective liaison with the Ministry of Home Affairs, Administrative Vigilance Division and the Inspector General of Police, Special Police Establishment.

Special attention of the railways was invited towards lacunae in the departmental rules and procedures which were coming in the way of prevention of frauds, misappropriation of Government money, corruption, etc. Railways were directed to pay greater attention not only to the detection of cases but also towards expeditious finalization of departmental action against the staff at fault. In particular, cases referred to by the Special Police Establishment for departmental action received special attention.

On the investigation side, the Central Investigating Agency set up in 1956-57 for dealing with important cases and also to carry out independent investigations of complaints of corruption and bribery ordered by the Board, investigated 314 cases during the year. Four of these cases were referred to the Special Police Establishment, five cases were sent up to the Government Railway Police for further detailed investigations and 201 cases were referred to the various Railway administrations for taking appropriate action on the basis of the facts brought out.

The activities of the Vigilance Organisations on the Railways were intensified during the year under review. Special watch was kept at important stations, goods sheds, works centres and offices. Surprise checks and raids were also organised by the vigilance organisations to check and arrest leakages of revenue and as a result thereof, an amount of Rs. 2.41 lakhs was realized on various counts—ticketless travel, resale of used tickets, misdeclaration of goods, wharfage and demurrage charges, etc. Unobstrusive watch was kept on private sidings, third class booking counters and different reservation offices at big cities and action was taken on the observations.

The total number of staff engaged in vigilance work during the year on the Indian Railways was as follows :

Officers	30
Inspectors	81
Assistant Inspectors	38
Other ranks	188

At the beginning of the year, 2,726 cases (including 128 Special Police Establishment cases not included last year) were pending on the Railways and 2,719 were registered during the year making a total of 5,445 cases for disposal. Of these, 1,440 cases were dropped during the course of investigations as the allegations were found to be incorrect; departmental action was finalised in 1,809 cases and at the end of the year 2,196 cases remained pending. A table indicating the various penalties imposed during 1959-60 and 1960-61 in respect of both gazetted and non-gazetted staff, is given below:

Nature of punishment	1959-60		1960-61	
	Gazetted	Non-gazetted	Gazetted	Non-gazetted
Dismissal	—	40	—	65
Removal	4	160	—	153
Compulsory retirement	—	5	1	6
Reduction	2	101	4	93
Stoppage of increments, passes, etc.	1	580	4	515
Other punishment	10	389	18	293
	17	1,275	27	1,125

During the year, one contractor and 2 private firms were black listed for committing various irregularities.

The engineering vigilance cells on the various railways functioned effectively and organised regular and surprise inspections, checking of measurements, security of deeds, specifications, etc. Investigations carried out by these cells enabled the railway administrations to effect savings and to deal with delinquent officials for their negligence, ineffective supervision and other lapses.

The Railways continued to lay greater stress on the preventive side of the vigilance work with satisfactory results. In a number of cases, lacunae in rules and procedures which facilitated perpetration of frauds, overpayments, favouritism, etc., were detected and necessary preventive measures were adopted wherever considered necessary. These preventive activities resulted in better administrative control and also in a sense of awareness on the part of staff.

CHAPTER XI

AMENITIES TO PASSENGERS AND OTHER RAILWAY USERS

170. General.—The railway administrations continued to pay sustained attention to the provision of more and more amenities in station premises and on trains for the convenience of passengers and other railway users. Adequate funds are provided each year and works in this connection are specially programmed on a priority basis.

Sleeping accommodation in specially designed three tier coaches with equal number of berths and seats has been provided free of additional charge for the benefit of long distance passengers on 20 pairs of additional trains, fourteen broad gauge and six metre gauge, during the year.

171. Improved lower class coaches.—All passenger coaches are at present built to the latest design. 703 broad gauge, 358 metre gauge and 23 narrow gauge lower class coaches were placed in service and all of them were manufactured indigenously. Particulars of these coaches are given in para. 89 of chapter V *ante*.

172. Improvements to coaching stock.—Passenger coaches are being built to the latest design, providing better amenities for the passengers. The outturn of integral type III Class broad gauge coaches by the Hindustan Aircraft Limited and the Integral Coach Factory, Perambur during the year was 147 and 112 respectively. The Integral Coach Factory also turned out 66 broad gauge third class luggage-cum-brake van carriages, 125 three-tier and 25 two-tier broad gauge III class sleeper coaches. In addition to these, the Integral Coach Factory, who recently took up the manufacture of broad gauge integral type I Class corridor type coaches turned out 3 such coaches towards the end of March 1961. The special feature of these I class coaches is the corridor arrangement connecting 5 four berth compartments and 2 coupes which provide accommodation for 36/24 passengers to sit/sleep. It incorporates the 'anti-telescopic end construction' which reduces the possibility of telescoping in the event of an accident. It has also provision for future vestibuling.

During the year six broad gauge refrigerated vans which were constructed by the Central Railway in the Carriage and Wagon workshop at Matunga on behalf of the Ministry of Food and Agriculture for the transport of fish as well as other perishable commodities, were put into service. The refrigerating equipment for these vans was obtained by the Ministry of Food and Agriculture from abroad under the Technical Co-operation Mission Aid.

The increasing demand for III class sleeper coaches which have proved popular with the public was met during the year, by introducing these coaches on more long distance trains. Apart from the 3-tier coach which provides sitting and sleeping accommodation for all the passengers in a coach, an improved type of 2-tier coach has also been introduced. These 2-tier coaches are provided with Pliofoam cushions on the upper berths which are meant for sleeping only, the lower being for sitting. Whereas no extra charge is recovered from the passengers travelling over 800 kilometres in the 3-tier sleeper coaches, a fee of Rs. 3 per night is recoverable from passengers who choose to use the cushioned upper berths of the 2-tier sleeper coaches.

173. Booking offices, out agencies, street collection and delivery services.—The following out agencies were opened during the year under review:

Railway	Name of out-agency	Serving station	Date of opening	Traffic for which opened
Central	Akluj	Bhigwan	1 April 1960	Goods traffic in 'smalls' and wagon loads.
Northern	Joshimath	Kotdwara and Rishikesh.	16 May 1960	Parcels and goods.

Railway	Name of out-agency	Serving station	Date of opening	Traffic for which opened
Northern	Samrala	Khanna	1 July 1960	
	Rangharwala	Dehra Dun	1 July 1960	
	Jhajjar	Bahadurgarh, Rohtak and Rewari.	15 July 1960	
	Kuchaman Town	Kuchaman City	30 July 1960	
	Ladwa	Kurukshetra	3 October 1960	
	Pehowa	Kurukshetra	3 October 1960	
	Raikot	Ludhiana and Jagraon.	15 October 1960	Parcels and goods in 'smalls' and full wagon loads.
	Jhilmila Teharpur	Delhi Shadara, New Delhi, Delhi Lahori Gate, Delhi Sarai Rohilla and Ghaziabad.	15 October 1960	
	Baga Purana	Moga Tehsil and Kotkapura	19 October 1960	
	Shahpur	Muzaffarnagar	26 January 1961	
	Uttar Kashi	Rishikesh	20 March 1961	
Northeast Frontier.	Mangal Dai	Rowtabagan	15 May 1960	Goods, parcels, passengers, and luggage.
	Khetasar (altered name of Kharupatia).	Rowtabagan	15 May 1960	
	Chawak Bazar (altered name of Goalpara).	Bongaigaon	15 February 1961	Goods.
	Aijal	Silchar	14 March 1961	Goods (Inward).
Southern	Gajendragad	Gadag	1 August 1960	Parcels and goods.
	Turuvekere	Banasandra	10 August 1960	
	Gadhinglaj	Ghatprabha	1 September 1960	
	Mahalingpur	Chikodi Road	10 September 1960	
	Yercaud	Salem Market	30 September 1960	
	Shertallai	Cochin Harbour Terminus.	18 October 1960	
	Malkapur (Shahuwadi).	Kolhapur	5 January 1961	
	Manantavadi	Tellicherry	6 February 1961	
	Markapur Town	Markapur Road	6 March 1961	
South Eastern	Kondagaon	Dhamtari	1 April 1960	Parcels and goods.
	Aska	Berhampur (Ganjam)	1 May 1960	
	Bilaspur	Bilaspur	19 August 1960	
	Phulbani	Berhampur (Ganjam)	22 August 1960	
	Surguja	Manendragarh	12 September 1960	
Western	Rajgarh	Indore	1 May 1960	Parcels and goods.
	Khargone	Sanawad	15 August 1960	
	Sheoganj (Sumerpur)	Erinpura Road	3 October 1960	
	Sojat City	Sojat Road	21 October 1960	

The following City Booking Agencies were opened during the year under review :

Railway	City booking agency	Serving station	Date of opening	Traffic for which opened
Central	Bhopal	Bhopal	15 November 1960	Goods and parcels.
Northern	Sonepat	Sonepat	25 June 1960	Passengers, (outward) parcels and goods, in 'smalls'.
	Nangal Township	Nangal	10 January 1961	

Railway	City booking agency	Serving station	Date of opening	Traffic for which opened
Eastern	Salkea	Howrah	15 September 1960	Passengers, luggage and parcels.
Northeast Frontier.	Mangal Bazar	Katihar	28 May 1960	Passengers and luggage with owner.
Southern	Cannanore	Cannanore	22 December 1960	Parcels and goods (outward) in local booking only. From 2 January 1961 opened for through booking also.

The following out agencies were closed during the year under review:

Railway	Name of out-agency	Serving station	Date from which closed
Central	Akluj	Bhigwan	1 January 1961.
Northern	Jhajjar	Bahadurgarh, Rohtak and Rewari.	1 January 1961.
Southern	Mahabaleshwar	Wathar	1 August 1960.
	Panchganj		
	Wai		
	Kalpatta	Calicut	1 February 1961.
	Chundale		
	Tiruppathur	Karaikkudi	1 March 1961.
Western	Jhabua	Meghnagar	30 June 1960.
	Ranapur		
	Rajgarh	Indore	15 September 1960.
	Kekri	Nasirabad (closed for passengers and luggage traffic only).	15 October 1960.
	Deoli		

The following City Booking Office was closed during the year under review:

Railway	City booking agency	Serving station	Date of closing
Central	Agra	Agra Cantt.	31 March 1961.

The following City Booking Agencies were closed during the year under review:

Railway	Name of city booking agency	Serving station	Date from which closed
South Eastern	Tatanagar	Tatanagar	21 June 1960.
	Tatanagar (Sakchi)		

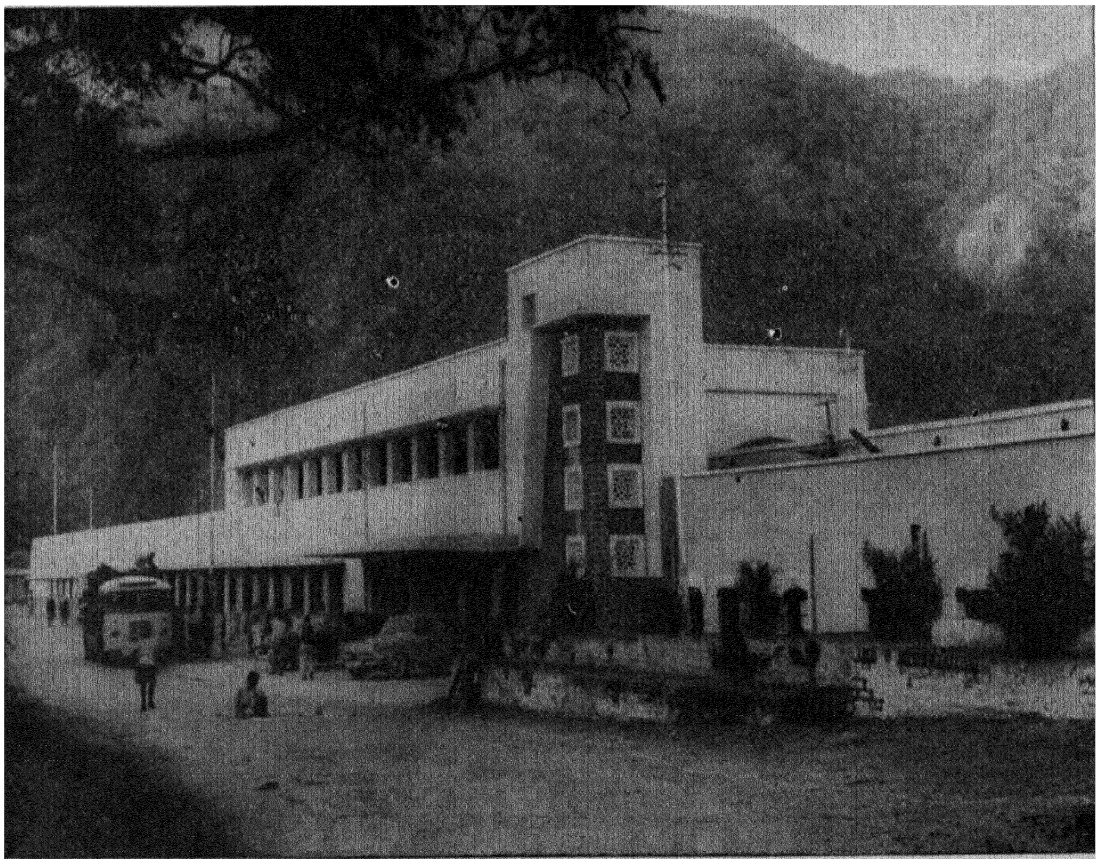
Street Collection and Delivery Services.—With a view to providing an integrated rail-cum-road service to the public, street collection and delivery services for parcels and goods were introduced on the Indian Railways and the particulars of such services in vogue on 31 March 1961 are given below:

Railway	Name of Station	Nature of service
Central	Bombay V. T.	Home delivery service for parcels and luggage.
	Poona	Home delivery service for parcels only.
	Bhopal	Street collection and delivery services for parcels and goods.
Eastern	Calcutta (*via* Howrah)	Street collection and delivery service for Eastern Railway goods and parcels traffic and South Eastern Railway parcels traffic only.
	Calcutta (*via* Sealdah)	Street collection and delivery service for Eastern Railway goods and parcels traffic.
	Patna (*via* Patna Jn. and Patna City).	Street collection and delivery service for goods and parcels.



THE NEW SUBURBAN WING OF THE HOWRAH STATION OPENED ON 14 APRIL, 1960—EASTERN RAILWAY

A VIEW OF THE REMODELLED STATION BUILDING OF KATHGODAM—NORTH EASTERN RAILWAY



Railway	Name of Station	Nature of service
Northern	Kanpur	Street collection and delivery service for parcels.
	Ludhiana	
	Allahabad	
Southern	Bangalore	Street collection and delivery service for parcels and goods.
	Calicut	
	Ernakulam	
	Madras	
	Yercaud (*via* Salem)	
	Madura	Collection service for parcels and goods and street delivery for parcels.
	Trichur	Collection service for parcels and street delivery for parcels and goods.
	Bellary	Street delivery for parcels.
	Belgaum	
	Coimbatore	Street delivery for parcels and goods.
	Dindigul	Street delivery for parcels.
	Gadag	
	Hubli	
	Kolhapur	
	Kumbakonam	
	Mangalore	
	Ootacamund	
	Tiruchchirappalli	
	Vellore	
	Tellicherry	Street delivery for parcels and goods.
	Mayuram	Street delivery for parcels.
	Vijayawada	Street delivery for parcels and goods.
	Tiruchchirappalli Town	Street delivery for parcels.
	Tiruchchirappalli Fort	Street delivery for parcels and goods.
Western	Bombay	Street delivery and collection service for parcels.
	Surat	Street delivery for parcels.
	Ahmedabad	Street collection and delivery service for parcels and goods.
	Jaipur	Street collection and delivery service for parcels and goods.
	Indore	
	Ratlam	

Note.—With effect from 1 September 1960 the system of Street Delivery and Collection of parcels at Ernakulam Junction and Ernakulam Town and goods at Ernakulam Junction was temporarily suspended.

174. Waiting Rooms and Waiting Halls.—Improvements were effected to many of the existing working facilities at stations and new waiting rooms and waiting halls were constructed at a number of stations during the year under review. Some of the more important works carried out are detailed below:

Central Railway.—Waiting halls were provided at Dabhaura, Gwalior, Damoh and Bharwasagar. Provision of waiting halls/waiting rooms was in progress at Agra, Kinwat, Vasind, Akolner and Nurabad.

Additions, alterations and/or improvements to the existing waiting halls/waiting rooms were completed at Purli-Vaijnath, Vrindaban Road, Orai, Aurangabad and 17 other stations, while the work is in progress at 14 stations including Khandwa, Saugor, Nander and Manmad.

Eastern Railway.—Waiting halls were provided at Bazar Sohu, Brace Bridge, Dhanbad, Gahmar, Jiaganj and Takipur.

The existing waiting room at Durgapur was improved.

Northern Railway.—Waiting halls were provided at Bidiad, Surpura, Atrauli Road and seven other stations, while the work was in progress at Amin, Kesri Singhpur, Madhoganj and Todarpur. Extension to waiting halls were carried out at Degana, Nagaur and Sujangarh while the work was in progress at Didwana and Bhiwani.

North Eastern Railway.—Waiting halls were provided at Mairwa, Kachla Bridge, Rawatganj and four other stations, while works were in progress at 18 other stations. The existing waiting hall at Parkham was extended and the works of extensions were in progress at Tarsarai and Behariganj.

Waiting rooms were provided at Kachla Bridge, Pilibhit and Nautanwa and the work was in progress at Jankinagar, Behariganj and Haldwani. Extension to the waiting room at Kaimganj was carried out. Waiting rooms for merchants in goods sheds were provided at Pilibhit and Kaimganj, while works were in progress at three stations, including Raxaul.

Northeast Frontier Railway.—Waiting halls were provided at Manihari, Barahapjan, Tangla, Langting, Maibong, Haflong Hill and thirteen other stations.

Waiting rooms were provided at Jorhat Town, Ranipatra and Margherita.

Southern Railway.—Waiting halls were provided at Kuruvapalam, Mannampandal, Tiruverambur and seven other stations. Extension to waiting halls were carried out at Badami, Tiruchchirappalli, Punalur, Varkala, Cocanada Town and nine other stations.

Waiting rooms were provided at Ambaturai, Madurai East, Badami, and Badagar (Ladies). A third class waiting room for ladies was provided at Feroke.

South Eastern Railway.—Waiting halls were provided at Sadashibpur, Rajim, Barabil and three other stations, while the works were in progress at Indrabil, Jankadeipur, Dumitra, Jerradih, Gatora and seven other stations.

