E. C. No. 5

# ESTIMATES COMMITTEE

## SEVENTEENTH REPORT

1955-56

## MINISTRY OF RAILWAYS

## OPERATION ON INDIAN RAILWAYS



LOK SABHA SECRETARIAT
NEW DELHI
*December, 1955*

## CORRIGENDA

**Seventeenth Report of the Estimates Committee on the Ministry of Railways—Operation on Indian Railways.**

Page 3.—Para 5, 3rd line: *for* "effected" *read* "affected".

Page 15.—Para 49, 7th line: *for* "Board" *read* "Broad".

Page 17.—Para 57, 3rd line from bottom: *for* "o" *read* "to".

Page 18.—Para 62, 3rd line: *for* "Central Railways" *read* "Central Railway".

Page 18.—Para 62, 4th line: *for* "Eastern Railways" *read* "Eastern Railway".

Page 18.—Para 63, 2nd line: *for* "trans" *read* "trains".

Page 19.—Para 65, 12th line from bottom: *insert* ":" *after* "traffic".

Page 24.—Para 75, 11th line: *for* "453" *read* "463".

Page 24.—Para 75, 11th line: *for* "1952-53" *read* "1942-43".

Page 27.—Para 83, (iii), 16th line: *for* "Poona-Bubli" *read* "Poona-Hubli".

Page 30.—Para 92, 6th line: *for* "tht" *read* "the".

Page 35.—Para 100, 8th line: *for* "195" *read* "1954-55".

Page 36.—Para 107, 2nd line: *for* "cantact" *read* "contact".

Page 42.—Para 124, 16th line: *for* "Administration" *read* "Administrations".

Page 48.—Para 141, 13th line: *insert* "non" between "qua" and "for".

Page 55.—Item 48, 8th line: *for* "repurcussions" *read* "repercussions".

Page 57.—Item 63, 1st line: *for* "arro" *read* "arrow".

Page 57.—Item 65, 1st line: *for* "provisions" *read* "provision".

Page 60.—Column headings, 3rd column: *insert* "%" *after* "trains"

Page 60.—Column 5, 1952-53: *for* "98·60-85·00†" *read* "85·00-98·60†".

Page 66.—11th line: *for* "(Upto 23/24)" *read* "Upto 23/4)".

Page 69.—Column 5, last line: *for* "166" *read* "266".

Page 73.—4th line from bottom: *for* "nad" *read* "and".

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*Elected Member with effect from the 7th December, 1955 *vice* Shri R. Venkata raman resigned.

# INTRODUCTION

I, the Chairman of the Estimates Committee, having been authorised by the Committee to submit the Report on their behalf, present this Seventeenth Report on the Ministry of Railways on the subject "Operation on Indian Railways".

2. During the tours of the Sub-Committees, frequent representations were received from the representatives of trade and industry that the rail transport available was very much inadequate to the needs with the result that the traffic was frequently held up seriously. The Committee, therefore, decided to give their prior attention to the question of the availability of rail transport in the country and operation of Indian Railways in general. This Report embodies the conclusions of the Committee on the Operation on Indian Railways.

3. The Committee wish to express their thanks to the Chairman and Members of the Railway Board and other Officers of the Ministry of Railways for placing before them the material and information that they wanted in connection with the examination of the estimates. They also wish to thank the representatives of the Federation of Indian Chambers of Commerce and Industry, New Delhi, the All India Manufactureres' Organisation, Bombay, the All India Federation of Transport Users' Associations, Bombay, the National Federation of Indian Railwaymen, New Delhi, Shri H. N. Kunzru, M.P., Shri Shanti Prasad Jain and Sarvashri L. P. Misra, K. C. Bakhle, I. S. Puri, V. P. Bhandarkar and B. B. Varma for giving their evidence and making valuable suggestions to the Committee.

# I

## INTRODUCTORY

In a way, Railways are like a business concern, which manufactures and sells the commodity called "transport". The manufacture of this commodity is an extremely complicated affair, because the factory in which it is manufactured consists of the entire railway line of about 34,000 miles. The workers in this factory consist of about ten lakhs of railway employees, who are spread over the entire railway line from one end of the country to the other. In no other business concern or Government activity are the full co-operation and joint effort of all the employees so vital as in the case of Railways. If a token porter, (working at a small road-side station) who is at the lowest rung of the ladder in the employment of the Railways, delivers a wrong token through mistake to a passenger train waiting at a station, it might result in a serious accident which may cost loss of life and property and affect the Railway communications for a long time. This would also naturally affect the manufacture of the commodity called "transport", *i.e.* it would have adverse repercussions on the movement of traffic. These particular aspects require also to be borne in mind while discussing, debating and deciding the issues affecting the rail communications.

2. During the study-tours of the Sub-Committees of the Committee, complaints were received about the inadequacy of rail transport and fears were expressed that unless proper provision was made for adequate rail transport, progress of trade and industry in the country would suffer a serious set-back. The Committee, therefore, decided to give their prior attention to the rail transport situation with a view to make a correct assessment of the availability of rail transport *vis-a-vis* the country's requirements.

## II

## OPERATION OF PASSENGER TRAFFIC

### A. Introduction

3. Apart from the business and trading community, an average citizen comes into contact with the Railways, when he has to undertake a journey by rail from one place to another. He, therefore, normally judges the performance of the Railways from the point of view of the punctuality with which these passenger trains run, the speed at which he is transported from one place to another, the comforts he gets during his travel and the amount he has to pay for securing the travel. Each of these aspects of passenger trains will be discussed separately.

### B. Passenger train punctuality

4. Attached to this Report are Appendices II and III containing the percentage of passenger and mixed trains not losing time on Indian Railways for Broad Gauge and Metre Gauge separately during the years 1935-36 to 1953-54.

These figures broadly reveal that the deterioration in passenger train punctuality, which had set in during the War period has been arrested and improvement effected during the post-War period; but the best figures of punctuality achieved during the pre-War period have not yet been attained. For instance, in the case of Broad Gauge, the highest percentage of punctuality achieved for all trains was 87.3 in 1935-36, whereas the figure for 1953-54 is 81.63. In the case of mail and important through trains, the percentage of the highest punctuality in trains was 81.9 during 1935-36, whereas in 1953-54, it was 74.79. As a matter of fact, the performance in 1953-54 showed a marked deterioration over the previous year, when the corresponding figure was 77.49. Similarly, in the case of Electric suburban trains of the Western and Central Railways, the best percentage attained was 95.1 in 1935-36 as against 81.69 in 1953-54. Here again the performance during 1953-54 showed a deterioration over the previous year, when the figure was 84.58. In the case of other passenger trains, the percentage in 1953-54 was 78.71 as compared to 85.3 during 1935-36.

5. These figures would further indicate that there is considerable scope for improving the punctual running of trains and the Committee would suggest the following targets for early attainment:

| | | |
|---|---|---|
| All trains | .. | 90% |
| Mail and important through trains | .. | 85% |
| Electric Suburban trains | .. | 95% |
| Other passenger trains | .. | 90% |

The Committee do not wish to comment upon the punctuality of mixed trains, because such trains have to perform shunting and their punctuality is likely to be effected by the amount of shunting required to be done *en route*. The Committee would, however, suggest that, as far as possible the running of mixed trains should be avoided.

6. The Committee have noticed that there are more than 1700 miles of track under engineering restrictions due to arrears of replacement of rails and sleepers, and that this is a factor, which is militating against better punctuality and better speeds. They recommend that early steps should be taken by the Railway Ministry to wipe off these arrears.

**C. Speeds of passenger trains**

7. Attached to this Report are Appendices IV and V containing the overall average speed for the entire run of the mail trains in the time-table current from 1st April, 1955, for Broad Gauge and Metre Gauge separately.

These figures reveal the following interesting features:

*Broad-Gauge sections*:

8. There are wide fluctuations in the overall speeds of mail trains running over different sections. The best speed is that of 31 Dn. Frontier Mail between Bombay Central and Delhi, the speed being 38·2 m.p.h. The overall speed of the same train in the opposite direction is, however, 35.6 m.p.h. The question of bringing the speed to the same level as that of the corresponding train in the opposite direction needs to be carefully examined. The slowest overall speed is of Madras Mail between Madras Central and Bombay V.T., the figure being 23.9 m.p.h. The speed of the corresponding train in the opposite direction is 25 m.p.h. The Committee consider these speeds to be very low for a 'mail train'. As a matter of fact, it is lower than the speeds of some of the mail trains on the Metre-Gauge sections.

*Metre-Gauge sections*:

9. (i) The overall speeds of mail trains on the Metre Gauge sections are generally lower than those on the Broad Gauge sections, as is to be expected.

(ii) The overall speeds of mail trains on Metre-Gauge sections also fluctuate widely as in the case of Broad-Gauge sections. The slowest overall speed on the Metre-Gauge section is that of 330 Dn. between Ahmedabad and Bhavanagar (15.6 m.p.h.), the fastest speed of a mail train being that of 301 Up. between Katihar and Lucknow (27 m.p.h.).

10. The Committee understand that the following proposals are under consideration of the Railway Ministry in this connection:

(i) The booked speed of 61/62 mail train would be increased on the Northern Railway portion by (a) strengthening of track, (b) improvement of standard of inter-locking and (c) provision of superior type of ash pits.

(ii) Proposals to improve track, bridges and inter-locking to increase maximum permissible speed over the Gondal Region have

been formulated. With these improvements an increase is anticipated in the average speed of trains in the Gondal Region of the Western Railway.

(iii) There is a proposal to raise maximum permissible speed on Lucknow-Katihar section to 60 m.p.h. When this becomes possible, the speed of mail trains will be increased.

The Committee recommend that these proposals should be implemented expeditiously, so that their results would be reflected in the time-table to come into force from 1-10-1956, if not earlier.

11. The Committee were rather surprised to note that even on the main route over which the Grand Trunk Express passes, there are sections containing non-interlocked stations which require the trains to be slowed down to 10 m.p.h., while passing through such stations. The Committee desire that early steps should be taken to make such stations fully interlocked.

12. The Committee also recommend that the Railway Board should undertake a systematic review of the overall speeds of mail trains throughout the country and incorporate schemes in the Second Five Year Plan with a view to ensure that the overall speeds of mail trains do not remain below 35 m.p.h. in the case of Broad-Gauge trains and not below 30 m.p.h. in the case of Metre-Gauge trains. These targets can be easily achieved without exceeding the maximum permissible speed of 60 m.p.h. for the Broad Gauge track and 45 m.p.h. for the Metre Gauge track. As a matter of fact, the speeds in excess of the target suggested have already been achieved for several mail trains on Broad Gauge sections within the overall maximum permissible speeds, which are at present operating on Indian Railways.

13. Even in regard to the maximum permissible speed-limit of 60 m.p.h. for Broad Gauge track, and 45 m.p.h. for Metre Gauge track, the Committee feel that this limit is on the low side, especially when it is compared with the maximum permissible speeds laid down in some of the foreign countries, the figures for which are given below:

| | |
|---|---|
| 1. (i) U.S.A. with steam engines and repeated signals | 90 m.p.h. |
| (ii) With steam engines and without repeated signals ... | 75 " |
| (iii) With diesel electric engines ... | Over 100 " |
| 2. United Kingdom | 85 " |
| 3. Canada | 85—90" |
| 4. France | 85 " |
| 5. Germany | 75 " |
| 6. Switzerland | 75 " |

14. Any substantial increase in the maximum permissible speed over the main line routes will need considerable strengthening of the track in the form of (i) heavier rails, (ii) heavier ballast and (iii) increased density of sleepers. This is likely to cost heavy expenditure and the Committee, therefore, do not recommend this course for the present. They were, however, glad to learn from the Chairman, Railway Board that it might be possible to increase the

maximum permissible speed over the main line routes to a certain extent by improved maintenance and without incurring heavy expenditure. It is worth noting here that the coaches that are being produced in the country would run safely at 80 m.p.h. The Committee were informed that the Director, Research Centre, Lucknow, had been asked to examine the question of increasing the speeds of mail trains on certain main routes. After examining the obstacles in the way of attaining higher speeds in certain main routes like Delhi to Madras, Delhi to Bombay and Delhi to Calcutta and also some of the branch lines, a clear picture would be presented to the Committee by the Railway Board and the Committee shall comment upon it in their subsequent Report.

15. Pending decision about increase in the maximum permissible speeds, there is another direction in which there is some scope for improving the overall speeds, *viz.*, reducing the number of stoppages *en route* on these long distance trains and also curtailing the halts provided at big stations. The Committee were informed that sometimes pressure was brought to bear from various quarters for introducing additional stoppages at comparatively small stations even on long distance mail and important trains. The Committee are of the opinion that such pressure should be resisted in the interest of long distance passengers. In regard to the halts of important trains at big stations, the Committee would suggest that a systematic review should be taken by the Railway Administrations to see as to what extent these halts can be curtailed. To mention only one instance as a random sample, it would be seen that 1 Up Punjab Mail is given a halt of 2 hours and 5 minutes at Delhi junction.

16. In regard to the speeds of passenger trains on branch line sections, the Committee find that in many cases these are very low, with the result that the train journey by these trains becomes tedious. The Committee give here one or two instances at random. The passenger train, 4 BBB between Bikaner and Hanumangarh junction, takes about 11½ hours to cover a distance of about 150 miles. The maximum permissible speed on this section is 40 m.p.h; but the booked speed is only 21 m.p.h. Similarly on the section, Fatehgarh to Kanpur, the booked speed of the passenger train, 470 Dn. is 25 m.p.h. though the maximum permissible speed is 40 m.p.h. Similarly, booked speeds on passenger trains on the Gondal Region are low. The Committee appreciate that the speed of a passenger train over any section is dependent on a large number of factors, such as the gradient, the strength of track, the type of engines provided for the train, the standard of interlocking provided on the section etc. Yet they do feel that there is an urgent need for a systematic review being taken by each Railway Administration of the speeds of passenger trains on branch lines, so that suitable steps may be taken to attain the booked speeds of 30 m.p.h. for Metre Gauge and 35 m.p.h. for Broad Gauge passenger trains running over a distance of 50 miles, say, by the end of the Second Five Year Plan. This might necessitate strengthening of track on some sections and provision of better locomotives. The expenditure to be incurred would, however, be worth while so as to provide for better rail transport to the population in the areas concerned.

## D. Over-crowding

17. The question of the comfort or discomfort of the passengers will be discussed by the Committee under "Passenger Amenities" in their subsequent Report. Here, however, they would confine themselves to the problem of over-crowding.

18. The number of passengers travelling by the Railways has increased tremendously during the War and the post-War period, whereas the number of coaches available with the Indian Railways has not correspondingly increased with the result that over-crowding of passenger trains has become a regular feature with the Indian Railways.

19. Attached to this Report is Appendix VI containing the number of passengers originating on Class I/Government Railways during the years 1938-39 to 1953-54 for Broad Gauge, Metre Gauge and Narrow Gauge separately.

From these figures it will be seen that the total number of passengers originating during 1953-54 recorded an increase of 140 per cent. over the number in 1938-39.

20. Appendix VII contains a statement giving the total number of of passenger carriages (in units) on Class I/Government Railways during the same period for Board Gauge and Metre Gauge separately.

These figures indicate that increase in coaching stock is not commensurate with increase in passenger traffic, and point to the obvious conclusion that the need for building up more coaching stock on Indian Railways is imperative. In the meantime, no efforts should be spared to make the best use of the coaching stock already available (a) by tightening the rake arrangements wherever feasible and (b) by reducing the number of coaches under or awaiting repairs.

21. The question of overcrowding on suburban trains is even more serious as will be seen from the figures of suburban traffic given for the Central, Western and Southern Railways in Appendix VIII.

From these figures it would be seen that the number of suburban passengers during 1953-54 recorded an increase of 328 per cent., 223 per cent. and 193 per cent. on the Central, Western and Southern Railways respectively over the corresponding figures for 1938-39 indicating a state of chronic overcrowding in suburban trains.

22. It is noted that the Railway Ministry has appointed a Committee to examine the extent of overcrowding on suburban trains and to suggest measures to improve the position. This Committee consists only of officials or retired officials. It would have been better if some non-official element were also associated with this Committee, so that the point of view of the people actually affected by this overcrowding could be given due weightage. It is suggested that this may be done even now.

23. The Committee recommend that the following points should also be examined in connection with the overcrowding in suburban trains:

(i) Provision of standing accommodation only in some compartments of suburban trains by removing the benches;

(ii) Reducing the minimum headway between trains to about 3 minutes against 4 minutes at Churchgate and 5 minutes at Victoria Terminus by improved signalling arrangements as suggested by the Indian Railway Delegation to the Soviet Railways and other European Railways; and

(iii) Staggering the office hours at Calcutta, Bombay and Madras, in consultation with the State Governments and the local business offices, so that the peak period can be spread out.

24. The problem of suburban overcrowding is equally serious in Calcutta area also. The introduction of additional trains in the suburban area is necessary during the peak hours. It is, however, not possible at present to introduce any additional trains during the peak hours for the following reasons:

(a) Want of section capacity

(b) Want of locomotives

(c) Want of coaching stock

(d) Inadequacy of platforms.

Electrification of suburban services is the only alternative to overcome these difficulties. The Committee are, therefore, glad to note that the scheme of electrification for this area has already been sanctioned and is progressing. Electrification of the Howrah-Burdwan section is expected to be completed by 1957.

25. It is necessary to introduce more suburban trains on the following sections:

(i) Delhi-Ghaziabad

(ii) Delhi-Shakurbasti

(iii) Delhi-Gurgaon

(iv) Delhi-Sonepat

(v) Delhi-Okhla.

But owing to the lack of line capacity and berthing difficulties at Delhi Main and also due to shortage of stock and power, it is not feasible to do so, at present. It is proposed to remodel Delhi Station Yard and to increase the line capacity in the Second Plan. In the meantime, some relief will be afforded on receipt of some Rail Cars which are expected shortly.

26. The Committee find that additional passenger trains are being introduced by the Railways every year; yet except the Central and Southern Railways the restoration of the passenger train services curtailed during the War has not yet been completed. When these services were curtailed due to the exigencies of War, it implied a moral responsibility on the part of the Railways to restore them at the earliest opportunity. The Committee, therefore, recommend that the restoration of these services should be given a very high priority. The Chairman, Railway Board, has promised to issue instructions to all the General Managers to review the position in this respect and the Committee hope that as a result of the review, all such passenger train services curtailed during the War will be restored by 1-10-1956, unless the census figures definitely prove that there is no need for such restoration due to the change in the trend of passenger traffic.

27. The question of passenger fares will be discussed under the heading "Commercial Matters" in a subsequent Report.

**E. Miscellaneous**

28. Before leaving this question of passenger traffic, the Committee would like to refer to three more points, *viz.* (i) Janata Express trains, (ii) Air-conditioned coaches for third class passengers and (iii) the classes of accommodation to be provided.

(i) *Janata Express trains.*—The running of Janata trains exclusively for third class passengers between certain specific points and providing sleeping accommodation for the night journeys are two features which are very much appreciated and the Committee hope that these facilities will be progressively extended. They understand that the following proposals in this connection are already under consideration:—

(a) Increasing the frequency of the Janata trains, 14 Up. and 13 Dn. between Madras and Bombay V.T. from bi-weekly to tri-weekly;

(b) Introducing a bi-weekly Janata between Bombay and Allahabad and Bombay and Bezwada;

(c) Introducing Janata Express trains between Bombay Central and Delhi; and

(d) Introducing a Janata Express train between Delhi and Ahmedabad (M.G.).

The Committee recommend that these proposals should be implemented as soon as possible. They also recommend that the question of introducing a through Janata Express between Bombay and Saurashtra (with suitable connection at the break-of-gauge point) and between Bombay and Howrah be examined.

(ii) *Air-conditioned coaches for third class passengers.*—The Committee were glad to learn from the representatives of the Railway Ministry that it was their intention to run a completely air-conditioned train between Bombay and Delhi and Delhi and Howrah and that the air-conditioned accommodation will be provided even to the third class passengers in these trains on payment of a surcharge. This experiment will be watched with considerable interest. The Committee further recommend that the Research Centres of the Railways should concentrate on devising some cheap method by which some degree of cooling can be effected in the third class compartments. Efforts should also be made to provide dust-free ventilation in third class carriages.

(iii) *Classes of accommodation to be provided.*—Apart from air-conditioned class, at present three classes of passenger accommodation are provided on Indian Railways, *viz.* Class I, Class II and Class III. One point is worth noting here that while sleeping accommodation can be reserved in I Class and also in III Class in certain trains, no sleeping accommodation is available in the II Class. The Committee were informed that this was due to the fact that eventually it was intended to abolish II Class, when adequate sleeping accommodation would be made available in III Class. The Committee are in agreement with this proposed arrangement and hope that it will be possible to implement it without undue delay.

## III

## OPERATION OF GOODS TRAFFIC

### A. Introduction

29. The increase in agricultural and industrial production of a country and generally its economic progress are reflected in the transport of goods from place to place. As the production of agricultural and industrial products develops the demand for transport also naturally increases. In India though there are various means of transport such as the Railways, river navigation, the coastal shipping and the air transport, major portion of the goods traffic is carried by the Railways; and this position is likely to remain for a long time to come. As the agricultural and industrial production in the country is going up, the demand for rail transport is also increasing rapidly and the present position is that the Railways are unable to cope up with the traffic offered. Unfortunately, in India the development of Railways has always lagged behind the requirements of rail transport and this position has not so far been rectified.

30. As a matter of interest, we quote below an extract from evidence that was given before the Ackworth Committee during 1920-21 by Mr. Hindlay, the then Agent of the East Indian Railway:

> "It is impossible to estimate the loss to trade which would be brought about by the delay in providing essential facilities and the persistent failure to keep the capacity of the lines up to the demand for transportation. The position is already so bad that at times the railway has to restrict or even entirely to close down the acceptance of goods traffic. Only one half of the demand for wagons for merchandise can be met. For the past 26 years, there has always been the inability to provide transportation to the extent demanded and the position is getting worse day by day.
>
> At times when the demands for coal reach their maximum, capacity available for ordinary goods is considerably less than is required—large quantities of merchandise offered for transportation have frequently to be refused. Improved facilities are necessary not only on the East Indian Railway, but especially on the adjoining lines and junctions. In one case, the European oil seed market was lost definitely owing to lack of railway transport."

31. During the course of the tours of Sub-Committees, they received numerous complaints about the inadequacy of rail transport due to which trade and industry had to suffer a lot. The representatives of the Federation of Indian Chambers of Commerce and Industries during the course of their evidence before the Committee stated that there were several instances, where the working hours of the Factories had to be reduced and the production slowed down due to

inadequacy of rail transport. The paramount need of extending rail facilities for the transport of goods has, therefore, to be borne in mind while discussing the operation of goods traffic on the Indian Railways. As a matter of fact, in an informal talk, the President of the Federation of the Indian Chambers of Commerce and Industries went to the extent of suggesting that one Five Year Plan might be exclusively ear-marked for the expansion of the Railway, so that the bottleneck of the rail transport is not allowed to hamper the economic progress of the country.

32. The Committee are, however, glad to note that the representatives of the Railway Ministry are not complacent about the inadequacy of the rail facilities available in the country. In their reply to a question as to when it is expected to withdraw the system of priorities in the movement of goods, they replied as under:

> "As the demands for movement of traffic continue to be far in excess of the available rail transport capacity the continuance of the system of rationing of rail transport is inevitable. During the slack season of 1949, when the outstanding indents had come down almost equivalent to a day-and-a-half or two days average loadings in certain cases, the rationing of capacity obviously did not have to function though the Preferential Traffic Schedule was still there. Due to the bookings being thus free, the application of the Preferential Traffic Schedule had been suspended. The tempo of demands had, however, increased considerably of late; in fact, this year it can be said that there has been really no slack season..... in spite of appreciable increase in the loadings in 1954-55 and part of 1955-56 so far over those in 1953-54 the outstandings have gone up by about 300 per cent. on the Broad Gauge and by about 200 per cent. on the Metre Gauge. The rationing of rail transport is, if anything, therefore all the more necessary and difficult."

33. It will, therefore, be seen that free movement of goods traffic by rail remains a distant goal which cannot be visualised in the near future.

### B. Coal Loading

34. Attached herewith are appendices IX, X, XI and XII giving the average daily coal loading figures for the months April, 1951 to March, 1955 in the Bengal and Bihar coal-fields and other coal fields on the North-Eastern, the South-Eastern and the Central Railways. For the sake of brevity, the Committee will confine themselves to comments on the coal loading in West Bengal and Bihar fields on the Eastern Railway, especially because this is the major coal loading area in the country.

35. Before discussing these figures it has to be noted that all the indents for loading coal are received by the Coal Commissioner's Office and not by the Railways. The distribution system in the Coal Commissioner's Office is based on categorising the individual large consumers in classes for which there are specific sponsoring authorities, *e.g.*, the Textile Commissioner for Textile Mills, State Govern-

ments for industries which are not dealt with as Central industries for this purpose etc. The requirement for each class of consumers is made up by the sponsoring authority by screening the requirements of each individual consumer and arriving at the total. This total indicates the coal distribution target which is fixed by the Coal Commissioner for each month. The Coal Commissioner's target may, therefore, be taken as a conservative estimate of the actual demand of coal loading. As the Railways are not in a position to meet this demand in full without detriment to the movement of other goods traffic, the Railway Board fixes up a minimum coal loading target in consultation with the Production Ministry. The minimum coal loading target, therefore, indicates the minimum number of wagons, which the Railways undertake to supply as an average daily figure for loading coal. In actual practice, however, the average daily coal loading figure is in excess of the minimum coal loading target, but less than the coal distribution target fixed by the Coal Commissioner. The difference between the average daily coal loading and the coal distribution target fixed by the Coal Commissioner may, therefore, be taken as an index of the short supply of transport for coal industry due to inadequacy of rail transport.

36. The figures given in Appendix IX furnish the following interesting features:—

(i) The average daily loading has invariably been below the Coal Commissioner's target;

(ii) During the 48 months under review from April, 1951 to March, 1955, the Railways fell short of the prescribed minimum target during six months;

(iii) The average daily coal loading during the slack months from July to November is normally better than for the months, December to June; and

(iv) The best performance was during the month, September, 1954, when the average daily coal loading reached the maximum of 3593 wagons per day. The Coal Commissioner's target during this month was, however, 4132.

37. The position, as it is today, is therefore that in spite of the fact that the average daily coal loading in the West Bengal and Bihar coal fields during the year 1954-55 has shown some improvment over the performance during the previous years, the demand of wagons for coal loading has all along been in excess of the supplies made. During 1954-55, the average daily coal loading in Bengal and Bihar coal fields was approximately 3269, against the coal Commissioner's average daily target of 3893 wagons. Hence the difference between the supply and demand may be taken to be of the order of 625 wagons per day.

38. Taking the number of Broad-Gauge wagons loaded with coal in all the coal fields, the figures for the years 1951-52 onwards are as under:

| Year | Total |
|---|---|
| 1951-52 | 13,72,073 |
| 1952-53 | 14,41,077 |
| 1953-54 | 13,94,074 |
| 1954-55 | 14,84,594 |
| 1955-56 (upto August, 1955) | 6,21,922 |

These figures would indicate that the average daily coal loading during 1955-56 has not shown any improvement upto August 1955 over the average daily performance of the previous year.

39. The Committee understand that during the Second Five Year Plan, the annual target of coal production will be stepped up from 37 million tons to 60 million tons and that out of these 60 million tons, 55 million tons will have to be moved by rail. The Committee have been assured by the representatives of the Railway Ministry that in their tentative Second Five Year Plan, the Railways have made provision for additional rolling stock and line capacity with a view to cope up with the demand of rail transport for carrying 55 million tons of coal per annum. The Committee do hope that this promise will be fulfilled because inadequate supply of coal in the various areas affects adversely the industrial progress of the country. Adequate provision in the Second Five Year Plan to meet the demands of coal traffic according to the planned target of production is absolutely essential for the industrial development of the country.

## C. Goods Loading

40. The figures giving the number of wagons loaded with coal, goods (excluding coal in full wagon loads and in smalls) and the total loading are given below for the years 1951-52 to 1954-55 separately.

for B.G. and M.G.:

| Year | Coal | Goods | | | Total | Percentage Ratio of 3(*b*)to(3*c*) |
|---|---|---|---|---|---|---|
| | | Full wagon loads | Smalls | Total | | |
| 1 | 2 | 3a | 3b | 3c | 4 | 5 |
| *B.G. loading.* | | | | | | |
| 1951-52 | 3,726 | 6,983 | 849 | 7,832 | 11,558 | 12·2 |
| 1952-53 | 3,947 | 7,242 | 849 | 8,091 | 12,038 | 11·7 |
| 1953-54 | 3,863 | 6,890 | 973 | 7,863 | 11,726 | 14·1 |
| 1954-55 | 4,107 | 7,284 | 1124 | 8,408 | 12,515 | 15·4 |
| *M.G. loading.* | | | | | | |
| 1951-52 | 1,010 | 5,208 | 905 | 6,113 | 7,123 | 17·4 |
| 1952-53 | 970 | 5,419 | 805 | 6,224 | 7,194 | 14·7 |
| 1953-54 | 957 | 4,975 | 978 | 5,953 | 6,910 | 19·7 |
| 1954-55 | 1,016 | 5,204 | 991 | 6,195 | 7,211 | 19·0 |

41. From these figures it will be seen during 1954-55, the increase in total loading, coal and goods combined was 8·2 per cent. over the corresponding figure in the year 1951-52 as far as B.G. is concerned. As far as M.G. is concerned, the increase is very much less, being 1·2 per cent.

42. Apart from the number of wagons loaded, another important figure indicative of the goods traffic carried by the Railways would be the freight tons originating. Apart from the tonnage lifted by the Railways, the distance, to which this tonnage was carried, is also an important factor indicating the transport provided by the railways to carry the goods. The figures of freight tons originating and the freight ton miles on Class I/Government Railways for the years 1938-39 to 1954-55 are given below:

| Year | Freight tons originating (millions) | Freight ton Miles (millions) |
|---|---|---|
| 1938-39* | 84·4 | 21,878 |
| 1939-40* | 88·4 | 23,192 |
| 1940-41* | 89·2 | 24,987 |
| 1941-42† | 93·5 | 27,811 |
| 1942-43† | 90·9 | 27,802 |
| 1943-44† | 91·7 | 28,065 |
| 1944-45† | 96·6 | 28,064 |
| 1945-46† | 96·7 | 28,843 |
| 1946-47† | 87·7 | 26,679 |
| 1947-48‡ | 69·8 | 20,117 |
| 1948-49 | 78·5 | 22,387 |
| 1949-50 | 87·7 | 25,119 |
| 1950-51§ | 91·4 | 26,963 |
| 1951-52 | 96·7 | 28,966 |
| 1952-53 | 97·1 | 28,906 |
| 1953-54 | 98·1 | 29,436 |
| 1954-55 | 105·8* | 32,100* (*Provisional) |

43. These figures indicate that there has been more or less a steady increase in the volume of goods traffic carried by the Indian Government Railways, since the partition, and the figures for 1954-55 are the highest ever achieved. They represent a percentage increase of 25.4 and 46.7 respectively over the corresponding figures for 1938-39.

## D. Inadequacy of Rail Transport

44. The inadequacy of wagons made available for loading goods traffic and the traffic awaiting clearance due to this inadequacy will

*Inclusive of the B. A., and N. W., but exclusive of the Bikaner.
†Inclusive of the B. A., N. W., and Bikaner.
‡Inclusive of the E. P., Assam and Bikaner, but exclusive of the B. A., and N. W.
§Inclusive of the Jaipur, Saurashtra, Dholpur, Cutch, Rajasthan and Scindia State Railways integrated with the Central and Western Railways.

be reflected in the figures of outstanding registrations which are furnished below:

| Date | Outstandings in terms of wagon loads |
|---|---|
| *Broad Gauge* | |
| 20-3-51 | 41,276 |
| 20-3-52 | 44,585 |
| 20-3-53 | 47,634 |
| 31-3-54 | 59,247 |
| 31-3-55 | 89,413 |
| 31-8-55 | 1,21,128 |
| *Metre Gauge* | |
| 20-3-51 | 60,364 |
| 20-3-52 | 66,367 |
| 20-3-53 | 63,386 |
| 31-3-54 | 78,494 |
| 31-3-55 | 1,16,223 |
| 31-8-55 | 1,36,427 |

45. One prominent feature of these outstandings is that the outstandings at the end of the busy period have been showing a steady increase every year, both on B.G. and M.G. in spite of the increased loading. The outstanding figures for 31-8-1955, both for the B.G. and M.G. show a phenomenal rise. This is a clear indication of the fact that the transport facilities available are totally inadequate to meet the increasing demands of traffic. The Committee would like to point out one thing here, *viz.*, that the figures of outstandings do not necessarily represent the traffic awaiting despatch. Quite a large number of merchants do not register their indents, especially when they know that they are not likely to get the wagons within a reasonable time. Thus the traffic offering for clearance by rail might be much more than what is indicated in the figures of outstanding registrations.

46. There might be some bogus registrations also included in the figures of outstandings. Such bogus indents might be put in by some merchants indulging in speculation. It has, however, to be remembered that the Railways charge a registration fee of Rs. 35 per B.G. wagon and Rs. 25 per M.G. wagon and the merchant stands to forfeit this registration fee, if he fails to produce the goods, when the wagon is allotted. This serves as a good check on such bogus indents. The Committee are, therefore, of the opinion that the percentage of such bogus indents would be very small, when compared with the total registrations.

47. Whereas the number of outstanding registrations serves as a rough indication of the volume of traffic offering, the Oldest Date of Registration indicates the delay that occurs in clearing such traffic.

Given below are the Oldest Dates of Registrations on various railways for B.G. and M.G. separately as on 1-5 1955 under three heads:

*Oldest Dates of Registrations on* 1-5-1955

| Railways | For unrestricted destinations | For restricted destinations | For quota destinations |
|---|---|---|---|
| 1 | 2 | 3 | 4 |
| *Broad Gauge* | | | |
| Northern | 14-4-1955 | 3-12-1954 | 12-10-1954 |
| Eastern | 9-4-1955 | 11-11-1954 | 12-11-1954 |
| South-Eastern | 11-2-1955 | 7-9-1954 | 14-12-1954 |
| Southern | 5-10-1954 | 8-10-1954 | 22-8-1954 |
| Central | 9-2-1955 | 20-11-1954 | 28-9-1954 |
| Western | 2-10-1954 | 6-1-1954 | 19-6-1954 |
| North-Eastern | .. | .. | .. |
| *Metre Gauge* | | | |
| Northern | 10-2-1955 | 24-2-1955 | 23-10-1954 |
| Eastern | .. | .. | .. |
| South-Eastern | .. | .. | .. |
| Southern | 5-11-1954 | 14-2-1955 | 9-11-1954 |
| Central | 20-1-1955 | 16-2-1955 | 20-11-1954 |
| Western | 1-1-1955 | 1-10-1954 | 17-8-1954 |
| North-Eastern | 16-10-1954 | 26-7-1954 | 23-5-1954 |

48. These dates indicate that the ability of the Railways to clear the traffic offered is extremely limited and that in some cases traffic even for unrestricted destinations has to wait for months together before being despatched. It has to be remembered that the actual position will be worse than indicated by these dates, because large amount of traffic would not be offered for despatch by rail, as the merchants know that it would take considerable time before they can secure wagon allotment and that they would not be in a position to wait for such a long time.

49. Whereas the traffic waiting for restricted destinations and quota destinations would indicate the insufficient capacity of the railways to handle traffic for those destinations or for those routes for which quotas have been laid down, the traffic waiting for unrestricted destinations is an indication of the inadequacy of the rolling stock, due to which the Railways are unable to clear the traffic expeditiously. The fact that, even for Board-Gauge unrestricted destinations, there were indents pending for a period of over 6 months on the Southern Railway and the Western Railway seems to indicate that the wagons allotted for these two Railways were inadequate and the point requires very careful examination.

50. The Committee recommend that as far as B.G. unrestricted destinations are concerned, even within the available resources the Railways should take special steps to ensure that no indents remain outstanding for a period in excess of three months under any circumstances.

51. The above analysis of the coal and goods loading clearly indicates that the rail transport available in the country is totally in-

adequate to meet the increasing demands of traffic arising out of the increased economic activity due to increased agricultural and industrial production.

### E. Factors determining the availability of Rail Transport

52. The transport availability depends upon the following important factors:

(a) Available rolling stock in the country (locomotives, carriages and wagons);

(b) Transhipment capacity at Break-of-Gauge points;

(c) Capacity of marshalling yards to deal with the flow of traffic;

(d) Terminal capacity at the destination stations where the traffic terminates;

(e) Section capacity of the Railway lines over which the traffic passes; and

(f) Efficiency with which the available facilities are utilised to the best advantage.

The Committee shall deal with each of these factors separately.

(a) *Available rolling stock in the country*:

53. *Locomotives.*—Appendix XIII gives the figures of the total number of locomotives on Class I/Government Railways for the period 1938-39 to 1953-54 for B.G. and M.G. separately.

From these figures it will be seen that the number of B.G. locomotives in 1953-54 has increased by about 4 per cent only when compared to the figure in 1947-48. In the case of M.G., however, increase in the number of locomotives is about 20 per cent. This would indicate that the performance on the Metre Gauge should show considerable improvement. This point will be further discussed under the head F.

54. *Passenger Coaches.*—Acute shortage of coaching stock on the Indian Railways has already been discussed under the heading "Over-crowding".

55. *Wagons.*—Appendix XIV contains a statement giving the total number of wagons (in terms of 4 wheelers) on Class I/Government Railways for the years 1938-39 to 1953-54 for B.G. and M.G. separately. From these figures, it will be seen that the increase in the number of wagons during 1953-54 over the figure in 1938-39 is 8·1 per cent for B.G. and 7·7 per cent. for M.G.

56. Though there has been an increase in the number of Metre-Gauge locomotives and the number of B.G. and M.G. wagons during 1953-54, as compared to 1938-39, one important factor is required to be borne in mind, *viz.* that the replacement of rolling stock on Indian Railways has been extremely inadequate during the War and in the immediate post-War period. Appendix XV gives the

figures of locomotives, coaching vehicles and wagons placed on line for B.G. and M.G. separately during the period 1938-39 to 1953-54.

57. These figures bring out the fact that generally speaking, the replacement of Rolling Stock on Indian Railways throughout the period has been inadequate. As the volume of traffic offering has been increasing, Railways have been utilising the overaged stock, which should in the normal course have been condemned and scrapped. As a result of this policy, the arrears of replacement have piled up. The net effect of this has been that even by the end of the First Five Year Plan, the rehabilitation of the stock of the Railways would not be completed. The Committee, therefore, are in entire agreement with the recommendation of the Railway Corruption Enquiry Committee that adequate provision must be made in the Second Five Year Plan not only to make up for the arrears, but also o build up sufficient assets to enable the Railways to cope with the present transport demands and the further demands that would be made by the expanding economy during the period.

(b) *Transhipment capacity at Break-of-Gauge points.*

58. There are two important gauges in the country, *viz.*, Broad Gauge and Metre Gauge, which are more or less evenly distributed. Naturally, therefore, when traffic is booked from an area served by Broad Gauge line to an area served by Metre Gauge line and *vice versa*, the contents in one type of wagon have to be physically transferred to another type of wagon at the meeting points of these two gauges. There are more than 50 such transhipment points between B.G. and M.G. in the country. As the traffic offering *via* most of these transhipment points is in excess of what can be handled, the booking of traffic *via* these routes is governed by quotas. The factors limiting the number of wagons that can be handled at these transhipment points every day may be briefly indicated as under:

(i) The line capacity for B.G. and M.G. at the transhipment shed;

(ii) Labour;

(iii) Shortage of rolling stock; and

(iv) In the case of traffic from South to the North of Ganges, the riverine conditions.

59. To meet the increased demand of traffic *via* the Break-of-Gauge points, the railways have been increasing the handling capacity at the various transhipment points from time to time. In order to get over the vagaries of the river, Ganges, which often seriously affects the transhipment performance, the Railways have opened a new transhipment point at Manduadih, which has proved considerably useful. Yet the fact remains that the quotas available *via* Break-of-Gauge points are inadequate to cope up with the demands of traffic. Unless and until, therefore, the problem of the Break-of-Gauge points is solved by the country by adopting one uniform gauge, increase in the transhipment capacity at various Break-of-Gauge points will be absolutely essential.

60. The Committee recommend that the process of mechanised transhipment should be introduced at certain important transhipments points. Particularly, arrangements should be made to provide tipplers for expeditious transhipment of coal from B.G. to M.G. The Committee would also recommend that the position should be reviewed periodically by the Railway Board and two shifts of working introduced at transhipment points, wherever feasible. They are also definitely of the opinion that as there is no dearth of man power in the country, the question of labour should not be allowed to stand in the way of increased transhipment.

61. In regard to the difficulties due to the vagaries of river Ganges, the only effective and permanent solution would be the Mokameh bridge, which is already under construction. Till the bridge is completed and opened for traffic, Manduadih will have to remain the mainstay for transhipment from B.G. to M.G. in this region. In the meantime, the possibility of opening out more such transhipment points should be explored. The Committee understand that the question of opening transhipment point at Rajmehal is already under consideration. This proposal should be expedited.

62. Some of the important transhipment points, where increase in the transhipment capacity is necessary, are given below:

*Central Railways.*—Ghorpuri, Hotgi.

*Eastern Railways.*—The main bottlenecks are three riverine transhipment junctions—(a) Bhagalpur; (b) Mokameh Ghat and (c) Sakrigali Ghat. With the completion of Ganga Bridge over the Ganges at Mokamehghat and construction of transhipment yard at Barauni, it is expected that 300 B.G. wagons will be transhipped at Barauni. Completion of the works will enable the release of ferries from Mokmehghat to Sakrigalighat and Bhagalpur with corresponding increase of trashipment capacities at these two points.

*Southern Railway.*—Arkonam, Katpadi, Bangalore City, Tadepalli, Gudur and Trichinopoly (Goods).

*Western Railway.*—Sabarmati, Viramgam, Ratlam, Ujjain, Sawai Madhopur, Agra East Bank.

(c) *Capacity of marshalling yards to deal with the flow of traffic:*

63. The marshalling yard has generally to perform three important function: (i) receiving trans coming into the yard from the adjoining sections freely without hold-up, (ii) sorting out the wagons on the incoming trains destinationwise and (iii) formation of the outgoing trains for despatch.

64. The capacity provided for reception and despatch of trains in a marshalling yard depends upon the volume of traffic that the yard is required to handle. There is a limit upto which the yard can efficiently handle the number of wagons that it is required to deal with. If the number of wagons to be handled passes beyond this limit, even though the marshalling yard may continue to handle more traffic, it is at the cost of operating efficiency, in the sense that the incoming trains would be held up on the section for want of room in the yard and the wagons dealt with in the yard would suffer heavier detentions. It is, therefore, essential that the capacity available in a marshalling yard should be adequate to deal with the

volume of traffic that it is required to handle. With the increase in volume of traffic to be handled by the Indian Railways, the yard capacity has reached a saturation point in the case of a large number of yards, and the expansion of the facilities in the yards has become necessary.

65. Some of the important yards on the various Railways, where such increase in the yard capacity has become essential, are indicated below:

*Central Railway.*—The yard capacity at Ajni, Katni, Murwara and Bhusawal up yard is being utilised practically to saturation point at present. The yard capacity in the other major marshalling yards, *viz.* Itarsi, Jhansi, and Kalyan will also reach the saturation point during the Second Five Year Plan period.

*Eastern Railway.*—At present, the main limitation is Moghalsarai yard. It is intended to have additional facilities to move 2,000 wagons from the present level of 1,750 within the next two years or so. Other yards requiring major re-modelling are in the coal fields, in view of the increase in output of coal envisaged in the Second Five Year Plan. These are Ondal, Sitarampur, Asansol up and down yards, Pathardihi, Kusunda, Katras *etc.* Besides, some new yards and depots, *e.g.,* Ukhra and Patratu will also have to be built.

*North-Eastern Railway.*—The traffic moving on the North Eastern Railway has been increasing and the demands for further traffic are even greater. Most of the yards on the North-Eastern Railway were built on a very small scale and at present almost all important yards, such as Aishbagh, Gonda, Gorakhpur, Chupra, Darbangha, Muzaffarpur, Samastipur, Katihar, Siliguri, Alipurduar, Amingaon, Mariani, Tinsukia, are proving to be bottlenecks. Re-modelling of these yards will, therefore, be necessary to cope up with the increase in traffic.

*Southern Railway.*—Remodelling of Bezwada, Rajahmundry, Raichur, Gooty and Arkonam on the B.G. is necessary to cope up with the increasing pressure of traffic. Similarly on the M.G., remodelling of the Dharamavaram, Dronachellam, Pakala, Koregaon, Miraj, Belgaum and Shencottah yards is necessary.

*South Eastern Railway.*—On the East Coast section the existing line and yard capacities have practically reached saturation point and additional facilities are necessary to cope up with the increase in traffic.

*Western Railway.*—The following yards have inadequate facilities to deal with additional traffic, Ratlam, Godhra, Gangapur, Agra East Bank, Kankaria, Baroda, Bulsar, Udhna, Phulera, Abu Road, Palanpur, Surendranagar, Rajkot, Jamnagar.

(d) *Terminal capacity at the destination stations where the traffic terminates*:

66. At many important centres due to the tremendous increase in population, the requirements of goods traffic to serve the population of those areas have gone up tremendously with the result that the terminal facilities available at such points have reached saturation point and further facilities are necessary. Some important points on the various Railways where the existing terminal capacity is inadequate are indicated below:

*Central Railway.*—The terminal capacity at Wadibunder has practically reached a saturation point. The daily average unloading is 250 wagons at present and it is proposed to increase it to 350 wagons per day for handling the increased traffic during the current busy season. A scheme costing Rs. 28 lakhs has been sanctioned, which includes provision of additional sheds and platforms for unloading. This work is likely to be completed by November, 1955.

*Eastern Railway.*—At present the Calcutta terminals, *viz.*, Howrah, Chitpur and Sealdah are dealing with traffic upto capacity. It would be necessary to provide additional capacities to cope up with the increase in volume of traffic.

*North Eastern Railway.*—The terminal capacity at the following points is inadequate:

Bareilly, Kasganj, Lucknow, Manduadih, Nirmali, Barauni, Kathiar, Maniharighat, Amingaon, Pandu, Tinsukia etc.

*Western Railway.*—The main terminals on this Railway, which require increase in terminal capacities are (a) Ahmedabad area, (b) Carnac bridge and stations in Bombay area.

(e) *Section capacity of the railway lines over which the traffic passes*:

67. The number of trains that can be run over a section in 24 hours is called "section capacity", which depends on the following factors:

(i) The distance between two consecutive stations;

(ii) The speed of the slowest train running over the section;

(iii) The facilities for arranging crossings or giving precedence in the form of additional loops etc.

(iv) The time taken for locomotive requirements at watering stations;

(v) The type of signalling and inter-locking provided; and

(vi) The yard facilities for the reception of trains without holding-up at either end of the section.