The work of providing a waiting room at Kendrapara Road was in progress.

Western Railway.—Waiting halls were provided at Petlad, Mavli Junction, and Kadiadra, while the work was in progress at seven stations including Bharatpur (Ladies). Extensions to waiting halls were carried out at Agra Fort, Dabla and Patan. Waiting hall for traders was provided at Bharatpur.

Waiting room was provided at Baran, while at Nimbahera and Gulabpura the waiting rooms were under construction.

175. Additional platforms and sheds.—Attention continued to be paid to the various works in connection with the extensions and improvements to the existing platforms, additional platforms and provision of sheds and covers at a number of stations on different railways. A brief summary of the progress made in this connection is indicated below:

Central Railway.—Raising, lengthening or widening of platforms was carried out at Manmad, Seram, Gwalior and eight other stations, while the works were in progress at Nandura, Bodwad and Sanatnagar.

Additional platforms were provided at Dombivli.

Cover over platforms was provided at Bhopal and Saugor, while the work was in progress at seven stations including Thana, Hyderabad and Jhansi.

Surfacing of platforms was completed at seven stations and the work was in progress at Nander.

Eastern Railway.—New platforms were provided at Agarpara, Belgharia, Kajoragram, Kankinara and six other stations.

Cover over the platforms were provided at Agarpara, Anugraha Narayan Road, Barkakana, Durgapur and Waria.

Northern Railway.—Additional platforms were provided at seven stations including Bahjoi, Sonepat, and Didwana.

The work of raising/extending the platforms was carried out at Mirzapur, Gajraula, Bhadan and four other stations, while that of extending the platforms was in progreess at Kalayat.

Covers over platforms were provided at Jind, Charkhi Dadri, Bikaner and three other stations while the work was in progress at Amethi, Narela and Barnala.

North Eastern Railway.—Additional platform was provided at Rafinagar and the work was in progress at four stations including Saharsa and Pilibhit.

Raising, extending or improvements to platforms were carried out at Govindnagar, Bisalpur, Parkham and six other stations, while the work was in progress at 16 stations including Fatehgarh, Samastipur, Aunrihar Junction, Haldwani and Pilibhit.

The work of providing cover over platforms was in progress at Mairwa, Laheriasarai, Indara and Siwan Katchery. The platform shed at Kamalganj was extended and this was in progress at four stations, *viz.*, Chupra, Gorakhpur, Raxaul and Karimganj.

Northeast Frontier Railway.—Raising/surfacing of platforms were carried out at Panbari, Moirabari, Naharkatiya, Sibsagar Town and Dibrugarh.

Covers over platforms were provided at Rangapara North, Moirabari, Margherita, Nahar Katiya and Sibsagar Town.

Southern Railway.—Raising, lengthening or surfacing of platforms were carried out at 10 stations including Chinnaganjam, Hindupur, and Dhanuskodi.

Sheds/covers over platforms were provided at Dhanuskodi Pier, Bangalore City, Annavaram and eight other stations.

South Eastern Railway.—Additional platforms were provided at Balugaon, Chandiposi and Rourkela, and the work was in progress at 10 stations including Akaltara and Burhar.

Platform sheds were provided at Khallikota, Muniguda and Galudih and the work was in progress at Bhubaneswar.

Western Railway.—Medium level platform was provided at Kelva Road and that at Karambele was in progress. Platforms were also under construction at Uttarsanda and Mhow.

Raising, extending or asphalting of platforms were completed at Marwar Junction, Petlad, Jaora and 4 other stations, while the work was in progress at 37 stations and the platforms of the stations between Virar and Churchgate were being extended.

The platform at Ashoknagar was provided with a cover and waiting sheds were extended at Sankheda, Bahadarpur, Velachha and Tankhala.

176. Reservation facilities.—As usual, reservation of seats and berths for the air-conditioned class, first class and third class sleeping berths was arranged on all the trains on which such accommodation was provided.

Reservation of seats in second and third classes was done on certain mail and express trains only.

Arrangements have been made for reservation of berths for return journeys and from outstations in air-conditioned and first classes on the following basis:

(*a*) reservations can be secured from outstations by remitting to the station masters concerned Rs. 22 in the case of first class and Rs. 42 in the case of air-conditioned class.

(*b*) reservations can be arranged for return journey at the starting station itself by purchasing return journey tickets on payment of two single journey fares *plus* a sum of Rs. 2 towards cost of telegram.

Railway Administrations were also directed to adopt the following measures for improving the arrangements of reservations from intermediate stations:

(i) Installation of voice frequency transmission teleprinter circuit at important trunk points between Delhi-Calcutta, Delhi-Bombay, Bombay-Madras and Madras-Calcutta.

(ii) Use of Administrative trunk teleprinter, wherever available; and

(iii) Fixed time ordinary calls on posts and telegraph trunk system.

The accommodation available in trains continued to be short of demand.

177. Catering arrangements.—Departmental catering is over 50 years old on Indian Railways. It now obtains at 102 stations and 21 Dining/Buffet cars. Departmental catering on all Railways has been introduced with a view to setting a model for quality of food and service being made available to the passengers at reasonable prices. Departmental catering has become popular and the sales have risen from Rs. 108 lakhs in 1956-57 to Rs. 283 lakhs in 1960-61. During the year, additional steps were taken to realise the objective of departmental working of catering establishments on 'no profit no loss' basis; the steps taken have resulted in considerable improvement of the financial position of departmental catering and within the course of two or three years, this organisation is expected to be self-sufficient. While the food served in departmental catering establishments has been generally appreciated by the public as wholesome, there have been some complaints relating to the service aspect. This matter has received special attention and various measures taken in this regard include special selection in the appointment of cooks, training of the staff, use of superior type of furniture and equipment, introduction of electrical and modern appliances, provision of adequate and neat uniforms to the staff, and tightening up of supervision of departmental catering establishments through inspections by railway officers as well as by non-official committees specially appointed for the purpose.

Several steps which were taken to improve the standards of departmental catering establishments influenced the catering contractors also in their efforts to catch up with the quality of food served and service rendered in the departmental establishments.

With a view to ensuring adequate supervision by the contractors so as to provide better service to the public, it has been decided to reduce their holdings to a manageable size, namely, four units including static and mobile establishments. Accordingly, the holdings of larger contractors are being reviewed and reduced by the railway administrations so as to conform to the limits prescribed.

178. Sale of cheap food packets.—For the convenience of the passengers, fresh cheap hygienic food packets—vegetarian and non-vegetarian—are made available for sale at important stations.

Food packets consisting of curd/sambhar rice, mutton biryani, vegetable pulao, curd bath, tamarind rice, dal-puri, chuna curry, chapaties, kima stuffed parota, chapaties with vegetable, bhujia and sweetmeat, and other snack packets such as cashewnuts, pakoras, potato chips, etc., have become popular.

179. Arrangemeents for the sale of milk.—Milk bars have been opened at stations where good milk is locally available.

Sustained attention continues to be paid for making good milk available to the travelling public. Train-side vending of milk has also been strengthened. Besides, sale of milk has been included in the tariff of catering establishments at stations.

180. Supply of drinking water.—Adequate arrangements were continued to be made by railway administrations for the supply of cool and wholesome drinking water to passenger both at stations and in moving trains.

Additional watermen were appointed to meet the needs of passengers during the summer months.

51 additional electric coolers were provided at certain important stations during 1960-61, bringing the total number of water coolers on the railways to 884.

181. Action taken to maintain cleanliness of station premises.—Railway administrations continued to pay attention to maintain standards of cleanliness on railway patforms and in station premises. During the Railway Week celebrations held in April, 1961, a special sanitation and cleanliness drive was also launched.

The scheme of award of half-yearly cash prizes and certificates for the best kept stations which provided a good incentive to the staff was continued during the year under review. The co-operation of the travelling public was also enlisted through exhibition of posters, sign-boards and through announcements on public address system.

182. Social education.—The social education campaign on the Indian Railways continued to be carried on through the media of posters, films, loudspeakers and public address system fitted in one of the rakes of the Air-conditioned Express trains running between Howrah-New Delhi-Madras. Relays of All India Radio news and playing of tape-recorded music were introduced in this rake for the entertainment of the travelling public.

A special campaign was arranged by the Southern Railway by way of exhibition of cinema slides for a period of six months. The pictorial slides included subjects relating to 'Arriving at booking window at stations in time' and 'Discouraging beggars and hawkers'.

Loudspeakers were installed at four more stations.

183. Steps to alleviate overcrowding in trains.—The progressive increase in passenger train kilometrage achieved on the Indian Government Railways during the first and second Five Year Plans is indicated below:

Year	Passenger train kilometres (millions)	
1951-52	169	First five-year plan.
1952-53	172	
1953-54	179	
1954-55	183	
1955-56	187	
1956-57	192	Second five-year plan.
1957-58	195	
1958-59	198	
1959-60	201	
1960-61	204	

During the Second Five Year Plan, against the overall provision for an annual increase of 3 per cent in passenger transport capacity, the actual increase in passenger traffic has been about five per cent. This increase has been catered for mainly by retention of overage stock in service with proper repairs. In the Third Five Year Plan, provision for an increase of 15 per cent in passenger traffic has been made.

Census of occupation of trains in Third Class (non-suburban trains) is being taken on all Railways to ascertain the extent of overcrowding on different trains and over different sections. The census taken during 1960 as compared to 1955 showed that the overcrowding on the metre gauge had dropped appreciably from 30 per cent to 11 per cent and on the broad gauge from 16 per cent to 13 per cent. The disparity in overcrowding between the two gauges has thus been considerably evened out.

184. Actual Expenditure out of Development Fund under detailed heads on passenger and other railway users' amenities.—The statement below gives the actual expenditure during 1960-61 on passengers and other railway users' amenities:

ACTUAL EXPENDITURE ON PASSENGERS AND OTHER RAILWAY USERS' AMENITIES OUT OF DEVELOPMENT FUND

(Figures in thousands of rupees)

Heads of expenditure	Central	Eastern	Northern	North Eastern	Northeast Frontier	Southern	South Eastern	Western	Total
Water supply at stations, etc.	2,87	4,15	1,84	2,80	1,56	1,45	6,96	3,03	24,66
Retiring rooms and waiting accommodation, etc.	2,02	2,52	2,86	3,93	3,57	3,83	1,41	1,59	21,73
Refreshment rooms and vendors' stalls of all description	3,05	89	45	69	1,01	2,02	6	8	8,25
Provision or improvement of latrines	1,34	87	1,41	1,00	87	1,02	1,02	84	8,37
Extending, raising and widening, surfacing, covering or other improvements *including* provision of seats, plantation, etc., at platforms	4,32	8,44	5,98	6,82	3,43	7,42	12,51	23	49,15
Provision of new overbridges, sub-ways and extensions	1,11	46	2,35	35	97	1,32	4,81	1,46	12,83
Provision of bathing facilities at stations	8	42	14	20	4	6	..	..	94
Improvement of approaches and circulating areas at stations *including* tube lighting	4,42	24	65	1,20	40	84	2,36	3,07	13,18
Improvement to existing carriages, such as, fans, etc.	55	4,27	10,87	1,99	2,15	9,70	1,76	9,09	40,38
Improved lighting and provision for fans on station, platforms or in waiting halls and vendors' stalls	2,38	2,90	1,58	3,07	68	2,56	3,23	4,17	20,57
Washable aprons on passenger platforms lines	..	1	57	40	1	..	3	1	1,03
Opening of new flag stations or conversion of halts into flag stations	10	64	1,32	73	1,00	45	27	1,06	5,63
Provision of fire fighting arrangements or equipments at stations, etc.	..	..	..	..	..	..		..	..
Provision of coal dumps at transhipment points	..	..	..	..	..	..	..	..	..
Exhibition of sheet time tables at stations	..	23	..	1	..	5	..	..	29
Works coming under all these heads provided in connection with *melas*	..	..	67	..	..	..	87	..	1,54
Any other works considered essential for meeting the requirements of railway users	2,86	5	(—)35	10,54	1,05	1,99	67	2,26	19,07
Conversion of narrow gauge lines into metre gauge or broad gauge ones	..	..	..	..	..	..	..	..	..
Credits for released materials	(—)2	..	..	..	..	..	..	..	(—)2
Miscellaneous improvement, namely, provision of seats, hedges, shady trees, etc.	6,39	2,26	4	26	..	3,14	3,16	69	15,94
Erroneous adjustment	..	..	..	..	..	..	..	..	..
Total .	31,53	28,35	30,38	33,99	16,74	35,85	39,12	27,58	2,43,54

CHAPTER XII

ACCIDENTS

185. Major accidents.—The details of major accidents which occurred during the year are given below:

On 8 May 1960, at about 21.30 hours, 213 Up Delhi-Ajmer Passenger train on being wrongly admitted into the Gurgaon-Garhi Harsaru block section, ran into the 93 Up Delhi-Jodhpur Mail train that was standing clear of the up outer signal at Garhi Harsaru resulting in the death of 9 persons and injuries to 11. The approximate cost of damage to railway property was Rs. 2,50,000. The Government Inspector held that the collision was caused by the violation of rules by the railway staff.

In the early hours of 8 July 1960, owing to rush of *mela* traffic, some passengers managed to climb on the roofs of the coaches of 12 Up Kumaon Express at Hathras station on the North Eastern Railway. While the train was passing over the Yamuna Bridge, on its way to Mathura Cantonment, these passengers were hit by the top bracings of the bridge, resulting in the death of 25 and injuries to 3 persons. According to the Government Inspector's findings, the accident was the result of the rash and irresponsible behaviour of the passengers themselves.

On 8 March 1961, at about 02.57 hours, while No. 24 Down Amingaon-Maniharighat Passenger train was being received on line No. 2 of Telta station of the Northeast Frontier Railway, it collided head-on with No. 705 Goods train which was already standing on the same line. This collision resulted in the death of 12 persons and injuries to 38 others. The cost of damage to railway property amounted to Rs. 17,500. According to the findings of the Government Inspector, the accident was due to the violation of rules by the railway staff.

186. Review of accident statistics.—The following statement analyses, under certain principal heads, the accidents which occurred during the last two years. The character and extent of these accidents in greater details for each railway will be found in Statement 41 of Volume II of this Report.

ACCIDENTS DURING 1959-60 AND 1960-61 CLASSIFIED UNDER PRINCIPAL HEADS—ALL RAILWAYS (INCLUDING NON-GOVERNMENT RAILWAYS)

ACCIDENTS TO TRAINS	1959-60	1960-61
I. Collisions*—		
(1) Collisions involving passenger trains	30	36
(2) Collisions involving goods trains or goods vehicles	103	124
(3) Collisions between light engines	7	3

NOTE*—According to the change in the definition made in 1960-61, even collisions of trains with trollies are treated as "collisions to trains". The comparable figures of the number of collisions during 1960-61 on the basis of the old definition were as follows :—

(1) Collisions involving Passenger trains	25
(2) Collisions involving Goods trains	100
(3) Collisions between Light Engines	2

II. Derailments—		
(4) Derailments of passenger trains	206	226
(5) Derailments to other than passenger trains	1,385	1,344
III. Failure of engines and rolling stock—		
(6) Failure of engines owing to faulty design, material or workmanship in the mechanical department	1,036	1,119
(7) Failure of engines owing to faulty material, workmanship or operation arising from the working of the running staff	2,173	1,990
(8) Failure of couplings and draft gear	1,386	1,318
(9) Failure of axles	7	7
(10) Failure of brake apparatus	1	1
(11) Failure of tyres and wheels	1	—
(12) Other rolling stock failures	237	208

	1959-60	1960-61
IV. Failure of permanent way—		
(13) Broken rails	67	132
(14) Failure of bridges, tunnels, etc.	3	—
(15) Flooding of portions of permanent way	120	94
(16) Landslips	73	56
V. Fires—		
(17) Fires in trains, at stations and bridges	329	436
VI. Other accidents—		
(18) Passenger trains running in the wrong direction through points but not derailed	20	9
(19) Train wrecking	11	20
(20) Attempted train wrecking	122	160
(21) Trains running into road traffic at level crossings	136	183
(22) Running over obstructions (other than those included under 'train wrecking', 'attempted train wrecking' and 'trains running into road traffic at level crossings')	111	109
(23) Running over cattle	1,391	1,341
(24) Miscellaneous	155	170
(25) Total (items 1 to 24)	9,110	9,086

The comparative figures given above reveal that the year under review has registered an improvement over the previous year in as much as the total number of accidents in 1960-61 was less by 24, despite an increase in train kilometres to the extent of 7.5 million. The number of accidents falling under the categories—failure of engines owing to faulty material, workmanship or operation arising from the working of the running staff, failure of couplings and draft gear, running over cattle, derailments not involving passenger trains, collisions between light engines, flooding of portions of permanent way, landslips, passenger trains running in the wrong direction through points, but not derailed and other rolling stock failures decreased in 1960-61 as compared with 1959-60. The incidence of accidents due to fires in trains, at stations and bridges, derailments of passenger trains, trains running into road traffic at level crossings, train wrecking and attempted train wrecking, collisions involving goods as well as passenger trains, broken rails, failure of engines owing to faulty design, material and workmanship in the mechanical department and miscellaneous recorded an upward trend. The position in regard to the accidents falling under the remaining categories remains more or less static.