68. When the number of trains passing over a section approaches the saturation point, the hold-ups of goods trains for crossings and precedence increase and consequently the speed of goods trains has a tendency to drop. Increase in the section capacity, therefore, becomes essential to maintain the efficiency of operation.

69. Some of the sections which are working practically to the saturation point and where increase in the section capacity is necessary, are given below:

*Central Railway.*—The following sections are working practically to a saturation point:

(a) Dhond — Manmad

(b) Bhusawal — Igatpuri

(c) Bina — Bhopal

(d) Wardha — Balharsha

(e) Balharsha — Kazipet

*Eastern Railway.*—The traffic on the Grand Chord, *viz.*, Gomoh-Gaya-Moghalsarai and Sahibganj loop, *viz.*, Burdwan-Sahibganj and Jamalpur sections has reached the saturation level. If the Grand Chord is electrified and the lengths of loops extended to 70 on the Sahibganj loop, these limitations would be removed.

*North Eastern Railway.*—The section capacity with various sections of the North Eastern Railway is limited mainly due to the following factors:

(i) There are long block sections;

(ii) Length of loops at stations is not upto the standard of 2250 ft.;

(iii) Owing to light rails only small powers are allowed to run on certain sections and before heavy powers can be allowed to run, sections have to be relaid with heavier rails; and

(iv) Low standard of signalling and interlocking on certain sections.

Major bottlenecks in this respect are on the following sections:

(i) Samastipur — Darbhanga

(ii) Barauni — Katihar

(iii) Katihar — Siliguri-Alipurduar Jn.

(iv) Manduadih — Chupra

(v) Sonepore-Hajipur-Mazaffarpur.

*Southern Railway.*—Considerable traffic, most of it of vital importance to industries and the economic life in the South moves from North India to South. This traffic moves *via* Waltair, *via* Bezwada and *via* Raichur on to the Southern Railway. The present capacity of the Southern Railway is to move 245 wagons *via* Waltair, 185, *via* Bezwada and 165 *via* Raichur. Major items of work are necessary to step up this capacity so that it becomes commensurate with the demand of traffic.

Similarly special attention is required to increase movement *via* Jalarpet to stations on the West Coast. Works have been programmed to increase the capacity from Jalarpet to the Podanur District.

As far as M.G. is concerned, increase in the capacity on Pakala-Dharmavaram section and Shencottah-Quilon section is necessary.

*South Eastern Railway.*—As already mentioned earlier, the existing line capacity on the East Coast section is being utilised fully and additional facilities are necessary to increase this capacity.

*Western Railway.*—The main bottlenecks on this railway for free flow of traffic are given below:

(a) Ratlam-Godhra section.

(b) Udhna-Nandurbar-Jalagaon section.

(c) Surendranagar-Rajkot-Jamangar section.

Ratlam-Godhra single line section is working to maximum capacity and the doubling of this section is necessary.

The capacity of Udhna-Nandurbar-Jalagaon Section and Surenderanagar-Rajkot-Jamnagar section are also required to be stepped up further for which provision is being made by the Railways.

70. The above analysis of five important factors, which influence materially the availablity of transport in the country, brings out one very important point, *viz.*, that apart from the construction of the new lines, considerable expansion of the existing railway facilities will be necessary in the shape of additional Rolling Stock, yard facilities, transhipment facilities, terminal facilities and increased section capacity, if Indian Railways are to cope up with the demand of rail transport, which is increasing day by day, due to the increasing agricultural and industrial production. Unless, therefore, the Railways plan in a big way to cope up with the situation and unless adequate funds are made available to them for this purpose, the Committee fear that transport will become a serious bottleneck in the fulfilment of the Second Five Year Plan.

71. The Committee are glad to note that there is no sense of complacency on the part of the Railway Ministry and that they are fully conscious of the inadequacy of the existing rail facilities made available to the Railway users. They particularly welcome the bold step taken by the Railway Ministry in announcing that they propose to carry about 15 to 20% additional traffic during the current busy season (except on Eastern and South-Eastern Railways where the immediate target is 10% increase in coal and goods loading), as compared to the previous year. The Committee have also noticed that the Railways have been taking vigorous steps to increase capacity to enable them to carry this increased volume of traffic. The Committee will watch the fulfilment of this announcement with interest and comment upon it in their subsequent Report.

(f) *Efficiency with which the available facilities are utilised to the best advantage*:

72. As mentioned earlier, the present equipment and facilities at the disposal of the railways are totally inadequate to cope up with the heavy demand of traffic. Adequate steps will have to be taken to increase and improve the available equipment and facilities. It has, however, to be recognised that the increase of equipment and facilities is necessarily a very costly and a slow process. It is, therefore, all the more necessary that the existing equipment and facilities are utilised to the best advantage. In view of the general shortage of rail equipment and facilities, the question of operating efficiency, with which the Railways are run, becomes one of paramount importance. To give a very simple illustration, if there is sufficient reserve of locomotives and if on any day 5 trains are run with 10 wagons short each, a sixth train can be run out with another locomotive; but if there is a shortage of of locomotives, then those 50

wagons which could have been run on the five trains by efficient operation are not despatched at all on that day and the rail transport of 50 wagons over that section becomes a permanent loss to the country. In other words any loss of transport that may occur due to inefficient operation "cannot be made good." The Committee, therefore, attach very great importance to the question of operating efficiency at the present critical stage of our national development.

### F. Performance of Indian Railways

73. The question of Railway Statistics and their analysis will be considered in detail in a subsequent Report. Here, the Committee would like to confine themselves, to the consideration of the following operating statistics and particulars which represent fairly well the performance of Indian Railways from year to year:

(a) Wagon miles per wagon day.
(b) Net ton miles per wagon day.
(c) Average train loads in tons.
(d) Net ton miles per goods train hour.
(e) Engine miles per engine day.
(f) Net ton miles per day engine (steam).
(g) Average speed of goods trains.
(h) Wagon turn-round.
(i) Under repairs position.
(j) Empty haulage.
(k) Performance of Break-of-Gauge points.
(1) Performance of marshalling yards.
(m) Performance of terminal goods station yards.
(n) Operating restrictions.
(o) Engineering restrictions.
(p) Track usage.

(a) *Wagon miles per wagon day*

74. Main function of a wagon is to transport goods from one place to another. Hence quicker the wagon moves and longer the distance it travels, better the transport available. This figure of wagon miles per wagon day is, therefore, indicative of wagon usage. Appendix XVI gives these figures for class I/Government Railways. The best performance, as far as B. G. is concerned, was during 1941-42, when the wagon miles per wagon day was 47.0. Unfortunately this good performance was not repeated during the subsequent years. The performance during 1948-49 was the worst, when the figure was 33.1. In the subsequent years, there was a slow recovery till in 1952-53, the figure achieved was 41.1, which again dropped to 40.1 in 1953-54. The figure of 1954-55 has been 43.5, which is better than any figure achieved since 1942-43; but is still far below the best performance during 1941-42. As regards the Metre-Guage, the deterioration during the recent years, compared to the best performance in 1944-45 has been worse and the figure for 1954-55 is 29.0, as against the best performance of 39.3 during 1944-45. As the increase

in the number of M. G. locomotives is more than in the case of B.G., one would have expected quicker recovery in the case of M.G. than in the case of B. G. Taken as a whole, the performance of Indian Railways as far as wagon miles per wagon day are concerned cannot be regarded as satisfactory. The Committee would recommend that suitable measures be taken to improve the performance and suggest the target of 50 for B. G. and 40 for M. G. to start with.

(b) *Net ton miles per wagon day*

75. It is not enough, if the wagons move expeditiously and cover a good mileage. It is also necessary that they carry maximum amount of goods in them, when they are moving. Thus actually there are two factors involved in judging the efficiency of wagon usage, *viz,* the distance travelled and the amount of goods carried. Hence the statistical figure of net ton miles per wagon day is rightly considered to be the best composite index of utilisation of wagons. Appendix XVII gives these figures for Class I/Government Railways. From these figures it will be seen that the best performance of B.G. Railways was achieved in 1951-52, when the figure stood at 453. The next best performance earlier to this was in 1952-53, when the figure was 451. The good performance during 1951-52 was unfortunately not maintained and there was a serious drop in 1952-53 and in 1953-54. The Committee are glad to note a very good recovery in 1954-55, when the figure achieved was 462, which is very near the best performance in the past. On the Metre-Gauge, the best performance was in 1952-53 with the figure at 204. During the two subsequent years, *viz.* 1953-54 and 1954-55 unfortunately there has been a serious drop of 10 points and the figure stands at 194. This indicates that the Railways are not making the best use of Metre Gauge wagons available. A steady drive to improve the net ton miles per wagon day specially on the M. G. is, therefore, necessary.

(c) *Average train loads in tons on Class I/Government Railways.*

76. These figures are given below for six years, for B.G. and M.G. separately:

| Year | B.G. | M.G. |
|---|---|---|
| 1948-49 . | 468 | 174 |
| 1949-50 . | 461 | 181 |
| 1950-51 . | 479 | 182 |
| 1951-52 . | 487 | 187 |
| 1952-53 . | 469 | 203 |
| 1953-54 . | 481 | 215 |

In view of the shortage of locomotives, it is necessary that the maximum use is made of them by giving better loads to trains. As far as B.G. is concerned, the best performance was in 1951-52, when the tonnage of train was 487. The performance during 1952-53, however, recorded a serious drop of 18 tons per train, though there has been a partial recovery in 1953-54. The Committee are glad to note that on the Metre-Gauge, the performance has shown a steady improvement from 1948-49 onwards, as far as tonnage per train is concerned.

(d) *Net ton miles per goods train hour on Class I/Government Railways.*

77. These figures are given below for six years for B.G. and M.G. separately.

| Year | B.G. | M.G. |
|---|---|---|
| 1948-49 | 4,866 | 1,669 |
| 1949-50 | 5,012 | 1,782 |
| 1950-51 | 5,253 | 1,764 |
| 1951-52 | 5,272 | 1,796 |
| 1952-53 | 4,951 | 1,929 |
| 1953-54 | 4,965 | 1,993 |

From these figures it will be seen that as far as B.G. is concerned, there has been considerable drop in the performance during 1952-53 and 1953-54, as compared to 1951-52. On the Metre-Gauge, there has been a steady improvement.

(e) *Engines miles per Engine day.*

78 Appendices XVIII & XIX give the figures of engine miles per engine day for B.G. and M.G. separately.

Dealing first with B.G., in regard to the engine miles per engine day per passenger engine (steam), it is noticed that there has been a steady improvement from 1950-51 onwards and the figure for 1953-54 was 166, which is equal to the highest figure that was achieved in the past during 1941-42. In regard to the engine mileage for mixed engines (steam), there has been a marked deterioration, the figure for 1953-54 being 114 as against the best figure of 148 during 1941-42. The most important figure, however, is pertaining to the performance of goods engine (steam). The figure for 1953-54 is 94 against the best performance of 105 during 1941-42. Taking the composite figure of the mileage per engine on line (steam) for B.G., it is noticed that there has been a slow and steady improvement from 1948-49 onwards, the figure for 1953-54 being 83. This figure is, however, less than the best figures of 87 obtained in 1941-42. As regards the performance of passenger engine (electric), the mileage obtained during 1953-54 shows considerable deterioration when compared to the figures during the previous three years. As a matter of fact, the figure obtained in 1951-52 was the best being 254, whereas the figure for 1953-54 is only 224. Similarly as regards the goods engine (electric), the figure for 1953-54 is only 136, which is considerably lower than the best figure in 1939-40 *viz.* 167.

79. Coming to the Metre Gauge performance, the Committee find that the figure during 1953-54 was 132 for passenger engines (steam) which is slightly lower than the best of 134 obtained during 1947-48. In regard to the mixed engine (steam) the figure for 1953-54 is 96, which again is considerably lower than the best figure of 115 obtained during 1941-42. Coming to more important figure of goods engine (steam), it is noticed that there has been a deterioration during the last three years, the figure for 1953-54

being only 85 against the best figure of 102 in 1941-42 and 1942-43. Similarly, in the case of engine miles per day per engine on line, the figure for 1953-54 is 74, against the best figure of 81 obtained during 1941-42. In regard to electric engines, there has been a deterioration during 1953-54, when compared to the previous year 1952-53.

80. These figures, therefore, clearly indicate that the Indian Railways are not getting the best mileage out of the engines both on the B.G. as well as on the M.G. In regard to B.G. the Indian Railway Enquiry Committee, 1947 had recommended a modest target of 90 engine miles per day per engine on line. But this target has not yet been achieved. In view of the general shortage of Rolling Stock including locomotives in the country, the Committee recommend that the Railway Ministry should immediately investigate the reasons for low mileage obtained from the engines both on B.G. and M.G. and take prompt measures to see that the mileage obtained out of the B.G. and M.G. engines for various services improves. To start with the target of best performance since 1938-39 should be aimed at and achieved within one year, after which the question of revising the targets still further might be considered.

(f) *Net ton miles per day per engine (steam).*

81. Appendix XX gives these figures for B.G. and M.G. separately for "engine on line" and "engine in use". It is gratifying to note that as far as these composite figures are concerned, the best results have been obtained during the year 1954-55 so far as M.G. engines in use are concerned and B.G. and M.G. engines on line are concerned. The figure for B.G. engine in use during 1954-55, though not the best, is very near the best figure obtained during 1951-52. It has, however, been noticed above that there has been deterioration as far as the mileage of engines is concerned. The improvement in this composite figure is, therefore, due to the better loading of wagons and better loads offered to trains. If better mileage is obtained out of the engines, this composite figure also can be considerably improved.

(g) *Average speed of goods trains.*

82. The average speeds of goods trains on Class I/Government Railways are given below for the years 1948-49 to 1953-54 for B.G. and M.G. separately:

| Year | Miles per hour. | |
|---|---|---|
| | B.G. | M.G. |
| 1948-49 . | 10·3 | 9·3 |
| 1949-50 . | 10·7 | 9·6 |
| 1950-51 . | 10·8 | 9·3 |
| 1951-52 . | 10·7 | 9·2 |
| 1952-53 . | 10·4 | 9·1 |
| 1953-54 . | 10·2 | 8·9 |

From these figures it will be seen that recently there has been a marked deterioration in the speeds of goods trains on Indian Railways.

83. As any drop in speeds of goods trains has serious repercussions on the availability of Rolling Stock, the Railway Ministry gave this problem of drop in speeds to the Efficiency Bureau for a detailed investigation. The Committee have gone through the report on speed of goods trains submitted by Efficiency Bureau in January, 1955. Some of the important features brought out in this report are as under:

(i) Deterioration in the speed of goods train has appreciable adverse effects on engine utilisation, "out of pocket costs" and also on wagon usage. The operational and financial advantages resulting from even a small increase in speed are substantial.

(ii) The main determinants of the speed of goods trains are: (a) tractive effort and class of locomotive, (b) gross load behind the engine, (c) density of traffic, (d) sectional capacity, (e) stage of utilisation of capacity, (f) shunting and loading and unloading time. These determinants are generally outside the scope of day to day operation.

(iii) When the utilisation of capacity exceeds the limit of say, 80 per cent. the rate of fall in speed with even a slight increase in density is great, pointing to the need for increase in the capacity. On the B.G., the percentage utilisation of capacity on the main routes is very high pointing to the urgency of works for increasing line capacity. The Efficiency Bureau have quoted the following as a few instances of sections which are working to or very close to the capacity:

Anuppur-Katni-Bina-Bhopal-Ujjain,

Ratlam-Godhra-Baroda,

Dhanbad-Moghalsarai-Lucknow,

Bezwada-Madras,

Jalarpet-Erode-Trichinopoly,

Kathihar-Siliguri-Assam Rail Link,

Poona-Bubli.

84. The following observations of the Efficiency Bureau are very significant to note: "Increase in the line capacity on some of the principal lines of communication and also the simultaneous improvement of facilities in the yards on the way appear to be necessary if deterioration in the speed is to be avoided. It has to be remembered here that we are now on the threshold of the Second Five Year Plan and further increase in the traffic on the principal routes is inevitable. The earlier the action in this regard is taken, the better it will be both from the point of view of the Railways' ability to handle the traffic when it materialises, as also for improving operation. It will be appreciated that high standards of operation can hardly be maintained on sections working at saturation level."

85. Though increase in the density of traffic was one of the causes for the drop in speed, the Efficiency Bureau, after making some sample survey of a number of typical sections came to the conclusion that the drop in speed was more than could be accounted for by the increased density of traffic and allied factors. They, therefore, attributed this additional drop in speed to deterioration in the general standard of working and supervision, lack of adequate co-ordination between adjacent control district divisional offices or between the Railways and low standard of Rolling Stock maintenance. To remove these adverse characteristics, the Efficiency Bureau suggested the following measures:

(a) Increased supervision of work, including top level watch on yard operation and Rolling Stock maintenance;

(b) Closer co-ordination between adjacent control and Divisional/District Offices and between concerned departments.

(c) Strict watch on (i) percentage of trains having a late start, (ii) causes of late starts, the extent to which the late starts are due to late materialisation of stock, late formation, improper selection of path and late availability of engine and crew, (iii) detentions to trains due to yard congestion etc., (iv) time for loco requirements, (v) satisfactory loco watering arrangements, (vi) wagon and engine difficulties or failures.

The Committeee are glad to observe that these measures are being progressively adopted by various Railway Administrations.

86. The importance of improving the speeds of goods trains by providing additional facilities, wherever necessary and by increased supervision and better co-ordination cannot be exaggerated.

(h) *Wagon turn-round.*

87. Given below are the figures of average turnround for Broad Gauge wagons, for Metre Gauge wagons (northern pool) and Metre Gauge wagons (Southern pool) for the years 1942 to 1954.

| Year | Broad Gauge | Metre Gauge (Northern Pool) | Metre Gauge (Southern) Pool) |
|---|---|---|---|
| 1942 | 10·9 | Not available | Not available |
| 1943 | 11·0 | " | " |
| 1944 | 10·9 | 7·8 | " |
| 1945 | 10·6 | 9·2 | " |
| 1946 | 11·8 | 10·9 | " |
| 1947 | 13·3 | 9·9 | " |
| 1948 | 13.6 | 8·6 | " |
| 1949 | 11·1 | 7·5 | " |
| 1950 | 11·0 | 7·3 | 6·4 (From April, 50) |
| 1951 | 10·9 | 6·4 | 6·4 |
| 1952 | 10·6 | 6·8 | 6·6 |
| 1953 | 10·8 | 7·6 | 7·7 |
| 1954 | 10·6 | 7·5 | 7·2 |

88. The average turn-round is actually the interval between the time of loading of wagon and the time when the same wagon is available for subsequent loading. Though, as far as B.G. is concerned, the performance during 1954 has touched the best performance of 10·6 which was achieved during 1952 and 1945, the turn-round figure for the M.G. wagons, both for Northern and Southern pools for the year 1954 was considerably higher than the best figure obtained in the past. The figures were 7·5 for Northern and 7·2 for the Southern pool during 1954 as against the figure of 6·4 obtained as recently as in 1951. The wagon turn-round is a composite index and the achievement of good figure depends on a large number of factors, such as the average detention in yards, average speeds of trains, average time for loading and unloading etc. If, therefore, sufficient improvement is brought about in these individual factors, the wagon-turn-round figure will take care of itself. Suffice it to say that there is considerable scope for improvement in this direction and that no efforts should be spared to bring about this improvement.

89. (i) *Under repairs position*: Appendix XXI gives a statement containing the percentage of locomotives coaches and wagons under or awaiting repairs for B.G. & M.G. separately for the period 1938-39 to 1953-54.

Taking into consideration the serious shortage of Rolling Stock that exists in our country, the Committee feel that the Railways cannot afford the luxury of keeping such a large number of locomotives, carriages and wagons under or awaiting repairs in their workshops, running sheds and sick lines. The Railway Ministry has started a drive recently to reduce the number of wagons awaiting repairs or under repairs. They also understand that on the Central Railway the percentage of wagons awaiting repairs has been brought down from 7·7% in 1954 to 3·61 per cent. in August, 1955. They recommend that this drive should be intensified and that the best performance obtained on any one Railway should be emulated by other Railways also. After reviewing the performance of all the Railways, the Railway Ministry should lay down the best performance as an immediate target to be attained by all Indian Railways.

(j) *Empty haulage*:

90. Given below are the percentages of empty wagon mileage to total wagon miles on Indian Railways during the years 1951-52 to 1954-55 for B.G. and M.G. separately:

| | B.G. | M.G. |
|---|---|---|
| 1951-52 | 30·6 | 23·8 |
| 1952-53 | 30·9 | 23·9 |
| 1953-54 | 30·7 | 21·8 |
| 1954-55 | 29·7 | 20·1 |

Apart from the variations in the demand for movement of traffic during the busy and slack seasons, the demands for movement in the different directions do not balance. In other words while there is always a preponderance of loaded movement in certain directions, equal quantum of loaded traffic does not offer in the opposite directions. This results in wagons running empty back to the area from where heavier traffic offers for despatch. The percentage of empty movement on the Broad Gauge is higher than that on the Metre Gauge due mainly to movement of open empties required for coal loading. It is significant to note from the above figures that the empty wagon mileage has remained more or less steady in spite of the increase in loadings.

91. While on this subject, the Committee recommend that the Railway Ministry should examine the feasibility of providing sliding doors in the roofs of covered wagons, so that the wagons may be utilised for coal loading in the mechanical coal loading plants on their outward trips from the coal fields and can also be utilised for loading general goods on their return trips to the coal fields. This is bound to result in reduction of empty wagon haulage on the B.G.

(k) *Performance at break-of-gauge points:*

92. Transhipment at break-of-gauge points has been a perennial head-ache to Indian Railways. This is because the areas served by M.G. systems receive considerable amount of traffic from the areas served by the B.G. systems and the former have also to despatch considerable amount of traffic to the latter areas. Keeping aside the requirements, which are not fully met, the actual position is that on the M.G., with an average daily loading of about 4,500 wagons at internal points, about 1,300 wagons are sent out of the M.G. area and in return about 2,100 wagons are loaded at the transhipment points and moved into the M.G. area. Thus only 3,200 wagon loads of traffic are loaded for within the M.G. area itself, *i.e.* "intra-gauge" traffic, while as many as 3,400 wagon loads move in conjunction with the transhipment points, *i.e.* "inter-gauge" traffic. There are in all about 52 points of contact between the Metre and Broad Gauges dealing with approximately 3,400 wagon loads per day.

93. An analysis made by the Efficiency Bureau on the problem of break-of-gauge in India revealed the following interesting features:

(i) Of the total goods traffic moved in terms of Metre Gauge wagons, over 50% is connected with transhipment traffic.

(ii) The total requirements of transhipment capacity per day are estimated at about 2,150 B.G. wagons from the Broad to the Metre Gauge and 2,880 Metre Gauge wagons from the Metre to the Broad Gauge.

(iii) The physical capacity available for transhipment is approximately 1,866 B.G. wagons from the Broad to the Metre Gauge and 2,603 M.G. wagons from the

Metre to the Broad Gauge. Thus the physical capacity is fairly close to the requirements, the latter being only 15 to 11% higher. The leeway, being small, could be made up without much capital expenditure (in fact the Railways have already included proposals for this purpose in their development plans).

(iv) The total quotas fixed for the movement of traffic *via* the transhipment points per day may be taken as about 1,246 B.G. wagons from the Broad to the Metre Gauge and 1,638 M.G. wagons from the Metre to the Broad Gauge. The quotas are 33 to 37% below the physical capacity.

(v) The main factors responsible for the quotas being substantially below the physical capacity are the paucity of Metre Gauge wagon stock and in some cases the limited power and line capacities on the adjoining sections (including ferry capacity, where a ferry intervenes).

(vi) The total performance during 1953-54 averaged to about 1,079 B.G. wagons from the Broad Gauge to the Metre Gauge and 1,339 Metre Gauge wagons from the Metre to the Broad Gauge per day. The total requirements are almost double these figures.

(vii) Sample time studies show that delays to goods at transhipment points are heavy, particularly from the Broad to the Metre Gauge.

(viii) Similarly delays to wagons at transhipment points are also heavy.

(ix) Targets are required to be prescribed for each transhipment point for the period of transit of goods through the junction in each direction.

(x) Targets are also required to be prescribed for total wagon hours that should be spent for each operation, *i.e.* for each wagon unloaded or loaded at a transhipment point.

(xi) Regular detention statistics are not made out at present. These should be brought into force to enable comparisons being made with the targets mentioned above.

94. The performance of some of the important transhipment points from B.G. to M.G. is given for the years 1951-52 to 1954-55, in Appendix XXII.

These figures reveal the following features:

(i) At some transhipment points, performance has actually deteriorated. For instance at Secunderabad during 1954-55 the average number of B.G. wagons transhipped was only 36, as compared to 39 in 1952-53 and 41 in 1953-54. Similarly at Bangalore City, the average number has come down to 34 during 1954-55 against 37, 39 and 37 during the previous three years.

(ii) Majority of transhipment points have shown a definite improvement in actual performance.

(iii) However, in almost all the cases, the actual performance has been below the quota. While in the case of transhipment points involving crossing across the Ganges, such as Sakrigalighat, Bhagalpur and Mokahmehghat, the drop in the performance due to the vagaries of the river cannot be controlled or foreseen, in the case of other transhipment points, the Committee are definitely of the opinion that steps must be taken to ensure that the quota is rigidy adhered to.

95. Pending a detailed examination of the question of gauges in India, the Committee recommend the following interim measures to minimise the difficulties of areas served by M.G.:

(i) Immediate steps should be taken to step up the physical capacity of transhipment points to the level of requirements as assessed by the Efficiency Bureau. There should be no delay in achieving this, in view of the fact that the expenditure involved is not heavy.

(ii) Steps should be taken to progressively increase the quota of transhipment points. The Efficiency Bureau has pointed out two main difficulties in the way of increased transhipment, *viz.* (i) paucity of Metre-Gauge stock and (ii) inadequate power and line capacity on adjoining sections in some cases. The Efficiency Bureau has also pointed out that the orders of the Railway Board are in several cases not carried out properly in giving sufficiently high priority to the supply of M.G. stock to the transhipment points. These orders must be rigidly enforced to improve the availability of M.G. stock at transhipment points. Similarly the question of augmenting the line and power capacity on the sections adjoining the transhipment points should also be given a very high priority and the measures should be taken in this direction without any delay. The Committee are glad to note that during the current year, the Railways have already stepped up the quotas at some of the transhipment points. They further recommend that the Railway Ministry should step up the quotas at various transhipment points upto the requirements assessed by the Efficiency Bureau during the course of the next two years.

(iii) As suggested by the Efficiency Bureau, targets for the period of transit of goods and for the total wagon hours spent for each operation should be laid down for each transhipment point and the performance should be regularly judged against these targets.

(iv) The Committee recommend that a beginning should be made to mechanise transhipment at some important points in regard to coal by providing suitable tipplers. This would expedite the release of wagons and assist in reducing the wagon turn-round and also would result in increasing the quotas for the transhipment points. The Committee were informed that the step of mechanisation of transhipment work was not being undertaken, because of the fear that it might reduce the scope for employment for labour. The Committee, however, feel that the question of improving wagon turn-round and of increasing transhipment performance is of such a paramount importance that this step of mechanising the transhipment at a few selected transhipment points will have to be taken in the larger interest of the country. Moreover, mechanised transhipment will increase the volume of traffic and will thus increase the scope of employment at other places.

(1) *Performance of marshalling yards*:

96. The Committee have scrutinised the number of wagons dealt with and the average detention per wagon in 68 marshalling yards of Indian Railways month by month for the years 1951-52 to 1954-55. These figures indicate that there are very wide fluctuations in the average detentions to wagons, not only between different yards, but also in the same yard from month to month and sometimes year to year. There have been instances where the average detentions have come down in spite of the fact that the number of wagons handled is larger.

97. Appendix XXIII contains a statement giving the average detentions to wagons in different yards month by month for the year 1954-55. From this statement it will be seen that in the following 11 marshalling yards the average detentions exceed 24 hours:—Gaya, Kanpur, Bezwada, Raichur, Bareilly, Gorakhpur, Manduadih, Pandu, Samastipur, Guntakal and Hubli.

In the case of Gaya, the average detention during the month of May, 1954 was 21.8, whereas in the month of February, 1955, it was as high as 32.0. Similar violent fluctuations have occurred in the case of other yards also. The Committee do appreciate that the average detentions to wagons in marshalling yards depend upon a large number of factors such as (i) the lay-out of the yard, (ii) the bunching of traffic, (iii) the shunting facilities available, (iv) strength and ability of the yard staff, and (v) operating conditions on the adjoining sections. All the same they feel concerned about such excessive detentions in the marshalling yards in excess of 24 hours. They, therefore, recommend that a detailed investigation should be undertaken by the administrations concerned regarding the causes of such heavy detentions and they should take remedial measures in the shape of (a) providing additional yard facilities, (b) providing additional shunting facilities, (c) strengthening the yard staff and (d) improving the line capacity in the adjoining sections as found necessary as a result of such investigations. Average detentions to wagons in excess of 24 hours in any marshalling yard

should be ruled out as an axiom of good operation and such excessive delays, if they do occur at any time, should be an object of a proper high level investigation. This target is very easy of attainment in view of the fact that in these yards, there have been months when average detention has been below 24 hours. For instance, in Gorakhpur yard during 1954-55, the average detentions during all the months were heavy, the figure for September, 1954 being as heavy as 60 hours, whereas during 1952-53 in 11 months out of 12, the detention was below 24 hours.

98. This target of maximum detention of 24 hours should apply only to these 11 yards, where chronic delays in excess of 24 hours have taken place. Eventually, however, facilities to be provided in the marshalling yards should be such that average detentions do not exceed 16 hours. That this target is not difficult of attainment would be seen from the fact that in the case of 36 yards out of 68 referred to in para. 96 above, detentions generally are below this figure. In a number of cases some additional facilities in the shape of a few extra lines or extra shunting engines will have to be provided, but it would be worth while giving these additional facilities to secure reduction in detention to stock in marshalling yards. Extra facilities required for this purpose should be incorporated in the Second Five Year Plan of the Railways, wherever this has not been done. Here the Committee would like to mention a word about provision of additional shunting facilities. They are of the opinion that if even a detention of one hour per wagon can be saved in a fairly big marshalling yard by providing an additional shunting engine, this should not be grudged. Any increase in the number of shunting hours in a marshalling yard need not be viewed with alarm so long as they produce results in the shape of reduction of average detention to stock.

99. While enumerating the various factors affecting the detention to stock in marshalling yards, the Committee have referred to the strength and ability of yard staff. In this connection they understand that the Railway Ministry proposes to introduce a Wagon Chaser Organisation on a fairly big scale. In view of the paramount necessity of improving the utilisation of Rolling Stock, the Committee feel that this would be a step in the right direction. There should be Wagon Chasers in sufficiently high grades in every important yard and it will be their duty to keep a constant watch over the movement of wagons and bring down the average detention. They should be given clear and well-defined targets of reducing the overall detentions by at least 10 to 20% to begin with and their work should be judged from the results produced. The exact target should be fixed by an Operating Officer not below the level of a District Officer. These Wagon Chasers should also be given the work of examining the various factors that tend to increase the detentions and suggest measures on the lines indicated above. These suggestions should be scrutinised by an Officer of district rank to be placed in charge of the Wagon Chaser Organisation in

each district or division and it would be his responsibility to see that these measures are promptly taken in co-operation with other branches and that the results expected on the basis of measures taken are produced. The Committee envisage a substantial reduction to stock by the creation of this Wagon Chaser Organisation. The Officer in charge of this organisation in the division or district will not confine his attention to the average detention to stock in marshalling yards, but will also keep a watch over the detentions to stock everywhere throughout the division or district including on the sections and in the departmental sidings, such as sick lines and loco sheds. The utility of this organisation should be judged only by the results produced and those who fail to produce results should be replaced by better personnel.

100. The Committee have laid so much stress on the intensive check through a Wagon Chaser Organisation because of the fact that they are convinced that there is plenty of scope for improvement in the utilisation of rolling stock, by better co-ordination and supervision. To illustrate the point, the Committee quote the example of Moghalsarai. The performance of Moghalsarai yard during the last 4 years was as under:

| | 1951-52 | 1952-53 | 1953-54 | 195 |
|---|---|---|---|---|
| Average number of wagons dealt with daily | 2,570 | 2,575 | 2,562 | 2,749 |
| Average detention per wagon . . . | 28·4 | 25·0 | 27·2* | 22·4 |

(*Heavy detention during 1953-54 was primarily due to abnormal conditions created by the Kumbh Mela at Allahabad).

101. From these figures, it will be seen that there has been a progressive reduction in the average detention to stock in Moghalsarai yard since 1951-52 (with the exception of a temporary set back during the 1953-54). The average detention per wagon during 1954-55 was about 6 hours less when compared to the figure for 1951-52 in spite of the fact that the number of wagons handled was about 200 wagons per day in excess. This means that during 1954-55 about 16,500 wagon-hours were being saved at Moghalsarai every day when compared to the performance of 1951-52. The Indian Railways can, therefore, be legitimately proud of their achievement at Moghalsarai. The Committee are of the opinion that this improvement is to a large extent due to the presence of a High level Officer for exercising close supervision and co-ordination. They feel that similar results can also be achieved elsewhere. This is the reason why the Committee strongly feel the immediate necessity of creating a well-knit Wagon Chaser Organization on Indian Railways. Even as regards Moghalsarai, they are of the opinion that these results can further be improved upon, if the following measures are taken:

(i) provision of more powerful diesel shunting engines;

(ii) electric control of points in the marshalling yard;

(iii) mechanical retarders; and

(iv) provision of an underground passage for the incoming and outgoing engines to and from the loco-shed, by-passing the running lines.

102. The Committee recommend expeditious adoption of these measures, because they will expedite the process of shunting and reduce average detentions further. As they have said earlier, eventually the target of average detention at Moghalsarai should be 16 hours and not 22 hours.

103. One significant fact to note here is that Moghalsarai is by far the biggest yard in India; and yet it is in urgent need of further expansion in the shape of extra lines and other facilities to cope up with the steadily increasing coal traffic. This fact brings into bold relief the paramount necessity of making adequate provision in the Second Five Year Plan for the expansion of Railways, if they are to play their due role in the rapid industrialisation of the country.

(*m*) *Performance of terminal goods station yards*:

104. The Committee have scrutinised the performance of 34 terminal goods stations on Indian Railways for the months, January to June, 55 under the following heads:

(i) average time taken in placing a wagon for unloading;

(ii) average time taken in releasing a wagon (from placement to release);

(iii) average time taken in placing a wagon for loading after being released or in placing a wagon received empty in position for loading;

(iv) average time taken in loading a wagon (from placement to loading); and

(v) average time taken in sending out a wagon from station after being released or reloaded.

Regarding item (i), the performance of 23 stations out of 34 is good inasmuch as the average time taken is less than 12 hours. In the case of the following 11 terminal yards, however, the average time taken is in excess of 12 hours:

Jhansi, Poona, Chitpur, Howrah, Sealdah, Shalimar, Bareilly, Moradabad, New Delhi, Salt Cotaurs and Bikaner.

105. The Committee recommend that detailed investigations should be undertaken by the Railway Ministry to ascertain the reasons for these excessive delays in placements and adopt measures to reduce the same. That maximum time taken for placing a wagon for unloading should not exceed 12 hours should be taken as an axiom of good operation.

106. As regards item (ii), the normal free time allowed for releasing a wagon is 6 hours. Hence the average time taken in releasing a wagon should not exceed this figure. It is noticed that the actual figures conform to this limit except in the case of seven stations, *viz.* Shalimar, Cochin Harbour, Coimbatore, Salt Cotaurs, Carnac Bridge, Hanumangarh and Ratangarh.

107. **The Committee recommend that the appropriate Railway authorities should cantact the representatives of trade at these points and take whatever measures are necessary to ensure that the average time taken for release does not exceed 6 hours.**

108. Regarding item (iii) it is noticed that the average time taken in placing a wagon for loading after being released or in placing a wagon received empty in position for loading are on the high side, particularly at Jhansi, Howrah and Sealdah. A detailed investigation should be undertaken at these points with a view to reduce these detentions.

109. Regarding item (iv), it is found that the position is generally satisfactory except at Howrah, Shalimar and Kanpur where the average time taken in loading a wagon is in excess of 6 hours. Efforts should be made to reduce this to the target of 6 hours.

110. As regards item (v), the average time taken in sending out a wagon from station after being released or reloaded is considerably in excess of 12 hours in the case of the following eighteen terminal yards: Poona, Chitpur, Howrah, Sealdah, Shalimar, Moradabad, Delhi, New Delhi, Cochin Harbour, Coimbatore, Bikaner, Hanumangarh, Ratangarh, Sadulpur, Bangalore City, Madras Beach, Tuticorin and Indore. The Committee recommend that detailed investigations should be undertaken at each of these points with a view to devise measures to reduce these detentions to the maximum of 12 hours.

111. The Committee appreciate that in a number of cases, the lay out of the terminal yards, the shunting facilities and such other factors militate against the reduction in the detention time at various stages and as such the reduction of these detention figures is beyond the control of the local staff in the existing conditions. They are, however, of the opinion that these existing conditions should be suitably altered, wherever necessary, so that the targets of detentions indicated are achieved.

The Wagon Chaser Organisation referred to earlier will, of course, be required to watch these detentions at different stages in terminal goods stations with a view to bring about an all-round improvement.

(n) *Operating restrictions*:

112. The Committee have scrutinised various operating restrictions that were imposed by railway administrations during the year 1954-55 and they find that the number of occasions when such restrictions have to be imposed is very frequent. Though in some cases, such restrictions may be necessary due to accidents interrupting through communications, causing hold-up etc., in quite a large number of cases, the restrictions are required due to the fact that the traffic offering exceeds the handling capacity, either at the goods shed concerned or at the transhipment points. Frequent imposition of the restrictions, therefore, is a further indication of the fact that considerable expansion of rail facilities at terminal points, transhipment points, marshalling yards and sections is urgently needed.

(o) *Engineering restrictions*:

113. There are heavy arrears of sleeper renewals on various Railways due to paucity of sleepers and the position on 1.4.'56 will be that there will be 7,389 miles of Railways on which there will be arrears

of renewal *i.e.*, 21% of the route mileage of Indian Railways. Due to the arrears of replacement of rails and sleepers as many as 1784 miles of track are under speed restrictions. These speed restrictions not only slow down the running of passenger trains, but also effect the overall availability of stock for goods loading. It is, therefore, urgently necessary to overtake the arrears of replacement and remove these speed rstrictions with the least possible delay.

(p) *Track Usage*:

114. The above review of the operating results in various directions shows that in several directions, the recovery effected by the Indian Railways from the after effects of War and partition has not been in full in as much as the best results achieved in the past have not been touched or maintained. There are some spheres in which the performance achieved in 1951-52 has not been maintained, but there has been a drop in subsequent years. In fairness to our Railway men, the Committee would like to point out here that the density of traffic on the Indian Railways has been steadily increasing since the year of partition, as can be seen from the following figures of track usage (train miles per annum per 100 m. of running track) for B.G. and M.G. separately.

| Year | Broad Gauge | Metre Gauge |
|---|---|---|
| | Train miles per 100 m. of R.T. | Train miles per 100 m. of R.T. |
| 1947-48 | 4,935 | 3,303 |
| 1948-49 | 5,226 | 3,615 |
| 1949-50 | 5,635 | 3,727 |
| 1950-51 | 5,778 | 3,896 |
| 1951-52 | 6,032 | 3,863 |
| 1952-53 | 6,096 | 3,906 |
| 1953-54 | 6,156 | 3,932 |

115. From these figures it will be seen that the track usage has increased by 25% on the B.G. and 19% on the M.G. during 1953-54 as compared to 1947-48. It has further to be noted that the increase in density of traffic on the minor branch lines has not been appreciable and as such the increased pressure of traffic has fallen unevenly resulting in a number of sections and yards working to saturation point. It is common experience that, whenever a terminal yard or a marshalling yard or a section is working to capacity, even a minor factor vitiates the operating results substantially. Moreover, inadequacy of facilities in any one aspect has its repercussions in other spheres also. To give an example, let us take the case of one section with two terminal marshalling yards. Let us assume that there are ample facilities on the section for the movement of trains in the shape of short block sections, sufficient number of loops, modern signalling etc. Let us also assume that the locomotives working on the section are in good fettle. Let us also assume that the facilities for reception and despatch of trains at one terminal

end 'A' are ample; but that those at the terminal and 'B' are inadequate. One might be tempted to draw a conclusion that in the above case, detentions to wagons at 'A', the speeds of trains over the section AB and the mileage obtained from locomotives should be satisfactory; but that the detention to stock at the terminal 'B' should be heavy. This is not actually so. Even with the good engines and better speeds, when the trains start pouring into the terminal end 'B' with inadequate facilities, there is a progressive hold-up of trains one after the other and this easily affects the speeds of trains for the entire section. Due to this hold-up the crew and the guards remain long hours on duty on the section, with the result that their availability for the return trip after the minimum rest is affected and this in turn also affects subsequently their availability at the terminal 'A'. Thus, the net result is that the trains are put back for driver's or guard's rest at the terminal end 'A' causing heavy detention to stock at the end 'A' also. In other words, in spite of all other favourable factors, the inadequate yard facilities at the terminal end 'B' affect a large number of operating results, such as detention to stock at 'A', speeds of trains over the section AB and the mileage taken out of the engines over the section AB though the engines are in good fettle. It is for this reason that adequate provision of operating facilities to cope up with the increasing demand of traffic is absolutely essential.

116. Having emphasized this aspect ,the Committee would also like to point out that the improvement in the railway equipment and facilities is bound to be a slow process. In the meantime, Indian Railways must mobilise themselves on a war-footing with a view to ensure that maximum use is made of the Rolling Stock and other equipment that are available so as to achieve better results. Every wagon on the Railway should be considered as a gold mine to be utilised unremittingly day and night and all the measures should be expeditiously taken on the lines recommended by the Committee with a view to improve utilisation of Rolling Stock.

**G. Some more suggestions to improve utilisation of Rolling Stock.**

(a) *Rationalisation of coal movements*:

117. In view of the general shortage of rail transport in the country, with a view to make the best use of the available transport, the Railway Ministry had formulated following views and objectives in connection with the rationalisation of coal movement:

(i) Complete rationalisation, in the sense that upper coal field (Jharia) be restricted to Up country and lower coal field (Raniganj) allocated to Down country, keeping in view the different qualities of coal available in the areas and the demand for soft coke and slack coal which are not available in the lower coalfield.

(ii) Avoidance of certain movements from the different pilot areas which are uneconomical due to excessive shuttling, etc. by restricting such movements only to those consumers who cannot get same type of coal in other areas.

(iii) Changing the method of allotment so as to give concentrated allotment to one depot, thereby facilitating formation of block rakes.

(iv) Confining movement of coal for Sindri from collieries served by the Pathardihi depot.

(v) Uniform utilisation of pilot capacity.

118. While some of these suggestions had been accepted by the Coal Commissioner further measures of rationalisation as proposed by the railways have been kept in abeyance. The Committee recommend that a high level meeting should be held between the representatives of the Production Ministry and the Railway Ministry with a view to ascertain what further progress can be made in this direction.

The Committee also recommend that the Railway Ministry should take over the day to day allotment for Coal loading within the general allocations made by the Coal Commissioner. This will definitely improve the position in regard to the rationalisation of coal movements.

(b) *Rationalisation of rail movements to ports*:

119. The terminal rail facilities at major ports in the country such as, Calcutta, Bombay etc. are insufficient to deal with the large volume of inward traffic both for local consumption as well as for export. Additional terminal facilities on these points will, therefore, be necessary. In addition, it would be beneficial to afford some relief to these major ports, if a certain amount of export and import traffic is diverted to other intermediate ports. For this purpose provision of direct rail connection of suitable gauge to the port with the areas in the interior, which it can legitimately serve, might become necessary. For instance a broad gauge connection to Kandla port which has already been connected with a Metre-gauge connection might eventually become necessary. This broad gauge connection might eventually also serve two intermediate ports of Navlakhi and Bedi.

120. One ex-Chief Commissioner of the Railways who is still in intimate touch with the working of the railways and who has interested himself in the problem of ports was of the opinion, and the Committee are in entire agreement with him, that a Broad Gauge connection between Ahmedabad and Bhavnagar was very necessary. This would serve to rationalise the export and import of traffic from and to Cotton Mills at Ahmedabad and export of ore traffic from Rajasthan. It is to be borne in mind that the distance between Ahmedabad and Bhavnagar port by this new line would be less than half the distance between Ahmedabad and Bombay and would, therefore, result in considerable saving of broad-gauge wagons. It would also serve to relieve congestion at the Bombay terminal. It would also bring Gujerat and Saurashtra nearer in point of time and distance by rail.

In this connection, the Committee were impressed by the analysis of the problem of Break-of-Gauge in India made by the Efficiency Bureau. In this analysis the Bureau divided the M.G. areas into three regions *viz.*, the Northern Region, the Rajasthan-Saurashtra Region and the Southern Region. The correlation of the import and export requirements with the population of the area follows the following pattern:

| Region | Import B.G. wagons per day | Export M.G. wagons per day |
|---|---|---|
| I . . | 12 P. | 16 P. |
| II . | 30 P. | 40 P. |
| III . . | 12 P. | 16 P. |

where P is the population of each region in million. This clearly shows that in the Rajasthan-Saurashtra Region, the dependence on the B.G. area is greater. Hence provision of a B.G. rail connection to Bhavnagar will assist considerably in meeting the requirements of Saurashtra area and will also relieve pressure on the transhipment points at Sabarmati and Viramgam which frequently get congested necessitating imposition of restrictions. The Committee, therefore, recommend that a B.G. link should be provided between Ahmedabad and Bhavnagar. The Committee would also recommend that examination should be undertaken on similar lines to see whether additional rail facilities to other intermediate ports will serve to relieve the ever-increasing pressure on major ports and also rationalise rail movements of export and import traffic.

(c) *Extension of Express Goods Services*:

121. The Committee are glad to note that the Railway Ministry have introduced a number of Express Goods services between a large number of important points and further that these services have also been incorporated in the time-tables. When the goods are despatched by the Express Goods services advertised in the time-table, the consignor knows in advance when his goods will reach the destination and is, therefore, in a better position to make prior arrangements for the receipt and disposal of goods. The Committee, therefore, recommend the progressive expansion of the advertised Express Goods services in the country.

122. The Committee understand that proposals to introduce the following additional Express Goods services are under consideration of the Railway Ministry.

(i) Bombay-Ahmedabad daily.

(ii) Ahmedabad-Delhi on alternate days.

(iii) Howrah-Patna weekly.

(iv) Howrah-Gaya and Delhi-on-Sone weekly.

(v) Extension of Express Goods services between Shalimar and Nagpur up to Bombay.

(vi) Extension of the services between Kharagpur and Waltair up to Madras.

(vii) Between Kanpur and Barauni daily.

The Committee recommend that these proposals should be put into effect as early as possible. They also suggest early examination to introduce advertised Express Goods services, *inter alia* between Jamnagar-Viramgam and Bhavnagar-Ahmedabad.