The percentage of the accidents under important categories to total are given below in the descending order:

	Per cent
Failure of engines owing to faulty material, workmanship or operation arising from the working of the running staff	22
Running over cattle	15
Failure of couplings and draft gear	15
Derailments not involving passenger trains	15
Failure of engines owing to faulty design, material or workmanship in the mechanical department	12
Fires in trains, at stations and bridges	5
Other rolling stock failures	2
Derailments of passenger trains	2
Miscellaneous	2

The number of passengers, Railway servants and other persons killed and injured in accidents on Indian Railways, exclusive of casualties in railway workshops, during 1960-61, as compared with the previous year, is shown in the table below:

NUMBER OF PERSONS KILLED AND INJURED IN ACCIDENTS ON ALL RAILWAYS DURING 1959-60 AND 1960-61 (INCLUDING NON-GOVERNMENT RAILWAYS)

Classification	Killed		Injured	
	1959-60	1960-61	1959-60	1960-61
A.—Passengers—				
(a) In accidents to trains, rolling-stock, permanent ways, etc.	4	28	339	253
(b) In accidents caused by movement of trains and railway vehicles exclusive of train accidents.	393	411	3,065	3,062
(c) In accidents on railway premises in which the movement of trains, vehicles, etc., was not concerned.	5	13	76	18
TOTAL	402	452	3,480	3,333
B.—Railway servants—				
(a) In accidents to trains, rolling-stock, permanent way, etc.	15	11	260	270
(b) In accidents caused by the movement of trains and railway vehicles exclusive of train accidents.	246	252	6,203	6,006
(c) In accidents on railway premises in which the movement of trains, vehicles, etc., was not concerned.	40	49	22,052	20,401
TOTAL	301	312	28,515	26,677
C.—Other than passengers and railway servants—				
(a) In accidents to trains, rolling stock, permanent way, etc.	18	36	107	273
(b) In accidents caused by movement of trains and railway vehicles, exclusive of train accidents.*	256	286	79	181
(c) In accidents on railway premises in which movement of trains, vehicles, etc., was not concerned.	58	39	63	44
TOTAL	332	361	249	498
GRAND TOTAL	1,035	1,125	32,244	30,508

*Excluding trespassers and suicides, details of which are set out below:

	Killed		Injured	
	1959-60	1960-61	1959-60	1960-61
Trespassers	3,973	4,063	1,964	2,041
Suicides	385	314	49	37
TOTAL	4,358	4,377	2,013	2,078

With regard to casualties in 1960-61, when compared with those of 1959-60, there has been a marked improvement in the number of persons injured, the figures having gone down by 147, in case of passengers and 1,838 in case of railway servants. The number of passengers and railway servants killed, however, increased by 50 and 11 respectively.

As regards the incidence of casualties to persons other than passengers and railway servants, there has been an increase of 48 under the column killed and of 268 under injured in accidents to trains, rolling stock, permanent way, etc., and also in accidents caused by the movement of trains and railway vehicles exclusive of train accidents. On the other hand, improvement has been registered in respect of casualties on account of accidents in railway premises in which movement of trains, vehicles, etc., was not concerned; the number of killed and injured having decreased by 19 each under the two categories.

The following statement shows the number of passengers killed and injured in train accidents only, *i.e.*, collisions, derailments, etc., during the last five years as compared with the number ot passengers originating:

NUMBER OF PASSENGERS KILLED AND INJURED IN TRAIN ACCIDENTS ON ALL RAILWAYS FROM 1956-57 TO 1960-61 (INCLUDING NON-GOVERNMENT RAILWAYS)

Year	No. of passengers originating (in million)	Killed		Injured	
		Number@	Per million passengers	Number@	Per million passengers
1956-7	1,383	276	0·20	335	0·24
1957-8	1,430	77	0·05	504	0·35
1958-9	1,441	39	0·03	315	0·22
1959-60	1,528	4	0·002	286	0·19
1960-61	**1,616**	**28**	**0·02**	**253**	**0·16**

@ Excludes train wrecking and attempted train wrecking.

On the Government Railways, the main causes for the accidents to railway servants caused by the movement of trains and railway vehicles, exclusive of train accidents, are analysed in the following table:

CLASSIFICATION OF ACCIDENTS TO RAILWAY SERVANTS ON GOVERNMENT RAILWAYS

Cause	Killed		Injured	
	1959-60	1960-61	1959-60	1960-61
(1) Misadventure or accidental	240	245	6,142	5,970
(2) Want of caution or misconduct on the part of the injured person	4	3	43	31
(3) Want of caution or breach of rules, etc., on the part of railway servants other than the persons injured	2	4	9	..
(4) Defective systems of working, dangerous places, dangerous conditions of work or want of rules or systems of working	..	..	3	1
(5) Defective apparatus appliances, etc., or want of sufficient appliances, safeguards, etc.	..	..	1	1
TOTAL	246	252	6,198	6,003

Accidents in railway workshops accounted for 7 deaths and injuries to 20,843 railway servants which mean a decrease of 7 in the former and 1,766 in the latter as compared with the previous year.

187. Claims settled by the *ad hoc* claims commissioners and *ex-officio* claims commissioners.—No *ad hoc* claims commissioners were appointed during the year. Eighty two claims were dealt with by the *ex-officio* claims commissioners including 37 cases (revised figure) pending on 1 April 1960. Out of these 82 claims, 11 claims were rejected and 32 involving a payment of Rs. 97,958 were settled. Thirty nine cases were outstanding at the end of the year.

APPENDIX A

Resolution regarding the separation of Railway from General Finance, adopted by the Legislative Assembly on 20 September 1924 and Convention Resolutions of 1943, 1949, 1954, 1959 and 1960.

"This Assembly recommends to the Governor General in Council that in order to relieve the general budget from the violent fluctuations caused by the incorporation therein of the railway estimates and to enable railways to carry out a continuous railway policy based on the necessity of making a definite return to general revenues on the money expended by the State on Railways.

(1) The railway finances shall be separated from the general finances of the country and the general revenues shall receive a definite annual contribution from railways which shall be the first charge on the net receipts of railways.

(2) The contribution shall be based on the capital at charge and working results of commercial lines and shall be a sum equal to one per cent on the capital at charge of commercial lines (excluding capital contributed by companies and Indian States) at the end of the penultimate financial year *plus* one-fifth of any surplus profits remaining after payment of this fixed return, subject to the condition that, if in any year railway revenues are insufficient to provide the percentage of one per cent on the capital at charge, surplus profits in the next or subsequent years will not be deemed to have accrued for purposes of division until such deficiency has been made good.

The interest on the capital at charge of, and the loss in working, strategic lines shall be borne by general revenues and shall consequently be deducted from the contribution so calculated in order to arrive at the net amount payable from railway to general revenues each year.

(3) Any surplus remaining after this payment to general revenues shall be transferred to a railway reserve, provided that if the amount available for transfer to the railway reserve exceeds in any year three crores of rupees only two-thirds of the excess over three crores shall be transferred to the railway reserve and the remaining one-third shall accrue to general revenues.

(4) The railway reserve shall be used to secure the payment of the annual contribution to general revenues; to provide, if necessary, for arrears of depreciation and for writing down and writing off capital; and to strengthen the financial position of railways in order that the services rendered to the public may be improved and rates may be reduced.

(5) The railway administration shall be entitled, subject to such conditions as may be prescribed by the Government of India, to borrow temporarily from the capital or from the reserves for the purpose of meeting expenditure for which there is no provision or insufficient provision in the revenue budget subject to the obligation to make repayment of such borrowings out of the revenue budgets of subsequent years.

(6) A standing Finance Committee for Railways shall be constituted consisting of one nominated official member of the Legislative Assembly who should be chairman and eleven members elected by the Legislative Assembly from their body. The members of the Standing Finance Committee for Railways shall be *ex-officio* members of the Central Advisory Council, which shall consist, in addition, of not more than one further nominated official member, six non-official members selected from a panel of eight elected by the Council of State from their body and six non-official members selected from a panel of eight elected by the Legislative Assembly from their body.

The Railway Department shall place the estimate of railway expenditure before the Standing Finance Committee for Railways on some date prior to the date for the discussion of the demand for grants for railways and shall, as far as possible, instead of the expenditure programme revenue show the expenditure under a depreciation fund created as per the new rules for charge to capital and revenue.

(7) The railway budget shall be presented to the Legislative Assembly if possible in advance of the general budget and separate days shall be allotted for its discussion, and the Member in charge of Railways shall then make a general statement on railway accounts and working. The expenditure proposed in the railway budget, including expenditure from the depreciation fund and the railway reserve, shall be placed before

the Legislative Assembly in the form of demands of grants. The form the budget shall take after separation, the detail it should give and the number of demands for grants into which the total vote shall be divided shall be considered by the Railway Board in consultation with the proposed Standing Finance Committee for Railways with a view to the introduction of improvements in time for the next budget, if possible.

(8) These arrangements shall be subjected to periodic revision but shall be provisionally tried for at least three years.

(9) In view of the fact that the Assembly adheres to the resolution passed in February 1923, in favour of State management of Indian Railways, these arrangements shall hold good only so long as the East Indian Railway and the Great Indian Peninsula Railway and existing State-managed railways remain under State management. But if inspite of the Assembly's resolution above referred to Government should enter on any negotiations for the transfer of any of the above railways to Company management, such negotiations shall not be concluded until facilities have been given for a discussion of the whole matter in the Assembly. If any contract for the transfer of any of the above railways to company management is concluded against the advice of the Assembly, the Assembly will be at liberty to terminate the arrangements in this Resolution.

Apart from the above convention this Assembly further recommends—

(i) that the railway services should be rapidly Indianised, and further that Indians should be appointed as Members of the Railway Board as early as possible, and

(ii) that the purchases of stores for the State Railways should be undertaken through the organization of the Stores Purchase Department of the Government of India."

Convention Resolution of 1943

The Legislative Assembly on 2 March 1943 passed the following resolution:

"Whereas it has been found that the Convention, which was adopted under the Assembly Resolution, dated 20 September 1924, and which was intended to relieve the General Budget from violent fluctuations caused by the incorporation therein of the railway estimates and to enable railways to carry on a continuous railway policy based on the necessity of making a definite return to general revenues on the money expended by the State, has not achieved these objects, this Assembly recommends to the Governor General in Council that:

(i) for the year 1942-3 a sum of Rs. 2,35,32 thousand shall be paid to general revenue over and above the current and arrear contribution due under the Convention,

(ii) from 1 April 1943, so much of the Convention as provides for the contribution and allocation of surpluses to general revenues shall cease to be in force,

(iii) for the year 1943-4, the surplus on commercial lines shall be utilised to repay any outstanding loan from the depreciation fund and thereafter be divided 25 per cent to the railway reserve and 75 per cent to general revenues, the loss, if any, on strategic lines being recovered from General Revenues, and

(iv) for subsequent years and until a new convention is adopted by the Assembly, the allocation of the surplus on commercial lines between the railway reserve and general revenues shall be decided each year on consideration of the needs of the railways and general revenues, the loss, if any, on strategic lines being recovered from general revenues."

Convention Resolution of 1949

The Constituent Assembly of India (Legislative) on 21 December 1949 passed the following resolution:

"This Assembly, after considering the recommendations of the Committee appointed by it in April 1949 to review the Convention relating to the separation of railway from general finance which was adopted under the Assembly Resolution, dated 20 September 1924, and in supersession of that and all other previous resolutions on the subject, resolve:

(1) that railway finance shall continue to remain separated from general finance;

(2) that the general tax-payer shall have the status of the sole shareholder in the railway undertaking;

(3) that on the capital invested out of general revenues in the railway undertaking as computed annually, general revenues shall receive only a fixed annual dividend;

(4) that for a period of five years, commencing from 1950-1 the annual dividend, shall be a sum calculated at the rate of 4 per cent on the capital invested provided that no dividend shall be payable on the capital invested out of general revenues in unremunerative strategic lines;

(5) that a Committee of the House shall review the rate of dividend towards the end of the aforesaid period and suggest for the years following it any adjustment considered necessary, having regard to the revenue returns of the railway undertaking, the average borrowing rate of government and any other relevant factors;

(6) that the existing railway reserve shall be renamed the Revenue Reserve Fund and utilised primarily for maintaining the agreed payments to general revenues and for making up any deficit in the working of the railways;

(7) that a Development Fund shall be constituted for financing expenditure for the following purposes:

(a) passenger amenities,

(b) labour welfare, and

(c) railway projects which are necessary, but unremunerative;

(8) that for meeting the cost of replacement and renewal of assets, the Depreciation Reserve Fund shall receive, for the next five years. a minimum contribution of Rs. 15 crores per annum chargeable to the working expenses of the undertaking;

(9) that the railway surplus shall be available for distribution amongst the Revenue Reserve Fund, the Development Fund, and the Depreciation Reserve Fund to the extent the last-named needs strengthening over and above the minimum annual contribution;

(10) that a Standing Finance Committee for Railways and a Central Advisory Council for Railways shall be constituted in the manner laid down in the motion adopted by this House on 23 March 1949;

(11) that the annual estimates of railway expenditure shall be placed before the Standing Finance Committee for Railways on some date prior to the date for the discussion of the demands for grants for railways by the Assembly; and

(12) that the Railway Budget shall be presented to the House, if possible, in advance of the general budget and separate days shall be allotted for its discussion and the Minister for Railways shall then make a general statement on railway accounts and working. The expenditure proposed in the Railway Budget, including the appropriation to the Depreciation Reserve Fund, the Development Fund, and the Revenue Reserve Fund shall be placed before the House in the form of demands for grants. The form the budget shall take, the details it shall give, and the number of grants into which the total vote shall be divided, shall be drawn up by the Ministry of Railways in consultation with the Standing Finance Committee for Railways.

2. This Resolution shall come into force from 1 April 1950."

Convention Resolution of 1954

The following Resolution was passed by the Lok Sabha at its sitting on Thursday, the 16 December 1954:

Resolution

"That this House approves the recommendations contained in the Report of the Committee appointed to review the rate of dividend at present payable by the Railway Undertaking to General Revenues as well as other ancillary matters in connection with the separation of Railway Finance from General Finance, which was presented to Parliament on 30 November 1954."

The Resolution was adopted in the Rajya Sabha in the following form on the 21 December 1954:

"That this House approves the recommendations contained in the Report of the Committee appointed to review the rate of dividend at present payable by the Railway Undertaking to General Revenues as well as other ancillary matters in connection with the separation of Railway Finance from General Finance, which was presented to Parliament on 30 November 1954."

2. The Summary of the principal recommendations of the Railway Convention Committee, 1954, as contained in its report, dated 30 November 1954, are as follows:

(1) It would be advantageous from all points of view to express the rate of dividend in terms of a percentage on the Capital-at-Charge and the amount paid annually through a fixed rate of dividend inclusive of the element of interest.

(2) The present rate of dividend should remain unaltered for another period of 5 years. However the Committee feel that in the matter of calculation of the Capital-at-Charge and arriving at the total of the dividend payable, some minor adjustments are called for.

(3) The element of over-capitalization should be precisely assessed by the Railway Board and on that portion of the loan capital, the Railways shall pay the dividend at the rate equivalent to the average borrowing rate charged by the Government of India to Commercial Departments from year to year.

(4) The dividend on the Capital-at-Charge of new lines should be computed at a lesser rate, *viz.*, the average borrowing rate charged to Commercial Departments and a moratorium should be granted in respect of the dividend payable on the Capital invested on the new lines during the period of construction and upto the end of the fifth year of their opening for traffic, the deferred amount being repaid from the six year onwards in addition to the current dividend out of the net income of the new lines.

(5) The annual contribution to the Depreciation Reserve Fund which had been maintained at a level of Rs. 30 crores during the five year period ending the 31 March 1955 should be raised to Rs. 35 crores during the next quinquennium.

NOTE.—The contribution to this Fund for five years commencing from 1955-6 was later increased from Rs. 35 crores to Rs. 45 crores with the approval of the Parliament.

(6) The Committee recognise that the appropriation to the Development Fund and the solvency of the Fund are dependent on the availability and the size of the surplus, while the provision for depreciation should be based on the life of the assets, and their replacement on the actual conditions which cannot be deferred, if their earning potential is to be maintained. They, therefore, feel that the replacement of these assets should bear no relationship with the ultimate loss or gain of the Undertaking but should be met out of the Depreciation Reserve Fund.

(7) The Committee are in favour of extending the scope of the Development Fund so as to include amenities for all "users of Railway transport", such as improvement to goods sheds, loading and unloading platforms, waiting sheds for the trading public, etc., which they consider as absolutely essential and recommend the continuance of the present practice of earmarking a minimum of Rs. 3 crores per annum on this account.

(8) The Railway Board should look into the matter of assessment of rent realised for Railway quarters and ensure that a return of rent more commensurate with the capital cost is obtained on all residential buildings built for Class III staff.

(9) The Committee are anxious that the primary amenity which the Railways must provide is that of safety of travel. They, therefore, desire that the expenditure on Safety Works should be given due priority in any allocations of funds from the Development Fund over the next few years.

(10) The Committee agree with the Railway Board that the distinction of splitting up of expenditure on works between Development Fund and Revenue for the purpose of allocation is unnecessary. The allocation should be determined as in the case of other works according to the total outlay expected on each work. The expenditure on unremunerative operating improvement works costing more than Rs. 3 lakhs each should be charged entirely to Development Fund.

(11) The cost of construction of all new lines when decided to be constructed might be debited to Capital from the very beginning

(12) In the event of the Development Fund not being in a position to meet the programme of expenditure chargeable to that Fund from its own resources, money should be advanced from General Revenues to the Railways for utilisation on those Projects or Works which are of a developmental nature. Such advances should be treated as Temporary Loans to the Railways and will not be added to the Capital-at-Charge on which 4 per cent dividend is payable annually. The Railways will pay interest on this loan to General Revenues at the average borrowing rate chargeable to Commercial Departments. It shall, however, be open

to the Railways to repay this loan in instalments, if necessary, from accretions to the Development Fund in more prosperous years and thus liquidate the debt and the interest liability thereon.

(13) In view of the fact that the annual loss on working of strategic lines is insignificant, the Committee consider that the suggestion made by the Railway Board whether the operating loss on strategic lines should not be deducted from the contribution calculated for payment to General Revenues on non-strategic lines should not be pressed for a decision now, but brought up before the next Convention Committee, if the loss on this account is sizable.

(14) The criterion for classifying a project as remunerative should be 5 per cent.

(15) While the Committee agree that amortisation would eventually be of benefit to the Railways and the users of Railway transport alike, they agree with the Railway Board that the time is not yet ripe for amortisation; they would, however, suggest that this question may be taken up at the time of next revision of the Convention.

(16) The Committee consider that in the present financial prospects, it will be idle either to prescribe any minimum limit for the balance in the Revenue Reserve Fund or to extend its scope so as to include amortisation of Capital and this should wait till better days come.

(17) A Parliamentary Committee should review the rate of dividend towards the end of the next quinquennium and suggest for the years following it, any adjustment considered necessary, in the light of the situation obtaining then.

(18) It would be enough if the Ministry of Railways submitted a review on the general working of the Railways during these five years to the next Convention Committee for their consideration.

Convention Resolution of 1959

The following resolution was passed by the Lok Sabha at its sitting on Tuesday, the 28 April 1959:

Resolution

"That this House resolves the period for the continuance in force of the recommendations of the Railway Convention Committee, 1954 governing the arrangements between Railway Finance and General Finance which were approved by this House by a resolution adopted on the 16 December, 1954 be extended by one year upto the 31 March 1961."

The resolution was adopted in the Rajya Sabha in the following form on the 8 May 1959:

"That this House resolves that the period for the continuance in force of the recommendations of the Railway Convention Committee 1954 approved by this House by a resolution adopted on the 21 December 1954, be extended by one year upto 31 March 1961."