(d) *Running of through goods trains according to fixed time-table*:

123. As the Express Goods services are being run on fixed time-tables between specific points, there is also scope for running at least certain percentage of goods trains on fixed paths. One of the advantages of running goods trains on the fixed timings, as rightly pointed out by the Indian Railway Enquiry Committee, 1947 is that it renders possible the preparation of goods engine links and so assists in obtaining better locomotive utilisation. Further the running staff working on these fixed links are able to know in advance when they would return to Headquarters, a point which assists them in planning their domestic life. The Committee would, therefore, recommend that the practice of running goods trains on fixed time-tables should be progressively extended on Indian Railways.

(e) *Loading of smalls*:

124. Due to shortage of full wagon load consignments, sometimes there is a tendency on the part of merchants to split up the wagon loads and book them as smalls. In order to keep a check on this tendency, a surcharge of 6¼ per cent. on freight has recently been introduced on smalls consignments weighing up to 20 mds. Efforts are also being made by the Railways to reduce the number of wagons loaded with smalls with a view to obtain better utilisation of wagon space available. While generally the Committee agree with these measures adopted by the Railway Ministry to make economic use of wagons, they would also like to stress here that while every effort should continue to be made to club smalls consignments to the maximum extent possible in the wagons, no restrictions as such should be imposed on the booking of smalls merely for the sake of securing better loading, as such a course is likely to affect the small scale industries adversely. As a matter of fact, the Committee did receive a number of such complaints. Railway Administration should promptly investigate such complaints and take remedial action, wherever necessary.

(f) *Nominated loading*:

125. The idea of the nominated loading is that certain days of the week are specified for the booking of traffic to particular destinations. This enables the Railways to load full wagons and sometimes even full trains to points at long distance with resultant acceleration in transit and economy in wagon usage. The Committee have examined the system of nominated loading on different Railways and are glad to observe that the Railways have made good progress in this direction. They recommend that the efforts in this direction should be continued without relaxation.

126. The Committee feel that there is considerable scope for formation of block loads for long destinations, specially in the case of coal traffic. Bulk allotments in the coal fields enable the Railways

to form and despatch special trains for distant destinations such as, Ghaziabad, Saharanpur and Agra East Bank. This will not only reduce the transit time and improve the turn-round of wagons, but also will assist the Moghalsarai Up yard inasmuch as such special trains for long destinations are not required to be dealt with in the marshalling yard, but are received in the Central yard and despatched directly onwards from there after changing the engines.

127. The Committee are glad to note that the Railway Board have recently evolved and published the Marshalling Orders on an All India basis. This will facilitate formation of goods trains to the farthest destinations. The Committee hope that this idea will be progressively developed.

(g) *Night loading*:

128. The Committee have noticed that the Railways have introduced night loading at a number of important goods sheds, with a view to expedite the release of wagons. They recommend that this practice should be extended in consultation with the local representatives of trade and that multiple shifts of working should be introduced at important goods sheds and transhipment points with the object of expediting the release of wagons.

(h) *Mechanical handling of bulk cargo at important Ports*:

129. A large number of wagons are handled daily at important ports to deal with the export and import traffic. Any devices for mechanical handling of bulk cargo in the Docks in big Ports will, therefore, not only increase their capacity, but also reduce substantially detention to stock. The Committee understand that the following proposals for the provision of mechanical handling are under consideration at Calcutta and Madras ports:

*Calcutta*

130. (i) Instalment of a coal loading plant with two tipplers, the average loading capacity being 300 tons per hour per tippler, for loading coal from the wagons direct into the ship. This instalment is expected to be ready by about the middle of 1956. It will be capable of dealing with only open trucks loaded with coal.

(ii) Semi-mechanical ore loading berth at No. 5, King George's Docks. Tippler tubs on trolley would run parallel to the wagons and perpendicular to the quayside and the tubs will be manually loaded from the wagons. These tubs on trollies will be hauled by diesel locomotives. The cranes will hoist the tubs into the ship. The average loading capacity will be 3,000 tons per day. The unloading of ore wagons by these means will be very much quicker. This arrangement will also be ready by about the middle of 1956.

*Madras*

131. Two quay berths are proposed to be constructed and are expected to come into operation by the end of 1957—one for handling Coal and the other for Ores. ...

At the proposed Coal berth, coal will be grabbed out from the ship's holds, loaded into tipping wagons, tipped at the coal dump and stacked with manual labour or light shovels. The rate of discharge of Coal will be about 1600 tons per day working two shifts of eight hours each.

Ores arriving from the interior will be stacked in piles at the Ore Yard by manual labour or by mechanical shovels. Cranes will be used for grabbing from the stock-piles and loading into tipping wagons. The ore will be tipped from the tipping wagons into under-deck-bins at the proposed Ore berth. Loading into ship's holds from the bins will be by grabbing cranes. The rate of loading of Ores will be about 2300 tons per day of two shifts working eight hours each.

132. The Committee recommend that the question of providing facilities for mechanical handling of bulk cargo in the docks may be examined for Bombay Port as well as some of the important intermediate Ports like Bhavnagar, Bedi etc. Similarly, the question of handling salt by mechanised means may also be examined.

(i) *Intensive High level supervision on rail operation:*

133. In view of the inadequacy of rail transport due to the extremely limited resources of the Railway Ministry, the importance of exercising high level supervision for making the best use of these limited resources is paramount. The Efficiency Bureau in their investigations about the drop in speed of goods trains noticed that there was a necessity of improved supervision and co-ordination and better maintenance of Rolling Stock. During the course of their study tours and their discussions with the Officers at Divisional and District as also zonal headquarters level, the Committee were glad to notice that there was a consciousness amongst the Railway officials about the inadequacy of rail transport and the paramount need of exerting to the utmost to make the best use of the limited resources.

134. The Committee were also glad to notice that the Chairman and Members of the Railway Board are also seized of the problem of inadequate rail transport available in the country and therefore, a detailed control is being exercised in the Railway Board's Office on the operation of the railways by the following methods:

(i) Check of the daily line and stock position on each of the Railways. This position is received in the prescribed form through the Delhi Control Office on the day following that to which it relates except in the case of the Southern Railway which furnishes the information by wireless message.

The salient points that are checked from these reports are:

(a) The disposition of inter-Railway interchange of wagons and the resultant overall interchange balance of the Railway *vis-a-vis* its target wagon balance.

(b) The throughout, in each of the two directions separately, in terms of goods trains and wagons on the more important and

difficult routes and the number of goods trains, if any, stabled thereon. With this is checked the balance of wagons left over for clearance on the section.

(c) The handling performance at the more important break-of-gauge transhipment points and the number of wagons left over to be handled and in sight.

(d) Yard balance at some of the more important yards *vis-a-vis* the balances that they may have in the normal course.

(e) Overall loading (and coal loading, where concerned) on the Railways.

(f) Overall outstandings with the oldest dates of registrations, separately for foodgrains also.

The position regarding any deterioration in these respects is watched and if consistently bad for two or three days or in the case of any marked deterioration on any particular day, the matter is immediately taken up with the Railways concerned either over the telephone, or by wireless message, or by a letter. Thus, the Railway Board keeps in touch with the pulse of the day-to-day operation of the Railways.

(ii) The overall position as reflected in the Ten-day Confidential Periodical Demi-official letters from each of the General Managers is studied and suitable action as warranted on the part of the Board is taken.

(iii) A monthly 'Review of Rail Transport' is prepared by the Priority Branch of the Traffic (Transportation) Directorate which gives an indication of the overall trends of traffic and its clearance, and serves as a pointer to certain noteworthy features.

(iv) The punctuality performance of passenger trains is furnished by the individual Railways every ten days and monthly. In the case of certain important trains statements of the actual arrivals at and departures from Delhi are received on the daily, ten-day and monthly basis.

Special reports on these lines are also received regarding the position at Madras and Bezwada in respect of Grand Trunk Express. The overall position is watched and if bad over a period it is pointedly brought to the notice of the Railway Administrations concerned. In some cases, particularly bad specific instances are also taken up.

(v) Operating Statistics with brief explanations of the Railways for deterioration are also studied and necessary action taken on particularly weak spots.

(vi) The operating problems are also gone into at periodical Operating Meetings at which the Railways are represented by the Chief Operating Superintendents.

135. In the normal circumstances, the Committee would have regarded such a detailed scrutiny of operation on individual railways by the Railway Board's Office as an interference in the

sphere of the General Managers. In view of the critical position of rail transport in the country, they are, however, of the opinion that at present this detailed control from the Railway Board's Office must continue. The control may be progressively relaxed, as the position improves with the improvement in the railway equipment and facilities. The Committee would like to stress here that different operating statistics that are submitted at various levels should be carefully scrutinised and prompt remedial action taken wherever necessary.

## H. **Miscellaneous**

136. While on this subject of Operation, the Committee would now deal with the following subjects:

(a) Clearance of parcels and perishable traffic.
(b) Registered Transit System.
(c) Priority Schedule.
(d) Working of Control Offices.
(e) Restrictions on Road Transport.

(a) *Clearance of parcel and perishable traffic*:

137. The Committee have examined the arrangements for clearance of parcels and perishable traffic on various Railways. They find that these arrangements are in many cases inadequte due to the following reasons:

(i) the shortage of luggage and parcel vans;
(ii) the shortage of wooden floored and ventilated wagons;
(iii) acute shortage of Vacuum fitted stock on the M.G. Railways.

Adequate provision of parcel vans, luggage vans, refrigerator vans, wagons with wooden floors and ventilation and vacuum fitted wagons for the M.G. Railways is urgently needed to cater for the increasing demands of parcel and perishable traffic.

(b) *Registered Transit system*:

138. Before the War, the old East Bengal Railway was operating "the green arrow system" for an additional charge of Re. 1/- per consignment. The transit was specially supervised and recorded in what was known as the 'green arrow cabinet.' The consignor could obtain at any time information by telephone as to the progress of his consignment and on arrival at destination, special steps were taken to inform both consignor and consignee immediately. The Committee recommend that an experiment on these lines should be made on Indian Railways also. During the course of discussions, the Committee were informed by the representatives of the Railway Ministry that they intended to introduce such a system from the time-table of 1st April, 1956. They have no doubt that the experiment will be watched with great interest.

(c) *Priority schedule*:

139. As the demands for movement of traffic continue to be far in excess of the available rail transport capacity, the continuance of the system of rationing of rail transport is inevitable. This rationing is arranged by prescribing priorities to the general range of traffic suitably grouped consistent with the comparative urgency and importance of the traffic generally falling in each of the groups. This inter-group priority is prescribed in the General Order applicable to all Railways and issued under the authority of Section 27-A of the Indian Railways Act, 1890, as modified from time to time. The current General Order is different from its predecessors in force prior to 17-8-1953 inasmuch as under item 'E' provision is made for availability of some share of rail transport for all kinds of traffic not covered by the higher priority items, *viz.*, items 'A' to 'D'. Unlike the past, under this Preferential Schedule any particular *kind* of traffic does not remain *altogether* unsatisfied over abnormally long periods. Under item 'E' the quotas specifically for some commodities and those for miscellaneous traffic are fixed as recommended by the Railways and are subject to revision from time to time in the light of the prevalent local conditions and availability of rail transport *vis-a-vis* the demands. Thus, the economy of the areas served by a Railway is catered to at least to a limited extent depending upon the overall availability of transport. The extent to which commodity quotas under item 'E' can be actually implemented is, of course, dependent upon the day-to-day availability of wagons and disposition of operating restrictions etc. with due regard to the requirements to be met under items 'A' to 'D'. Some share of the wagon availability is, however, made available for this item as a rule. (It is needless to add that this share is very inadequate to meet the requirements).

For fixing the commodity quota under item 'E' of the General Order, Special Order for each of the Railways is issued, as the character of the commodities and quotas for meeting the local requirements are different on each of the different Railways. The overall commodity quota for a particular Railway, as given in the Special Order, is in turn suitably distributed by the Railways between the areas served by it.

As the shortage of rail transport is likely to persist for some time to come, the Committee do not envisage the abolition of the priority schedule in the near future. All the same the Committee recommend that the Railway Ministry should have a time-table for gradual and progressive relaxation of controls and restrictions.

(d) *Working of Control Offices*:

140. On each division or district of the Railway, there are a number of sections, each station of which is connected by control phone to the Control Office, usually situated at district or divisional headquarters. This enables the Controller in the Control Office to plot the movement of each train on a chart and to keep the movement of trains under continuous watch. It also enables him to plan the crossing and precedence of trains in advance. In

addition, a closer watch is kept on the supply and clearance of wagons from the road-side stations. It wil thus be seen that the provision of control phone is a great asset. The medical and relief measures in case of an accident can also be taken more expeditiously over a controlled section than in the case of non-controlled section. The importance of providing control over the sections is, therefore, obvious. There are a number of sections on Indian Railways, where due to the increasing traffic, provision of control communications is very necessary. Provision of such control facilities should, therefore, be given a high priority. The Committee recommend that each Railway Administration should make out a phased programme for introducing control system over non-controlled sections.

141. The Control Office is a sort of nerve centre, as far as the working of the traffic on the district or a division is concerned. The responsibilities of the Section Controller are great. Not only has he to keep his finger constantly on the pulse of traffic, but also he has to keep close co-ordination with the line staff, the yard staff at the terminal ends and the adjoining control offices, so that he may be able to plan the traffic on his section to the best advantage. The Committee, therefore, lay great stress on the proper selection and training of Section Controllers. During the study tours of Sub-Committees, it was noticed that some of the Control Offices are situated in rather cramped areas. Proper accommodation for the Control Offices with properly tested acoustics is a *sine qua* for good operation. Where the Control Offices are situated at stations subject to extremes of climate, the Committee would also recommend that air-conditioning should be provided, so that Section Controllers and other staff in the Control Office can work efficiently.

(e) *Restrictions on road transport*:

142. Many years back, in order to avoid untealthy competition between the Railways and the Road, at the instance of the Railway Ministry, numerous restrictions were imposed on the road traffic. Now that the demand of traffic in the country has shown a phenomenal rise and as the Railways are not in a position to carry all the traffic that is offered the Committee are of the opinion that the entire position regarding the various restrictions imposed by the State Governments on the road traffic should be carefully reviewed and these restrictions should be relaxed to the maximum extent possible so that wherever the rail transport is inadequate, advantage can be taken of road transport. While relaxing these restrictions, care will, of course, have to be taken to see that road transport does not enter into unhealthy competition with the Railways now or at a later stage.

BALVANTRAY GOPALJEE MEHTA,
*Chairman,*
*Estimates Committee.*

NEW DELHI;
*The 20th December,* 1955.

## APPENDIX I

**Statement showing the summary of conclusions/recommendations of the Estimates Committee relating to the Ministry of Railways— Operation on Indian Railways.**

| S. No. | Reference to Para number in the Report | Summary of conclusions/recommendations |
|---|---|---|
| 1 | 2 | 3 |
| 1 | 5 | The Committee suggest that as far as possible the running of mixed trains should be avoided. |
| 2 | 6 | The Committee recommend that early steps should be taken by the Railway Ministry to wipe off the arrears of replacement of rails and sleepers. |
| 3 | 8 | The overall speed of the Mail train between Madras Central and Bombay V. T. and *vice versa* is very low for a mail train and is lower than the speed of some of the mail trains on the Metre Gauge sections. |
| 4 | 10 | The Committee recommend that the following proposals which are under examination be implemented expeditiously so that their results would be reflected in the time table to come into force from 1-10-1956, if not earlier :—<br>(*i*) Booked speed of 61/62 Mail train to be increased on the Northern Railway portion;<br>(*ii*) Improvement of track, bridges and inter-locking which would result in an increase in the average speed of trains in the Gondal Region of the Western Railway; and<br>(*iii*) Raising maximum possible speed on Lucknow-Katihar section to 60 M.P.H. |
| 5 | 11 | The Committee desire that early steps should be taken to make all stations on the route of the Grand Trunk Express fully interlocked. |
| 6 | 12 | A systematic review of the overall speeds of mail trains throughout the country should be undertaken by the Railway Board and schemes should be incorporated in the Second Five Year Plan with a view to ensure that the overall speeds of mail trains do not remain below 35 M.P.H. in the case of Broad Gauge trains and not below 30 M.P.H. in the case of Metre Gauge trains. These targets can easily be achieved without exceeding the maximum permissible speed of 60 M.P.H. for the B.G. and 45 M.P.H. for the M. G. |
| 7 | 13-15 | Even the existing maximum permissible speed of 60 M.P.H. for B.G. and 45 M.P.H for M.G. track in the country is lower than that laid down in some of the foreign countries like the U.S.A., U.K., Canada, France and Germany. As any substantial increase in the maximum permissible speed over the main line routes will cost heavy expenditure, the Committee do not recommend this course for the present. The Committee were glad to learn that the question of increasing the maximum permissible speed over certain |

| 1 | 2 | 3 |
|---|---|---|
| | | main line routes by improved maintenance and without incurring heavy expenditure and thereby increasing the speeds of mail trains was under examination of the Railway Ministry. The Committee would comment upon the question in a subsequent Report. Meanwhile, the Committee would suggest that a systematic review of halts of important trains at big stations should be taken by the Railway Administrations to see as to what extent these halts could be curtailed. |
| 8 | 16 | The Committee feel that there is an urgent need for a systematic review being taken by each Railway Administration of the speeds of passenger trains on branch lines, so that suitable steps may be taken to attain the booked speeds of 30 M.P.H. for M.G and 35 M.P.H for B.G. passenger trains running over a distance of 50 miles by the end of the Second Five Year Plan. |
| 9 | 20 | There is an imperative need for building up more coaching stock on Indian Railways. In the meantime, the coaching stock that is already available should be used to the maximum extent by tightening the rake arrangements wherever feasible and by reducing the number of coaches under or awaiting repairs. |
| 10 | 22-23 | (a) The Committee are glad to observe that Government have appointed a committee to examine the extent of overcrowding on suburban trains and to suggest measures to improve the position; but feel that it would have been better if some non-official element were also associated with this committee, so that the point of view of the people actually affected by overcrowing could be given due weightage. This may be done even now.<br><br>(b) As regards overcrowding in suburban trains, the Committee recommend the examination of the following points: —<br><br>(*i*) Provision of standing accommodation only in some compartments by removing the benches;<br><br>(*ii*) Reducing the minimum headway between trains to about 3 minutes against 4 minutes at Churchgate and 5 minutes at Victoria Terminus by improved Signalling arrangements; and<br><br>(*iii*) Staggering the Office hours at Calcutta, Bombay and Madras in consultation with the State Governments and the local business Offices. |
| 11 | 26 | The Committee observe that, except in the Central and Southern Railways, passenger train services curtailed during the war have not yet been fully restored. The Committee recommend that this item should be given a very high priority and hope that all passenger train services curtailed during the war will be restored by 1-10-1956 unless the census figures of traffic definitely prove that there is no need for such restoration due to the change in traffic trends. |
| 12 | 28(*i*) | The Committee understand that the following proposals regarding the running of Janata trains are under consideration :—<br><br>(*i*) Increased frequency of the Janata trains between Madras and Bombay V. T. from bi-weekly to tri-weekly; and<br><br>(*ii*) Introduction of a bi-weekly Janata train between Bombay and Allahabad, Bombay and Bezwada, Bombay Central and Delhi and Delhi and Ahmedabad (M.G.)<br><br>The Committee recommend that these proposals should be implemented as soon as possible. They also recommend that the question of introducing a through Janata Express between Bombay and Saurashtra (with suitable prompt connection at the break-of-gauge point) and between Bombay and Howrah be examined. |

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| 13 | 28( *ii*) | The Committee welcome the proposal of the Railway Ministry to run a completely air-conditioned train, providing air-conditioned accommodation to the third class passengers also. |
| 14 | | The Committee recommend that the Research Centres of the Railways should concentrate on devising some cheap method by which some degree of cooling can be effected in the third class compartments. Efforts should also be made to provide dust-free ventilation in third class carriages. |
| 15 | 28(*iii*) | The Committee are in agreement with the contemplated abolition of II class, when adequate sleeping accommodation would be made available in III class; and hope that it will be possible to implement it without undue delay. |
| 16 | 32 | The Committee are glad to note that the Railway Ministry is not complacent about the inadequacy of the rail facilities available in the country. |
| 17 | 35 and 36 | The average daily coal loading has invariably been below the Coal Commissioner's distribution target. The difference between the two may be taken as an index of the short supply of transport for coal industry due to inadequacy of rail transport. |
| 18 | 42 | The figures of goods loading (including coal) during 1954-55 have recorded an increase of 8·2 % over the figures of 1951-52, as far as B.G. is concerned. As far as M.G. is concerned, the increase is very much less, being 1·2%. |
| 19 | 43 | The figures of Freight tons originating and Freight ton miles during 1954-55 are the highest ever achieved. They represent a percentage increase of 25·4 and 46·7 respectively over the corresponding figures for 1938-39. |
| 20 | 45 | The outstandings at the end of the busy period have been showing a steady increase every year. The outstanding figures for 31-8-1955 show a phenomenal rise. This is a clear indication of the fact that the transport facilities available are totally inadequate to meet the increasing demands of traffic. |
| 21 | 49 | Whereas the traffic waiting for restricted destinations and quota destinations would indicate the insufficient capacity of the railways to handle traffic for those destinations or for those routes for which quotas have been laid down, the traffic waiting for unrestricted destinations is an indication of the inadequacy of the rolling stock, due to which the railways are unable to clear the traffic expeditiously. |
| 22 | 49 | The fact that, even for B. G. unrestricted destinations, there were indents pending for a period of over 6 months on the Southern Railway and the Western Railway seems to indicate that the wagons allotted for these two Railways were inadequate and the point requires careful examination. |
| 23 | 50 | The Committee recommend that as far as Broad Gauge unrestricted destinations are concerned, even with the available resources the Railways should take special steps to ensure that no indents remain outstanding for a period in excess of three months under any circumstances. |
| 24 | 51 | After examining the statistics of coal and goods loading, the Committee feel that the rail transport situation in the country is totally inadequate to meet the increasing demands of traffic arising out of the increased economic activity due to increased agricultural and industrial production. |

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| 25 | 57 | The Committee are in entire agreement with the recommendation of the Railway Corruption Enquiry Committee that adequate provision must be made in the Second Five Year Plan not only to make up for the arrears but also to build up sufficient assets to enable the Railways to cope with the present transport demands and the further demands that would be made by the expanding economy during the period. |
| 26 | 60 | The process of mechanised transhipment should be introduced at certain important transhipment points. Particularly arrangements should be made to provide tipplers for expeditious transhipment of coal from Broad Gauge to Metre Gauge. The Committee also recommend that the position should be reviewed periodically and two shifts of working introduced at transhipments wherever feasible. The Committee are of the opinion that the question of labour should not be allowed to stand in the way of increased transhipment. |
| 27 | 61 | As regards transhipment over the Ganga, the Committee recommend that the question of opening more transhipment points should be considered expeditiously pending construction of the Mokameh Bridge. |
| 28 | 70 | The Committee consider that apart from the construction of new lines, considerable expansion of the existing Railway facilities will be necessary in the shape of additional rolling stock, yard facilities, terminal facilities and increased section capacity, if Indian Railways are to cope up with the demand of rail transport. |
| 29 | 71 | The Committee welcome the bold step taken by the Railway Ministry in announcing their proposal to carry about 15 to 20% additional traffic during the current busy season (except on the Eastern and South-Eastern Railways where the immediate target is 10% increase in coal and goods loading) as compared to the previous years. The Committee will watch the fulfilment of the announcement with interest and comment upon it in their subsequent Report. |
| 30 | 72 | The Committee attach great importance to the question of operating efficiency at the present critical stage of our national development as loss of transport that may occur due to inefficient operation "cannot be made good". |
| 31 | 74 | The Committee recommend that suitable measures should be taken to improve the performance of wagon miles per wagon day and suggest the target of 50 for B.G. and 40 for M.G. to start with. |
| 32 | 75 | A steady drive to improve the net ton miles per wagon day specially on the M.G is necessary so as to ensure the maximum possible use of wagons. |
| 33 | 76 | In view of the shortage of locomotives, it is necessary that the maximum use is made of them by giving better loads to trains. The Committee are glad to note that on the M.G., the performance has shown a steady improvement from 1948-49 onwards, as far as tonnage per train is concerned. |
| 34 | 77 | In regard to Net ton miles per goods trains hour, there has been considerable drop in the performance during 1952-53 and 1953-54 as compared to 1951-52. |