Convention Resolution of 1960

The following resolution was passed by the Lok Sabha at its sitting on Tuesday, the 6th December, 1960:

Resolution

"That this House approves the recommendations contained in the Report of the Committee appointed to review the rate of dividend which is at present payable by the Railway undertaking to General Revenues as well as other ancillary matters in connection with the Railway Finance *vis-a-vis* the General Finance which was presented to Parliament on 30 November, 1960."

The resolution was adopted in the Rajya Sabha in the following form on 12 December, 1960:

"That this House approves the recommendations contained in the Report of the Parliamentary Committee appointed to review the rate of dividend which is at present payable by the Railway Undertaking to General Revenues as well as other ancillary matters in connection with the Railway Finance *vis-a-vis* the General Finance which was presented to Parliament on the 30 November, 1960."

A summary of the principal recommendations of the Railway Convention Committee, 1960, as contained in its report dated 25 November, 1960 is given below:

(1) In the opinion of the Committee, the present mode of contribution, *viz.*, a fixed rate of dividend by the Railways to General Revenues does not call for any change in the next five years.

(2) The rate of dividend to be paid by the Railways to General Revenue should be fixed at 4.25 per cent during the five years 1961-66.

(3) The annual loss in the working of strategic lines should be borne by General Revenues.

(4) The Committee accept the suggestion of the Railway Board that the Capital-at-charge of the Northeast Frontier Railway, other than the clearly strategic portion thereof, should be regarded as unproductive and recommend that till such time as the line becomes productive or the next Convention Committee review the position, whichever is earlier, the rate of dividend payable on the Capital-at-charge should be at the average borrowing rate of Government.

(5) The total contribution to the Depreciation Reserve Fund should be Rs. 3,50 crores during the next quinquennium.

(6) The Committee are inclined to accept the suggestion that the existing rules of allocation of Railway expenditure between Capital, Revenue, Depreciation Reserve Fund and Development Fund might be retained without any modification during the next five years.

(7) The Committee are averse to the curtailment or limiting of expenditure on works met out of the Development Fund which in their opinion are as important as additions financed from Capital. They, therefore, see no alternative but to continue the facility of providing temporary loans from General Revenues to finance the Railway Development Fund during the next five years, unless the net surplus is able to meet in full the requirements of the Fund.

The Committee endorse the proposal of the Financial Commissioner (Railways) that the outstanding liability of the Development Fund to the General Finance as on 31-3-1961 should be liquidated in the *ad hoc* manner indicated in the last sub-para. of para. 11 of this Report so that the Railways could start on the Third Plan period with a clean slate in regard to this liability.

(8) The Committee recommend that the Railway Development Fund, besides meeting the cost of Labour Welfare Works, etc., should include a minimum allocation of Rs. 3 crores per annum for Users' amenities as hitherto.

(9) The suggestion made by the Railway Board that the passenger tax at the existing rate might be merged with passenger fare from 1 April, 1961 and that the State Governments might be paid a fixed amount based on the average collections in the period 1957-61 is reasonable. The Committee recommend that the fixed amount payable by the Railways may be Rs. 12.50 crores per year during the quinquennium 1961-66 representing the average of the actual collections for the years 1958-59 and 1959-60.

(10) While the Committee appreciate that the financial position of the railways during the next quinquennium will not be favourable for the creation of an Amortisation Fund, they nevertheless feel that this question should not be lost sight of inasmuch as in the context of the repatriation of all the dollar loans, it will assume importance.

(11) With reference to the recommendation of the Railway Convention Committee, 1954, contained in para. 19 of their Report, the Committee are of the view that the deferred dividend on new lines should be paid from the six year onwards only if the net income of the new lines leaves a surplus after payment of the current dividend.

APPENDIX B

MINISTRY OF RAILWAYS

Shri Jagjivan Ram, Minister for Railways

Shri Shah Nawaz Khan, Deputy Minister for Railways

Shri S. V. Ramaswamy, Deputy Minister for Railways

Officers of the Ministry of Railways (Railway Board) and attached Offices, as on 31 March

Railway Board

Shri Karnail Singh	Chairman and ex-Officio Principal Secretary in the Ministry of Railways
„ S. Jagannathan	Financial Commissioner and ex-Officio Secretary in the Ministry of Railways
„ E. W. Isaacs	Member, Engineering and ex-Officio Secretary in the Ministry of Railways
„ D. C. Baijal	Member, Staff and ex-officio Secretary in the Ministry of Railways
„ Kripal Singh	Member, Transportation and ex-Officio Secretary in the Ministry of Railways
„ R. B. Lal	Additional Member (Commercial)
„ C. T. Venugopal	Additional Member (Finance)
„ K. C. Lall	Additional Member (Mechanical)
„ B. Mazumdar	Additional Member (Staff)
„ R. E. de Sa	Additional Member (Works)
„ D. V. Reddy	Secretary
„ V. Venkataramayya	Director, Civil Engineering
„ P. Sahai	Director, Efficiency Bureau
„ L. N. Mathur	Director, Electrical Engineering
„ M. A. Qadeer	Director, Establishment
„ D. P. Mathur	Director, Finance
„ R. Krishnaswamy	Director, Mechanical Engineering
„ S. Chakravarti	Director, Mechanical Engineering (Production)
„ F. B. Khambatta	Director, Medical
„ O. S. Murthy	Director, Railway Planning
„ G. P. Bhalla	Director, Railway Stores
„ M. M. Chudasama	Inspector General, R. P. F./Director, Security
„ L. C. Mohindra	Director, Signalling and Telecommunication
„ S. K. Guha	Director, Statistics and Economic Adviser
„ Jagjit Singh	Director, Traffic, Transportation
„ D. B. Singh	Director, Training
„ R. Prasad	Director, Vigilance
„ M. R. Reddy	Joint Director, Civil Engineering
„ D. B. Vohra	Joint Director, Establishment
„ B. Bhattacharyya	Joint Director, Finance (Accounts)
„ H. K. Bhalla	Joint Director, Finance (Budget)
„ M. Sunder Raj	Joint Director, Finance (Establishment)
„ P. R. K. Menon	Joint Director, Finance (Expenditure)
„ T. N. Kuriakos	Joint Director, Finance (Stores and Foreign Exchange)
„ T. R. Subramanian	Joint Director (Iron and Steel)
„ P. N. Khanna	Joint Director, Mechanical Engineering (Fuel)
„ B. P. Hira	Joint Director, Mechanical Engineering (Metric)

Shri S. S. Jagota	Joint Director, Mechanical Engineering (Production)
„ M. M. Bam	Joint Director, Mechanical Engineering (Running)
„ K. S. Ramaswamy	Joint Director, Mechanical Engineering (Workshops)
„ K. T. Mirchandani	Joint Director, Pay Commission
„ B. Mukhopadhyay	Joint Director, Public Relations
„ P. R. Pusalkar	Joint Director, Railway Planning
„ H. M. Chatterji	Joint Director, Railway Stores
„ M. Sundaresan	Joint Director, Railway Stores (General)
„ Usman Ali Khan	Joint Director, Security/Dy. Inspector General, Railway Protection Force
„ V. Parthasarathy	Joint Director, Signalling and Telecommunication
„ V. N. Agarkar	Joint Director, Steel Procurement
„ K. N. Chennabasappa	Joint Director, Traffic (General)
„ M. P. Sathaye	Joint Director, Traffic (Rates)
„ V. P. Sawhney	Joint Director, Traffic (Transportation)
„ J. N. Roy	Joint Director, Works
„ Parshotam Lal	Deputy Secretary
„ V. S. Misra	Deputy Director, Accidents and Rules
„ A. V. Jacob	Deputy Director, Civil Engineering
„ K. N. Kamath	Deputy Director, Civil Engineering (Bridges Sidings)
„ Shanti Nath	Deputy Director, Development (Electrical)
„ J. C. Bhatt	Deputy Director, Electrical Engineering
„ M. S. Sundara	Deputy Director, Establishment I
„ Kunwar Bahadur	Deputy Director, Establishment II
„ K. S. Haravu	Deputy Director, Finance (Accounts)
„ P. M. Narasimhan	Deputy Director, Finance (Expenditure)
„ A. D. Sawhney	Deputy Director, Finance (Production)
„ R. Mahadevan	Deputy Director, Finance (Stores)
„ S. Ramaswamy	Deputy Director, Finance (Stores)
„ V. L. Khanna	Deputy Director (Iron and Steel) (Calcutta)
„ P. C. Luther	Deputy Director, Mechanical Engineering
„ R. S. Madan	Deputy Director, Mechanical Engineering (Efficiency Bureau)
„ M. Kunhappa	Deputy Director, Pay Commission
„ K. N. Venkateshwar	Deputy Director, Public Relations
„ Prabhinder Singh	Deputy Director, Public Relations (Exhibition)
„ A. C. Sen Sarma	Deputy Director, Rail Movements (Calcutta)
„ P. S. Doraisamy	Deputy Director, Railway Planning
„ B. C. Chowdiah	Deputy Director, Railway Stores I
„ J. V. Saldanha	Deputy Director, Railway Stores II
„ S. S. Lal	Deputy Director, Signals
„ J. P. Chapman	Deputy Director, Signals (Calcutta)
„ M. Ramaswami	Deputy Director, Statistics
„ R. R. Bhanot	Deputy Director, Statistics
„ R. C. Chetty	Deputy Director, Steel Procurement
„ N. M. Shah	Deputy Director, Stores (S)
„ A. C. Khanna	Deputy Director, Telecommunication
„ V. Sriraman	Deputy Director, Traffic (Commercial)
„ R. Srinivasan	Deputy Director, Traffic (C. T. P. C.)
„ P. A. Pai	Deputy Director, Traffic (Efficiency Bureau)
„ A. N. Kapoor	Deputy Director, Traffic (Freight Structure)

Shri A. P. Varma	Deputy Director, Traffic (General)
„ C. Prabhakaran	Deputy Director, Traffic (Transportation)
„ V. D. Jog	Deputy Director, Traffic Transportation (Goods)
„ D. D. Borwankar	Deputy Director, Vigilance
„ A. C. Ahuja	Under Secretary (General)
„ V. Madhavachari	Under Secretary (O. & M.)
„ G. Santhanam	Under Secretary (Parliament)
„ P. B. Jain	Assistant Director, Establishment I
„ M. P. K. Menon	Assistant Director, Establishment II
„ G. R. Venkataramanan	Assistant Director, Establishment III
„ K. N. R. Pillay	Assistant Director, Establishment IV
„ J. R. Anand	Assistant Director, Establishment (P)
„ A. R. Kapur	Assistant Director, Finance (Budget Committee)
„ B. N. Soni	Assistant Director, Finance (Establishment)
„ B. D. Vatsalya	Assistant Director (Fuel)
„ D. Sorabji	Assistant Director (Fuel)
„ S. R. Sinha	Assistant Director, Investigation
„ M. R. Sood	Assistant Director (Iron and Steel)
„ F. J. Edulji	Assistant Director, Signals
„ H. S. Sodhi	Assistant Director, Signals
„ P. K. Mathur	Assistant Director, Sports
„ H. L. Malhotra	Assistant Director, Statistics
„ G. Rangaswami	Assistant Director, Statistics
„ T. C. Jain	Assistant Director, Statistics (Inspection)
„ K. Parameswaran	Assistant Director, Traffic (Commercial)
„ Bishan Singh	Under Secretary (Welfare)
„ S. K. Ramanathan	Assistant Director, Works
„ D. G. Jadhav	Adviser (Labour and Welfare)
„ S. P. Sinha	Land Adviser
„ R. Sahai	Timber Adviser
„ Lochan Singh	Telecommunication Adviser
„ T. P. Mukherjee	O. S. D. (A/cs) E. B.
„ S. Natarajan	O. S. D. (Co-op.)
„ M. S. Bhatnagar	O. S. D. (Metric)
„ J. P. Sharma	O. S. D. (Pension)
„ B. M. Aggarwal	O. S. D. (Price Fixation)
„ K. K. Poulose	O. S. D. (Printing Press)
„ R. Upadhyaya	Assistant Land Adviser
„ Krishan Gulati	Editor
„ R. C. Tiwari	Assistant Editor
„ K. R. Padmanabhan	Assistant Accounts Officer (Finance Loans)
„ K. L. Kakkar	Assistant Accounts Officer (Inspection)
„ A. V. Srinivasan	Assistant Development Officer (Mechanical)
„ Sahib Singh	Assistant Accounts Officer (Partition)
„ M. R. Wadhwan	O. S. D. (Production)
„ Jarnail Singh	Assistant Development Officer (Stores)
„ Ram Murti Singh	Hindi Officer
„ N. N. Roy	Librarian
Miss E. M. Atkisan	Special Assistant to C. R. B.

Section Officers Class I

Shri Agrawal, R. K.	Budget Branch
„ Radhey Shiam	Budget Branch
„ Thiagarajan, J.	Cash Branch
„ Bua Ditta	Electrical Branch

Shri Narayanaswami, K. N.	Establishment (Gazetted Recruitment) Branch
„ Jayaraman, N. V.	Establishment (Labour) Branch
„ Sankara Narayan, T. C.	Establishment (Officers) I Branch
„ Joshi, V. P.	Establishment (Pay Commission) Branch
„ Nair, R. K.	Establishment (Railway Board) I Branch
„ Gurmukh Singh	Finance (Expenditure) I Branch
„ Rup Lal	Finance (Expenditure) II Branch
„ Madan, H. K.	Finance (Pension) Branch
„ Blagan, R. P.	Finance (Project and Procurement) Branch
„ Khuller, S. R.	Fuel Branch
„ Hira Lal	General Branch
„ Ghosh, J. N.	Organisation and Methods Branch
„ Pancham Lal	Railway Stores Branch
„ Lal, J. B.	Security Branch
„ Bharal, Ram Singh	Traffic (General) I Branch
„ Srivastava, S. K.	Traffic (Transportation) III Branch
„ Venkataraman, T. H.	Traffic (Transportation) IV Branch
„ Ragade, R. R.	On L. P. R.
„ Hariharan, R. R.	On L. P. R.
„ Suraj Prasad	On L. P. R.

Section Officer Class II

„ Ganeshratnam, M.	Budget Branch
„ Harmesh Chand	Budget Branch
„ Gopal Dass	Budget (Committee) Branch
„ Tilak, G. V.	Cash Branch
„ Narasimhan, S.	Chasing Cell
„ Ram Dass	Economic Adviser's Branch
„ Mangal Pershad	Efficiency Bureau
„ Nair, M. N. N.	Efficiency Bureau
„ Lallan Prasad	Establishment (Co-operative Societies) Branch
„ Rajagopalan, B.	Establishment (Discipline and Appeal) Branch
„ Sharma, O. D.	Establishment (General) Branch
„ Mohan Lal	Establishment (General) Branch
„ Sharma, M. G.	Establishment (Gazetted Recruitment) Branch
„ Jauhry, I. B.	Establishment (Gazetted Sections) Branch
„ A. K. Sinha	Establishment (Labour Welfare Advisers) Branch
„ Gupta, K. C.	Establishment (Medical) Branch
„ Sud, G. D.	Establishment (Non-Gazetted) Branch
„ Kidar Nath I	Establishment (Non-Gazetted) Branch
„ Bhalla, H. P. S.	Establishment (Officers) I Branch
„ Aggarwal, P. C.	Establishment (Officers) II Branch
„ Sarkar, D. P.	Establishment (Pay Commission) Branch
„ Jagat Ram	Establishment (Railway Board) II Branch
„ Dhingra, L. C.	Establishment (Railway Board) III Branch
„ Krishnamurthy, A.	Establishment (Railway Board) III(b) Branch
„ Thapar, P. L.	Establishment (Railway Board) Reorganisation Branch
„ Chakraborti, M.	Establishment (Representation) Branch
„ Bhardwaj, K. R.	Establishment (Scheduled Castes) Branch
„ Rangamannar, K. C.	Establishment (Special) I Branch
„ Bebbar, T. R.	Establishment (Special) II Branch (on leave)
„ Ray, G. G.	Establishment (Special) II Branch
„ Gopal, S. N.	Establishment (Sports) Branch
„ Comfort, E. W.	Establishment (Welfare) Branch
„ Jagdish Chandra	Establishment (Vigilance) Branch
„ Bajpai, M. N.	Establishment (Vigilance) Branch
„ Bakshi Ram I	Finance (Escalator Claims) Branch
„ Bhardwaj, C. L.	Finance (Establishment) Branch
„ Naidu, J. P.	Finance (Establishment) Branch
„ Bhasin, S. P.	Finance (Establishment) Branch

Shri Sharma, P. C.	Finance (Expenditure) I Branch
„ Bansal, P. L.	Finance (Expenditure) I Branch
„ Sharma, J. B.	Finance (Foreign Exchange) Branch
„ Rajagopalan, M.	Finance (Steel) Branch
„ Nand Lal	Fuel Branch
„ Puri, K. L.	General Accommodation Branch
„ Sivaraman, S. V.	General (Parliament) Branch
„ Sharma, B. B.	Hindi (G) Branch
„ Bhagel, J. N. S.	Hindi (Special) Branch
„ Banerjee, G. G.	Issue Branch
„ Chadha, R. L.	Mechanical (C) Branch
„ Sardari Lal	Mechanical (L) Branch
„ Ahuja, Y. R.	Mechanical (M and P) Branch
„ Thirumalai, G. S.	Mechanical (N) Branch
„ Ghosh II, A. K.	Mechanical (W) Branch
„ Ram Ditta Mal	Partition (Co-ordination) Branch
„ Prabhakar, C. L.	Public Relations Branch
„ Chatterjee, M. N.	Railway Planning Branch
„ Chibber, S. N.	Railway Stores (Foreign Procurement) Branch
„ Budha Singh	Railway Stores (Development) Branch
„ Shrama, Sita Ram	Railway Stores (Escalator Claims) Branch
„ Raghu Nath	Railway Stores (Foreign Procurement)
„ Satya Pal	Railway Stores (Global Tenders) Branch
„ Ohri, C. L.	Railway Stores (Indigenous) Branch
„ Dutta, D.	Railway Stores (Steel) Branch
„ Padmanabhan, N.	Railway Stores (Steel) Branch
„ Sobti, D. R.	Records Branch
„ Srivastava, M. P.	Security Branch
„ Rao, S. V. S.	Security Branch
„ George, K. T.	Security Branch
„ Jain, K. C.	Statistical I Branch
„ Krishna Swarup	Statistical II Branch (on leave)
„ Chopra, L. D.	Statistical III Branch
„ Ballal, P. N.	Statistical IV Branch
„ Krishnaswamy, S.	Statistical Branch (on leave)
„ Dass, J. C.	Statistical Branch
„ Rampal, T. D.	Statistical Branch
„ Ramasubban, S. V.	Traffic (Commercial) I Branch
„ Ohri, J. R.	Traffic (Commercial) II Branch
„ Beli Ram	Traffic (Commercial) III Branch
„ Sharma, R. L.	Traffic (Commercial) IV Branch
„ Bakshi Ram II	Traffic (Commercial Carriers Liability) Branch
„ Shankar Narain, V.	Traffic Commercial (C. T. P. C.) Branch
„ Venkatesan, V.	Traffic Commercial (Export Promotion) Branch
„ Joseph, B. J.	Traffic (General) II Branch
„ Dutta, J. S.	Traffic (General) III Branch
„ Passi, H. K.	Traffic (General) IV Branch
„ Parti, Y. R.	Traffic (Transportation) I Branch
„ Handa, S. L.	Traffic (Transportation) II Branch
„ Kholi, R. K.	Traffic (Transportation) V Branch
„ Ganguly, K. D.	Works I Branch
„ Khurana, R. D.	Works II Branch
„ Dwarka Dass	Works III Branch
„ Bhawakar, H. R.	Works IV Branch
„ Jain, S. C.	Works V Branch
„ Amrit Singh	Works VI Branch
„ Sharma, Shiv Ram	Honourable Minister's Branch
„ Midha, K. K.	Training
„ K. D. Khanna	Stenographers

Private Secretaries

Shri Panchmi Singh	Private Secretary to Minister
„ R. N. Mehrotra	Private Secretary to Deputy Minister (S)
„ K. K. Gopalakrishnan	Private Secretary to Deputy Minister (R)
„ J. K. Razdan	Private Secretary to Chairman, Railway Board
„ V. B. Menon	Private Secretary to Financial Commissioner
„ V. K. Natarajan	Private Secretary to Member Engineering
„ N. I. Chacko	Private Secretary to Member Staff
„ J. N. Gupta	Private Secretary to Member Transportation
„ S. Somasundaram	Private Secretary to Additional Member Finance
„ S. Gopalaswamy	Private Secretary to Additional Member Finance
„ G. D. Dahiya	Private Secretary to Additional Member Mechanical
„ Inder Nath	Private Secretary to Additional Member Staff
„ J. K. Kapoor	Private Secretary to Additional Member Works
„ S. D. Sansi	Private Secretary to Secretary
„ M. N. Sinha	Confidential Assistant to Deputy Director Finance (Accounts)
„ V. Raghavan	(On leave)
„ Gurdasmal Verma	Confidential Assistant to Secretary

Research, Designs and Standards Organisation, Simla

General

„ A. C. Mukerji	Director General
„ Lal Das	Secretary to Director General
„ R. L. Tuli	Establishment Officer
„ D. S. Thakur	Section Officer (Administration I)
„ S. R. Sharma	Section Officer (Administration II)
„ P. R. Rao	Section Officer (Cash)
„ A. D. Ghoshal	Section Officer (General)

Civil Directorate

„ P. K. Mukherjee	Joint Director Standards (Building and Structure)
„ D. N. Chopra	Director Standards (Civil)
„ P. N. Sud	Joint Director Standards (Track)
„ J. S. Bhavra	Dy. Director Standards (Building and Structure)
„ M. W. Desai	Asstt. Director Standards (Civil)
„ G. Chakrapani	Assistant Director Standards (M)
„ M. R. Ambulkar	Section Officer (Building and Structure)—I
„ N. Ramu	Section Officer (Building and Structure)—II
„ J. R. Tandon	Section Officer (DSR—II)
„ P. S. Marwah	Section Officer (Metric) (Civil)
„ Ganesh Kumar	Section Officer (Track)

Architectural Wing

„ N. B. Shroff	Joint Director Standards (Architecture)
„ N. V. Shastri	Deputy Director Standards (Architecture)
„ G. R. Bahulkar	Assistant Director Standards (Architecture)

Signal and Telecommunication Wing

„ Laljee Singh	Joint Director Standards (Signal and Telecommunication)
„ T. S. Vardya	Deputy Director Standards (Signal and Telecommunication)
„ K. S. Kale	Assistant Director (Metric) (Signal and Telecommunication)
„ H. S. Sodhi	Asstt. Director Standards (Signal and Telecommunication)

Shri K. N. Bajaj	Section Officer (Metric) (Singal and Telecommunication)
„ G. Amalraj	Section Officer (Signal and Telecommunication)—I
„ R. Srinivasan	Section Officer (Signal and Telecommunication)—II
„ P. C. Roy	Section Officer (Telecommunication)

Mechanical Directorate
Carriage and Wagon Wing

„ R. Rajagopalan	Director Standards (Mechanical)
„ D. Kumar	Joint Director Standards (Carriage)
„ M. L. Puri	Joint Director Standards (Wagon)
„ I. M. Sahni	Deputy Director (Liaison) I
„ C. M. Malik	Deputy Director (Liaison) II
„ D. R. Kochhar	Deputy Director Standards (Carriage)
„ J. M. Kapur	Deputy Director Standards (Wagon Design)
„ T. N. Tandon	Assistant Director Standards (Wagon—I)
„ M. C. Pal	Section Officer (Carriage and Wagon)—I
„ V. B. Narayan	Section Officer (D.S.R.—I)
„ Hardas Singh	Section Officer (Metric—Carriage and Wagon)

Loco Wing

„ R. Krishnamurti	Joint Director Standards (Loco)
„ K. S. Krishnan	Assistant Director Standards (Loco)
„ T. N. Srinivasan	Section Officer (Loco—I)
„ S. H. Subbanna	Section Officer (Loco—II)
„ D. N. V. Chellam	Section Officer (Metric)—Loco
„ Harnam Singh	Liaison Engineer

Electrical Wing

„ D. V. K. Sastri	Joint Director Standards (Electrical)
„ A. S. Nagra	Section Officer (Electrical)

Diesel Wing

„ M. M. Suri	Joint Director Standards (Diesel)
„ S. Krishnaswamy	Deputy Director Standards (Diesel)
„ Prem Prakash	Assistant Director Standards (Diesel)

Inspectorate

„ G. S. Kodikal	Senior Inspecting Engineer

Central Part Drawing Office

„ S. K. Banerjee	Section Officer

Tatanagar

„ R. N. Sinha	Inspecting Engineer

Bridges and Floods Directorate

„ V. P. Ribeiro	Director (Bridges and Floods),
„ Gurdial Singh	Deputy Director (Bridges and Floods)
„ B. S. Thakur	Section Officer (Bridges and Floods)

Research Directorate, Lucknow
General

„ K. K. Rao	Director Research
„ M. P. Srivastava	Section Officer I
„ H. N. Sareen	Section Officer II

Civil Wing

Shri T. A. Rao	Joint Director Research (Civil)
„ Y. L. Tandon	Deputy Director (Civil)
„ S. N. Ramaswamy	Assistant Director (Buildings)
„ O. P. Kapur	Assistant Director (Soil Mechanics)

Mechanical Wing

„ R. L. Vohra	Joint Director Research (Mechanical)
„ B. V. Mallya	Deputy Director (Mechanical)
„ A. K. Srivastva	Deputy Director (Oscillation Trials)
„ Chander Mohan	Assistant Director (Instruments and Electronics)
„ R. K. Bose	Dynamometer Car Officer (Broad Gauge)
„ T. A. Ramachandran	Oscillograph Car Officer—I
„ C. S. P. Sastry	Oscillograph Car Officer—II
„ R. N. G. Dastidar	Oscillograph Car Officer—III

Publication and Documentation

„ K. Bhattacharya	Assistant Director (Information and Publication)

Metallurgical and Chemical Sub Centre, Chittaranjan

„ K. C. Choudhuri	Joint Director (Metallurgical and Chemical)
„ S. Ramanujam	Deputy Director (Metallurgical and Chemical)
„ V. R. S. Subramanian	Chemist and Metallurgist—I
„ M. N. Bhide	Chemist and Metallurgist—II
„ N. V. Raghavan	Assistant Director (Metallurgical and Chemical)
„ B. B. Ajmani	Section Officer (Metallurgical and Chemical)—I
„ A. Ramamurti	Section Officer (Metallurgical and Chemical)—II

Railway Liaison Office (New Delhi)

„ G. Rai	Railway Liaison Officer

Asstt. Director, Railway Stores (Steel) Calcutta

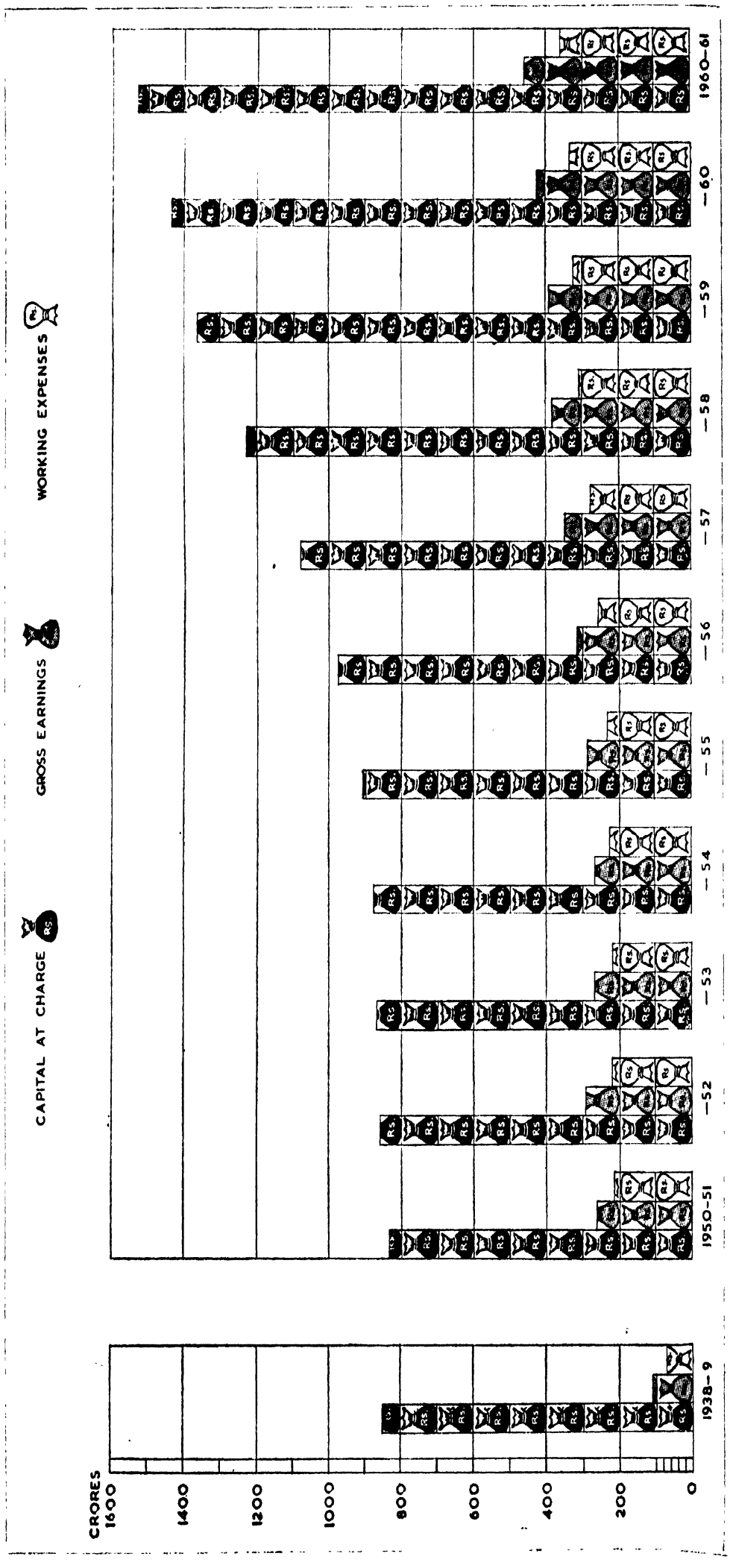
„ T. P. Mukherji	Assistant Director, Railway Stores (Steel)

APPENDIX C.