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| 35 | 79—80 | As the Railways are not getting the best mileage out of the engines both on the B.G as well as on the M.G. the Committee recommend that the Railway Ministry should immediately investigate the reasons for low mileage obtained from the engines both on B.G. and M.G. and take prompt measures to see that the mileage obtained out of the B.G. and M.G. engines for various services, improves. To start with, the target of best performance since 1938-39 should be arrived at and achieved within one year, after which the question of revising the targets still further might be considered. |
| 36 | 81 | The Committee observe that there has been considerable improvement in the composite figure of net ton miles per engine day.<br><br>This is due to the better loading of wagons and better loads offered to trains. If better mileage is obtained out of the engines, this composite figure also can be considerably improved. |
| 37 | 83—85 | The Committee are glad to observe that the measures advocated by the Efficiency Bureau for removing certain causes of drop in speed of goods trains are being progressively adopted by various Railway Administrations. The importance of improving the speeds of goods trains by providing additional facilities, wherever necessary and by increased supervision and better co-ordination cannot be exaggerated. |
| 38 | 88 | There is considerable scope for improvement in wagon-turn-round which is a composite index depending upon a large number of factors such as the average detention in yards, average speeds of trains, time for loading and unloading etc. No efforts should be spared to bring about this improvement. |
| 39 | 89 | Taking into account the serious shortage of rolling stock the Committee feel that the Railways cannot afford the luxury of keeping a large number of locomotives, carriages and wagons under or awaiting repairs in their workshops, running sheds, and sick lines. While the Committee appreciated the drive started by the Railway Ministry recently in effecting improvements in this direction, they recommend that the drive should be intensified and that the Railway Ministry should lay down the figures of best performance obtained on any Railway as an immediate target to be attained by all Indian Railways. |
| 40 | 91 | The Committee recommend that the Railway Ministry should examine the feasibility of providing sliding doors in the roofs of covered wagons, so that the wagons may be utilised for coal loading in the mechanical coal loading plants on their outward trips from the coal fields and can also be utilised for loading general goods on their return trips to the coal fields, thereby reducing the empty wagon haulage on the B.G. |
| 41 | 95 | Pending a detailed examination of the question of gauges in India the Committee recommend the following interim measures to minimise the difficulties of areas served by M.G. :—<br><br>(*i*) Stepping up the capacity of transhipment points to the required level ;<br><br>(*ii*) Progressive increase of the quota of transhipment points ;<br><br>(In this connection, orders about giving high priority to the supply of M.G. stock to the transhipment points should be rigidly enforced, and the question of augmenting the line and power capacity on the sections adjoining the transhipment points should be given a very high priority). |

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| | | (*iii*) Laying down targets for the period of transit of goods and for the total wagon hours spent for each operation for each transhipment point and judging the performance regularly against the prescribed targets ; and<br>(*iv*) Provision of tipplers for handling coal at some important transhipment points. |
| 42 | 97 | A detailed investigation should be undertaken by each of the Railway Administrations regarding the causes of heavy detentions in the marshalling yards and remedial measures taken in the shape of (*a*) providing additional yards facilities, (*b*) providing additional shunting facilities, (*c*) strengthening the yard staff and (*d*) improving the line capacity in the adjoining sections as considered necessary. Average detentions to wagons in excess of 24 hours in any marshalling Yard should be ruled out as an axiom of good operation and if such excessive delays occur, they should be investigated at a high level. The Committee feel that extra facilities required to minimise detentions in marshalling yards should be incorporated in the Second Five Year Plan wherever this has not been done. Any increase in the number of shunting hours in a marshalling yard need not be viewed with alarm so long as they produce results in the shape of reduction of average detention to stock. |
| 43 | 99 | The Committee consider the proposal of the Railway Ministry to introduce a wagon chaser organisation on a fairly big scale as a step in the right direction, and envisage a substantial reduction in detention to stock by the creation of a well-knit organisation. There should be Wagon Chasers in sufficiently high grades in every important yard and it will be their duty to keep a constant watch over the movement of wagons. They should be given clear and well defined targets of reducing the overall detentions by at least 10 to 20 per cent. to begin with and the work should be judged by the results produced. Those who fail to produce results should be replaced by better personnel. |
| 44 | 100—103 | The Committee are glad to note that there has been a progressive reduction in the average detention to stock (despite handling of a larger number of wagons) in Mogalsarai Yard, by far the biggest yard in India, largely due to the close supervision and co-ordination exercised there by a high level officer. The Indian Railways can be legitimately proud of their achievement at Moghalsarai. Similar results can be achieved elsewhere also. Even as regards Moghalsarai better results can be achieved by adopting the following measures :—<br>(*i* Provision of more powerful diesel shunting engines ;<br>(*ii*) Mechanical retarders ;<br>(*iii*) Electric control of points in the marshalling yard; and<br>(*iv*) Provision of an under-ground passage for the incoming and outgoing engines to and from the loco sheds, by-passing the running lines.<br>The Committee recommend expeditious adoption of these measures It is significant to note here that even Moghalsarai, the biggest yard in India, is in urgent need of expansion. This fact brings into bold relief the paramount necessity of making adequate provision in the Second Five Year Plan for the expansion of Railways, if they are to play their due role in the rapid industrialisation of the country. |

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| 45 | 105—109 | (*i*) Detailed investigations should be undertaken by the Railway Ministry to ascertain the reasons for excessive delays in "placements" in some of the terminal goods station yards and measures to reduce the same should be adopted. That maximum time taken for placing a wagon for unloading should not exceed 12 hours should be taken as an axiom of good operation ;<br><br>(*ii*) Also, the appropriate railway authorities should contact the representatives of the trade to reduce the average time taken for releasing wagons, at stations where this time is in excess of 6 hours ;<br><br>(*iii*) A detailed investigation should be taken at points like Jhansi, Howrah and Sealdah where the average time taken in placing a wagon for loading after being released or in placing a wagon received empty in position for loading is on the high side ;<br><br>(*iv*) Efforts should be made to keep the average time for loading within the prescribed time at Howrah, Shalimar and Kanpur; and<br><br>(*v*) The average time taken in sending out a wagon from station after being released or reloaded is considerably in excess of 12 hours in the case of the 18 terminal yards. The Committee recommend that detailed investigations should be undertaken at each of these points with a view to devise measures to reduce these detentions to the maximum of 12 hours. |
| 46 | 110 | While the Committee appreciate that in a number of cases the lay out of the terminal yards and other facilities are such that reduction of detention time is beyond the control of the local staff, they consider that the existing conditions should be altered, wherever necessary, so that the targets of detentions indicated are achieved. |
| 47 | 113 | The Committee observe that due to arrears of replacements of rails and sleepers as many as 1784 miles of track are under speed restrictions. It is urgently necessary to overtake the arrears of replacement and remove these speed restrictions with the least possible delay. |
| 48 | 114-115 | The density of traffic on the Indian Railways has been steadily increasing since partition, both on B.G. and M.G. This increase has occurred unevenly resulting in a number of sections and yards working to saturation point. It is common experience that, whenever a terminal yard or a marshalling yard or a section is working to capacity, even a minor factor vitiates the operating results substantially. Moreover, inadequacy of facilities in any one aspect has its repurcussions in other spheres also. It is for this reason that adequate provision of operating facilities to cope up with the increasing demand of the traffic are absolutely essential. |
| 49 | 116 | As the improvement in the railway equipment and facilities is bound to be a slow process, Indian Railways must mobilise themselves on a war-footing with a view to ensure that maximum use is made of the Rolling Stock and other equipment that are available so as to achieve better results. Every wagon on the Railway should be considered as a gold mine to be utilised unremittingly day and night and all the measures should be expeditiously taken on the lines recommended by the Committee with a view to improve utilisation of Rolling Stock. |

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| 50 | 118 | The Committee recommend that a high level meeting should be held between the representatives of the Ministries of Production and Railways with a view to explore ways and means of rationalisation of movement of coal. They also recommend that the Railway Ministry should take over the day to day allotments for coal loading within the general allocations made by the Coal Commissioner. |
| 51 | 119 | Additional terminal facilities at major ports like Calcutta, Bombay etc. are necessary to deal with the large volume of traffic. In order to afford some relief to those major ports, a certain amount of traffic can be diverted to other intermediate ports which should be connected with a suitable gauge with the interior areas. A Broad Gauge connection to Kandla port which is already connected to the interior by M. G. might eventually be necessary. This B.G. connection might eventually also serve two intermediate ports of Navalakhi and Bedi. |
| 52 | 120 | The Committee consider that a Broad Gauge connection between Ahmedabad and Bhavnagar is necessary for rationalising the export and import traffic from and to cotton Mills at Ahmedabad and export of ore traffic from Rajasthan. It would also bring Gujerat and Saurashtra nearer in point of time and distance by rail. This connection will also relieve pressure on the transhipment points at Sabarmati and Viramgam. The Committee also recommend that similar examination should be undertaken to see whether additional rail facilities to other intermediate ports will serve to relieve the over-increasing pressure on major ports and also rationalise rail movements of export and import traffic. |
| 53 | 121-122 | The Committee recommend the progressive expansion of the advertised Express Goods Services in the country. The Committee understand that proposals for introducing the following additional Express Goods Services are under consideration :—<br>(i) Bombay—Ahmedabad (daily)<br>(ii) Ahmedabad—Delhi (on alternate days)<br>(iii) Howrah—Patna (weekly)<br>(iv) Howrah-Gaya and Dehri-on-Sone, (weekly)<br>(v) Extension of Express Goods Services between Shalimar and Nagpur, upto Bombay.<br>(vi) Extension of the services between Kharagpur and Waltair upto Madras.<br>(vii) Between Kanpur and Baruni (daily).<br>The Committee recommend that these proposals should be put into effect as early as possible. They suggest early examination to introduce advertised Express Goods Services, *inter alia*, between Jamnagar—Viramgam and Bhavnagar—Ahmedabad. |
| 54 | 123 | The Committee recommend that the practice of running goods trains on fixed time-tables should be progressively extended on Indian Railways. |
| 55 | 124 | The Committee would like to stress that while every effort should continue to be made to club 'smalls' consignments to the maximum extent possible in the wagons, no restrictions as such should be imposed on the booking of smalls merely for the sake of securing better loading, as such a course is likely to affect the small scale industries adversely. Such complaints should be promptly investigated and remedial action taken by the Railway Administration. |
| 56 | 125 | The Committee appreciate the progress made with regard to the system of nominated loading and recommend that the efforts should be continued without relaxation. |

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| 57 | 126 | The Committee feel that there is considerable scope for formation of block loads for long destinations, specially in the case of coal traffic. |
| 58 | 127 | The Committee welcome the publication of Marshalling Orders on an All-India basis which will facilitate formation of goods trains to the farthest destinations and hope that the idea will be progressively developed. |
| 59 | 128 | The Committee recommend that the practice of night loading introduced at a number of important goods sheds should be extended in consultation with the local representatives of trade and that multiple shifts of working should be introduced at important goods sheds and transhipment points with the object of expediting the release of wagons. |
| 60 | 129—132 | The Committee understand that certain proposals for mechanical handling of bulk cargo at Madras and Calcutta Ports are under-consideration and recommend that the question of providing similar facilities in Bombay Port as well as some of the important intermediate Ports like Bhavnagar, Bedi etc. may be examined. |
| 61 | 133—135 | The Committee observe that a detailed control is being exercised in the Railway Board's Office on the operation of the Railways and feel that this should continue at present. The control may be progressively relaxed as the position improves with the improvement in the railway equipment and facilities. The Committee stress that different operating statistics that are submitted at various levels should be carefully scrutinised and prompt remedial action taken, wherever necessary. |
| 62 | 137 | The Committee consider that adequate provision of parcel vans, luggage vans, refrigerator vans, wagons with wooden floors and ventilation and vacuum fitted wagons for the Metre Gauge Railways is urgently needed to cater for the increasing demands of parcel and perishable traffic. |
| 63 | 138 | The Committee recommend that the system called "the green arro system" which used to be in operation on the old East Bengal Railway should be introduced on Indian Railways, as an experimental measure. The Committee understand that the system is being introduced from 1-4-1956. The Committee have no doubt that the experiment will be watched with great interest. |
| 64 | 139 | As the shortage of rail transport is likely to persist for sometime to come, the Committee do not envisage the abolition of the priority schedule in the near future. All the same, the Committee recommend that the Railway Ministry should have a time-table for gradual and progressive relaxation of controls and restrictions. |
| 65 | 140 | The Committee recommend that provisions of control facilities should be given a high priority. Each Railway Administration should make out a phased programme for introducing the control system over non-controlled sections. |
| 66 | 140—141 | Proper accommodation for the control offices with properly tested acoustics is a *sine qua non* for good operation. Where the control offices are situated at stations subject to extremes of climate, the Committee also recommend provision of air-conditioning so that section controllers and other staff in the Control Office can work efficiently. |

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| 67 | 142 | The Committee are of the opinion that the entire position regarding the various restrictions imposed by the State Governments on the road traffic should be carefully reviewed and these restrictions should be relaxed to the maximum extent possible so that wherever the rail transport is inadequate, advantage can be taken of road transport, care being taken that road transport does not enter into any unhealthy competition with the Railways now or at a later stage. |

# APPENDIX II

## Punctuality of Passenger Trains

### (*Broad Gauge*)

| Year | All trains (including electric multiple Unit trains)% | Mail and important through trains % | Mixed trains % | Suburban trains % | Other passenger trains% |
|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 |
| 1935-36* | 87·3 | 81·9 | 83·5 | 88·5 —95·1† | 85·3 |
| 1936-37* | 84·7 | 81·4 | 81·8 | 83·5 —94·9† | 81·6 |
| 1937-38* | 83·5 | 77·2 | 82·2 | 82·1 —94·7† | 79·4 |
| 1938-39* | 80·9 | 72·2 | 77·8 | 78·9 —94·3† | 77·6 |
| 1939-40* | 82·0 | 75·9 | 79·1 | 81·5 —92·2† | 79·2 |
| 1940-41* | 84·2 | 77·2 | 79·7 | 92·4 —91·5† | 80·8 |
| 1941-42* | 77·7 | 65·7 | 75·8 | 86·1 —87·1† | 71·7 |
| 1942-43* | 65·0 | 45·0 | 64·3 | 66·0 —80·8† | 54·4 |
| 1943-44* | 65·0 | 52·2 | 63·3 | 63·8 —79·1† | 53·9 |
| 1944-45* | 69·3 | 59·7 | 68·7 | 73·2 —77·3† | 61·8 |
| 1945-46* | 70·0 | 58·8 | 70·7 | 71·7 —78·4† | 62·6 |
| 1946-47* | 70·3 | 53·7 | 67·3 | 72·7 —79·9† | 63·0 |
| 1947-48‡ | 67·6 | 48·5 | 66·9 | 60·4 —82·6† | 59·5 |
| 1948-49‡ | 71·30 | 61·47 | 69·35 | 70·94—84·01† | 62·45 |
| 1949-50* | 81·41 | 75·90 | 81·73 | 83·15—89·22† | 74·34 |
| 1950-51‡ | 79·79 | 69·83 | 79·89 | 78·40—88·02† | 75·30 |
| 1951-52* | 78·81 | 74·15 | 81·16 | 80·60—82·00† | 75·49 |
| 1952-53§ | 82·14 | 77·49 | 83·90 | 83·85—84·58† | 79·79 |
| 1953-54§ | 81·63 | 74·79 | 84·4 | 86·16—81·69† | 78·71 |

*Figures relate to Class I Railways.

†Electric multiple unit trains of the Western & Central Railways.

‡Figures relate to Class I Railways excluding B.A., N.W., E.P. and Assam Railways.

§Figures relate to Government Railways.

# APPENDIX III

## Punctuality of Passenger Trains

### (*Metre Gauge*)

| Year | All trains (including electric multiple unit Trains) % | Mail and Important through trains | Mixed trains % | Suburban trains % | Other passenger trains % |
|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 |
| 1935-36* | 88·5 | 88·8 | 87·1 | 97·4 —90·2† | 87·8 |
| 1936-37* | 87·7 | 85·0 | 87·8 | 97·8 —92·2† | 86·8 |
| 1937-38* | 85·5 | 81·4 | 88·7 | 97·0 —90·0† | 82·2 |
| 1938-39* | 82·9 | 78·9 | 86·7 | 98·3 —82·3† | 80·0 |
| 1939-40* | 84·9 | 79·4 | 87·7 | 98·5 —88·1† | 82·2 |
| 1940-41* | 84·9 | 78 8 | 87·9 | 97·5 —92·2† | 82·1 |
| 1941-42* | 80·2 | 66 2 | 84·9 | 93·1 —89·8† | 76·0 |
| 1942-43* | 69·2 | 46·5 | 72·9 | 87·8 —79·3† | 64·7 |
| 1943-44* | 72·3 | 46·1 | 72·7 | 89·7 —88·4† | 69·8 |
| 1944-45* | 74 1 | 48·8 | 73·9 | 91·3 —91·9† | 70·3 |
| 1945-46* | 76·4 | 56·5 | 78·7 | 86·2 —91·5† | 71·3 |
| 1946-47* | 67 7 | 43·2 | 70·4 | 88·8 —94·5† | 60·7 |
| 1947-48‡ | 69·7 | 51·2 | 74·1 | 80·9 —90·2† | 62·8 |
| 1948-49‡ | 68 41 | 55·34 | 76·85 | 70·65—72·52† | 64·31 |
| 1949-50* | 76 72 | 67·33 | 80·60 | 84·79—91·24† | 71·52 |
| 1950-51* | 71·43 | 68·08 | 73·89 | 65·09—82·34† | 68·13 |
| 1951-52* | 77·70 | 72·53 | 77·56 | 73·84—95·35† | 74·27 |
| 1952-53§ | 83·57 | 77·37 | 83·83 | 98·60—85·00† | 80·46 |
| 1953-54§ | 81·62 | 70·19 | 80·74 | 73·68—97·50† | 79·79 |

*Figures relate to Class I Railways.

†Electric multiple unit trains of the Southern Railways.

‡Figures relate to Class I Railways excluding B·A., N.W., E.P. and Assam Railways.

§Figures relate to Government Railways.

# APPENDIX IV

## Speeds of Mail Trains

### (*Broad Gauge*)

| Train No. | | Running | | Overall (average) speed for the entire run whether through or local as the case may be. |
|---|---|---|---|---|
| | | From | To | |
| 1 | | 2a. | 2b. | 3 |
| | (*i*) *Through mail trains running over more than one Railway :* | | | |
| 31 | Dn. | Bombay Central | Amritsar | 32·3 m.p.h. |
| 31 | Dn. | Do. | Delhi | 38·2 ,, |
| 32 | Up. | Amritsar | Bombay Central | 33·4 ,, |
| 32 | Up. | Delhi | Bombay Central | 35·6 ,, |
| 1 | Dn. | Bombay V. T. | Ferozepur | 31·5 ,, |
| 2 | Up. | Ferozepur | Bombay V. T. | 31·2 ,, |
| 61 | Up. | Howrah | Kalka | 30·5 ,, |
| 62 | Dn. | Kalka | Howrah | 34·7 ,, |
| 73 | Up. | Howrah | Amritsar | 33·4 ,, |
| 74 | Dn. | Amritsar | Howrah | 30·7 ,, |
| 6 | Up. | Howrah | Bombay V. T. (Via Allahabad). | 34·3 ,, |
| 5 | Dn. | Bombay V. T. | Howrah | 34·7 ,, |
| 41 | Dn. | Bombay V. T. | Howrah (Via Nagpur) | 33·7 ,, |
| 42 | Up. | Howrah | Bombay V. T. | 32·8 ,, |
| 43 | Up. | Howrah | Madras | 26·7 ,, |
| 44 | Dn. | Madras | Howrah | 26·7 ,, |
| 9 | Dn. | Bombay V. T. | Madras Central | 25·0 ,, |
| 10 | Up. | Madras Central | Bombay V. T. | 23·9 ,, |
| 19 | Dn. | Jhansi | Lucknow | 25·8 ,, |
| 20 | Up. | Lucknow | Jhansi | 25·8 ,, |
| | (*ii*) *Mail trains on a single Railway :* | | | |
| 303 | Dn. | Bombay V. T. | Poona | 30·4 ,, |
| 304 | Up. | Poona | Bombay | 30·4 ,, |
| 301 | Up. | Amritsar | Delhi | 32·6 ,, |
| 302 | Dn. | Delhi | Amritsar | 33·2 ,, |
| 305 | Up. | Delhi | Pathankot | 27·5 ,, |
| 306 | Dn. | Pathankot | Delhi | 23·5 ,, |
| 307 | Up. | Kalka | Amritsar | 23·5 ,, |
| 308 | Dn. | Amritsar | Kalka | 23·0 ,, |
| 303 | Dn. | Bombay | Viramgam | 31·0 ,, |
| 304 | Up. | Viramgam | Bombay | 28·8 ,, |
| 301 | Dn. | Bombay | Ahmedabad | 23·5 ,, |
| 302 | Up. | Ahmedabad | Bombay | 32·3 ,, |
| 307 | | Madras ... | Bangalore City | 21·2 ,, |
| 308 | | Bangalore City | Madras | 23·7 ,, |

# APPENDIX V

## Speeds of Mail Trains

*(Metre Gauge)*

| 1 | 2a | | 2b | | 3 |
|---|---|---|---|---|---|
| | *(i) Through mail trains running over more than one Railway:* | | | | |
| 202 | Dn. | Ahmedabad . . . | Delhi . . . . | 25·7 | m.p.h. |
| 201 | Up. | Delhi . . . | Ahmedabad . . | 26·2 | ,, |
| | *(ii) Mail trains running on a single Railway:* | | | | |
| 401 | Up. | Delhi . . . . | Bikaner . . . | 24·3 | ,, |
| 402 | Dn. | Bikaner . . . . | Delhi . . . . | 23·9 | ,, |
| 403 | Up. | Bikaner . . . . | Marwar . . . | 16·6 | ,, |
| 404 | Dn. | Marwar . . . . | Bikaner . . . | 18·3 | ,, |
| 419 | Up. | Ratangarh . . . . | Jodhpur . . . | 24·0 | ,, |
| 420 | Dn. | Jodhpur . . . . | Ratangarh . . . | 24·0 | ,, |
| 337 | Dn. | Veraval . . . . | Viramgam . . . | 19·7 | ,, |
| 338 | Up. | Viramgam . . . . | Veraval . . . | 19·3 | ,, |
| 329 | Up. | Bhavnagar . . . . | Ahmedabad . . . | 16·3 | ,, |
| 330 | Dn. | Ahmedabad . . . | Bhavnagar . . . | 15·6 | ,, |
| 331 | Dn. | Bhavnagar . . . . | Surendranagar . . | 19·5 | ,, |
| 332 | Dn. | Surendranagar . . . | Bhavnagar . . . | 19·1 | ,, |
| 341 | Up. | Veraval . . . . | Ahmedabad . . . | 17·2 | ,, |
| 342 | Dn. | Ahmedabad . . . | Veraval . . . | 16·9 | ,, |
| 301 | Up. | Kathiar . . . . | Lucknow . . . | 27 | ,, |
| 302 | Dn. | Lucknow . . . . | Kathiar . . . | 27 | ,, |

## APPENDIX VI

## Number of Passengers originating on Class I/Government Railwa

(in millions)

| Year | Broad Gauge Passengers originating | Metre Gauge Passengers originating | Narrow Gauge Passengers originating | Total |
|---|---|---|---|---|
| 1938-39* | 325 | 164 | 10 | 499 |
| 1939-40* | 327 | 162 | 10 | 499 |
| 1940-41* | 358 | 173 | 11 | 542 |
| 1941-42† | 397 | 183 | 11 | 591 |
| 1942-43† | 410 | 164 | 12 | 586 |
| 1943-44† | 519 | 212 | 13 | 744 |
| 1944-45† | 616 | 241 | 15 | 872 |
| 1945-46† | 684 | 285 | 17 | 986 |
| 1946-47† | 730 | 329 | 19 | 1078 |
| 1947-48‡ | 641 | 324 | 16 | 981 |
| 1948-49 | 743 | 353 | 18 | 1114 |
| 1949-50 | 806 | 365 | 23 | 1194 |
| 1950-51§ | 846 | 400 | 33 | 1279 |
| 1951-52 | 802 | 374 | 28 | 1204 |
| 1952-53℗ | 801 | 358 | 27 | 1186 |
| 1953-54 | 827 | 338 | 29 | 1194 |

*Inclusive of the B. A., N.W., but exclusive of the Bikaner.
†Inclusive of the B. A., N. W. and Bikaner.
‡Inclusive of the E. P., Assam and Bikaner, but exculsive of the B.A., and N.W.
§Inclusive of the Jaipur, Saurashtra, Dholpur, Cutch, Rajasthan, and Scindia St Railways integrated with the Central and Western Railways.
℗Revised.