GRAPHS

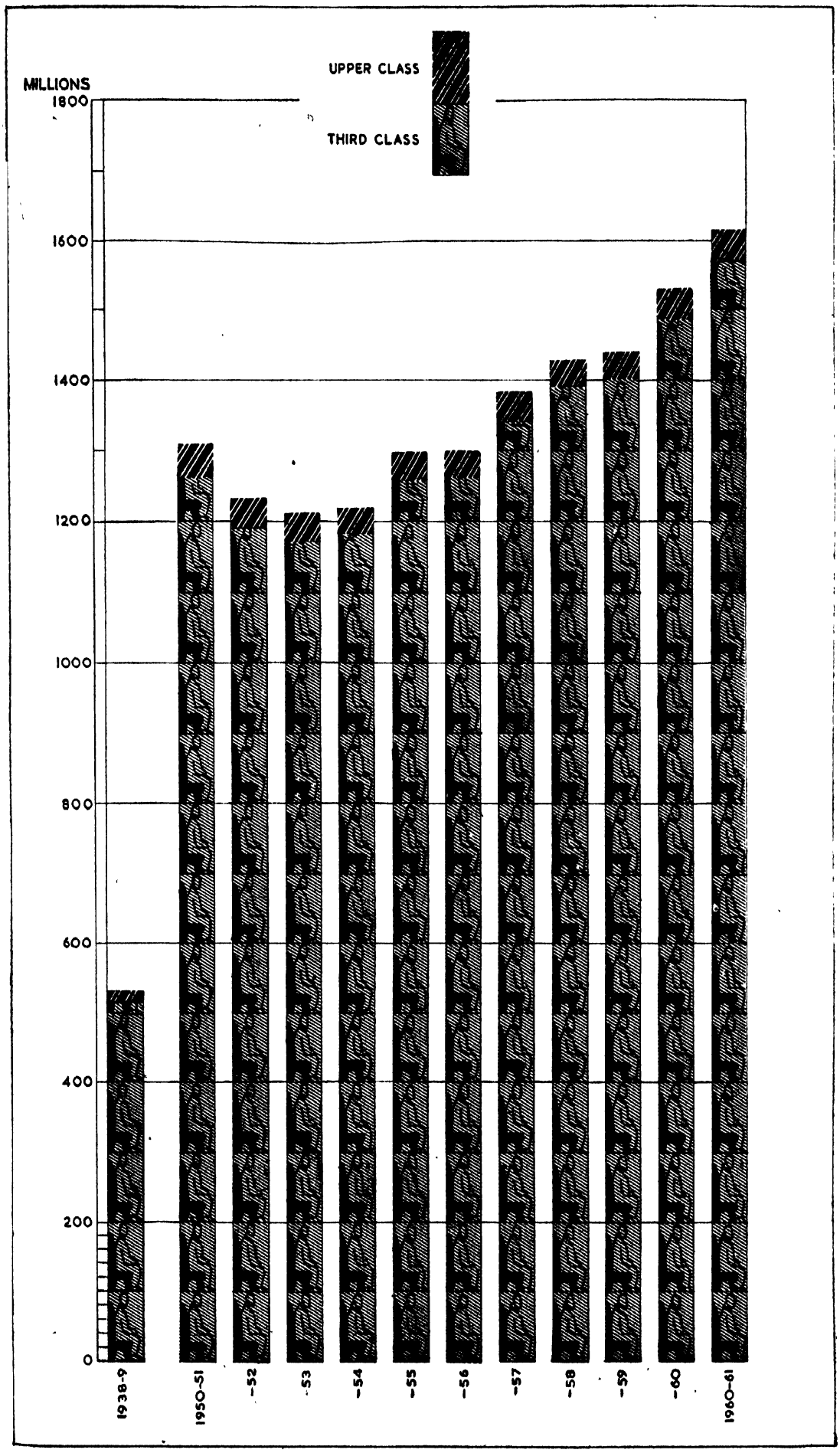
ALL INDIAN RAILWAYS

I—TOTAL CAPITAL AT CHARGE, TOTAL GROSS EARNINGS AND TOTAL WORKING EXPENSES



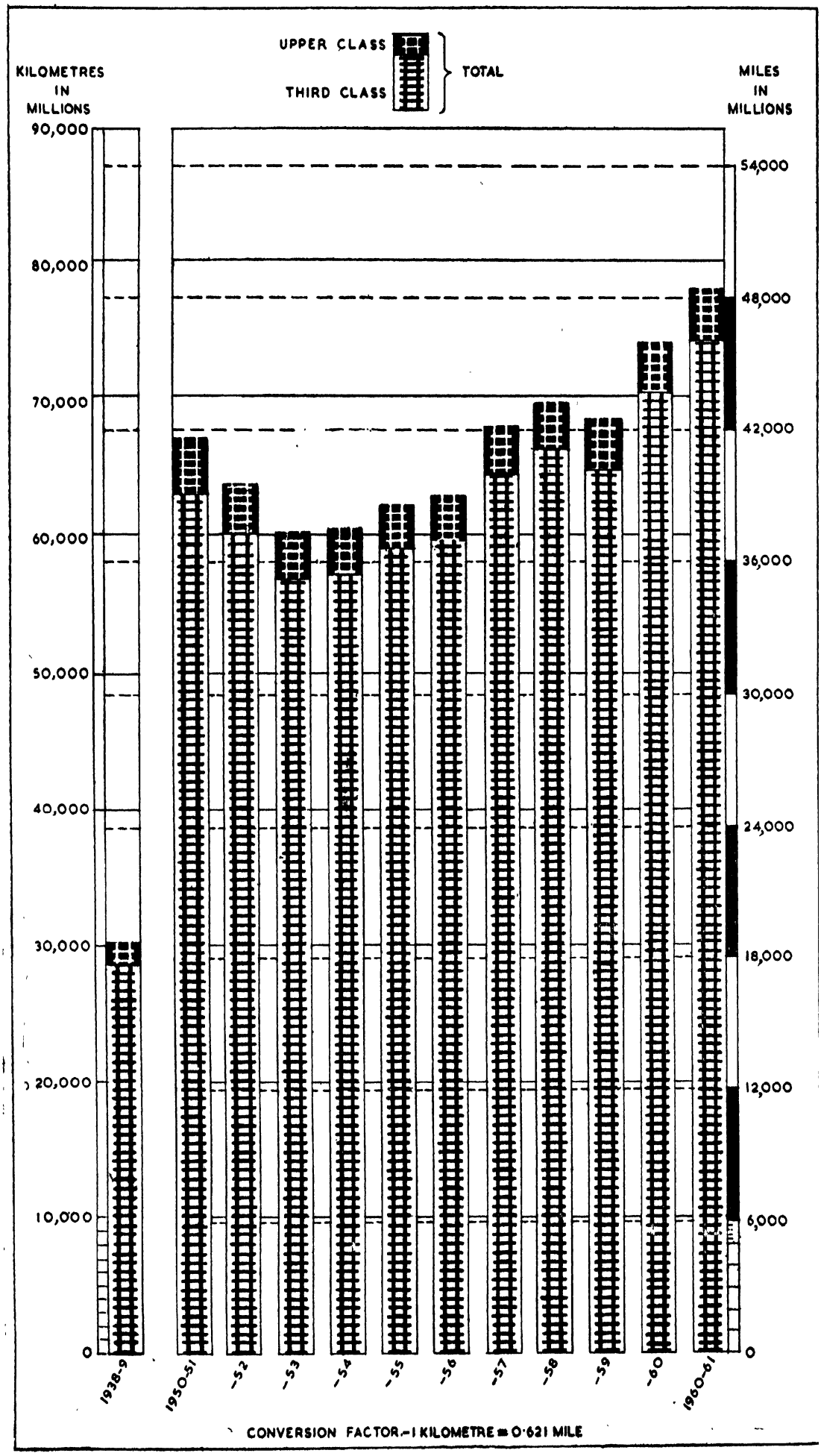
ALL INDIAN RAILWAYS

II—NUMBER OF PASSENGERS CARRIED



ALL INDIAN RAILWAYS

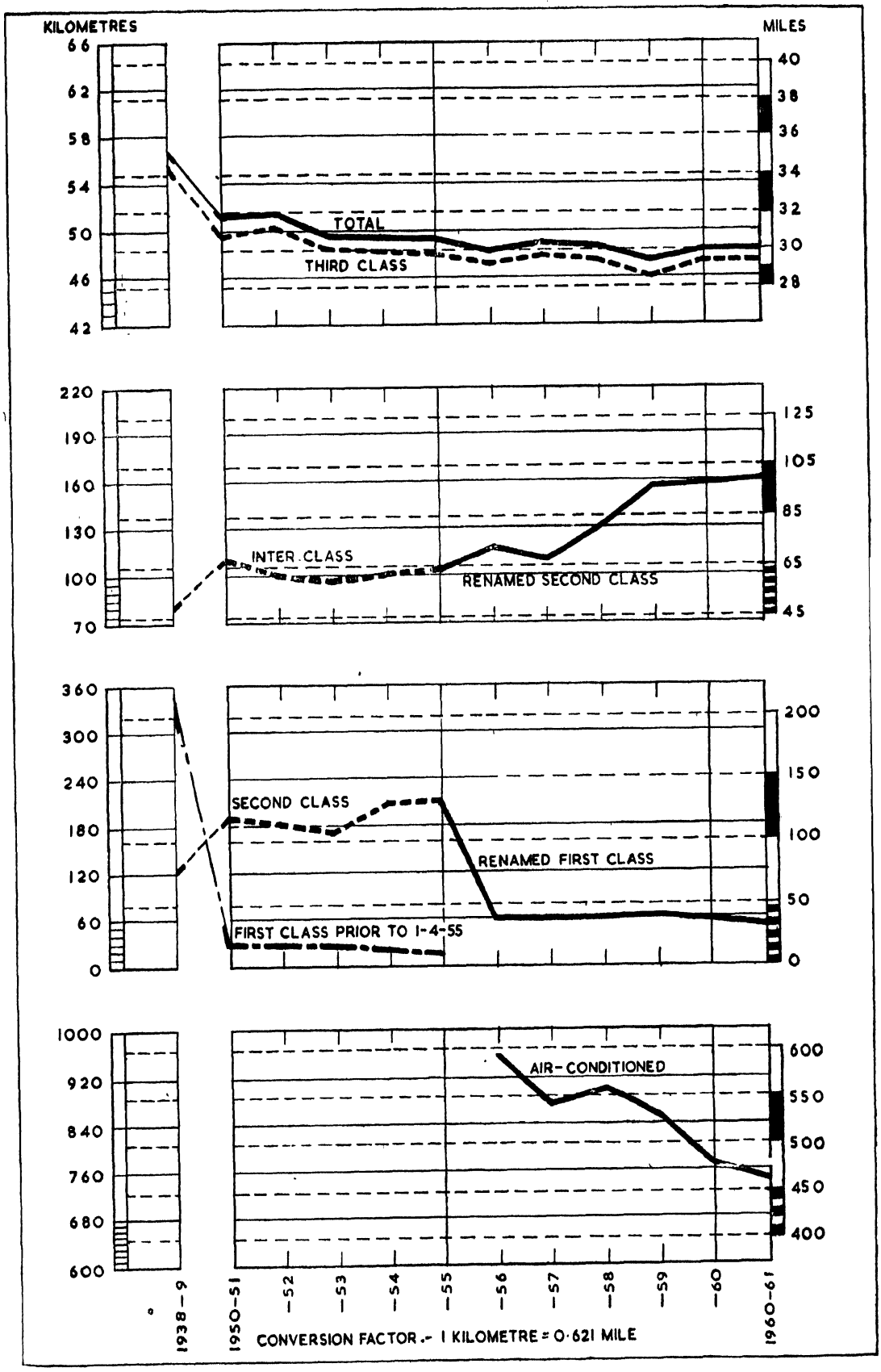
III—NUMBER OF PASSENGER KILOMETRES/MILES



ALL INDIAN RAILWAYS

IV—AVERAGE KILOMETRES/MILES A PASSENGER WAS CARRIED

(INCLUDES SUBURBAN AND NON-SUBURBAN TRAFFIC)



NOTE:—The classification between 1 April 1950 and 30 June 1950 has been taken to correspond with the old classification as under:

Class	I	=First class
Class	II Special	=Second class
Class	II	=Inter class
Class	III	=Third class

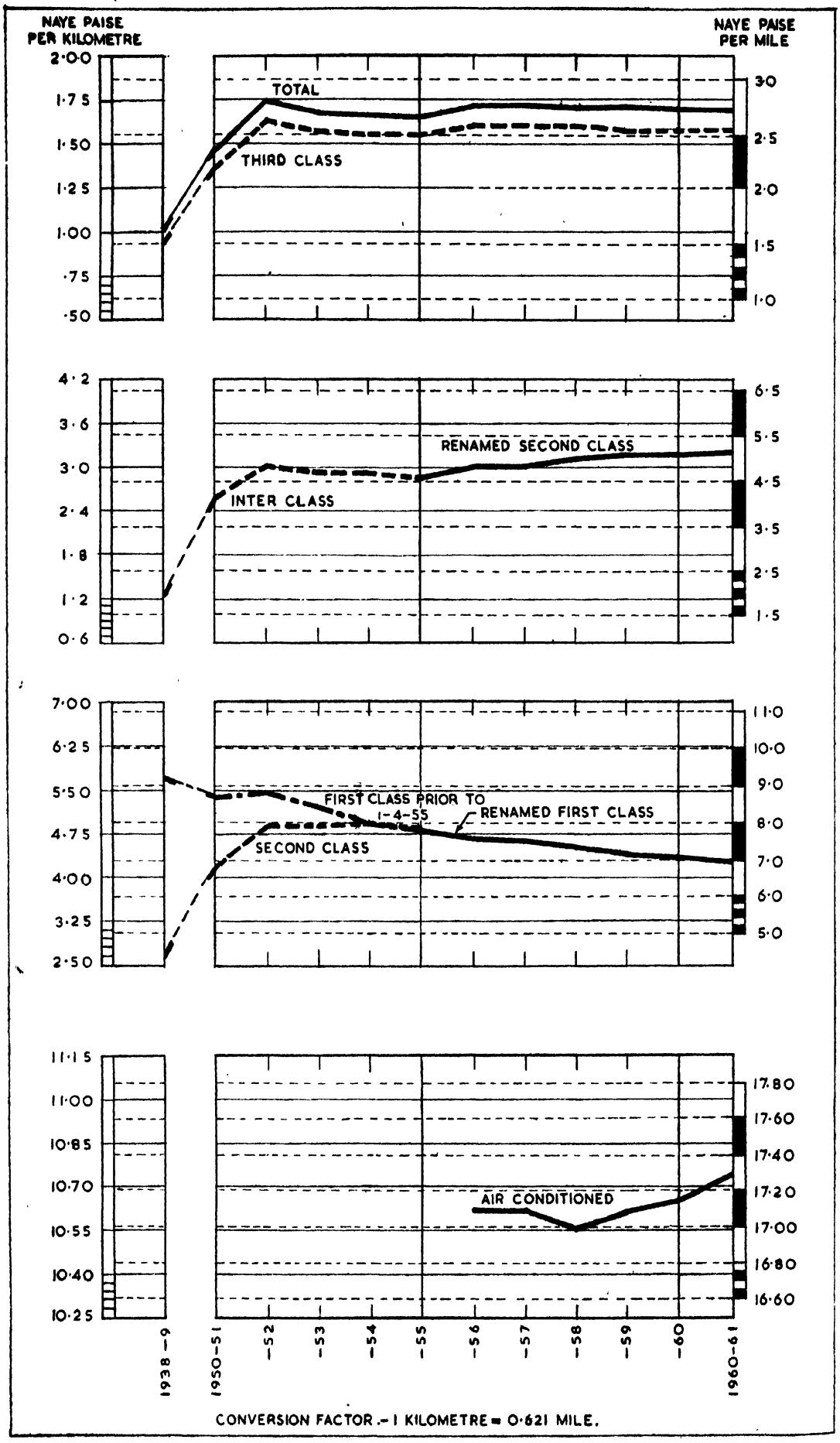
With effect from 1 April 1955 the pre-existing inter class was renamed as second class and the pre-existing second class as first class, the pre-existing first class being abolished.

From 1950-1 to 1954-5 the air conditioned class was also included in the pre-existing first class.

ALL INDIAN RAILWAYS

V—AVERAGE RATE CHARGED PER PASSENGER PER KILOMETRE/MILE

(INCLUDES SUBURBAN AND NON-SUBURBAN TRAFFIC)

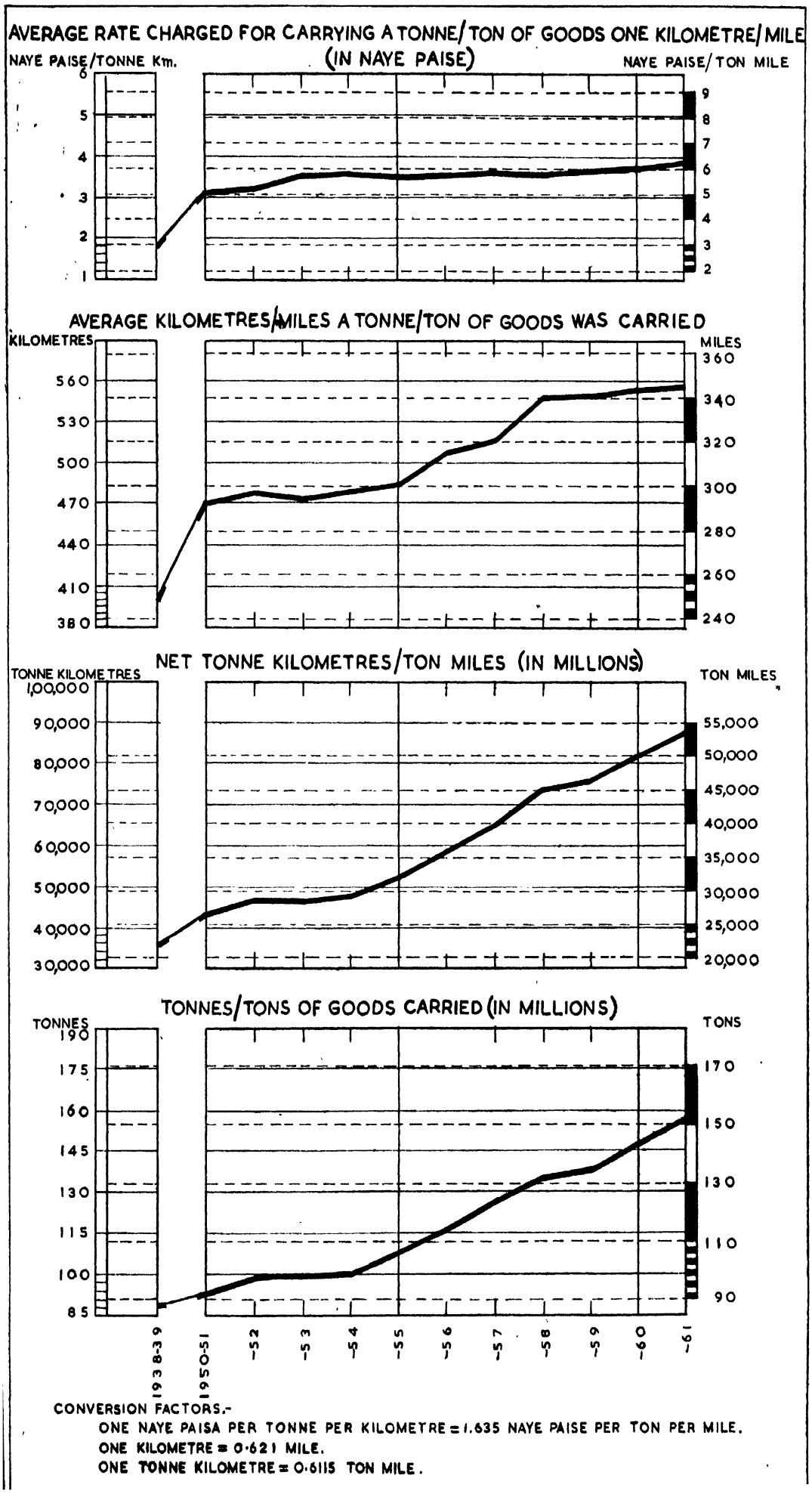


With effect from 1 April 1955 the pre-existing inter class was renamed as second class and the pre-existing second class as first class, the pre-existing first class being abolished.

From 1950-1 to 1954-5 the air-conditioned class was also included in the pre-existing first class.

ALL INDIAN RAILWAYS

VI—AVERAGE RATE, AVERAGE LEAD, NET TONNE KILOMETRES/TON MILES AND TONNES/TONS CARRIED



CONVERSION FACTORS.-

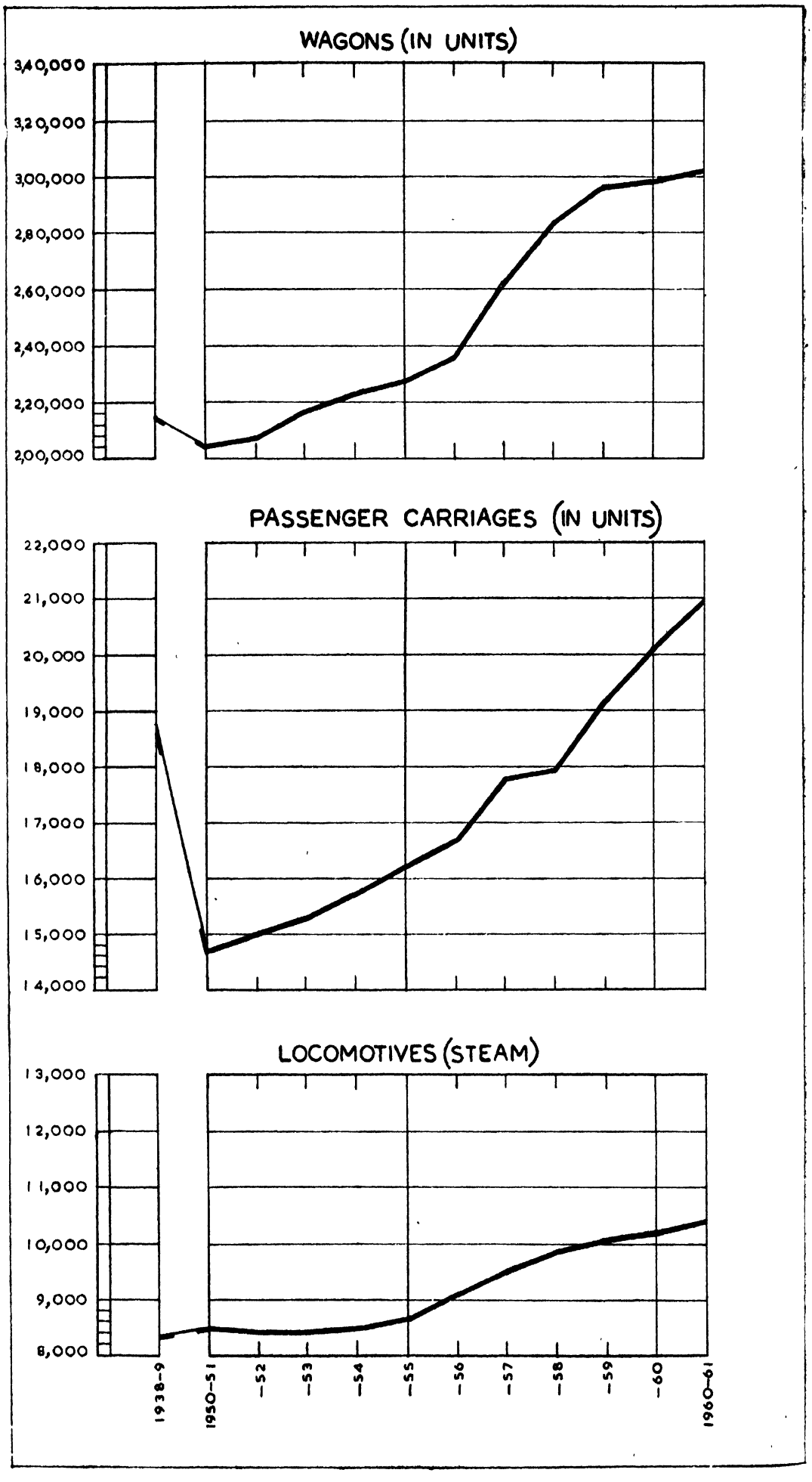
ONE NAYE PAISA PER TONNE PER KILOMETRE = 1.635 NAYE PAISE PER TON PER MILE.

ONE KILOMETRE = 0·621 MILE.

ONE TONNE KILOMETRE = 0·6115 TON MILE.