## APPENDIX VII

**Number of Passenger carriages (in units) on Class I Govt. Railways.**

| Year | Total number on line | |
|---|---|---|
| | B.G. | M.G. |
| 1938-39* | 8,887 | 6,666 |
| 1939-40* | 8,782 | 6,606 |
| 1940-41* | 8,705 | 6,525 |
| 1941-42† | 8,700 | 6,564 |
| 1942-43† | 8,699 | 6,283 |
| 1943-44† | 8,661 | 6,041 |
| 1944-45† | 8,654 | 5,706 |
| 1945-46† | 8,599 | 5,696 |
| 1946-47† | 8,440 | 6,027 |
| 1947-48‡ | 6,489 | 4,337 |
| 1948-49 | 6,635 | 5,356 |
| 1949-50 | 6,588 | 5,459 |
| 1950-51§ | 6,727 | 6,088 |
| 1951-52 | 6,942 | 6,208 |
| 1952-53 | 7,190 ❋ | 6,312 |
| 1953-54 | 7,346 | 6,458 |

*Inclusive of the B.A. and N.W., but exclusive of the Bikaner.
†Inclusive of the B.A., N.W., and Bikaner.
‡Inclusive of the E.P., Assam and Bikaner, but exclusive of the B.A., and N. W.
§Inclusive of the Jaipur, Saurashtra, Dholpur, Cutch, Rajashthan and Scindia State Railways integrated with the Central and Western Railways.
❋Revised.

## APPENDIX VIII
## Suburban Traffic

(in millions)

| Year | Number of Passengers | | |
|---|---|---|---|
| | Broad | | Metre |
| | Central | Western | Southern |
| 1938-39 . | 33·6 | 47·6 | 8·49 |
| 1939-40 . | 33·9 | 48·3 | 8·50 |
| 1940-41 . | 36·4 | 51·1 | 8·65 |
| 1941-42 . | 45·4 | 59·7 | 9·68 |
| 1942-43 . | 52·4 | 64·2 | 13·0 |
| 1943-44 . | 70·0 | 84·3 | 16·5 |
| 1944-45 . | 86·1 | 100·4 | 20·8 |
| 1945-46 . | 98·0 | 112·1 | 25·4 |
| 1946-47 . | 97·8 | 113·7 | 24·4 |
| 1947-48 . | 108·0 | 128·1 | 28·7 |
| 1948-49 . | 129·9 | 135·1 | 27·4 |
| 1949-50 . | 143·8 | 149·8 | 28·7 |
| 1950-51 . | 149·8 | 157·5 | 30·7 |
| 1951-52 . | 147·0 | 145·4 | 28·0 |
| 1952-53 . | 147·8 | 149·4 | 25·9 |
| 1953-54 . | 144·0 | 153·7 | 24·9 |

## APPENDIX IX

**Average daily coal loading in West Bengal & Bihar Fields month by month, against Minimum Target and Coal Commissioner's Target**

| Months | 1951-52 | | | 1952-53 | | | 1953-54 | | | 1954-55 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Coal Loading | Minimum Target | Coal Commissioner's Target | Coal Loading | Minimum Target | Coal Commissioner's Target | Coal Loading | Minimum Target | Coal Commissioner's Target | Coal Loading | Minimum Target | Coal Commissioner's Target |
| April | 2,870 | 2,900 | N.A. | 3,067 | 2,935 | 3,260 | 3,111 | 2,885 | 3,524 | 3,111 | 2,885 (Upto 23/24) | 3,712 |
| May | 2,807 | 2,900 | N.A. | 3,035 | 2,935 | 3,281 | 3,093 | 2,885 | 3,500 | 3,092 | 3,085 (From 24/4) | 3,706 |
| June | 2,878 | 2,900 (Upto 19/6) | N.A. | 3,010 | 2,935 | 3,322 | 3,033 | 2,885 | 3,594 | 3,118 | 3,085 | 3,769 |
| July | 3,160 | 2,975 (From 20/6) 2,975 (Upto 25/7) 3,200 (From 26/7) | 3,603 | 3,124 | 2,935 | 3,455 | 3,033 | 2,885 | 3,674 | 3,351 | 3,085 | 3,922 |
| August | 3,323 | 3,200 | 3,585 | 3,444 | 2,935 | 3,563 | 3,020 | 2,885 | 3,678 | 3,558 | 3,085 | 4,035 |
| September | 3,305 | 3,200 (Upto 22/9) 3,150 (From 23/9) | 3,394 | 3,323 | 2,935 | 3,666 | 3,222 | 2,885 | 3,642 | 3,593 | 3,085 | 4,132 |
| October | 3,283 | 3,150 | 3,593 | 3,390 | 2,935 | 3,750 | 3,351 | 2,885 | 3,713 | 3,432 | 3,085 | 4,048 |
| November | 3,116 | 3,150 | 3,652 | 3,330 | 2,935 | 3,750 | 3,209 | 2,885 | 3,779 | 3,263 | 3,085 | 3,931 |
| December | 2,932 | 2,900 | 3,699 | 3,270 | 2,935 | 3,763 | 2,885 | 2,885 | 3,681 | 3,145 | 3,085 | 3,933 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| January . . . . | 2,935 | 2,935 | 3,260 | 3,119 | 2,935 | 3,565 | 2,874 | 2,885 | 3,579 | 3,169 | 3,085 | 3,787 |
| February . . . . | 3,046 | 2,935 | 3,323 | 3,054 | 2,935 | 3,585 | 2,865 | 2,885 | 3,541 | 3,208 | 3,085 | 3,864 |
| March . . . . | 2,998 | 2,935 | 3,312 | 3,211 | 2,935 | 3,533 | 3,061 | 2,885 | 3,705 | 3,199 | 3,085 | 3,881 |

## APPENDIX X

### Average Daily Coal Loading on the North Eastern Railway

On the N. E. Railway Coal Fields are located in Upper Assam, Garo Hills and Bagrakote in West Bengal. There is no set quota but the production approximates a target of 120 wagons per day from Upper Assam; Coal Field, 14 wagons per day from Garo Hills and about 10 to 15 wagons during the dry season (March to May) from Bagrakote Coal Fields. Traffic is cleared by Rail, however as offered. There has therefore normally been no outstandings as shortfalls.

Loading figures have been as follows:—

| | 1952-53 | | | 1953-54 | | | 1954-55 | | |
|---|---|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 1 | 2 | 3 | 1 | 2 | 3 |
| | Upper Assam | Garo | Bagra-kote | | | | | | |
| April | .. | .. | .. | 89·2 | 2·5 | 17·6 | 87·8 | 9·2 | 14·3 |
| May | .. | .. | .. | 82·2 | 7·7 | 18·1 | 78·7 | 7·9 | 8·7 |
| June | .. | .. | .. | 86·0 | 4·5 | 16·8 | 71·4 | 5·5 | 3·8 |
| July | N.A. | N.A. | N.A. | 80·9 | 3·1 | 14·2 | 75·7 | 9·2 | 2·2 |
| August | .. | .. | .. | 71·3 | 4·2 | 3·1 | 72·4 | 11·4 | 2·2 |
| September | .. | .. | .. | 82·7 | 6·2 | 4·4 | 78·4 | 8·4 | 1·7 |
| October | .. | .. | .. | 74·1 | 6·4 | 6·8 | 63·5 | 5·6 | 2·4 |
| November | .. | .. | .. | 75·6 | 4·9 | 5·7 | 80·6 | 6·6 | 4·9 |
| December | .. | .. | .. | 83·7 | 2·4 | 8·8 | 83·6 | 4·6 | 10·8 |
| January | 92·1 | 2·4 | 22·5 | 85·1 | 2·0 | 12·7 | 75·7 | 5·8 | 8·3 |
| February | 94·3 | 5·3 | 19·9 | 86·7 | 10·7 | 13·1 | 80·1 | 8·7 | 12·6 |
| March | 87·9 | 3·2 | 12·1 | 83·1 | 9·9 | 17·4 | 71·8 | 7·6 | 7·7 |

Remarks : Figures for 1951 & 1952 are not available.

## APPENDIX XI

### Average daily coal loading on the South Eastern Railway

| Month | 1951-52 | | | 1952-53 | | | 1953-54 | | | 1954-55 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Target of Coal Commissioner | Minimum Target | Average daily loading | Target of Coal Commissioner | Minimum Target | Average daily loading | Target of Coal Commissioner | Minimum Target | Average daily loading | Target of Coal Commissioner | Minimum Target | Average daily loading |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| | | | | | CENTRAL INDIA | | | | | | | |
| April | 245 | 245 | 238 | 255 | 255 | 237 | 266 | 281 | 266 | 350 | 295 | 283 |
| May | 245 | 245 | 224 | 255 | 255 | 248 | 300 | 281 | 251 | 350 | 307 | 275 |
| June | 245 | 245 | 229 | 255 | 255 | 239 | 300 | 281 | 256 | 350 | 295 | 293 |
| July | 245 | 245 | 235 | 255 | 266 | 238 | 350 | 281 | 270 | 350 | 295 | 291 |
| August | 255 | 255 | 242 | 255 | 266 | 258 | 350 | 295 | 266 | 350 | 295 | 289 |
| September | 255 | 255 | 256 | 255 | 266 | 258 | 350 | 295 | 284 | 350 | 302 | 303 |
| October | 255 | 255 | 249 | 266 | 266 | 261 | 350 | 295 | 304 | 350 | 302 | 290 |
| November | 255 | 255 | 242 | 266 | 266 | 270 | 350 | 295 | 267 | 350 | 302 | 304 |
| December | 255 | 255 | 247 | 266 | 266 | 290 | 350 | 295 | 297 | 350 | 317 | 294 |
| January | 255 | 255 | 248 | 266 | 266 | 271 | 350 | 295 | 292 | 360 | 317 | 276 |
| February | 255 | 255 | 231 | 266 | 266 | 256 | 350 | 295 | 268 | 360 | 317 | 313 |
| March | 255 | 255 | 243 | 166 | 235 | 258 | 350 | 295 | 275 | 360 | 317 | 301 |

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | TALCHER COAL FIELDS | | | | | | | |
| April | 36 | 30 | 31 | 35 | 35 | 37 | 41 | 39 | 36 | 41 | 39 | 31 |
| May | 36 | 36 | 32 | 35 | 35 | 37 | 41 | 39 | 33 | 41 | 39 | 28 |
| June | 36 | 36 | 30 | 39 | 39 | 37 | 41 | 39 | 36 | 39 | 39 | 31 |
| July | 36 | 36 | 31 | 39 | 39 | 37 | 41 | 39 | 32 | 38 | 39 | 27 |
| August | 35 | 35 | 30 | 39 | 39 | 30 | 41 | 39 | 32 | 38 | 39 | 33 |
| September | 35 | 35 | 32 | 39 | 39 | 29 | 41 | 39 | 35 | 38 | 39 | 34 |
| October | 35 | 35 | 33 | 39 | 39 | 39 | 41 | 39 | 34 | 38 | 39 | 25 |
| November | 35 | 35 | 35 | 39 | 39 | 23 | 41 | 39 | 32 | 38 | 39 | 34 |
| December | 35 | 35 | 32 | 39 | 39 | 25 | 41 | 39 | 36 | 38 | 39 | 32 |
| January | 35 | 35 | 32 | 39 | 39 | 27 | 41 | 39 | 33 | 35 | 39 | 30 |
| February | 35 | 35 | 31 | 40 | 39 | 28 | 41 | 39 | 32 | 35 | 39 | 31 |
| March | 35 | 35 | 32 | 39 | 39 | 32 | 41 | 39 | 31 | 35 | 39 | 33 |

## PENCH VALLEY (NARROW GAUGE)

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| April | 40 | 40 | 36 | 40 | 40 | 39 | 40 | 40 | 38 | 40 | 40 | 49 |
| May | 40 | 40 | 35 | 40 | 40 | 37 | 40 | 40 | 39 | 40 | 40 | 43 |
| June | 40 | 40 | 31 | 40 | 40 | 36 | 40 | 40 | 39 | 40 | 40 | 46 |
| July | 40 | 40 | 33 | 40 | 40 | 38 | 40 | 40 | 37 | 40 | 40 | 42 |
| August | 40 | 40 | 36 | 40 | 40 | 36 | 40 | 40 | 31 | 40 | 40 | 35 |
| September | 40 | 40 | 34 | 40 | 40 | 44 | 40 | 40 | 38 | 40 | 40 | 42 |
| October | 40 | 40 | 31 | 40 | 40 | 38 | 40 | 40 | 41 | 40 | 40 | 34 |
| November | 40 | 40 | 35 | 40 | 40 | 34 | 40 | 40 | 38 | 40 | 40 | 43 |
| December | 40 | 40 | 34 | 40 | 40 | 44 | 40 | 40 | 41 | 40 | 40 | 41 |
| January | 40 | 40 | 30 | 40 | 40 | 42 | 40 | 40 | 42 | 40 | 40 | 37 |
| February | 40 | 40 | 37 | 40 | 40 | 43 | 40 | 40 | 37 | 40 | 40 | 45 |
| March | 40 | 40 | 37 | 40 | 40 | 37 | 40 | 40 | 43 | 40 | 40 | 47 |

## APPENDIX XII

### Average daily Coal loading on the Central Railway Singareni Collieries

| | 1951-52 | 1952-53 | 1953-54 | 1954-55 |
|---|---|---|---|---|
| Quota | 175 | 175 | 200 | 260 |
| April | 128 | 165 | 156 | 157 |
| May | 127 | 171 | 155 | 156 |
| June | 144 | 165 | 88 | 161 |
| July | 116 | 177 | 71 | 164 |
| August | 155 | 163 | 144 | 177 |
| September | 148 | 166 | 168 | 173 |
| October | 140 | 157 | 160 | 145 |
| November | 167 | 162 | 158 | 176 |
| December | 159 | 165 | 163 | 194 |
| January | 175 | 166 | 152 | 197 |
| February | 188 | 159 | 153 | 189 |
| March | 161 | 146 | 159 | 163 |
| | 150 | 172 | 144 | 171 |

C. P. COLLIERIES

| | | | | |
|---|---|---|---|---|
| Quota | .. | .. | 285 | 295 |
| April | 230 | 238 | 235 | 231 |
| May | 203 | 234 | 223 | 219 |
| June | 208 | 217 | 233 | 222 |
| July | 155 | 236 | 244 | 233 |
| August | 210 | 212 | 210 | 228 |
| September | 221 | 230 | 242 | 236 |
| October | 201 | 216 | 245 | 204 |
| November | 216 | 228 | 202 | 227 |
| December | 224 | 244 | 246 | 242 |
| January | 225 | 225 | 236 | 235 |
| February | 256 | 229 | 242 | 250 |
| March | 212 | 225 | 217 | 234 |
| | 213 | 228 | 231 | 230 |

## APPENDIX XIII.

### Number of locomotives on Class I/Government Railways

| Year | Total number on line | |
|---|---|---|
| | B.G. | M.G. |
| 1938-39* | 5,247 | 2,331 |
| 1939-40* | 5,224 | 2,326 |
| 1940-41* | 5,218 | 2,344 |
| 1941-42† | 5,218 | 2,324 |
| 1942-43† | 5,241 | 2,205 |
| 1943-44† | 5,240 | 2,247 |
| 1944-45† | 5,389 | 2,527 |
| 1945-46† | 5,745 | 2,650 |
| 1946-47† | 5,983 | 2,653 |
| 1947-48‡ | 4,979 | 2,310 |
| 1948-49 | 5,047 | 2,313 |
| 1949-50 | 5,159 | 2,330 |
| 1950-51§ | 5,256 | 2,611 |
| 1951-52 | 5,233 | 2,645 |
| 1952-53¶ | 5,226 | 2,693 |
| 1953-54 | 5,182 | 2,777 |

*Inclusive of the B.A., and N.W., but exclusive of the Bikaner.
†Inclusive of the B.A., N.W. and Bikaner.
‡Inclusive of the E.P., Assam and Bikaner, but exclusive of the B.A., nad N.W.
§Inclusive of the Jaipur, Saurashtra, Dholpur, Cutch, Rajasthan and Scindia State Railways integrated with the Central and Western Railways.
¶Revised.

## APPENDIX XIV

### Number of wagons (in terms of 4 wheelers) on class I/Government Railways.

| Year | Total number of wagons on line | |
|---|---|---|
| | B. G. | M.G. |
| 1938-39* | 142,619 | 56,529 |
| 1939-40* | 144,088 | 55,742 |
| 1940-41* | 146,846 | 56,112 |
| 1941-42† | 146,083 | 55,875 |
| 1942-43† | 144,638 | 52,626 |
| 1943-44† | 144,666 | 51,851 |
| 1944-45† | 145,209 | 61,028 |
| 1945-46† | 152,150 | 74,275 |
| 1946-47† | 164,307 | 71,024 |
| 1947-48‡ | 148,505 | 50,460 |
| 1948-49 | 148,890 | 44,983 |
| 1949-50 | 147,850 | 46,660 |
| 1950-51§ | 146,713 | 51,592 |
| 1951-52 | 146,339 | 52,604 |
| 1952-53 | 150,180‖ | 56,399 |
| 1953-54 | 154,249 | 60,888 |

*Inclusive of the B.A. and N.W., but exclusive of the Bikaner.
†Inclusive of the B.A., N.W. and Bikaner.
‡Inclusive of the E.P., Assam and Bikaner, but exclusive of the B.A. and N.W.
§Inclusive of the Jaipur, Saurashtra, Dholpur, Cutch, Rajasthan and Scindia State Railways integrated with the Central and Western Railways.
‖Revised.

# APPENDIX XV

## Rolling stock placed on line

| Year | Locomotives placed on line | | Wagons placed on line | | Coaching Vehicles placed on line | |
|---|---|---|---|---|---|---|
| | B.G. | M.G. | B.G. | M.G. | B.G. | M.G. |
| 1 | 2a | 2b | 3a | 3b | 4a | 4b |
| 1938-39 | 9 | 24 | 2,269 | 1,008 | 375 | 353 |
| 1939-40 | 23 | 22 | 3,495 | 535 | 326 | 277 |
| 1940-41 | 9 | 10 | 1,790 | 298 | 383 | 226 |
| 1941-42 | 8 | .. | 130 | 93 | 244 | 78 |
| 1942-43 | .. | .. | 458 | 205 | 211 | 42 |
| 1943-44 | 55 | 82 | 2,231 | 3,485 | 101 | 50 |
| 1944-45 | 282 | 213 | 5,660 | 406 | 101 | 52 |
| 1945-46 | 441 | .. | 11,680 | 230 | 94 | 32 |
| 1946-47 | 167 | 351 | 14,589 | 100 | 157 | 47 |
| 1947-48 | 28 | .. | 5,518 | 195 | 186 | 100 |
| 1948-49 | 71 | 33 | 2,629 | .. | 233 | 173 |
| 1949-50 | 395 | 17 | 1,444 | .. | 301 | 318 |
| 1950-51 | 144 | 149 | 2,924 | 415 | 480 | 416 |
| 1951-52 | 75 | 28 | 2,254 | 2,159 | 507 | 264 |
| 1952-53 | 54 | 136 | 4,664 | 9,258 | 585 | 310 |
| 1953-54 | 63 | 89 | 6,697 | 1,211 | 426 | 402 |

## APPENDIX XVI

### Wagon miles per wagon day on Class I/Government Railways

| Year | B.G. | M.G. |
|---|---|---|
| 1938-39 | 40·2 | 30·9 |
| 1939-40 | 41·3 | 32·9 |
| 1940-41 | 42·9 | 33·1 |
| 1941-42 | 47·0 | 35·9 |
| 1942-43 | 42·5 | 34·7 |
| 1943-44 | 39·7 | 36·7 |
| 1944-45 | 40·0 | 39·3 |
| 1945-46 | 41·6 | 31·5 |
| 1946-47 | 37·3 | 26·2 |
| 1947-48 | 34·3 | 28·5 |
| 1948-49 | 33·1 | 29·1 |
| 1949-50 | 38·1 | 29·7 |
| 1950-51 | 38·7 | 31·2 |
| 1951-52 | 40·9 | 32·4 |
| 1952-53 | 41·1 | 31·4 |
| 1953-54 | 40. I | 28·4 |
| 1954-55 | 43·5 | 29·0 |

## APPENDIX XVII

### Net ton miles per wagon day on Class I/Government Railways

| Year | B.G. | M.G. |
|---|---|---|
| 1938-39 | 351 | 147 |
| 1939-40 | 367 | 158 |
| 1940-41 | 392 | 163 |
| 1941-42 | 441 | 182 |
| 1942-43 | 451 | 182 |
| 1943-44 | 445 | 201 |
| 1944-45 | 438 | 199 |
| 1945-46 | 433 | 159 |
| 1946-47 | 360 | 133 |
| 1947-48 | 351 | 162 |
| 1948-49 | 358 | 171 |
| 1949-50 | 402 | 180 |
| 1950-51 | 434 | 186 |
| 1951-52 | 463 | 198 |
| 1952-53 | 444 | 204 |
| 1953-54 | 441 | 194 |
| 1954-55 | 462 | 194 |

## APPENDIX XVIII

### Engine miles per engine day
### Broad Gauge

| Year | Passenger Engine (Steam) | Mixed Engine (Steam) | Goods Engine (Steam) | Per Engine on line (Steam) | Passenger Engine (Electric) | Goods Engine (Electric) |
|---|---|---|---|---|---|---|
| (1) | (2) | (3) | (4) | (5) | (6) | (7) |
| 1938-39 . . | 160 | 138 | 99 | 79 | 202 | 132 |
| 1939-40 . . | 163 | 140 | 101 | 81 | 230 | 167 |
| 1940-41 . . | 165 | 143 | 105 | 83 | 232 | 162 |
| 1941-42 . . | 166 | 148 | 105 | 87 | 240 | 161 |
| 1942-43 . . | 158 | 128 | 99 | 79 | 214 | 152 |
| 1943-44 . . | 154 | 137 | 94 | 77 | 230 | 143 |
| 1944-45 . . | 155 | 141 | 92 | 77 | 217 | 142 |
| 1945-46 . . | 158 | 143 | 92 | 77 | 234 | 141 |
| 1946-47 . . | 160 | 140 | 90 | 75 | 232 | 136 |
| 1947-48 . . | 158 | 103 | 90 | 72 | 237 | 114 |
| 1948-49 . . | 151 | 109 | 86 | 71 | 221 | 117 |
| 1949-50 . . | 155 | 110 | 92 | 75 | 226 | 121 |
| 1950-51 . . | 155 | 116 | 93 | 76 | 247 | 119 |
| 1951-52 . . | 158 | 120 | 95 | 78 | 254 | 116 |
| 1952-53 . . | 163 | 115 | 94 | 80 | 241 | 124 |
| 1953-54 . . | 166 | 114 | 94 | 83 | 224 | 136 |

## APPENDIX XIX

### Engine miles per engine day
### Metre Gauge

| Year | Passenger Engine (Steam) | Mixed Engine (Steam) | Goods Engine (Steam) | Per Engine on line (Steam) | Passenger Engine (Electric) | Goods Engine (Electric) |
|---|---|---|---|---|---|---|
| (1) | (2) | (3) | (4) | (5) | (6) | (7) |
| 1938-39 | 130 | 105 | 99 | 76 | .. | .. |
| 1939-40 | 129 | 106 | 100 | 78 | .. | .. |
| 1940-41 | 128 | 110 | 101 | 77 | .. | .. |
| 1941-42 | 129 | 115 | 102 | 81 | .. | .. |
| 1942-43 | 123 | 99 | 102 | 73 | .. | .. |
| 1943-44 | 125 | 103 | 101 | 72 | .. | .. |
| 1944-45 | 126 | 106 | 96 | 69 | .. | .. |
| 1945-46 | 128 | 98 | 96 | 69 | .. | .. |
| 1946-47 | 130 | 106 | 96 | 70 | .. | .. |
| 1947-48 | 134 | 109 | 90 | 71 | .. | .. |
| 1948-49 | 130 | 103 | 79 | 70 | .. | .. |
| 1949-50 | 132 | 101 | 89 | 74 | .. | .. |
| 1950-51 | 131 | 100 | 87 | 74 | .. | .. |
| 1951-52 | 129 | 99 | 88 | 75 | 95 | 90 |
| 1952-53 | 129 | 94 | 87 | 75 | 117 | 109 |
| 1953-54 | 132 | 96 | 85 | 74 | 107 | 88 |

## APPENDIX XX

### Net ton miles per day engine (Steam)

| Year | in use | | on line | |
|---|---|---|---|---|
| | B.G. | M.G. | B.G. | M.G. |
| 1938-39 | 24,172 | 10,795 | 15,144 | 7,019 |
| 1939-40 | 24,862 | 11,410 | 15,776 | 7,467 |
| 1940-41 | 26,661 | 12,157 | 17,154 | 7,367 |
| 1941-42 | 26,960 | 12,382 | 18,379 | 8,106 |
| 1942-43 | 26,530 | 11,572 | 17,749 | 7,281 |
| 1943-44 | 26,208 | 11,652 | 17,397 | 7,374 |
| 1944-45 | 24,938 | 11,704 | 16,523 | 7,307 |
| 1945-46 | 24,136 | 11,333 | 15,963 | 6,978 |
| 1946-47 | 23,240 | 10,614 | 15,030 | 6,294 |
| 1947-48 | 23,044 | 10,840 | 14,389 | 6,303 |
| 1948-49 | 24,217 | 10,212 | 15,312 | 6,048 |
| 1949-50 | 26,406 | 11,159 | 16,090 | 6,709 |
| 1950-51 | 27,261 | 10,705 | 17,812 | 6,613 |
| 1951-52 | 28,501 | 11,332 | 19,017 | 7,263 |
| 1952-53 | 27,518 | 12,066 | 18,634 | 7,745 |
| 1953-54 | 27,962 | 11,875 | 19,296 | 7,404 |
| 1954-55 | 28,382 | 12,858 | 19,651 | 8,268 |

## APPENDIX XXI

### Rolling Stock under repairs

| Year | Broad Gauge | | | Metre Gauge | | |
|---|---|---|---|---|---|---|
| | Locomotives | Carriages | Wagons | Locomotives | Carriages | Wagons |
| 1938-39 . . | 18·8 | 10·4 | 5·7 | 12·8 | 6·9 | 2·9 |
| 1939-40 . . | 17·6 | 9·8 | 5·7 | 13·2 | 8·0 | 3·6 |
| 1940-41 . . | 16·9 | 9·2 | 5·2 | 12·5 | 8·4 | 3·1 |
| 1941-42 . . | 16·4 | 8·9 | 4·5 | 13·5 | 8·6 | 3·5 |
| 1942-43 . . | 16·4 | 8·4 | 4·4 | 13·1 | 8·8 | 2·8 |
| 1943-44 . . | 16·3 | 9·4 | 4·0 | 13·4 | 9·4 | 3·1 |
| 1944-45 . . | 16·1 | 9·3 | 4·4 | 13·9 | 7·6 | 3·4 |
| 1945-46 . . | 16·3 | 9·6 | 5·3 | 15·7 | 9·2 | 4·3 |
| 1946-47 . . | 18·3 | 10·8 | 6·9 | 19·8 | 10·1 | 7·5 |
| 1947-48 . . | 20·2 | 13·1 | 7·5 | 19·9 | 9·26 | 5·9 |
| 1948-49 . . | 21·2 | 13·5 | 8·2 | 19·2 | 8·5 | 6·9 |
| 1949-50 . . | 20·3 | 11·9 | 7·5 | 17·4 | 8·1 | 8·3 |
| 1950-51 . . | 19·0 | 14·1 | 7·2 | 17·6 | 9·0 | 8·6 |
| 1951-52 . . | 18·3 | 13·4 | 7·4 | 15·8 | 8·4 | 9·4 |
| 1952-53 . . | 17·9 | 12·7 | 7·5 | 17·0 | 8·5 | 8·2 |
| 1953-54 . . | 18·1 | 11·5 | 7·3 | 18·5 | 7·8 | 7·4 |

## APPENDIX XXII

### Transhipment performance from B. G. to M. G. ..

| Transhipment Point | 1951-52 | | 1952-53 | | 1953-54 | | 1954-55 | |
|---|---|---|---|---|---|---|---|---|
| | Quota | Actual | Quota | Actual | Quota | Actual | Quota | Actual |
| *Central Rly.*— | | | | | | | | |
| Secunderabad . | | | | 39 | .. | 41 | .. | 36 |
| Ghorpuri . | | | | 43 | .. | 45 | .. | 54 |
| *Eastern Rly.*— | | | | | | | | |
| Sakrigalighat . | 32 | 34 | 34 | 28 | 37 | 35·5 | 56 | 39 |
| *Northern Rly.*— | | | | 7 | | | | |
| Bhatinda | | | 13 (for 3 months only) | 11·7 (for 10 months only) | 14 | 12 | 10·5 (for 2 months only) | 25·3 |
| *North Eastern Rly.*— | | | | | | | | |
| Mokamahghat . | 110 (for 10 months) | 98·6 | 127·7 (for 9 months only) | 118·7 | 129·6 | 114 | 116·5 | 103·4 |
| Bhagalpur . | 30 | 24·5 | 36·7 | 31·7 | 39·1 | 26·4 | 36·8 | 32·1 |
| Manduadih . | 49·9 (for 10 months) | 31·1 | 51·5 (for 7 months) | 53·2 | 62·6 | 52·2 | 94 | 86·8 |
| *Southern Rly.*— | | | | | | | | |
| Arkonam . | 33 | 28 (for 9 months) | 33 | 31 | 33 | 38 | 35·3 | 46 |
| Bangalore City | 49 | 37 (for 9 months) | 49 | 39 | 49 | 37 | 49·3 | 34 |
| Tadepalli . | 34 | 40 | 34 | 32 | 34 | 34 | 34·5 | 33 |
| *Western Rly.*— | | | | | | | | |
| Sabarmati . | .. | .. | .. | .. | 120 | 92 | 120 | 107·2 |
| Viramgam . | .. | .. | .. | .. | 50 | 47 | 60 | 51·8 |
| Sawaimadhopur | .. | .. | .. | .. | 20 | 18·7 | 25 | 22·1 |
| Agra East Bank | .. | .. | .. | .. | 77 | 62 | 72 | 65·8 |

## APPENDIX XXIII

Average detentions to wagons in Marshalling yards

| Name of Marshalling Yard | Target | 1954 April | May | June | July | August | September | October | November | December | 1955 January | February | March |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| *Broad Gauge* : | | | | | | | | | | | | | |
| *Central Railway*— | | | | | | *All Wagons* | | | | | | | |
| Bhusawal | 20·0 | 18·9 | 19·7 | 19·6 | 18·9 | 19·4 | 19·6 | 20·1 | 19·0 | 19·4 | 18·5 | 19·2 | 19·7 |
| Dhond | 15·0 | 12·3 | 12·7 | 13·1 | 11·4 | 10·8 | 12·2 | 11·9 | 14·6 | 13·3 | 13·3 | 9·65 | 12·6 |
| Itarsi | 12·0 | 11·6 | 11·7 | 11·6 | 11·6 | 12·3 | 11·7 | 11·8 | 11·8 | 12·1 | 12·2 | 11·7 | 11·4 |
| Jhansi | 19·0 | 16·8 | 15·0 | 14·5 | 15·3 | 14·6 | 14·6 | 15·0 | 13·5 | 16·0 | 17·7 | 14·7 | 21·0 |
| KALYAN | 20·0 | 17·6 | 16·2 | 18·1 | 17·2 | 18·6 | 17·4 | 17·3 | 16·9 | 17·6 | 16·6 | 16·9 | 17·2 |
| Katni-Murwara | 12·0 | 12·3 | 12·3 | 12·6 | 12·6 | 12·6 | 12·1 | 11·8 | 12·2 | 12·0 | 12·4 | 12·2 | 12·3 |
| Nagpur (Ajni) | 19·0 | 21·1 | 21·0 | 21·7 | 21·1 | 20·8 | 20·9 | 20·0 | 19·8 | 19·2 | 20·1 | 20·8 | 20·2 |
| Secunderabad | 17·5 | 13·5 | 12·4 | 14·1 | 13·6 | 14·9 | 14·2 | 16·9 | 16·8 | 15·4 | 14·9 | 17·4 | 15·7 |
| *Eastern Railway*— | | | | | | | | | | | | | |
| Adra | 15·0 | 14·2 | 15·3 | 14·4 | 14·0 | 13·4 | 13·8 | 14·1 | 13·9 | 13·9 | 13·2 | 16·6 | 14·2 |
| Asansol | 19·0 | 18·7 | 19·5 | 18·8 | 19·1 | 17·5 | 17·4 | 18·0 | 17·9 | 17·8 | 17·0 | 17·6 | 17·5 |
| Bhojudih* | 16·0 | 9·82 | 8·90 | 9·27 | 9·20 | 9·87 | 10·2 | 9·50 | 9·80 | 8·80 | 8·43 | 8·33 | 9·23 |
| Bilaspur | 17·0 | 26·0 | 26·3 | 24·7 | 24·9 | 22·5 | 20·4 | 17·7 | 17·0 | 18·4 | 22·9 | 20·2 | 21·2 |
| Burdwan | * | 14·4 | 15·0 | 15·1 | 14·5 | 15·2 | 15·2 | 14·9 | 14·8 | 14·6 | 14·4 | 15·9 | 14·8 |
| Chakradharpur | 16·5 | 15·6 | 16·2 | 15·6 | 16·2 | 16·1 | 15·9 | 15·7 | 15·3 | 16·2 | 14·8 | 16·6 | 16·9 |
| Chitpur | 24·0 | 17·9 | 20·6 | 20·7 | 20·9 | 18·7 | 18·6 | 18·1 | 18·6 | 17·8 | 17·5 | 17·3 | 16·3 |
| Gaya | * | 24·6 | 21·8 | 23·9 | 28·0 | 27·3 | 26·6 | 29·3 | 23·9 | 26·5 | 29·2 | 32·0 | 28·2 |
| Gobindpur | * | 11·6 | 11·7 | 12·5 | 12·2 | 12·5 | 12·1 | 12·3 | 11·6 | 11·6 | 11·8 | 11·1 | 12·0 |
| Kharagpur | 19·6 | 23·6 | 20·1 | 20·2 | 20·2 | 19·9 | 16·9 | 15·5 | 16·8 | 18·4 | 19·0 | 17·5 | 16·7 |
| Moghalsarai | 24·6 | 22·5 | 21·1 | 21·6 | 20·9 | 24·4 | 23·9 | 20·9 | 22·3 | 21·7 | 22·7 | 24·6 | 22·7 |
| Naihati | 24·0 | 16·7 | 19·2 | 19·3 | 19·0 | 18·5 | 10·6 | 21·6 | 21·6 | 18·7 | 17·0 | 17·2 | 15·8 |
| Ondal | 17·0 | 18·0 | 16·8 | 16·1 | 15·8 | 16·2 | 15·7 | 15·7 | 15·4 | 14·9 | 15·0 | 14·3 | 14·4 |
| Patherdihi | * | 12·2 | 12·5 | 12·6 | 12·0 | 12·5 | 12·3 | 12·2 | 12·1 | 11·5 | 10·3 | 10·3 | 10·3 |

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Shalimar** | 16·0 | 25·8 | 25·5 | 21·9 | 19·4 | 17·3 | 17·6 | 19·6 | 23·6 | 20·1 | 21·1 | 21·5 | 17·5 |
| Sitarampur | * | 16·5 | 16·0 | 16·4 | 16·5 | 15·9 | 16·1 | 16·1 | 15·8 | 15·8 | 16·2 | 15·4 | 14·9 |
| Tatanagar** | 15·0 | 11·2 | 12·2 | 12·0 | 10·5 | 10·3 | 10·8 | 10·4 | 10·2 | 11·4 | 12·2 | 12·6 | 15·9 |
| Waltair | * | 15·1 | 15·7 | 17·3 | 15·0 | 15·2 | 15·3 | 16·2 | 16·9 | 15·7 | 15·6 | 14·7 | 13·9 |
| *Northern Railway—* | | | | | | | | | | | | | |
| Chheoki** | 22·0 | 19·3 | 22·7 | 17·3 | 18·7 | 16·7 | 17·6 | 17·2 | 15·3 | 14·6 | 14·3 | 19·1 | 21·6 |
| Ghaziabad | 22·0 | 24·1 | 19·4 | 19·2 | 16·8 | 14·3 | 13·5 | 13·8 | 15·2 | 15·4 | 14·4 | 14·6 | 13·1 |
| Khan-Alampura | 21·0 | 19·8 | 20·1 | 19·4 | 19·0 | 18·6 | 16·9 | 14·3 | 14·4 | 15·6 | 15·6 | 15·8 | 15·9 |
| Kanpur | 29·0 | 24·5 | 24·1 | 24·5 | 25·2 | 26·6 | 24·0 | 22·3 | 25·6 | 26·8 | 30·3 | 25·5 | 23·2 |
| Lucknow | 27·0 | 22·9 | 25·4 | 26·8 | 28·2 | 27·1 | 25·6 | 24·9 | 23·0 | 21·6 | 27·3 | 26·9 | 22·1 |
| Moradabad | 22·0 | 22·4 | 21·8 | 22·1 | 22·0 | 22·9 | 20·1 | 20·3 | 19·1 | 18·0 | 19·2 | 17·9 | 18·3 |
| *Southern Railway—* | | | | | | | | | | | | | |
| Arkonam | 10·0 | 16·9 | 14·9 | 16·9 | 11·9 | 12·2 | 13·0 | 11·1 | 12·8 | 11·1 | 12·6 | 11·3 | 12·7 |
| Bezwada | 26·0 | 28·2 | 26·0 | 27·8 | 32·2 | 22·3 | 21·5 | 23·2 | 25·4 | 26·7 | 27·1 | 25·1 | 26·1 |
| Erode | 17·0 | 18·0 | 15·9 | 18·1 | 15·9 | 17·7 | 14·5 | 15·0 | 15·0 | 15·5 | 16·3 | 15·7 | 15·6 |
| Jalarpet | 18·0 | 20·7 | 20·5 | 18·4 | 17·0 | 18·4 | 17·5 | 17·8 | 18·3 | 20·9 | 17·4 | 18·3 | 17·2 |
| Raichur | * | 23·6 | 25·2 | 28·9 | 29·3 | 22·6 | 26·8 | 21·4 | 25·8 | 25·5 | 33·3 | 25·7 | 24·3 |
| Shoranur | 18·0 | 18·5 | 19·8 | 21·6 | 18·0 | 17·9 | 16·1 | 21·1 | 18·6 | 18·6 | 19·1 | 19·8 | 18·4 |
| Tondiarpet | 13·0 | 18·0 | 18·6 | 14·0 | 14·4 | 12·5 | 15·0 | 14·3 | 15·8 | 17·9 | 16·3 | 15·0 | 13·0 |
| *Western Railway—* | | | | | | | | | | | | | |
| Agra East Bank | * | 12·0 | 14·2 | 14·0 | 23·2 | 22·1 | 23·5 | 14·5 | 13·5 | 13·0 | 13·4 | 13·2 | 13·0 |
| BANDRA | 11·0 | 11·8 | 12·4 | 13·3 | 14·0 | 13·0 | 13·7 | 11·4 | 11·6 | 13·8 | 13·6 | 12·6 | 11·9 |
| Baroda | 14·0 | 13·5 | 13·4 | 14·9 | 11·4 | 12·8 | 11·2 | 13·2 | 11·9 | 12·4 | 11·8 | 14·3 | 10·6 |
| Kankaria | * | 14·5 | 14·4 | 15·9 | 16·6 | 15·5 | 16·6 | 15·0 | 16·7 | 14·9 | 17·5 | 14·9 | 20·4 |
| Ratlam | * | 6·90 | 7·30 | 7·50 | 7·80 | 8·25 | 8·40 | 9·41 | 6·55 | 7·34 | 7·20 | 7·20 | 7·50 |
| Ujjain | * | 11·0 | 7·93 | 8·78 | 17·0 | 19·6 | 17·2 | 18·4 | 15·1 | 16·7 | 11·1 | 11·8 | 13·5 |
| *Metre Gauge:* | | | | | | | | | | | | | |
| *Central Railway—* | | | | | | | | | | | | | |
| Secunderabad | 22·0 | 18·4 | 19·3 | 19·3 | 18·9 | 18·3 | 17·2 | 17·4 | 18·0 | 19·2 | 20·7 | 18·0 | 16·9 |
| *Northern Railway —* | | | | | | | | | | | | | |
| Rewari | 14·0 | 18·6 | 21·4 | 22·2 | 21·8 | 20·8 | 21·7 | 19·0 | 19·5 | 13·1 | 28·8 | 26·1 | 20·3 |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *North Eastern Railway—* | | | | | | | | | | | | | |
| Baruni Jn. | 16·0 | 14·7 | 13·2 | 18·7 | 16·1 | 19·1 | 19·2 | 16·0 | 14·2 | 15·9 | 12·7 | 10·4 | 12·2 |
| Bareilly City | 16·5 | 24·1 | 24·5 | 24·2 | 26·0 | 21·6 | 30·3 | 33·9 | 32·7 | 31·9 | 31·8 | 32·5 | 25·8 |
| Chupra | 11·0 | 11·6 | 11·8 | 10·9 | 10·8 | 10·2 | 12·9 | 12·1 | 12·4 | 16·8 | 13·9 | 14·5 | 12·9 |
| Gonda | 10·0 | 9·28 | 10·3 | 9·21 | 10·4 | 10·2 | 10·0 | 10·4 | 11·1 | 12·1 | 11·7 | 11·6 | 10·5 |
| Gorakhpur | 25·0 | 31·7 | 31·9 | 32·0 | 43·9 | 38·7 | 60·0 | 37·5 | 36·8 | 36·5 | 35·0 | 29·3 | 29·3 |
| Katihar | 20·0 | 20·0 | 22·0 | 20·0 | 19·0 | 19·0 | 22·0 | 22·0 | 22·0 | 22·0 | 23·0 | 24·0 | 21·0 |
| Kanpur-Anwarganj | | 17·0 | 10·0 | 10·0 | 16·0 | 20·0 | 23·0 | 20·0 | 17·0 | 17·0 | 13·2 | 14·1 | 11·9 |
| Lumding | 16·0 | 21·2 | 19·3 | 18·6 | 15·6 | 19·5 | 19·4 | 17·6 | 19·5 | 20·2 | 21·2 | 22·3 | 24·1 |
| Manduadih | 36·0 | 35·0 | 32·0 | 39·0 | 38·0 | 33·0 | 29·0 | 30·0 | 23·0 | 26·0 | 26·0 | 24·0 | 23·0 |
| Pandu | 24·0 | 35·3 | 34·8 | 32·1 | 27·8 | 23·8 | 37·7 | 25·1 | 32·5 | 20·9 | 23·8 | 26·0 | 28·4 |
| Samastipur | 26·0 | 25·0 | 26·0 | 25·0 | 26·0 | 24·0 | 24·0 | 26·0 | 25·0 | 24·0 | 26·0 | 25·0 | 20·0 |
| Siliguri | 20·0 | 24·0 | 23·0 | 23·0 | 22·0 | 41·0 | 44·0 | 31·0 | 29·0 | 24·0 | 27·0 | 22·0 | 23·0 |
| *Southern Railway—* | | | | | | | | | | | | | |
| Guntakal | 30·0 | 37·9 | 41·4 | 33·3 | 44·7 | 44·9 | 30·5 | 38·8 | 36·9 | 37·8 | 33·8 | 36·0 | 36·5 |
| Hubli | 22·0 | 24·8 | 26·2 | 28·0 | 31·0 | 28·8 | 22·8 | 23·1 | 24·1 | 23·4 | 28·9 | 28·8 | 18·4 |
| Madura Jn. | 25·0 | 18·0 | 19·9 | 18·9 | 19·4 | 19·1 | 18·9 | 19·3 | 16·2 | 18·9 | 17·6 | 17·9 | 18·6 |
| Trichinopoly (Classification Yard) | 22·0 | 11·1 | 11·5 | 13·0 | 12·8 | 12·8 | 12·7 | 12·6 | 13·0 | 12·1 | 15·8 | 12·4 | 8·61 |
| Villupuram | 15·0 | 10·9 | 11·3 | 11·0 | 11·2 | 11·1 | 10·0 | 10·2 | 10·2 | 11·0 | 13·6 | 10·6 | 10·7 |
| *Western Railway—* | | | | | | | | | | | | | |
| Achnera | * | 13·0 | 12·5 | 10·8 | 16·1 | 11·5 | 11·3 | 11·7 | 15·3 | 13·3 | 16·4 | 17·1 | 19·8 |
| Bandikui | * | 11·4 | 12·5 | 13·7 | 13·6 | 11·8 | 11·1 | 12·2 | 12·9 | 11·6 | 13·6 | 12·5 | 15·2 |
| Phulera | 10·0 | 11·1 | 9·36 | 9·34 | 9·57 | 9·73 | 9·70 | 10·3 | 10·4 | 10.7 | 11·5 | 12·8 | 12·6 |
| Surendranagar | * | 17·0 | 16·0 | 16·0 | 16·0 | 13·0 | 12·5 | 12·9 | 11·5 | 14·2 | 13·2 | 11·5 | 13·5 |

* Target not yet fixed.
** Provisional.



GIPD. —LAD—1582—L.S.—22-12-55— 1,500.