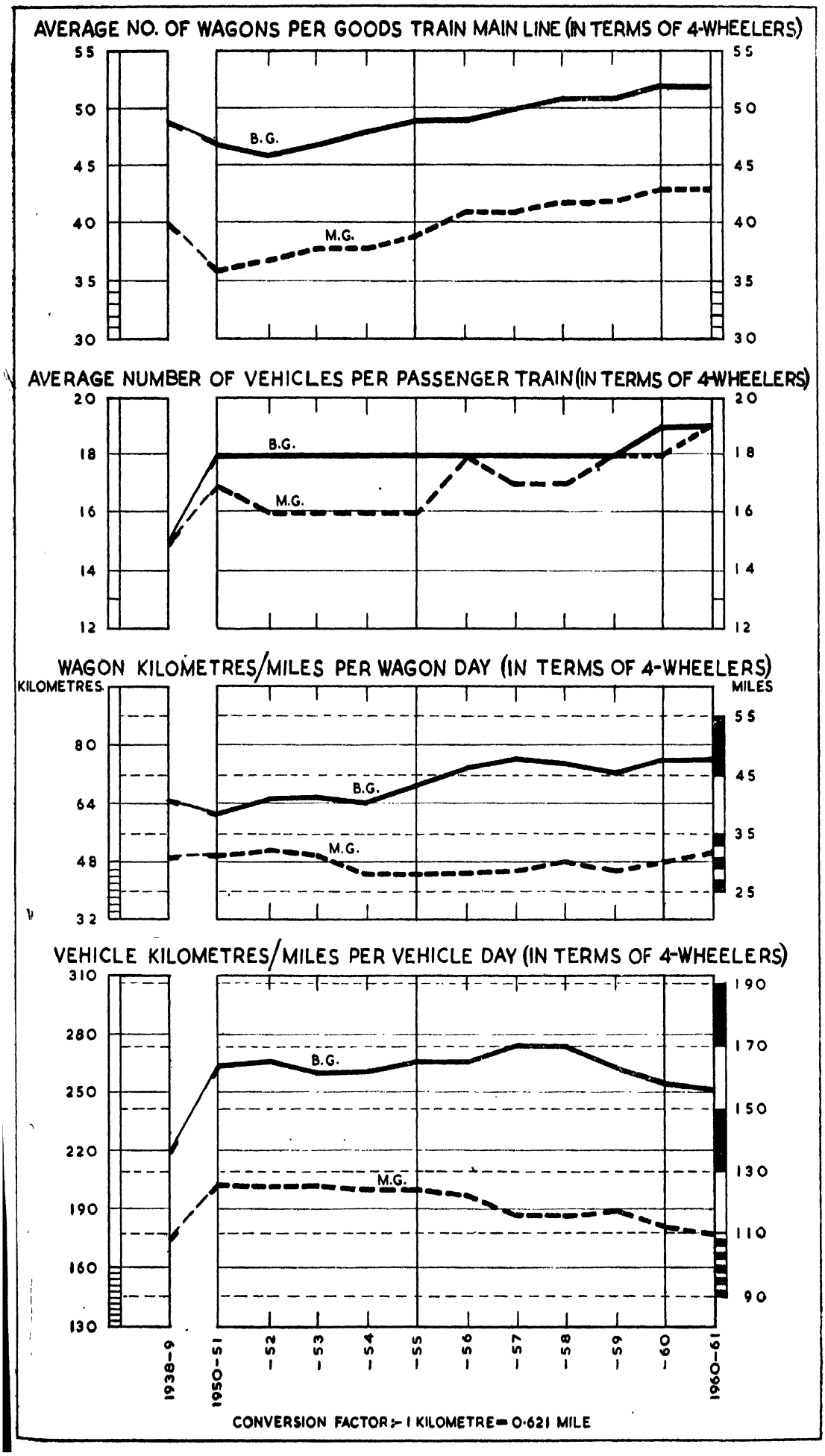
ALL INDIAN RAILWAYS

VII—ROLLING-STOCK IN SERVICE



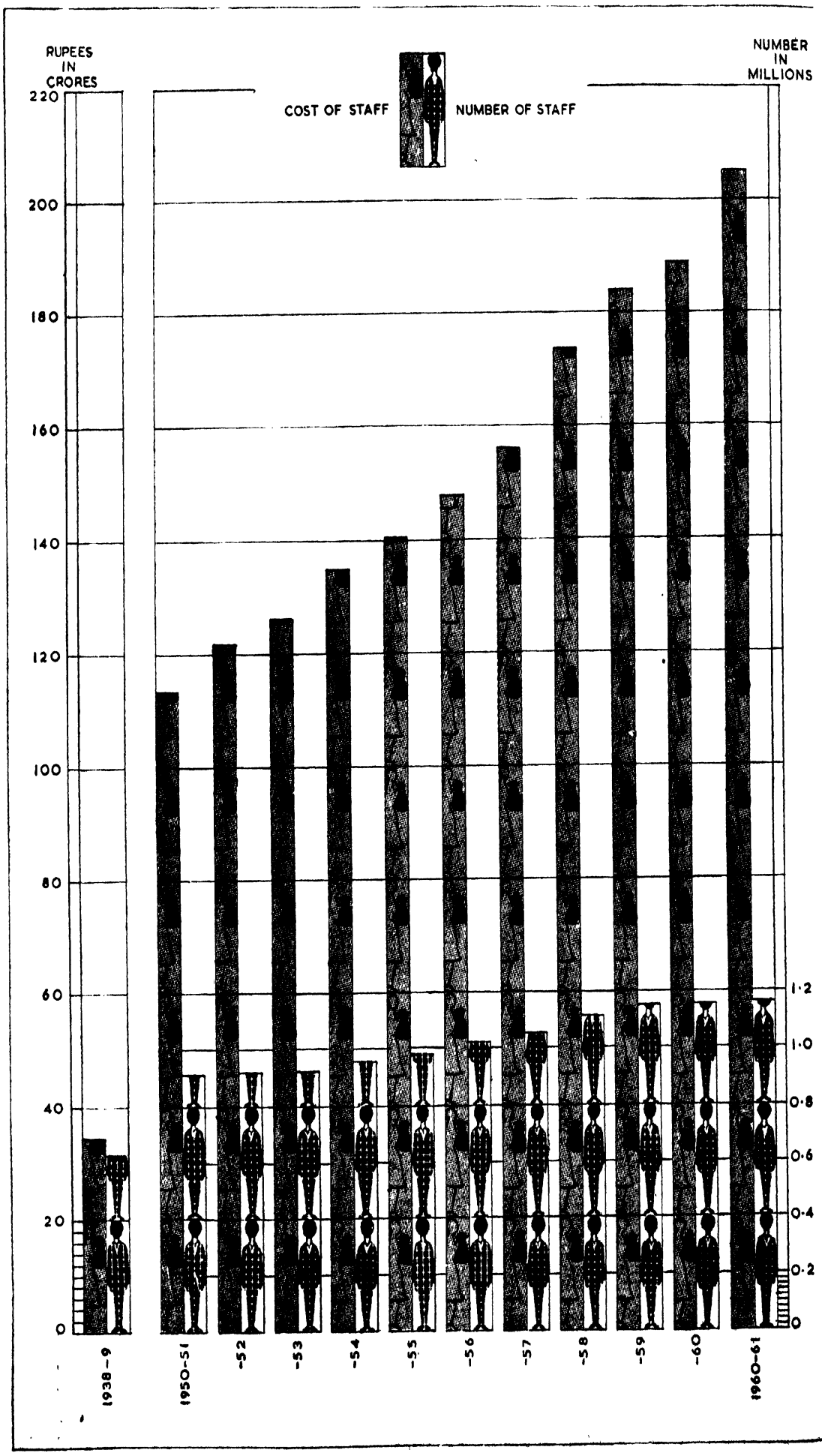
GOVERNMENT RAILWAYS

VIII—WAGON AND VEHICLES UTILIZATION



GOVERNMENT RAILWAYS

IX—TOTAL NUMBER AND COST OF STAFF



APPENDIX D

Railway Administrations in India (alphabetically arranged) showing the working agencies, ownership and route kilometrage/mileage open on 31 March 1961

Indian Railway systems have been classified under two classes for statistical purposes:

Government Railways
Non-Government Railways

Railway system		Lines comprised in the system			
Name	Worked by	Name	Gauge	Route Kilometrage/ mileage	Owned by
		GOVERNMENT RAILWAYS			
(1) Central	Indian Government	(a) Central	1·676 m	6,111	Indian Government.
			5′-6″	3,797	
		(b) Central	1·000 m	1,546	Do.
			3′-3⅜″	960	
		(c) Central	0·762 m	515	Do.
			2′-6″	320	
		(d) Ellichpur-Yeotmal	0·762 m	190	Branch Line Company under rebate terms.
			2′-6″	118	
		(e) Pulgaon-Arvi	0·762 m	35	Do.
			2′-6″	22	
		(f) Central	0·610 m	427	Indian Government.
			2′-0″	265	
(2) Eastern	Indian Government	(a) Eastern	1·676 m	3,756	Do.
			5′-6″	2,334	
		(b) Eastern	0·762 m	28	Do.
			2′-6″	17	
(3) Northern	Indian Government	(a) Northern	1·676 m	6,710	Do.
			5′-6″	4,169	
		(b) Rupar-Nangal-Dam*	1·676 m	56	Do.
			5′-6″	35	
		(c) Mukerian-Pathankot	1·676 m	41	Do.
			5′-6″	26	
		(d) Northern	1·000 m	3,296	Do.
			3′-3⅜″	2,048	
		(e) Northern	0·762 m	260	Do.
			2′-6″	162	
(4) North Eastern	Indian Government	(a) North Eastern@	1·676 m	2	Do.
			5′-6″	1	
		(b) North Eastern	1·000 m	4,919	Do.
			3′-3⅜″	3,057	
(5) Northeast Frontier	Indian Government	(a) Northeast Frontier†	1·676 m	3	Do.
			5′-6″	2	
		(b) Northeast Frontier	1·000 m	2,608	Do.
			3′-3⅜″	1,620	
		(c) Chaparmukh-Silghat‡	1·000 m	82	Branch Line Company under guarantee terms.
			3′-3⅜″	51	
		(d) Katakhal-Lalabazar‡	1·000 m	38	Do.
			3′-3⅜″	23	
		(e) Darjeeling Himalayan	0·610 m	84	Indian Government.
			2′-0″	52	
(6) Southern	Indian Government	(a) Southern	1·676 m	2,951	Do.
			5′-6″	1,834	
		(b) Cochin Harbour Extension	1·676 m	7	Cochin Harbour Authority.
			5′-6″	4	
		(c) Tenali-Repalli	1·676 m	34	District Board, Guntur.
			5′-6″	21	
		(d) Southern **	1·000 m	6,671	Indian Government.
			3′-3⅜″	4,145	
		(e) Alnavar-Dandeli	1·000 m	31	Goverment of Mysore.
			3′-3⅜″	19	

* Jointly owned by the Government of India and the Government of Punjab (India).
† This line is between Haldibari and Pakistan Border for direct communication with Pakistan.
‡ This line is guaranteed by the Government of India and also received a subsidy from the Assam Government for the first ten years.
@ This line is of Ganga Bridge at Barauni.
** Increase of 1.22 kilometres/0.76 mile due to bifurcation of mixed gauge line between Sitanganam South Cabin and North Cabin into separate broad gauge and metre gauge lines.

Railway system		Lines comprised in the system			
Name	Worked by	Name	Gauge	Route Kilometrage/ mileage	Owned by
		GOVERNMENT RAILWAYS—*contd.*			
(6) Southern —*contd.*	Indian Government	(*f*) Peralam-Karaikkal	1·000 m 3′-3⅜″	24 15	Indian Government.
		(*g*) Pondicherry	1·000 m 3′-3⅜″	13 8	Do.
		(*h*) Nanjangud Town-Chamarajanagar	1·000 m 3′-3⅜″	36 22	District Boards, Mysore and Mandya.
		(*i*) Cochin Harbour-Extension	1·000 m 3′-3⅜″	2 1	Cochin Port authorities line (Ministry of Transport).
		(*j*) Southern	0·762 m 2′-6″	154 96	Indian Government.
(7) South Eastern	Indian Government	(*a*) South Eastern	1·676 m 5′-6″	4,371 2,716	Do.
		(*b*) South Eastern	0·762 m 2′-6″	1,488 925	Do.
(8) Western	Indian Government	(*a*) Western	1·676 m 5′-6″	2,633 1,636	Do.
		(*b*) Western	1·000 m 3′-3⅜″	5,904 3,669	Do.
		(*c*) Western	0·762 m 2′-6″	1,155 718	Do.
		(*d*) Western (Ujjain-Agar).	0·610 m 2′-0″	67 42	Do.
		NON-GOVERNMENT RAILWAYS			
(1) Ahmadpur-Katwa	Ahmadpur-Katwa Railway Co.	Ahmadpur-Katwa*	0·762 m 2′-6″	52 32	Branch Line Company under guarantee terms.
(2) Arrah-Sasaram Light	Arrah-Sasaram Light Railway Co.	Arrah-Sasaram Light	0·762 m 2′-6″	105 65	Company line subsidized by District Board of Shahabad.
(3) Bankura-Damodar River	Bankura-Damodar River Railway Co.	Bankura-Damodar River*	0·762 m 2′-6″	96 60	Branch Line Company under guarantee terms.
(4) Bukhtiarpur-Bihar Light	District Board, Patna	Bukhtiarpur-Bihar Light	0·762 m 2′-6″	53 33	District Board of Patna.
(5) Burdwan-Katwa	Burdwan-Katwa Railway Co.	Burdwan-Katwa*	0·762 m 2′-6″	52 32	Branch Line Company under guarantee terms.
(6) Dehri-Rohtas Light	Dehri-Rohtas Light Railway Co.	Dehri-Rohtas Light	0·762 m 2′-6″	67 42	Company line subsidized by District Board of Shahabad.
(7) Futwah Islampur	Futwah-Islampur Light Railway Co.	Futwah-Islampur*	0·762 m 2′-6″	43 27	Branch Line Company under guarantee terms.
(8) Howrah-Amta Light	Howrah-Amta Light Railway Co.	Howrah-Amta Light	0·610 m 2′-0″	70 44	Company line subsidized by District Boards of Howrah and Hooghly and Municipality of Howrah.
(9) Howrah-Sheakhala Light	Howrah-Sheakhala Light Railway Co.	Howrah-Sheakhala Light	0·610 m 2′-0″	27 17	Do.
(10) Shahdara (Delhi) Saharanpur Light	Shahdara (Delhi) Saharanpur Light Railway Co.	Shahdara (Delhi)-Saharanpur Light†	0·762 m 2′-6″	149 93	Company line.

* Guaranteed by the Government of India.

† Received land only from Government.

*

APPENDIX E

Principal Statistics of Railway Working in Selected Foreign Countries

British Railways, 1960*

Capital†	£1,987,586,104
Route mileage	18,369
Total Gross Receipts	£478,571,057
Working expenses	£546,223,137
Net traffic receipts	£(—) 67,652,080
Operating ratio	114%
Passenger journeys originating (in thousands)	1,036,688
Passenger miles estimated (in millions)	21,547
Passenger earnings (in thousands)	£151,274
Freight train traffic originating tons (in thousands)	248,500
Net ton miles (in millions)	18,650
Freight earnings (in thousands)	£247,320
Train miles—	
Coaching (in thousands)	280,210
Freight (in thousands)	208,676
Number of employees at the end of year (including collection and delivery services)	514,500

* British Transport Commission Financial and Statistical Accounts, 1960.

† Capital represents the gross book value of rolling stock, vehicles, plant and equipment, lands, buildings, permanent way, etc.

U. S. Class I Railways, 1960*

Investment in railway property in use in transportation service (in thousands)	$35,105,665
Route miles	220,559
Total operating revenues (in thousands)	$9,514,294
Total operating expenses (in thousands)	$7,565,336
Operating ratio	79.52%
Revenue passengers carried (in thousands)	325,872
Revenue passenger miles (in thousands)	21,257,969
Passenger revenues (in thousands)	$640,268
Revenue tons originated‡ (in thousands)	1,240,789
Revenue ton miles‡ (in thousands)	572,308,838
Freight revenue (in thousands)	8,025,423
Train miles—	
Passenger (in thousands)	209,367
Freight (in thousands)	404,464
Number of employees (in thousands)	781

* Seventy Fourth Annual Report on Transport Statistics in the United States for 1960.

‡ Short tons of 2,000 lbs.

Canadian Railways, 1960

	Canadian National Railways*	Canadian Pacific Railways**
Capital†	$3,767,316,630	$2,360,364,489
Average mileage of road operated	24,945	17,094
Total operating revenues (in thousands)	$693,141	$457,105
Total operating expenses (in thousands)	$685,794	$396,160
Net operating revenues (in thousands)	$7,347	$60,945
Operating ratio	98.9	86.7%
Passengers carried (Revenue) (in thousands)	12,024	7,059
Passenger miles (Revenue) (in millions)	1,201	1,008
Passenger revenue (in thousands)	$48,209	$30,516
Tons‡ carried (Revenue) (in thousands)	77,689	56,924
Net ton miles of freight (Revenue) (in millions)	34,011	25,733
Freight revenues (in thousands)	$541,909	$390,508
Train miles—		
Passenger service (in thousands)	21,292	12,127
Freight service (in thousands)	34,379	26,325
Number of employees (All services)	104,155	74,037

* Annual Report, Canadian National Railways, 1960.

** Annual Report, Canadian Pacific Railways Company, 1960.

† Represents Property Investment Account at the end of the year 1960.

‡ Short tons of 2,000 lbs.

SOUTH AFRICAN RAILWAYS, 1959-60*

Total capital expenditure (Open lines)	£616,654,310
Mileage of open lines as at 31 March, 1960	13,564
Total earnings	£164,753,870
Total working expenditure (including depreciation)	£110,550,911
Surplus of earnings over gross working expenditure	£54,202,959
Operating ratio	67.10%
Passenger journeys	294,711,470
Earnings—Passenger	£21,277,552
Total tonnage† of revenue—earning traffic	70,285,823
Earnings—goods, coal and live-stock	£129,399,733
Total train miles run	99,689,579
Total staff at 31 March, 1959	209,881

* Report of the General Manager of Railways and Harbours for the year ended 31 March, 1960.

† Short tons of 2,000 lbs.

JAPANESE NATIONAL RAILWAYS, 1959-60 AND 1960-61*

	1959-60	1960-61
Tangible assets (in 1,000 million yen)	2,380.9	2,435.5
Route kilometres	20,402	20,482
Railway revenue (in 1,000 million yen)	351.4	391.1
Railway expenses (in 1,000 million yen)	276.3	300.1
Operating ratio	78.6%	76.7%
Passenger carried (in millions)	4,813	5,124
Passenger kilometres (in millions)	114,189	123,983
Passenger revenue (in 1,000 million yen)	175.5	199.2
Freight tons† carried (in thousands)	181,403	195,295
Freight tons† kilometres (in millions)	49,668	53,592
Freight revenue (in 1,000 million yen)	152.4	164.1
Passenger train kilometres (in 1,000)	145,702	141,550
Electric railcar train kilometres (in 1,000)	87,828	94,849
Diesel railcar train kilometres (in 1,000)	66,547	84,573
Freight train kilometres (in 1,000)	134,664	141,895
Number of employees	448,996	448,390

* Japanese National Railways, facts and figures 1960 and 1961 editions respectively.

† Metric tons of 2,204.62 lbs.

AUSTRALIAN RAILWAYS

	New South Wales Railways 1959-60*	Victorian Railways 1958-9**	Queensland Railways† 1959-60*	Western Australian Government Railways 1959-60*	South Australian Railways 1958-9**
Capital (open lines)	£290,627,537	£115,425,189‡	£95,009,124	£53,591,069	£54,027,926
Miles open	6,108	4,333	6,338	4,120	2,533
Earnings	£83,562,706	£38,149,994	£34,855,601	£15,038,264	£12,920,890
Working expenses	£76,491,427	£38,119,057	£37,483,138	£15,408,204	£14,159,327
Net earnings	£7,071,279	£30,937	£(—)2,627,537	£(—)369,940	£(—)1,238,437
Operating ratio	91·54%	99·9%	107·54%	102·46%	109·6%
Passenger journeys	254,589,596	163,482,829	32,197,469	13,879,329	16,804,864
Passenger miles	Not available	1,779,423,431	Not available	167,453,014	231,896,969
Passenger revenue	£22,106,670§	£11,976,698	£3,017,248	1,143,365	£1,493,781
Tonnage of goods and live-stock (paying).	22,127,217	9,295,015	7,747,187	4,532,614	4,226,934
No. of tons carried one mile (paying).	8,806,028,101	1,352,516,481	1,515,241,815	705,245,196	605,456,281
Total goods revenue (including live-stock).	£57,597,911	£22,125,822	£29,420,183	£12,445,225	£10,098,208
Train mileage—					
Passenger	21,219,007	13,020,677	6,988,851	2,847,023	4,188,557
Goods	15,562,685	5,405,818	11,795,673	5,114,857	2,701,416
No. of staff	50,361	29,965	28,566	13,081	9,687

* Annual Report for the year ended 30 June, 1960.

† Exclusive of uniform Gauge Railways.

‡ Capital reduced by £30,000,000 Railway (Finance Adjustment) Act, 1936.

** Annual Report for the year ended 30 June, 1959.

§ Represent Coaching earnings.

APPENDIX F

RAILWAY-WISE DETAIL OF PLAN HEAD EXPENDITURE FOR THE YEAR 1960-61

(Figures in lakhs of rupees)

Particulars	Central	Eastern	Northern	North Eastern	Northeast Frontier	Southern	South Eastern	Western	Chittaranjan Locomotive Works	Integral Coach Factory	Locomotive Components Works	Railway Electrification	Railway Board	DBK	TOTAL
1. Rolling-stock (*excluding* Stock provided as part of electrification projects).	8,63	8,17	9,88	4,26	82	8,52	12,66	9,25	..	..	..	..	..	..	62,19
2. Machinery and Plant	71	29	21	33	12	25	20	28	8	..	..	..	..	..	2,47
3. Track Renewals	7,32	5,77	4,26	3,28	1,51	5,29	6,36	8,18	..	..	..	..	..	..	41,97
4. Bridge Works	34	10	47	47	4,19	82	3	61	..	..	..	..	..	..	7,03
5. Ganga Bridge	.. (—)	(—)9	..	..	..	..	..	..	..	..	..	..	..	..	—9
6. Traffic facilities	4,85	2,76	4,65	2,58	6,46	7,33	9,24	3,59	..	..	..	..	..	..	41,46
7. Signalling and Inter-locking works, etc.	1,61	54	76	38	41	73	38	64	..	..	..	..	..	..	5,45
8. Workshops *excluding* those provided as part of electrification projects.	1,21	14	1,33	63	24	59	17	78	21	67	34	..	..	..	6,31
9. I. Electrification (Electric Traction)	..	..	..	..	..	..	..	..	..	..	..	17,60	..	..	17,60
9. II. Other Electrical Works	42	6	..	..	..	2	10	28	..	..	..	..	..	..	88
10. Staff Quarters	1,48	66	1,19	59	1,19	66	82	1,92	12	..	..	..	..	..	8,63
11. Amenities for Staff	60	39	41	19	28	36	33	39	5	..	..	..	..	..	3,00
12. Passengers and other railway users' amenities	34	29	30	34	17	36	39	28	..	..	..	..	..	..	2,47
13(*a*) New Lines	1,19	5,95	4,62	..	6,34	11	3,63	49	..	..	..	..	..	3,07	25,40
(*b*) Restoration of dismantled lines	..	..	18	..	..	..	..	..	..	..	..	..	..	..	18
(*c*) Purchase of railway lines	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
14. Investment in road services	20	37	3	..	15	15	12	49	..	..	..	..	..	..	1,51
15. Other specified works	88	77	48	24	48	30	29	10	9	..	..	..	..	..	3,63
16. *Increase or decrease in balances under* :—															
(*a*) Stores Suspense	—3,48	—1,14	—3,58	—1,56	—47	—96	—2,10	—1,45	—1,00	15	1	..	..	..	—15,58
(*b*) Manufacture Suspense	—35	—1,08	44	—35	—17	—80	—1	6	—44	—2,98	3	..	..	..	—5,65
(*c*) Misc. Advances	—87	—7,36	3	—12	9	25	—1	—7	—10	2	..	..	—1	..	—8,15
17. *Credits or Recoveries* :—															
(*a*) Credits for released materials	—3,18	—1,38	— 1,80	—70	—27	—76	—1,28	—1,81	..	..	..	..	..	..	—11,18
(*b*) Other Credits	..	—20	—2	..	—81	..	—9	—3	—1	..	..	—3	..	..	—1,19
TOTAL	21,90	15,01	23,84	10,56	20,73	23,22	31,23	23,98	—1,00	—2,14	38	17,57	—1	3,07	1,88,34

Books, Technical Monographs and Technical Papers published by the Railway Board

BOOKS

(1) Report by the Railway Board on Indian Railways. Published yearly. Volume I—Report, Price Rs. 12 or 19*sh.* Volume II—Statistics, Price Rs. 24.50 or 37*sh.* 6*d.* (1959-60).

(2) Indian Railways, 1959-60. Published yearly. Price Rs. 2.50.

(3) Classified List of Gazetted Establishment of Indian Railways, corrected up to 31 December, 1960. Price Rs. 10.50 or 16*sh.* 6*d.*

(4) History of Indan Railways, Constructed and in Progress, corrected up to 31 March, 1955. Published sexennially. Price Rs. 18.50 or 28*sh.*

(5) Annual Report of Railway Testing and Research Centre, 1959-60. Price Rs. 12.00 or 18*sh.*

(6) Soil Mechanics for Railway Engineers by U. G. K. Rao. Price Rs. 7.50 or 12*sh.*

The books can be had from the Manager of Publications, Civil Lines, Delhi-8.

TECHNICAL MONOGRAPHS

(7) Twenty-two monographs on technical subjects of interest to railwaymen have been published and issued by the Research Directorate of Research, Designs and Standards Organization, Alambagh, Lucknow. The complete list is given below:

Technical Monograph		*Name*	*Author*	*Remarks*
No.	1.	Explanatory notes on soil exploration and field identification	...	Out of stock
,,	2.	Suggested simple method of designing concrete mixes for minor works	...	Out of stock
,,	3.	Analytical comparison between different methods of concrete mix design	...	Out of stock
,,	4.	Tunnelling techniques	U. G. K. RAO	Out of stock
,,	5.	The problem of diesel *vs.* steam rail traction	R. K. SETHI	Out of stock
,,	6.	The significance of laboratory tests on the design and selection of engineering materials	S. RAMANUJAM	Available
,,	7.	Waterway required for Bridges	GURDIAL SINGH	Available
,,	8.	New transhipment yard at Garhara (near Barauni junction)	K. C. SOOD AND K. DEVANATHAN	Available
,,	9.	The selection and design of a rail section	K. C. SOOD AND M. MENEZES	Available
,,	10.	Simple tests to determine approximately the quality of building limes		Available
,,	11.	Remodelling of MG marshalling yards	D. DEVANATHAN AND M. M. AGERWALA	Available
,,	12.	Track loading fundamentals	C. W. CLARKE	Available
,,	13.	Problem of Yamuna Bridge at Delhi	GURDIAL SINGH	Available
,,	14.	Application of soil mechanics to five interesting railway problems	U. G. K. RAO, R. NAGARAJAN, R. BASU CHOUDHURY, O. P. KAPUR, A. K. RAMAYYA, K. SITARAMAN	Available
,,	15.	Selection of ruling gradients	K. C. SOOD	Available
,,	16.	Centralised traffic control in U.S. Railroads and its applications in India	A. K. SARKAR	Available
,,	17.	Corrosion and its Prevention	S. RAMANUJAM	Available
,,	18.	Modern principles of bogie design and their use in the MAN—HAL bogie for model 411 coach	ULRICH KAYSERLING	Available
,,	19.	Testing to destruction of prestressed concrete girders	N. N. SARMA	Available
,,	20.	Gradients in hump yards	O. S. MURTHY	Available
,,	21.	Some topics in vehicle design	J. L. KOFFMAN	In the press
,,	22.	Remedial measures for deteriorated track formations	R. NAGARAJAN	Available

TECHNICAL PAPERS

(8) The number of technical papers published by the Railway Board up to date is 335. Two are under print. The papers comprise :

(a) Original descriptions of railway works and studies of railway problems in India and elsewhere.

(b) Reprints of articles from foreign engineering magazines.

(c) Reprints or abstracts of reports received by the Government of India on subjects connected with railways.

A few of the important technical papers are mentioned below :

Technical Paper		*Name*	*Author*
No.	153.	River training and control on the guide bank system	F. J. E. SPRING
,,	215.	The Hardinge Bridge over the Ganges Lower at Sara	SIR ROBERT GALES
,,	244.	Sleeper spacing and the effect of the new Permissible Axle-loads	A. F. HARVEY

Technical Paper	*Name*	*Author*
No. 245.	Report of the Indian Railway Bridge Committee on track stresses	...
„ 256.	Notes on the preparation of railway projects	H. L. GLASS
„ 262.	Notes on steps to be taken to permit of running the future large vehicles on Broad Gauge Railways, 1927	A. I. SLIEGH
„ 267.	Flood-Lighting, 1929	H. J. MULLENEUX
„ 271.	Antiseptic treatment of *Pinus Longifolia* for Railway Sleepers	KAMESAM
„ 272.	The Sterographic Survey of the Shakagam	MAJOR KENNETH MASON (Reprint)
„ 273.	A Schedule system for the Control of Operations in Workshops, 1929	H. H. SAUNDERS
„ 276.	Investigation into the Strength of Rail Joints	H. HOWE AND L. H. SWAIN
„ 277.	Description of the Cost Accounting Scheme introduced in the Locomotive Workshops at Moghalpura	A. E. HOWELL
„ 278.	Notes on Table Railway Construction	H. G. SALMOND
„ 279.	Report on Track Practice on American and Canadian Railways	A. F. HARVEY
„ 280.	The Installation of a Production system in the Locomotive Workshops at Moghalpura	A. E. HOWELL
„ 281.	The Belt System of Repairs introduced in the Loco. Workshops at Kancharapara	DE'VERA IRWIN AND J. R. POTTER
„ 282.	Notes on "Fridera" a composition for reconditioning abraised spike holes in Railway Sleepers	S. KRISHNA AND T. P. GHOSE
„ 283.	Description of a system introduced in the Stores Department of E. I. Railway with appendices	F. G. S. MARTIN AND A. R. A. HARE DUKE
„ 284.	Notes on progressive system of wagon repairs as introduced in N. W. R. Workshops at Moghalpura	B. S. SINDHU
„ 285.	Notes on the methods by which the provisions in the English Railway Act of 1921 were framed both from the points of view of the Railway Coys. and of Work—the compilers of the Act	E. A. SIMS
„ 286.	Stresses in Fishplates for 90 lbs. Rails (with conclusions affecting the design of standard rail and fishplate sections)	E. A. SIMS
„ 287.	Report on Oil Burners and Wicks for Signal Lamps	H. E. COX
„ 288.	G. I. P. Railway Dynamometer Car, Report No. 11, Train Resistance	C. W. CLARKE
„ 289	The Hump Yard in India	MAJOR H. W. WAGSTAFF
„ 291.	Controlled Concrete	A. W. CRIP VILLIERS
„ 292.	Hints on the Construction of a Railway in the plains with special reference to Bengal	K. B. RAY
„ 293.	Simplified Design of Masonry Arch by Elastic Theory	A. VASUDEVAN
„ 294.	Frame Arch Spans for Railway Loadings	H. J. NICHOLAS
„ 296.	Paint Flanking on Railway Carriages	H. M. R. MORSE
„ 297.	The Maximum Length of Rails as affected by the range of temperature and the design of Rail-Joints	A. M. SIMS
„ 298.	Cost Accounting in English and Indian Railway Workshops	S. V. IYER
„ 300.	Report on investigation into modern methods of introducing Transition Curves economically into existing lines of Railways	R. H. MARTIN
„ 301.	Note on Reconditioning of Curves	R. STRICK
„ 303.	Wear of Rails on curves and check rails clearances required on curves of 4" and sharper	A. M. SIMS
„ 305.	Primary Stresses in Railway Tracks	W. E. GELSON
„ 306.	Creosoted Wooden Railway Sleepers (Ties) in India and elsewhere	C. W. SCOTT
„ 307.	Earthquake Reconstruction on Quetta (Railway) Division, 1936-40	R. O. C. THOMSON
„ 308.	Braking Distances of Metre Gauge Trains	E. W. BAKER
„ 309.	The Section and Armour of a Guide Bank for the Training and Control of the Greak Alluvial Rivers	K. B. RAY
„ 311.	Diesel Locomotives and Railcars, their development and suitability with special reference to their future in railway traction in India and post-war reconstruction	P. R. AGARWAL
„ 312.	The Steel User's Guide, Part I, Constructional Steels	C. W. CLARKE
„ 313.	Approximate Method for calculating the Deflection of Beams	D. S. DESAI

Technical Paper	Name	Author
No. 316.	Curve Realignment on the East Indian Railway	J. M. FENTON
„ 317	Control of Railway Traffic Operations by Tele-phone and Teleprinter	H. L. CARTER
„ 318.	History of the Hardinge Bridge	T. N. S. RAO
„ 319.	The manufacture of Locomotive in India	P. R. AGARWAL
„ 320.	Investigation into the cause of cyclic wear of Rails on the Great Indian Peninsula Railway by the Electric Suburban stock and the remedies found necessary	E. C. B. THORNTON
„ 321.	Use of Aluminium Alloys in Structures	K. F. ANTIA
„ 322.	Practical Well Foundations and Girder Erection for the Less or "Major Bridges" in India (under reprint)	FRANK J. SALBERG
„ 323.	Stresses in Railway Track	V. VENKATARAMAYYA
„ 324.	Engine failure Analysis on the Bengal Nagpur Railway	H. M. CHATERJEE
„ 325.	Economic Types of Water Softening Installations, with special reference to the work under-taken on the Poona-Raichur Section of the G. I. P. Railway	N. L. DESHMUKH
„ 326.	A Note on the Preparation of Designs and Estimates for Workshop Sheds, with special reference to the Mechanical Workshop Project on the Assam Railway	T. V. JOSEPH AND S. K. KANJILAL
„ 327.	Railway Construction in India, Plant and Stores	N. K. ROY
„ 328.	Prestressed concrete Railway girder spans including the report on test spans	By Central Standards Office for Railways, New Delhi
„ 329.	Foundations in Shrinkable Soils	KURT J. VOGL
„ 330.	Statistical Aids to Railway Operation	JAGJIT SINGH
„ 331.	Mukerian-Pathankot construciton with a special note on Chakki Bridge (1×350 ft. span girder)	G. P. SHAHANI
„ 332.	'The Value of Phenolic Resins and the Unique properties of their Indian substitutes'	S. RAMANUJAM
„ 333.	Construction of a B. G. M. L. bridge (14 spans×150 ft.) and its training works across the Beas at Mirthal on the new Mukerian-Pathankot Link	G. P. SHAHANI
„ 334.	River Engineering (in two volumes)	K. B. RAY
„ 335.	River training and control for bridges	H. K. L. SETHI

Catalogue of technical papers priced at Re. 0.44 nP can be had from the Manager of Publications, Civil Lines, Delhi-8. The technical papers can also be bought from him.

The prices of the papers vary from 19 nP to rupees fifteen.

PERIODICALS

Indian Railway Technical Bulletin.—Edited and published quaterly by the Reserach Directorate, Research, Designs and Standards Organization, Alambagh, Lucknow. The annual subscription of the Bulletin is as follows:

Inland	Rs. 3.00 including postage
Foreign	Rs. 5.00 including postage
Single copy	Re. 1.00 plus postage

Concessional annual subscription for the employees of the Indian Railways is Rs. 2.00 (50 nP. per copy) only. Railway employees should register orders with the Secretary to the General Manager of their railway and non-railway subscribers direct with the publisher.

Documentation Notes.—A monthly publication giving abstracts of articles of interest on railway and allied engineering subjects. Annual subscription Re. 1.00 for the employees of the Indian Railways and Rs. 6.00 including postage for other subscribers.

Indian Railways.—A monthly magazine published by the Joint Director, Public Relations, Railway Board, New Delhi: devoted to railway affairs in India and abroad. Annual subscription :

Inland	Rs. 10.00 including postage
Foreign	18*s.* or $2.25 including postage
Single copy	Re. 1.00 and Rs. 4.00 for the annual number.

Concessional subscription for the employees of the Indian Railways is Rs. 8.00 per annum.

MGIPC—L-1 Railway/61—23-2-62—3,000.